SHARP
Be Original.

Sustainability Report
2021

CONTENTS

Editorial Policy / Disclosure System

Editorial Policy / Disclosure System

◇ Policy for Information Disclosure:

The Sharp Sustainability Report 2021 discloses information on Sharp's corporate social responsibility (CSR) efforts, which contribute to creating a sustainable society.

< Non-Financial Information (ESG Information) >   < Financial / Non-Financial Information >

Sustainability   Investor Relations

ESG Information (Excerpt)

Sustainability Report
(This report)

・Sustainability Report
・Green Procurement
・CSR Procurement
・For Suppliers
・Environmental Information
　　　　　　　　　　etc.

Annual Report
(Integrated Report)

・Annual Report
　(Integrated Report)
・Consolidated Financial
　Results
・Fact Book
・Corporate Governance
　　　　　　　　　　etc.

> Sustainability   > Investor Relations

◇ Period Covered:

Fiscal 2020 (April 2020 to March 2021)

◇ Coverage:

Sharp Corporation, along with its domestic and overseas subsidiaries and affiliates.

◇ Referenced Guidelines:

- GRI Sustainability Reporting Standards (GRI Standards), Global Reporting Initiative (GRI)
- Environmental Reporting Guidelines (2018 Version), Ministry of the Environment, Japan

Content indexes between this report and the following guidelines and principles are disclosed on Sharp's official website together with related information.

> GRI Standards Content index

> United Nations Global Compact 10 Content Index

> ISO26000 Content Index

◇ Environmental Data :

We share detailed environmental data on greenhouse gases, waste, water, and more on the Sharp Corporation website.

> Environmental Data

◇ Scheduled Publication Date for Next Report:

November 2022 (published annually since 1999)

◇ Inquiries:

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Philosophy and Policy

Business Philosophy and Business Creed

Sharp Will Continue to Fulfill Its Social Responsibility through Its Business Activities

Business Philosophy

We do not seek merely to expand our business volume. Rather, we are dedicated to the use of our unique, innovative technology to contribute to the culture, benefits and welfare of people throughout the world.

It is the intention of our corporation to grow hand-in-hand with our employees, encouraging and aiding them to reach their full potential and improve their standard of living.

Our future prosperity is directly linked to the prosperity of our customers, dealers and shareholders ...indeed, the entire Sharp family.

Business Creed

Sharp Corporation is dedicated to two principal ideals:

"Sincerity and Creativity"

By committing ourselves to these ideals, we can derive genuine satisfaction from our work, while making a meaningful contribution to society.

Sincerity is a virtue fundamental to humanity ... always be sincere.

Harmony brings strength ... trust each other and work together.

Politeness is a merit ... always be courteous and respectful.

Creativity promotes progress ... remain constantly aware of the need to innovate and improve.

Courage is the basis of a rewarding life ... accept every challenge with a positive attitude.

"Make products that others want to imitate. "These words, spoken by Sharp founder Tokuji Hayakawa, exemplify his management concept of contributing to society through the company's technologies and manufacturing. This concept is realized by being the first to make products that meet the needs of a new era and by becoming a corporation that is known and trusted by society. In1973, Sharp articulated this spirit in the company's business philosophy and business creed. This spirit has been passed down continuously over the generations, ever since the company's founding over a hundred years ago.

The business philosophy represents the image that Sharp aims to present. As stated in the words "contributing to the culture, benefits and welfare of people throughout the world, "Sharp has always strived for mutual prosperity with society and stakeholders, ever since its founding. This philosophy is the foundation of CSR* today.

The business creed represents the beliefs and attitudes that all employees must hold fast to in order to realize the business philosophy. Sharp is dedicated to the two principal ideals of "Sincerity and Creativity." These ideals, which form the foundation of Sharp, involve thoroughly maintaining a customer's perspective and bringing forth inventive products.

Sharp will remain committed to fulfilling its social responsibility and to being a company that is known and trusted throughout society through business activities that abide by its business philosophy and business creed.

* Corporate Social Responsibility

SHARP Sustainability Report 2021

"Be Original." Corporate Motto

Be Original.

From the beginning, Sharp has been driven by originality.
We originate technologies that enhance lifestyles,
Inspire innovations that support individual expression,
And create products that let you be you.
There is only one Sharp.
There is only one you.

SHARP

In November 2016, Sharp announced its "Be Original." corporate motto. "Be Original." is Sharp's promise to our customers around the world that we will remain a brand that creates value that is rich in originality and that is uniquely Sharp.

We have infused two meanings into the word "original."
1. Tokuji Hayakawa, Sharp's founder, left us with a spirit of "Sincerity and Creativity." This spirit will forever be with us and it will remain unchanged as the original foundation of the work we do.
2. Sharp is a company that is always there for people and that constantly creates new value. By offering various products and services that are uniquely Sharp, we are continuously creating "original products just for you"
— products and services that enable all of our customers to fulfill their wishes and dreams.

The period at the end represents our firm commitment to taking on challenges and initiatives with a strong sense of purpose.

SHARP Sustainability Report 2021

Message from the Chairman and President

Establishing SHARP, a powerful corporate brand representing a company closest to people and society, constantly proposing new value

August 2021 marked five years since the launch of Sharp's new management structure. During those five years the business environment was affected by a number of changes that went beyond anything anticipated, including Covid-19 and trade friction between the United States and China. Nevertheless, amidst all of this, Sharp worked to steadily improve business performance, completing a round of management reforms and pursuing the next 100 years of sustainable growth. Once again, we want to thank every one of our stakeholders for your support of Sharp.

Last year's Covid-19 pandemic confronted the world with an unprecedented crisis, but, thanks to the tireless efforts of medical personnel and others around the world, it is a crisis that humanity is slowly but surely overcoming. Sharp has also been a contributor to society's fight against Covid-19, providing masks and other health-related products, and these efforts will be both continued and expanded upon with the aim of helping realize a safer and more secure world.

The pandemic has also been a catalyst for major change in society, including growing demand for a more stay-at-home lifestyle, greater focus on health and hygiene, spreading adoption of telework, development of ICT-driven learning, an accelerating trend towards online medical consultations and telemedicine, and increasing digital transformation of stores and factories. All of this is affecting how people look at the world, how they live, and how they work, and it is driving urgent demand for the creation of a "new normal." This is in addition to the various other issues facing society that require urgent action by the international community, such as achieving carbon neutrality, addressing medical and nursing care problems, and resolving labor shortages.

It is in this context that Sharp, with a business vision of "Changing the World with 8K+5G and AIoT[*1]," is working in collaboration with a variety of companies to create innovative services and solutions centered on 8K, 5G, AI, IoT, robotics, and other cutting-edge technologies in the eight priority business areas of smart homes, smart offices, healthcare, entertainment, education, industry, security, and mobility. Through such initiatives, Sharp is helping to address the issues facing contemporary society and, thereby, establish itself as a powerful corporate brand in touch with people and society and constantly providing them with new value.

Jeng-Wu Tai
Chairman & Chief
Executive Officer

Katsuaki Nomura
President & Chief
Operating Officer

Sharp is also committed to stronger, ongoing efforts focused on ESG, seeking through its business activities to contribute to achieving the Sustainable Development Goals (SDGs) advocated by the United Nations as well as to reliably fulfilling the corporate social responsibilities of a global brand. Specifically, with regard to the environment, Sharp is working to reduce CO_2 emissions, generate more clean energy, and reduce its environmental burden in line with SHARP Eco Vision 2050, which was formulated in February 2019 and establishes long-term goals to be achieved by 2050. With regard to society, Sharp is contributing through business activities centered on eight priority business areas and is working hard to integrate CSR across the entire supply chain. As for governance, Sharp is continually working to improve the functionality of its Board of Directors and to engage in sustained dialogue with its stakeholders, striving to cultivate the sort of corporate governance that leads to improved corporate value.

*1 AIoT is a word coined by Sharp, combining the words AI (artificial intelligence) and IoT (Internet of things). AIoT is a vision of how products and services will connect to artificial intelligence via the cloud and become a people-oriented existence. AIoT is a registered trademark of Sharp.

Message from the Chairman and President

Establishing SHARP, a powerful corporate brand representing a company closest to people and society, constantly proposing new value

As a signatory to the United Nations Global Compact[*2], Sharp continues to support the 10 Principles in the areas of human rights, labor, the environment, and anti-corruption.

It has been previously announced that Sharp found inappropriate accounting taking place at its consolidated subsidiary, Kantatsu Co., Ltd., and its subsidiaries. In response, Sharp convened an investigative committee in December 2020, which contained outside lawyers and certified public accountants, and the results of this committee's investigation were delivered in March 2021. Sharp views this as a serious matter that represents a failure in the effective functioning of internal control for the Sharp Group, and it is thoroughly reviewing and reinforcing compliance-related practices, revising operational processes, strengthening Group governance, and implementing other specific reoccurrence prevention measures in line with the committee's report.

A key component of Sharp's business philosophy is that "our future prosperity is directly linked to the prosperity of our customers, dealers and shareholders." Sharp will continue to put these words into practice by working together with all of its stakeholders to address the issues that face society and, thereby, contribute to the realization of a more sustainable society.
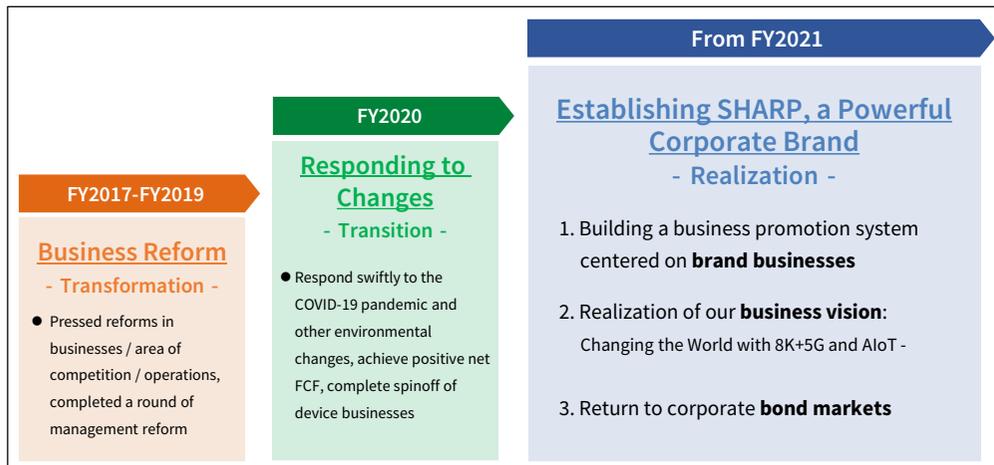
[*2] Signed in June 2009.

October 2021

Direction of Business Management

Establishing SHARP, a Powerful Corporate Brand

In the three years since fiscal 2017, Sharp has pursued transformation in the three fields of business, area of competition, and operations in order to quickly revitalize business performance and establish a firm foundation for the future. Moreover, Sharp quickly and flexibly responded to numerous environmental changes that arose in fiscal 2020 to produce even greater improvement in business performance and establish a positive balance in free cash flow and, through strategic actions such as spinning off device businesses and pursuing M&A, took decisive action to position the company for accelerated growth.

The results achieved from these will be used starting in fiscal 2021 as a foundation for building a business promotion system centered on brand businesses, for realization of our business vision, and for a return to corporate bond markets, all for the sake of establishing SHARP, a powerful corporate brand.
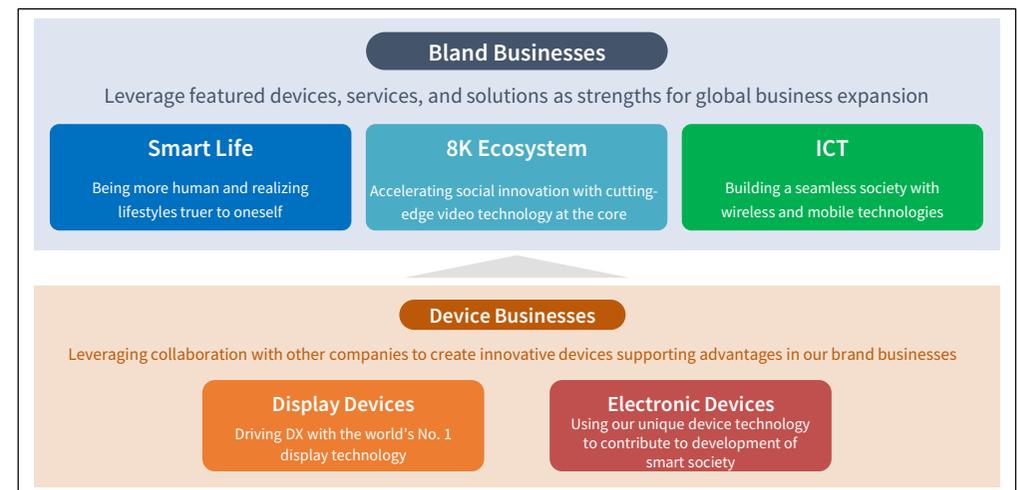

1. Building a Business Promotion System Centered on Brand Businesses

Sharp uses its three core brand businesses, along with the two device businesses that support them, in an integrated fashion to pursue "One Sharp" business. With regard to brand businesses, a key focus for Sharp is global expansion, new business creation, and stronger cost competitiveness in B2B display business. Thus, in November 2020, Sharp acquired Sharp NEC Display Solutions, Ltd. as a subsidiary in order to capitalize on its strong presence in the European and North American market. Sharp is also focused on upgrading its AIoT* strategy and, towards that end, made AIoT

platform business-driven AIoT Cloud Inc. into a wholly owned subsidiary of Dynabook Inc., which develops PC-driven IT business, thereby facilitating stronger collaborative integration within Sharp's ICT Group. For its brand businesses, Sharp will continue to actively pursue M&A and collaboration with other companies, along with stronger cooperation among its businesses, for the sake of producing featured devices, services, and solutions more quickly and expanding Sharp business worldwide.

With regard to its device businesses, Sharp has now spun them all off as separate businesses, starting with electronic devices in April 2019, display devices in October 2020, and camera modules in April 2021. Also, with the intention of accelerating development of next-generation displays, Sharp acquired the Hakusan Plant of Japan Display Inc. in October 2020, first putting the LCD panel production line into operation in February 2021. Sharp's device businesses will continue to leverage collaboration with other companies for the sake of stronger cost competitiveness and the development of innovative devices that help ensure Sharp's brand businesses maintain their competitive edge.

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Direction of Business Management

Establishing SHARP, a Powerful Corporate Brand

2. Realization of Our Business Vision

Sharp is working to realize its business vision by creating featured devices powered by cutting-edge technologies, such as 8K+5G and AIoT, which contribute to an expansion in sales globally; by creating systems that integrate this hardware with software and services; and by building a platform unique to the Sharp Group that links together different systems, with all of these facilitating Sharp's ability to provide original solutions in a variety of different areas.

As of June 30, 2021, Sharp has seen growth in its sales, centered on Japan, of a diverse range of 8K+5G equipment, including 8K TVs, 8K cameras, 8K PCs, and 8K+5G smartphones, along with AIoT devices encompassing 567 models in 11 different categories. In terms of overseas markets, Sharp has been focused on future expansion of its 8K+5G and AIoT business, with expansion in product categories and lineup being used to drive business expansion in ASEAN countries and sales structure reorganization and brand business reestablishment being implemented in Europe, the Americas, and China.

Moving forward, for Japan, Sharp is focused on smart home, smart office, and entertainment-related areas, leveraging the business foundation that it has cultivated in order to offer innovative and full-fledged services and solutions; to create new business in the areas of health, medicine, and nursing care; to further develop its factory automation solutions; to capitalize on the government's GIGA School Project in order to expand its education-oriented business; and to pursue other initiatives that will secure Sharp's position in both new and established areas of business.

Outside Japan, Sharp is focused on greater global expansion for its 8K+5G and AIoT devices, particularly in Europe, the Americas, Taiwan, and ASEAN countries, and is pursuing accelerated establishment of a business foundation for the future.

3. Return to Corporate Bond Markets

In order for Sharp to continue growing sustainably, it is essential that it build a stronger financial base. Therefore, Sharp is currently working to maximize its operating cash flows (CF) through an emphasis on quality over quantity and on reducing working capital. It is also accelerating efforts to improve investment efficiency, such as by expanding investment in brand businesses expected to provide stable revenue and by acquiring external funds in device businesses. Through these efforts, Sharp will create stable free cash flow (FCF) every year to provide appropriate shareholder returns, and it will take action to improve its financial position, such as by reducing interest-bearing debt. Sharp is also working to return to corporate bond markets in the future.

Direction of Business Management

Establishing SHARP, a Powerful Corporate Brand

Through efforts in each of the ESG areas, we will contribute to the realization of a sustainable society and seek to build a strong business infrastructure capable of supporting sustainable growth. With regard to the environment, in February 2019, Sharp formulated its long-term environmental vision, SHARP Eco Vision 2050, which establishes long-term targets for 2050 in the three areas of climate change, resource recycling, and safety and security, with the ultimate aim of helping realize a sustainable global environment. In the area of climate change, countries around the world have been accelerating their efforts in recent years, and Sharp is working to, by 2050, achieve net zero CO_2 emissions from its corporate activities and to generate clean energy in excess of the energy consumed throughout the supply chain. In order to reach these goals, Sharp is growing its energy solutions business, improving the energy-saving performance of its products, and further streamlining fuel and electricity usage in its business activities.

With regard to society, Sharp is using its business activities centered on eight priority business areas to help address various issues facing society. An example of Sharp's contribution to society is its response to the government's request for help in February 2020, when there was a severe shortage of face masks in Japan. The Sharp Group started production of masks at its Mie Plant in March, and, a little over a year later, had delivered more than 200 million masks. Other examples include a photocatalyst spray, high-performance face shields, cold-retention material that can be used for vaccine delivery, and various other health-related products that Sharp is actively developing. Sharp will continue to use such efforts focused on ensuring public health, safety, and security in order to contribute more to society. Sharp is also working on stronger initiatives to prevent and effectively address social problems, such as human rights concerns connected with the supply chain.

With regard to governance, Sharp is focused on cultivating the sort of corporate governance that leads to improved corporate value. Towards that end, it has established a special committee to review the necessity, reasonableness, and appropriateness of business dealings conducted between the Sharp Group and its parent company group and increased the number of independent outside directors. Moving forward, Sharp will pursue structural development aimed at further improving the functioning of the Board of Directors and will work to strengthen Group governance. Furthermore, Sharp will emphasize more relevant information disclosure and ongoing dialogue with stakeholders.

E | **Executing the SHARP Eco Vision 2050**

➢ Achieve net zero CO_2 emissions from our own business activities by 2050

➢ Generate clean energy in excess of the energy consumed throughout our supply chain

➢ Minimize the environmental impact of our business activities on the planet

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S | **Contributing to Society through Business Activities**

➢ Resolving social issues centered on eight business areas

➢ Promoting CSR throughout the supply chain

➢ Continuous and global social contribution

G | **Building Corporate Governance that Improves Corporate Value**

➢ Rebuilding the Board of Directors structure to improve its function
(e.g. diversification of experience, evolution/diversification of expertise)

➢ Strengthening group governance

➢ More appropriate information disclosure and continuing dialogue with stakeholders

Sharp and the SDGs

Sharp and the SDGs: Business Philosophy and the SDGs

In 1973, Sharp put into writing its business philosophy, which says the company will "contribute to the culture, benefits and welfare of people throughout the world" and that "our future prosperity is directly linked to the prosperity of our customers, dealers and shareholders." These and other vows of the business philosophy share the aims of the Sustainable Development Goals (SDGs), which the UN enacted in 2015.

Through its business philosophy, Sharp aims to contribute to the achievement of the SDGs both by providing solutions to social issues through its business and by reducing burdens on society and the environment through SER* measures, thus helping realize a better, more sustainable world in which no one on our Earth is left behind.

* SER: Social and environmental responsibility; see page 28.

Business Philosophy

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It is the intention of our corporation to grow hand-in-hand with our employees, encouraging and aiding them to reach their full potential and improve their standard of living.

Our future prosperity is directly linked to the prosperity of our customers, dealers and shareholders ...indeed, the entire Sharp family.

Sharp and the SDGs: Eight Priority Business Areas Focused on Addressing Social Issues

SMART HOME

ENTER-TAINMENT

EDUCATION

HEALTH-CARE

Changing the World with 8K+5G and AIoT

MOBILITY

SECURITY

SMART OFFICE

INDUSTRY

In line with its business vision of "Changing the world with 8K+5G and AIoT*," Sharp has worked to create an 8K+5G ecosystem, develop 5G-related business, expand its COCORO LIFE services, and strengthen its cloud services in order to move beyond business that revolves solely around hardware and devices and towards more innovative systems and solutions-focused business integrating hardware, software, and services. The aim of this business innovation is to offer the world new value as "One Sharp," which helps to address the issues facing the international community.

Each business unit and affiliated company is working to bolster Sharp's efforts not only in those business areas where it is already successfully established, namely smart homes, entertainment, and smart offices, but also in healthcare, education, security, industry, and mobility-related areas. In each of these areas, Sharp's business units and affiliated companies seek to balance business expansion with addressing social issues in such a way that will contribute to the achievement of the Sustainable Development Goals (SDGs) adopted by the United Nations in 2015.

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 AIoT is a registered trademark of Sharp.

Sharp and the SDGs: Contributing to the SDGs through Business

	Business Unit / Subsidiaries*	Related SDGs
Bland Businesses — Smart Life	Smart Appliances & Solutions BU	3 Good Health and Well-Being; 4 Quality Education; 6 Clean Water and Sanitation; 8 Decent Work and Economic Growth; 9 Industry, Innovation and Infrastructure; 12 Responsible Consumption and Production; 13 Climate Action
	Sharp Energy Solutions Corporation (SESJ)	7 Affordable and Clean Energy; 11 Sustainable Cities and Communities; 12 Responsible Consumption and Production; 13 Climate Action
Bland Businesses — 8K Ecosystem	Smart Business Solutions BU	8 Decent Work and Economic Growth; 9 Industry, Innovation and Infrastructure
	Smart Display Systems BU and Global Brand-Products BU	9 Industry, Innovation and Infrastructure; 11 Sustainable Cities and Communities
	Corporate Research & Development BU	3 Good Health and Well-Being; 4 Quality Education; 7 Affordable and Clean Energy; 8 Decent Work and Economic Growth; 9 Industry, Innovation and Infrastructure; 11 Sustainable Cities and Communities; 13 Climate Action
Bland Businesses — ICT	Mobile Communication BU	4 Quality Education; 8 Decent Work and Economic Growth; 9 Industry, Innovation and Infrastructure; 10 Reduced Inequalities
	Dynabook Inc.	3 Good Health and Well-Being; 4 Quality Education; 7 Affordable and Clean Energy; 8 Decent Work and Economic Growth; 9 Industry, Innovation and Infrastructure; 11 Sustainable Cities and Communities; 12 Responsible Consumption and Production
Device Businesses — Display Devices	Sharp Display Technology Corporation	3 Good Health and Well-Being; 4 Quality Education; 7 Affordable and Clean Energy; 9 Industry, Innovation and Infrastructure; 11 Sustainable Cities and Communities; 12 Responsible Consumption and Production; 13 Climate Action
Device Businesses — Electronic Devices	Sharp Sensing Technology Corporation	3 Good Health and Well-Being; 8 Decent Work and Economic Growth; 9 Industry, Innovation and Infrastructure
	Sharp Fukuyama Laser Co., Ltd. (SFL)	7 Affordable and Clean Energy; 9 Industry, Innovation and Infrastructure
	Sharp Fukuyama Semiconductor Co., Ltd. (SFS)	3 Good Health and Well-Being; 7 Affordable and Clean Energy; 8 Decent Work and Economic Growth; 11 Sustainable Cities and Communities; 12 Responsible Consumption and Production; 13 Climate Action

* Company name is current as of March 31, 2021

< Smart Life >   Smart Appliances & Solutions BU

Offering support through AIoT[*1] for a safe, healthy, and comfortable lifestyle.
Yielding a smart life for the near future through people-oriented AIoT.

SMART HOME

In our aim to help create a healthy and comfortable life, Smart Appliances & Solutions BU supplies end consumers and B2B customers globally with a variety of appliances, such as air conditioners, refrigerators, washing machines, microwave ovens, and air purifiers.

We offer users a safe, healthy, and comfortable lifestyle in a variety of ways by applying AIoT to conventional household appliances to match lifestyles and preferences, such as proposing healthful food recipes, ensuring safe and comfortable indoor air environments, and helping make work more rewarding by reducing household chores. We also strive to realize smart homes that integrate AIoT and storage batteries that further the use of renewable energy. These efforts help us contribute to Goals 3, 8, 9, and 13 of the SDGs.

Further, we carry out ongoing eco-friendly practices at the development stage, such as the development of low-power-consumption technology, low-resource-use design, and the active use of recycled plastics using our closed-loop material recycling technology[*2], in which products are recovered and their plastics are 100% recycled and reused multiple times in making new home appliances. In the production stage, we establish numerical objectives for each factory and work to achieve them in an effort to reduce the consumption of electricity and gas by the factories and reduce the volume of waste produced, thus contributing to Goals 9, 12, and 13 of the SDGs.

Towards Goal 6 of the SDGs, our proprietary hole-less tub washing machines save water and reduce water pollution, while our water purifiers provide users with clean, safe water.

Our electronic dictionaries contribute to Goal 4 of the SDGs.

Smart Appliances & Solutions BU will continue to develop AIoT-driven technologies and use unique creativity to develop eco-friendly products, thus bringing customers a safer, healthier, and more comfortable smart life.

< Awards and Honors >

- Judging Panel Chair Prize (Award of Excellence) in 2nd EcoPro Awards (fiscal 2019); for closed-loop material recycling of used home appliances
- Judging Panel Chair Prize (Award of Excellence) in 3rd EcoPro Awards (fiscal 2020); for COCORO AIR Service[*3] for IoT energy-efficient control of household air conditioners using weather forecasts
- METI Minister's Award in fiscal 2020 Energy Conservation Grand Prize; for Airest air-purifying household air conditioner[*4]

[*1] AIoT is a word coined by Sharp, combining the words AI (artificial intelligence) and IoT (Internet of things). AIoT is a vision for making products and services more integral to people's lives by connecting them via the cloud using AI. AIoT is a registered trademark of Sharp.
[*2] Jointly developed by Sharp and Kansai Recycling Systems Co. Ltd., an appliances recycling company invested in by Sharp and five other companies.
[*3]
[*4]

AIoT WORLD

ココロ通う、ココロつながる。

3 GOOD HEALTH AND WELL-BEING   **4** QUALITY EDUCATION   **6** CLEAN WATER AND SANITATION   **8** DECENT WORK AND ECONOMIC GROWTH   **9** INDUSTRY, INNOVATION AND INFRASTRUCTURE   **12** RESPONSIBLE CONSUMPTION AND PRODUCTION   **13** CLIMATE ACTION

< Smart Life > Sharp Energy Solutions Corporation (SESJ)

Providing eco-friendly, energy-producing solar power systems to countries around the world to help solve the pressing energy challenges we face. Making life easier with energy solutions (systems and services) that make smarter use of electricity.

SMART HOME   MOBILITY   INDUSTRY

Sharp's history of achievements in solar power systems goes back more than six decades to 1959, beginning with the words of founder Tokuji Hayakawa: "If we could find a way of generating electricity from limitless solar heat and light, that would benefit humankind to an extent we can scarcely imagine."

SESJ has kept to these words and continues to work consistently from development to sales, installation, and after-sales service in its domestic and overseas energy solutions business to contribute to achieving the SDGs.

Specifically, the expansion of installations of solar power systems on rooftops of housing and factories and mega-solar projects help us achieve goals 7 and 13 of the SDGs.

In an aim to promote the use of sustainable renewable energy sources, we also develop smart homes that integrate with people-oriented IoT home appliances. We are also creating new solutions, like self-consumption systems that smartly link solar power systems with storage batteries. These help us achieve goals 11 and 12 of the SDGs.

In fiscal 2020, SESJ added to its solar power systems track record by constructing 38 mega-solar power plants in Japan totaling approximately 112 MW-dc in capacity, and five mega-solar power plants in Vietnam and other Asian countries totaling approximately 149 MW-dc in capacity. Also, in Thailand, SESJ installed solar power systems totaling 5 MW-dc on the rooftops of two plants of MinebeaMitsumi Inc.

Meanwhile, in collaboration with TEPCO Ventures Inc., SESJ launched a solar power service (on-site PPA[*1]) for corporate customers, which provides CO_2-free electricity at reasonable cost, generated by installing solar power systems with zero upfront investment.

*1 Power Purchase Agreement model.

In the residential sector, COCORO ENERGY, a HEMS[*2] service that automatically and intelligently controls the recharging of storage batteries according to the amount of surplus electricity[*3] generated by solar power systems using AI predictions, won the Agency for Natural Resources and Energy Commissioner's Award[*4] at the 2020 New Energy Awards. This service was commended highly for its ability to increase the rate of self-consumption using AI control and for its ability to prevent power outages in response to lightning. This is a world first for a stand-alone HEMS service.

In the transportation sector, SESJ manufactured a car-mounted solar panel with a high capacity of more than 1 kW, utilizing the same cells as the world's top-class high-efficiency solar cell module (conversion efficiency: 31.17%) developed for a NEDO project[*5]. Nissan Motor Corporation produced an electric minivan equipped with these panels in order to test the technology on public roads. Through these activities, SESJ aims to create new markets for solar panels in the transportation and other sectors and to further contribute to solving the world's energy and environmental issues.

*2 Home energy management system
*3 The amount of electricity obtained by subtracting power consumption from the amount of electricity produced by a solar power system.
*4 See page 45.
*5 New Energy and Industrial Technology Development Organization

7 AFFORDABLE AND CLEAN ENERGY   11 SUSTAINABLE CITIES AND COMMUNITIES   12 RESPONSIBLE CONSUMPTION AND PRODUCTION   13 CLIMATE ACTION

MinebeaMitsumi's Lopburi Plant, Thailand

The e-NV200 electric vehicle with on-board solar panels

< 8K Ecosystem >   Smart Business Solutions BU

Providing smarter office solutions to enable work environments that are safe and secure, and where people can concentrate, thus boosting work efficiency and productivity.

SMART OFFICE

Smart Business Solutions BU solves problems faced by clients by providing them with new added value and services centered on digital MFPs and peripheral equipment such as the BIG PAD e-blackboard and TeleOffice videoconferencing system.

Japan enacted the Work Style Reform Act amidst problems such as a shrinking workforce due to an aging society and low birthrate, and the need to diversify the ways people work. The act has been expanded to cover small- and medium-sized companies. Since enactment, the world has entered a "new normal" brought on by Covid-19, which has created the need to respond to people's changing work styles, including working online from home. As well, many companies, mainly small- and medium-sized ones, are facing problems such as a shortage of IT personnel, the need to procure funding to introduce and run IT systems, and information security.

Up to now, digital MFPs focused primarily on the input/output of paper-based information. However, as work styles diversify, MFPs are transforming into comprehensive business task-support equipment that work better with cloud-based data and aim to create a work environment of optimal efficiency, regardless of the task at hand. In addition to digital MFPs, Sharp offers a wide range of hardware, including display products, PCs, and smartphones all indispensable to office work. We aim to contribute to society by improving workspace environments with total solutions that involve proposals on device usage and business task improvement.

Launched in July 2020, COCORO OFFICE uses an AIoT platform to change office equipment from mere tools to "business partners" that make work styles and efficiency more transparent. By linking various office equipment and the people who use them, it supports varied work styles and brings innovation to the office via diverse, flexible ideas.

Along the journey to create the future we all look forward to, Smart Business Solutions BU will work to respond to the needs of society for improvements to work environments, mitigation of personnel shortages, and increased office productivity. We will not only continue with the technological development of hardware, but also work to optimize service platform and application solutions. In the future, we will go beyond simply improving office information security and task efficiency; we will contribute to the creation of a more pleasant work environment that will form the foundation of our new information society.

COCORO OFFICE

COCORO OFFICE で、働き方に変革を。

8 DECENT WORK AND ECONOMIC GROWTH

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

< 8K Ecosystem >   Smart Display Systems BU and Global Brand-Products BU

Building an 8K+5G Ecosystem and AIoT World through the development and expanded sales of AV products to provide solutions for a more convenient and comfortable lifestyle.

ENTER-
TAINMENT

SMART
HOME

The Smart Display Systems BU and Global Brand-Products BU come out with products offering new lifestyles in audio/video.

Since releasing the world's first ultra-HD-compatible (8K) 85-inch LCD[1] in 2011, we have continued to come out with 8K technologies for exquisite, vivid images. In September 2020, we announced a 120-inch 8K display, among the largest in the world[2].

Measuring 2.66 m x 1.5 m (W x H), the display shows incredibly realistic textures and depth of scenery, making it ideal for signage in commercial facilities such as stores and showrooms, digital exhibits of paintings and sculptures, and public viewings of events.

We are also coming out with new-category products in the field of audio. Our 8A-C22CX1 Theater Bar System announced in August 2020 is the industry's first soundbar[3] to support the 22.2-channel audio input of MPEG-4 AAC, the audio format for NHK BS 8K broadcasts. The Theater Bar System uses OPSODIS[4] 3D sound technology, which employs proprietary audio processing to totally envelope the user in sound.
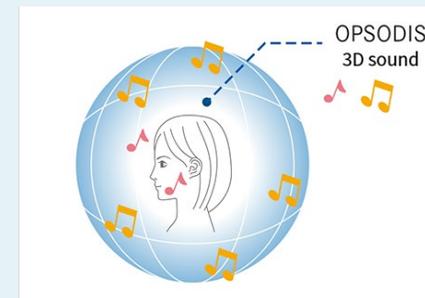
We are also offering COCORO VISION for AIoT-compatible AQUOS TVs, which introduces viewers to information on making life at home more fun. This service recommends video content on a variety of hobby, learning, and health topics that you can easily put to use at home, along with the latest entertainment information on popular TV shows and movies. Users get handy lifestyle information delivered to them on their large AQUOS screens.

We will continue to develop carefully thought-out products to provide solutions for exciting new lifestyles.

[1] For direct-view displays compatible with ultra-HD (as of May 19, 2011; based on Sharp research).
[2] For displays using an 8K LCD panel (as of September 9, 2020; based on Sharp research).
[3] For theater bar systems/soundbars that connect to TVs (as of June 26, 2020; based on Sharp research).
[4] A 3D sound reproduction technology jointly developed by the Technical Research Institute of Kajima Corporation and the Institute of Sound and Vibration Research at the University of Southampton, U.K.

8M-B120C 120-inch 8K display

8A-C22CX1 Theater Bar System

OPSODIS 3D sound effect (conceptual image)

COCORO VISION home page

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

11 SUSTAINABLE CITIES AND COMMUNITIES

< 8K Ecosystem >   Corporate Research & Development BU

By using society-changing, proprietary, world-first, and world's-best technology to build entirely new ecosystems and create and expand new businesses, we are contributing to a sustainable society.

INDUSTRY

Corporate Research & Development creates proprietary technologies that become the core of new business as it aggressively strives to solve the social issues of a new era through innovative services and solutions that support society's new normal.

An example of a new solution is the triplet-lens camera rebar arrangement inspection system, which Sharp developed in cooperation with a partner company for civil engineering. With an 8K camera and high-precision measuring and image-processing technology, it reduces labor needed for infrastructure inspection, remote inspection, and maintenance work, thus contributing to digital transformation (DX) of construction work.

For municipal governments, we are constructing a new DX platform by doing demonstration experiments in which 8K ultra-detailed images are transmitted in real time using 5G. An example is a drone with 8K camera that makes infrastructure inspections more efficient and saves labor when assessing damage after accidents and disasters.

5G communications hold promise for application in a wide range of industrial fields. Sharp holds 1,497 patent families under the licensing declaration for 5G wireless communication standards (ranked first in Japan, 10th in the world; as of June 2021*).

To help achieve a society where people can live in safety and peace of mind, we are focusing on goals 3, 4, 7, 8, 9, 11, and 13 of the SDGs.

* Based on research by a third-party institute

Triplet-lens camera rebar arrangement inspection system

Inspecting rebar arrangement

8K-camera drone on an aerial inspection

3 GOOD HEALTH AND WELL-BEING

4 QUALITY EDUCATION

7 AFFORDABLE AND CLEAN ENERGY

8 DECENT WORK AND ECONOMIC GROWTH

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

11 SUSTAINABLE CITIES AND COMMUNITIES

13 CLIMATE ACTION

SHARP Sustainability Report 2021

< ICT >   Mobile Communication BU

Using communication technology to build a society where everyone has an equal opportunity to find decent work and education.

EDUCATION   SMART OFFICE

Mobile Communication aspires to be a people-oriented business unit that leverages communication technology to keep on producing new value and providing products and services, such as smartphones, tablets, and various networked products that inspire people around the world to live more joyful lives.

Modern-day Japan is facing a variety of challenges and changes: a diminishing workforce due to low birthrates and an aging population, diversifying work styles to accommodate birth, childcare, and family care needs, and a changing social environment brought on by the global Covid-19 pandemic. These are accelerating work style reforms made possible by telecommuting, remote and non-contact solutions, and the proliferation of DX. On the education front, Japan is stepping up the shift to ICT learning, as exemplified by the GIGA School Program of the Ministry of Education, Culture, Sports, Science and Technology (MEXT). Mobile Communications is advancing communications networks, such as the 5G services that began in the spring of 2020, and developing products and services that use the knowhow built up through our business over the years.

In fiscal 2020, we developed a number of notable products. These include the SH-T01 tablet for corporate users providing convenience and security in situations such as working from home and visiting customers on-site; the Dynabook Chromebook C1, jointly developed using Sharp's communications technologies and Dynabook Inc.'s IT technologies, which helps advance ICT in education, for example in Japan's GIGA School Program, by offering the operability of a normal laptop in a tablet with a folding display; and the SH-52B Wi-Fi Station 5G mobile router for NTT Docomo Inc., which fits in the palm of your hand and serves everyone from business to personal users thanks to its ability to connect to 5G networks and thus make it possible to join online meetings from anywhere, download and send large files, and enjoy video.

Mobile Communications will continue to offer high-value-added products and solutions that free working people from the constraints of time and place, and that pique the interest and fascination children have in learning by creating a mutual and cooperative learning model that allows them to autonomously and cooperatively learn in an easy-to-understand classroom environment.

Dynabook Chromebook C1

SH-T01 tablet for corporate users

SH-52B Wi-Fi Station 5G mobile router for NTT Docomo

4 QUALITY EDUCATION   8 DECENT WORK AND ECONOMIC GROWTH   9 INDUSTRY, INNOVATION AND INFRASTRUCTURE   10 REDUCED INEQUALITIES

< ICT >   Dynabook Inc.

Dynabook is making people's lives and society better by "changing the world through computing and services," developing "true computing that reflects real needs and that supports communities," and offering "new added value and services developed from the user's standpoint."

EDUCATION

SMART OFFICE

Dynabook is a business corporation that develops, manufactures, sells, supports, and services personal computers and system solutions products. With the vision "Changing the world through computing and services," we are pursuing the fusion of hardware ("dynabook as a Computing") and services ("dynabook as a Service") and strengthening the technology that supports this endeavor as we expand our business globally. The contributions of our business and services to the SDGs span across the fields of education, energy, decent work, economic growth, industrial and technological innovation, infrastructure, and recycling.
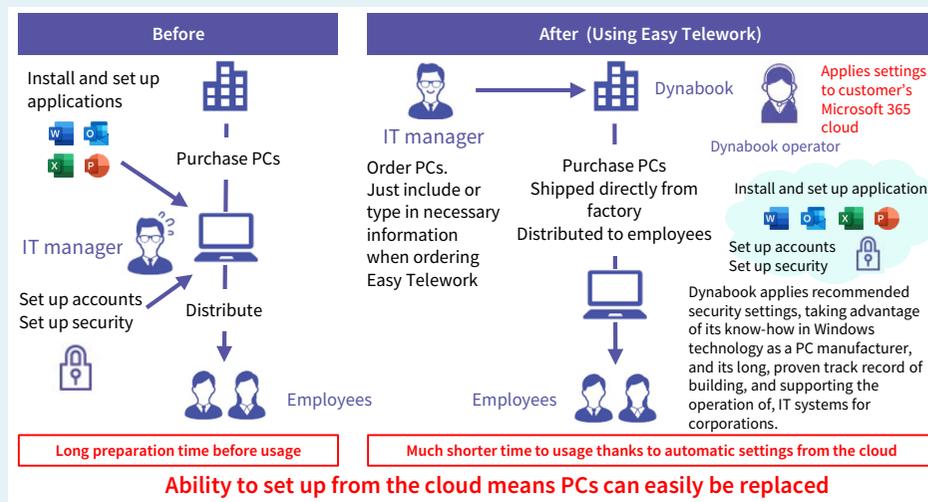In the realm of services and solutions, Dynabook is combining computing and cloud services to offer new added value required in today's new normal brought on by the Covid-19 pandemic, which has dramatically changed the way people work and live. With people increasingly working from home, more customers are moving their IT environment to the cloud.
In fiscal 2020, Dynabook launched its "Easy Telework Starter Pack," a one-stop package offering a cloud environment for working from home that features user ID management, the ability to create application usage environments, and maintain security. Using computing technologies accumulated through years as a PC manufacturing company, and knowhow gained by building corporate IT environments, Dynabook is offering the "Dynabook Cloud Platform & Cloud Service" for use on the Microsoft Azure* cloud computing service.
In hardware, Dynabook offers a substantial laptop lineup with advanced functions that support customers' changing work styles. The company has released the dynabook V5-in-1 Premium laptop in response to users' need to work without constraints on time and place, and the dynabook K60 2-in-1 detachable PC to facilitate ICT advances in education. By stepping up solution services while keeping firmly grounded in hardware, Dynabook is developing and launching products that that help people live, study, and work better.

To be a company that supports and serves people, Dynabook will continue to face social challenges squarely and propose products and services with new added value that will deliver enhanced quality to communities and individuals through the fusion of "dynabook as a Computing" and "dynabook as a Service."
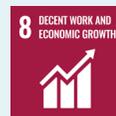
* Azure is a registered trademark or trademark of Microsoft Corporation in the U.S. and other countries

Before	After (Using Easy Telework)
Install and set up applications	Dynabook / Applies settings to customer's Microsoft 365 cloud
Purchase PCs	IT manager — Order PCs. Just include or type in necessary information when ordering Easy Telework / Dynabook operator
IT manager — Set up accounts / Set up security	Purchase PCs Shipped directly from factory / Distributed to employees / Install and set up applications / Set up accounts / Set up security
Distribute	Dynabook applies recommended security settings, taking advantage of its know-how in Windows technology as a PC manufacturer, and its long, proven track record of building, and supporting the operation of, IT systems for corporations.
Employees	Employees
Long preparation time before usage	**Much shorter time to usage thanks to automatic settings from the cloud**

Ability to set up from the cloud means PCs can easily be replaced

Easy Telework Starter Pack

「dynabook V」

「dynabook K60」

Laptop lineup

3 GOOD HEALTH AND WELL-BEING

4 QUALITY EDUCATION

7 AFFORDABLE AND CLEAN ENERGY

8 DECENT WORK AND ECONOMIC GROWTH

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

11 SUSTAINABLE CITIES AND COMMUNITIES

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

SHARP Sustainability Report 2021

< Display Devices >   Sharp Display Technology Corporation

Using display technology to build an 8K+5G Ecosystem and AIoT World.
Offering solutions—through high-definition, energy-efficient, environmental durability, high-speed drive technology—to the social challenges of healthcare, education, infrastructure, and self-driving, as they evolve in an AIoT society.

HEALTH-CARE   EDUCATION   MOBILITY

Sharp Display Technology Corporation currently develops, manufactures, and sells display modules for a variety of uses.

Among these, an LCD that utilizes IGZO[1], an oxide semiconductor that we were the first in the world to successfully mass produce[2] in March 2012, is notably characterized by its 1) high definition, 2) high-speed drive, 3) low power consumption, and 4) versatility in design. This LCD technology has found wide applications, including in personal devices such as smartphones, tablets, and laptops, and automotive displays, as well as in industrial equipment and commercial displays.

Ever since the start of the worldwide Covid-19 pandemic in early 2020, our lives have undergone dramatic changes. As our routines adapt to what is being called the new normal, people are using IT networks for both business and daily life as we work, study, get medical care, shop, and make payments online. Amidst this new wave, displays are taking on increasingly crucial roles.

In response to these changes, Sharp is stepping up development of IGZO and other display technologies. We continue to be flexible in meeting the world's many changes and advances. Recent products include the Transparent Display Partition, winner of the Grand Prix in the New Normal Solutions category of the 2020 CEATEC Awards; a low-power-consumption reflective IGZO display that uses ambient light instead of a backlight for the light source; a high-definition 8K display for medical use; and the IGZO OLED display, the first in the world[3] to support refresh rates from 1 to 240 Hz and used in the AQUOS R6 5G-compatible smartphone, which Sharp released in June 2021.

In its quest to build an 8K+5G Ecosystem and AIoT World, Sharp is continuously advancing technologies that meet the world's needs and giving new value to displays. These efforts are aimed at building a prosperous society where everyone can live safely and securely and at advancing a variety of business fields towards achievement of the SDGs.

[1] An oxide semiconductor comprising indium, gallium, zinc, and oxygen
[2] Mass produced through joint development with Semiconductor Energy Laboratory Co., Ltd.
[3] For smart phones, as of May 17, 2021; based on Sharp research.

Transparent Display Partition

Reflective IGZO display (educational tablet)

3 GOOD HEALTH AND WELL-BEING   4 QUALITY EDUCATION   7 AFFORDABLE AND CLEAN ENERGY   9 INDUSTRY, INNOVATION AND INFRASTRUCTURE   11 SUSTAINABLE CITIES AND COMMUNITIES   12 RESPONSIBLE CONSUMPTION AND PRODUCTION   13 CLIMATE ACTION

< Electronic Devices >   Sharp Sensing Technology Corporation

Contributing to a safe and secure society by making camera modules that don't just take pictures but also recognize what's in them.

SECURITY

HEALTH-CARE

Sharp Sensing Technology develops and markets camera modules and 3D facial recognition modules for smartphones, tablets, and other IT equipment. In 2000 Sharp released the world's first mobile phone with a camera, which was equipped with a camera module developed by Sharp Sensing Technology. The camera module we developed at that time had a resolution of only 0.1 megapixel, but we pursued higher and higher image quality and eventually achieved mass production of a camera module with a 1-inch, 20.2 megapixel sensor in June 2021, which gives image quality equivalent to that of a single-lens-reflex camera.

While the size of the smartphone market has stabilized, products have become equipped with gradually more lenses and higher performance, with the first dual camera model coming out in 2014, triple camera model in 2016, and quad camera model in 2018. The market is forecast to continue growing by 7% annually (market value).

With advances in sensing and AI technology has come the advent of devices with the ability to recognize and distinguish beyond the human eye's ability. In this new and growing recognition sensor market, Sharp Sensing Technology is focusing on the non-contact market necessitated by the persistence of Covid-19. Measures to stop contagions will likely continue for some time, and we intend to meet society's needs with the following technologies.

1. **Technologies for avoiding contact (Applications: Door keys, delivery box keys, electronic payments, etc.)**
   Using individual recognition modules that can distinguish people with high accuracy thanks to facial photos that incorporate 3D data instead of conventional 2D data, build non-contact systems for identifying users without the need for fingerprints or IC cards.

2. **Technologies for avoiding the three Cs (closed spaces, crowded places, close-contact settings) (Applications: Remote training, e-commerce, etc.)**
   Use virtual reality (VR) technology to show users how to assemble products using 3D product information, and augmented reality (AR) technology to coordinate actual camera images with 3D virtual reality products.

By coming out with solutions that fuse various sensing technologies with camera modules at the core, we are contributing to the realization of a society where people can live in safety and peace of mind.

Smartphone with 1-inch sensor cameral module

Smartphone with multiple camera modules

3 GOOD HEALTH AND WELL-BEING

8 DECENT WORK AND ECONOMIC GROWTH

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

< Electronic Devices >   Sharp Fukuyama Laser Co., Ltd. (SFL)

Laser business: Contributes to the creation of lifestyles for the new normal by developing laser modules that realize VR and AR technologies

Semiconductor business: Aggressively expands production capacity in order to contribute to the growth of a semiconductor industry that sustainably supports the foundations of society.

INDUSTRY

SFL contributes to the creation of numerous products by developing and manufacturing laser devices and modules and carrying out semiconductor wafer foundry business.

Laser business: SFL is the only manufacturer that can provide laser devices in the three primary light colors of RGB[*1]. It contributes to the creation of new lifestyles by developing and manufacturing, for example, laser modules that make possible colorful, realistic images to use in next-generation displays such as smart glasses[*2] that apply VR and AR[*3] technologies; and high-powered lasers used for stage lighting and for creating the wiring on circuit boards in 5G-compatible products.

Semiconductor business: As a wafer foundry manufacturer responding to the vibrant demand for semiconductors, SFL develops production processes and expands manufacturing capacity for driver ICs[*4] used in LCDs and analog ICs[*5] for power supply control that make electronic products more energy efficient. In the process, SFL contributes to the growth of a semiconductor industry that sustainably supports the foundations of society.

These businesses drive industrial and technological innovation, and through the contributions we make to building a healthy and comfortable society for all, we are working to improve the social value of our company.
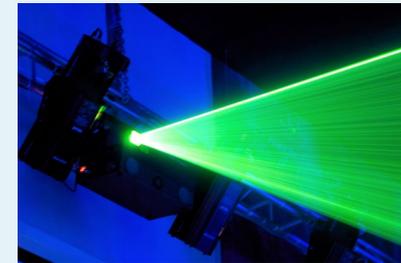
[*1] RGB: Red, green, and blue, the three primary colors
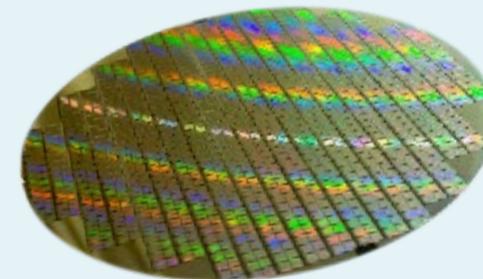[*2] A head-mounted, wearable device for virtual and augmented reality
[*3] VR: Virtual reality; AR: Augmented reality
[*4] Integrated circuits that send the electrical signals that operate LCDs and similar products
[*5] Integrated circuits responsible for processing analog signals and controlling power supply and movement

Laser device and application products

Semiconductor integrated circuit

< Electronic Devices > Sharp Fukuyama Semiconductor Co., Ltd. (SFS)[1]

To achieve Sharp's vision of changing the world with 8K+5G and AIoT, SFS is contributing to the advancement of Japan's semiconductor industry by creating specialized devices.

INDUSTRY   MOBILITY   SECURITY

SFS[1] creates the various key devices that underpin Sharp's unique products. We currently develop and sell the devices and modules that are the technological infrastructure for 8K and AIoT.
8K technology is not simply limited to TV broadcasting. Because it handles an overwhelmingly large amount of data, there are other anticipated applications for it in various industrial fields, such as infrastructure maintenance, safety monitoring, and remote medicine. Moreover, sensors are an indispensable part to achieving an IoT society.
In addition to ① LSI (8K SoC), needed for 8K image processing, and CMOS image sensors (8K CIS), the entry point for images, we have an assortment of products, including ② various sensors (such as optical sensors), and ③ IoT modules.

① CMOS image sensors (CIS) are semiconductor devices for capturing images and represent a key device of SFS. Used in all digital cameras, they are an important electronic device that is key to image quality. Sharp has a long history of developing, manufacturing, and selling image sensors. Incorporating the proprietary technologies and know-how built up over the years, these high-quality devices from SFS are used in numerous applications and add greater value in many realms of society.

② SFS develops various sensors incorporating optoelectronics technology, such as proximity sensors, ToF sensors, and dust sensors. Two electronic devices widely used in familiar products are ToF sensors, found in refrigerators, humidifiers, and robotic vacuum cleaners, for example, and proximity sensors, used in products including smartphones and TWS[2] earbuds. With these sensors expected to be used in more and more areas of our daily lives, SFS continues its efforts to create a better society.

③ IoT modules can easily be incorporated into a wide range of products to give them IoT capabilities. Combined with different kinds of sensors, they can, for example, provide location information and equipment operational status information in industrial devices that are critical to management and control, and go into onboard equipment and security terminals. Integrated with 5G communications technologies, ultra-low standby power consumption technologies, and energy harvesting power sources, IoT modules can contribute to the realization of IoT services that ensure no electricity disruptions or stoppages in places where electricity is hard to procure.
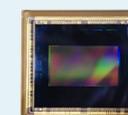
These businesses drive industrial and technological innovation, and through the contributions we make to building a healthy and comfortable society for all, we are working to improve the social value of our company.

[1] Company name is current as of March 31, 2021
[2] TWS: True wireless stereo

8K SoC

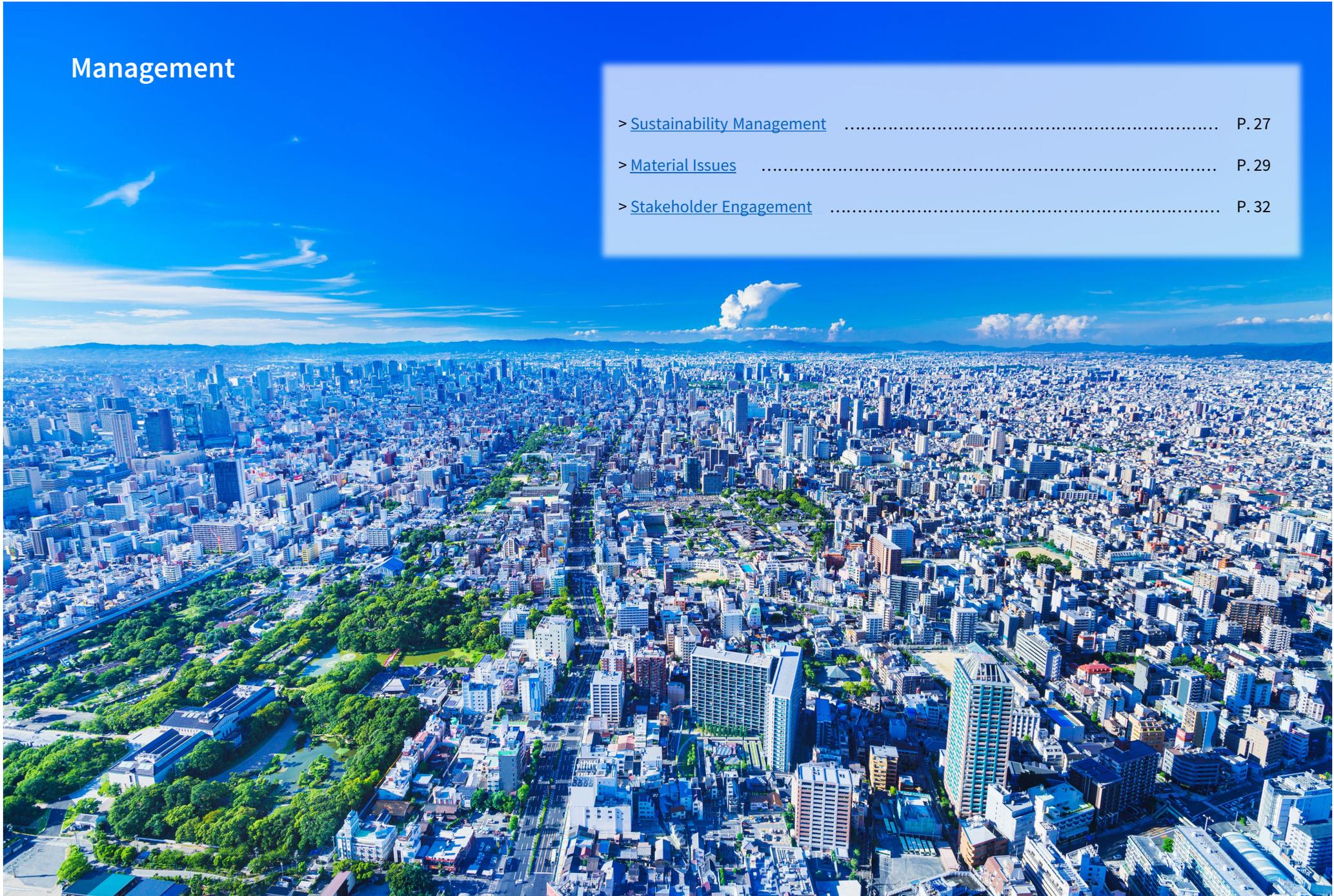CMOS image sensor

Various sensors (optical sensor, others)

IoT module

3 GOOD HEALTH AND WELL-BEING   7 AFFORDABLE AND CLEAN ENERGY   8 DECENT WORK AND ECONOMIC GROWTH   11 SUSTAINABLE CITIES AND COMMUNITIES   12 RESPONSIBLE CONSUMPTION AND PRODUCTION   13 CLIMATE ACTION
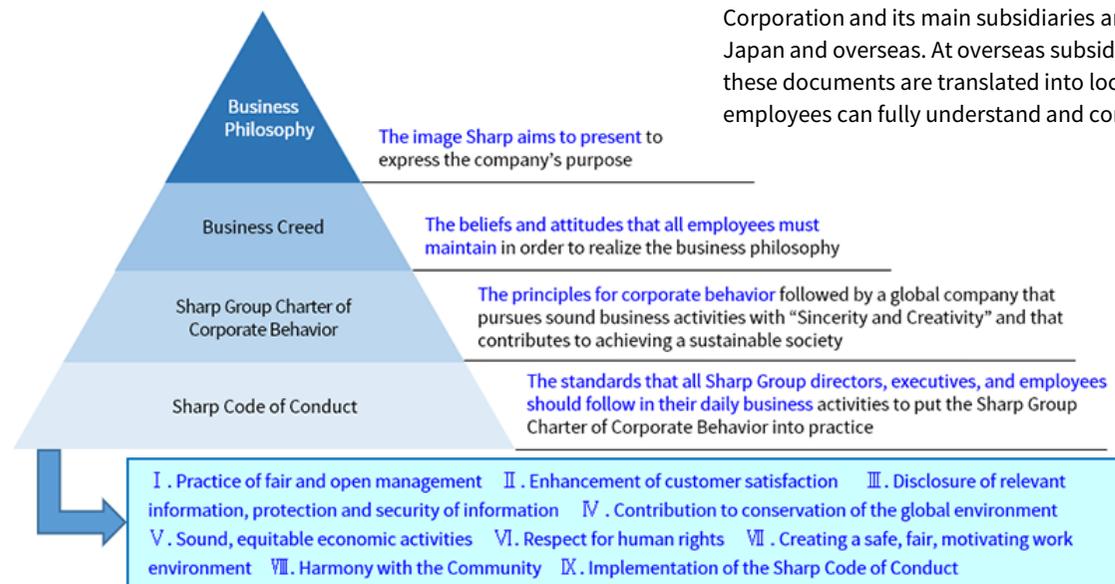
Management

Management: Sustainability Management

Basic Policy on Sustainability

It has been Sharp's business philosophy since its founding to "contribute to the culture, benefits and welfare of people throughout the world" and to understand that "our future prosperity is directly linked to the prosperity of our customers, dealers and shareholders." Based on this business philosophy Sharp has continued to meet the expectations and requirements of society and its stakeholders, and these aspirations for sustained mutual growth of the company and society are maintained as Sharp's basic philosophy on sustainability.

Related Information: > Business Philosophy and Business Creed

Business Philosophy — The image Sharp aims to present to express the company's purpose

Business Creed — The beliefs and attitudes that all employees must maintain in order to realize the business philosophy

Sharp Group Charter of Corporate Behavior — The principles for corporate behavior followed by a global company that pursues sound business activities with "Sincerity and Creativity" and that contributes to achieving a sustainable society

Sharp Code of Conduct — The standards that all Sharp Group directors, executives, and employees should follow in their daily business activities to put the Sharp Group Charter of Corporate Behavior into practice

Ⅰ. Practice of fair and open management　Ⅱ. Enhancement of customer satisfaction　Ⅲ. Disclosure of relevant information, protection and security of information　Ⅳ. Contribution to conservation of the global environment　Ⅴ. Sound, equitable economic activities　Ⅵ. Respect for human rights　Ⅶ. Creating a safe, fair, motivating work environment　Ⅷ. Harmony with the Community　Ⅸ. Implementation of the Sharp Code of Conduct

Related information: > Sharp Group Charter of Corporate Behavior, Sharp Code of Conduct

Sharp Group Charter of Corporate Behavior and the Sharp Code of Conduct

To concretize its business philosophy and business creed, the company has set out the Sharp Group Charter of Corporate Behavior to serve as the principles of behavior for Sharp Group companies, and the Sharp Code of Conduct to serve as a standard for all directors and employees. Sharp works to ensure that these guidelines permeate the Group as fundamental sustainability policies, and that the Group takes appropriate and sincere action in all of its business endeavors with a high ethical standard and full compliance with the law.
Resolutions and revisions regarding the adoption of the Sharp Group Charter of Corporate Behavior and the Sharp Code of Conduct are issued by the boards of directors of Sharp Corporation and its main subsidiaries and affiliate companies in Japan and overseas. At overseas subsidiaries and affiliates, these documents are translated into local languages so that employees can fully understand and comply with them.

These documents have been periodically reviewed and revised to accommodate changes in the business environment, including changes in stakeholder expectations as well as the establishment of new laws and revisions to existing ones. Such revisions are made known throughout the Sharp Group via internal notices.
To deepen understanding of the Sharp Code of Conduct and ensure that all executives and employees act in accordance with it, an e-learning compliance workshop based on the Sharp Code of Conduct is held every year.
In fiscal 2020, Sharp carried out the Sharp Code of Conduct compliance workshop for eligible employees at Sharp Corporation, 14 consolidated and non-consolidated subsidiaries in Japan, and six affiliate companies as well as eligible labor union members. This online workshop saw participation by about 19,000 employees.
The training covered a range of areas and how to deal with issues related to them, including conducting business activities in line with the Sharp Code of Conduct, the whistleblowing system, labor and human rights issues such as discrimination and harassment, competition laws, bribery and corruption, personal information protection, compliance with the Act against Unjustifiable Premiums and Misleading Representations, and information security.
The compliance workshop will continue to be held and expanded in content with the goal of ensuring that employees have a better understanding of compliance and fostering awareness for potential problems and ways to prevent them.

SHARP Sustainability Report 2021

Management: Sustainability Management

Sustainability Policy and Implementation System

In line with Sharp's basic philosophy and policy towards sustainability and amidst its efforts spanning a broad scope, Sharp defined the topics considered particularly important in mitigating impacts on society and the environment as its SER (Social and Environmental Responsibility) and formulated its SER Policy in August 2016.

> **SER Policy**
>
> 1. **Value the rights of employees and ensure their health and safety.**
> 2. **Fulfill environmental responsibilities in business activities and manufacturing processes.**
> 3. **Build and operate an SER management system based on international standards, regulations, and client requests.**

Furthermore, beginning in fiscal 2018, Sharp has positioned its role to contribute to the achievement of the Sustainable Development Goals (SDGs)—adopted by the UN in September 2015 with major expectations placed on corporations—in its medium- to long-term vision, and is moving forward with those efforts.

Beginning in fiscal 2019, Sharp is accelerating its efforts towards this medium- to long-term vision through a two-pronged approach of creating solutions to social problems through business and technological innovation, and reducing the social and environmental toll of its business activities through actionable SER measures in line with the SER Policy. Sharp is making efforts through a fundamental strategy of proceeding with sustainable management aimed at the achievement of the SDGs.

Sharp will continue to step up its efforts in ESG (environmental, social, and governance) and improve its ESG rating, while at the same time building a solid management foundation to support sustainable growth and contributing to the realization of a sustainable society.
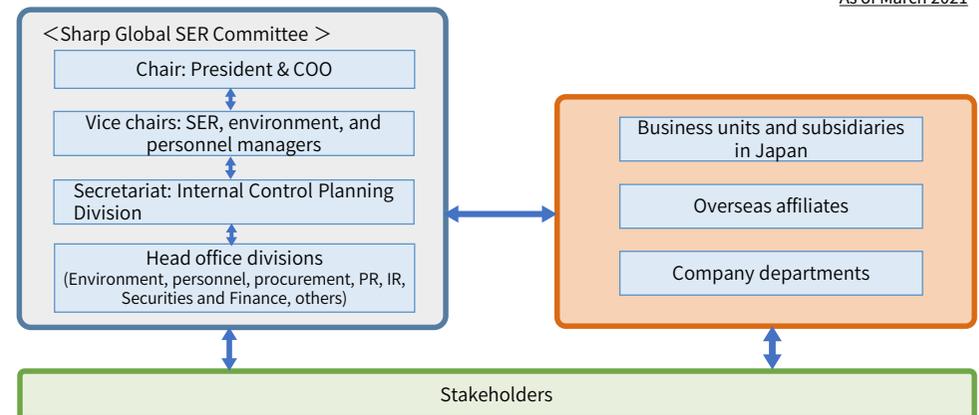
To execute these policies and manage them in a PDCA cycle, the company launched the Sharp

Global SER Committee (SGSC), which is chaired by the President & COO of Sharp and comprises members of top management, Head Office divisions such as environment, personnel, and procurement, business units, and subsidiaries. The SGSC engrains policies and visions into the Sharp Group, discusses crucial measures, and shares the latest trends in social issues.

< **Organization for Sustainability Management** >　　　As of March 2021

Management: Material Issues

Identifying Material Issues

A spate of international long-term goals that seek solutions for social issues at the global level, such as the Sustainable Development Goals (SDGs) and the Paris Agreement[1], have been announced, and there is a growing interest in human rights issues such as forced labor in global supply chains. As such, expectations continue to grow for companies to put forth an effort to address these goals and issues.

Against this backdrop, Sharp, in its aim to contribute to achieving these goals to solve global-level social issues, is identifying material issues for the Sharp Group from a medium- to long-term perspective and is carrying out initiatives for sustainable management.

In identifying the material issues, the more crucial issues were selected after reviewing management policy, business strategy, the SDGs, and international guidelines and principles, such as the UN Global Compact, as well as the opinions and expectations of various stakeholders, the effect of Sharp's business activities on stakeholders, and the results of assessments by ESG research and rating institutions.

The major CSR themes selected were mapped along the two axes of "importance to society (level of stakeholder expectations)" and "level of importance to the Sharp Group," and the issues to be prioritized were identified.
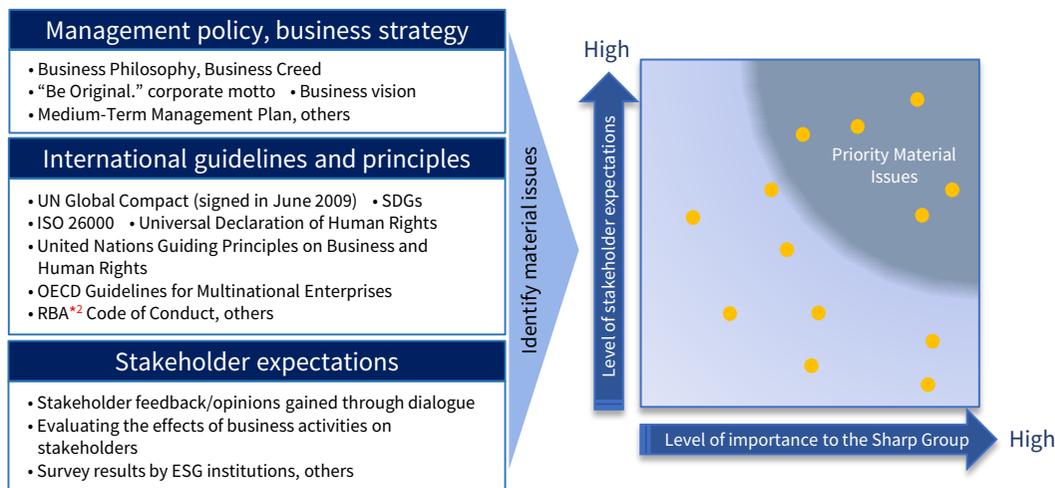
Moreover, Sharp is positioning the strengthening of governance as the basis for all of its corporate activities. It is organizing the identified material issues along the two perspectives of offering solutions to social issues through innovation and reducing the social and environmental impact of its business activities.

[1] An international framework for the prevention of global warming agreed on at the 21st yearly session of the Conference of the Parties to the 1992 United Nations Framework Convention on Climate Change (COP21), held in Paris in 2015. The agreement was to hold the increase in the global average temperature to well below 2°C above pre-industrial levels.

[2] RBA: Responsible Business Alliance. Founded in 2004 by a group of leading electronics companies including Hewlett-Packard, IBM, and Dell, the RBA, formerly the Electronic Industry Citizenship Coalition (EICC), has a code of conduct covering the social, environmental, and ethical responsibilities in the global supply chain of its members in the electronics and a wide range of other industries.

[3] See page 34.

Related information: > United Nations Global Compact

Management policy, business strategy

- Business Philosophy, Business Creed
- "Be Original." corporate motto   • Business vision
- Medium-Term Management Plan, others

International guidelines and principles

- UN Global Compact (signed in June 2009)   • SDGs
- ISO 26000   • Universal Declaration of Human Rights
- United Nations Guiding Principles on Business and Human Rights
- OECD Guidelines for Multinational Enterprises
- RBA[2] Code of Conduct, others

Stakeholder expectations

- Stakeholder feedback/opinions gained through dialogue
- Evaluating the effects of business activities on stakeholders
- Survey results by ESG institutions, others

Identify material issues

Level of stakeholder expectations — High

Priority Material Issues

Level of importance to the Sharp Group — High

Solutions to social issues through innovation

Smart Life	Being more human and realizing lifestyles truer to oneself
8K Ecosystem	Accelerating social innovation with cutting-edge video technology at the core
ICT	Building a seamless society with wireless and mobile technologies
Display Devices	Driving DX with the world's No.1 display technology
Electronic Devices	Using our unique device technology to contribute to development of smart society

Reducing the social and environmental impact of Sharp's business activities

Labor and Human Rights
- Ensuring the health and safety of employees by preventing overwork
- Preventing harassment
- Respect for human rights

Environment
Efforts towards SHARP Eco Vision 2050 long-term environmental vision[3]
- Climate change (achieving a carbon-free society)
- Resource recycling (achieving a circular economy)
- Safety and security (thorough management of chemicals)

Supply Chain Management
- ESG risk management across the entire supply chain
- Responsible mineral procurement

Strengthening governance

Corporate governance, risk management, compliance, information security, others

SHARP Sustainability Report 2021

Management: Material Issues

Monitoring Material Issues

Sharp is monitoring the integration of identified material issues at the level of specific and measurable actionable policies.

Regarding solutions to social issues through innovation, Sharp has established a medium- to long-term vision*1 for each business unit and subsidiary to contribute to achieving the SDGs. Progress on this vision is reported and confirmed.

For the reduction of the social and environmental impact of Sharp's business activities, each year Sharp formulates company-wide SER priority policy guidelines. Each business unit and subsidiary selects priority measures that are crucial to their operations, sets SER measures (including goals, KPIs, scope, and action plans), makes efforts to achieve them, and conducts self-assessments each quarter.

The Sharp Global SER Committee performs ongoing follow-ups on the progress of implementation of the SER measures for each business unit and subsidiary. Company-wide progress is shared and evaluated. The fiscal 2020 SER measures progressed largely as planned in all business units and subsidiaries. However, the topics with remaining issues and the measures to be taken for improvement are being reviewed.

Moreover, regarding the strengthening of governance, in addition to confirming the status of efforts at company-wide meetings for each of the topics, the responsible divisions for each topic sets and pushes forward with annual goals. The goals and achievements are disclosed on the relevant pages of the "Governance" section*2 of the Sharp Sustainability Report.

*1 See pages 11 to 25 (Sharp and the SDGs).
*2 See pages 119 to 135 (Governance).

■ **Fiscal 2020 Company-Wide SER Priority Policy Guidelines**

SER Measures	Scope	Related SDGs
Restrict long working hours that can lead to health problems	All employees in Japan	
Prevent harassment	All employees in Japan	
Respect for human rights at overseas bases	All employees at overseas bases	
Respond to new initiatives in responsible minerals procurement	Applicable business units	
Carry out SER performance surveys/audits at Sharp plants based on international SER standards (RBA*3 Code of Conduct)	All production sites and consolidated production subsidiaries in Japan	
Carry out SER surveys on an ongoing basis at suppliers in accordance with SDGs/ESG	Suppliers	
Reduce and recycle waste	All production sites	
Suppress greenhouse gas emissions associated with business activities	All production sites	
Suppress greenhouse gas emissions associated with product use (Make products more energy-efficient)	Product-related business units	
Comply with EU RoHS Directive*4 (eliminate the use of restricted substances) and WEEE Directive*5 (use of recycled materials)	All business units	

*3 RBA: Responsible Business Alliance. Founded in 2004 by a group of leading electronics companies including Hewlett-Packard, IBM, and Dell, the RBA, formerly the Electronic Industry Citizenship Coalition (EICC), has a code of conduct covering the social, environmental, and ethical responsibilities in the global supply chain of its members in the electronics and a wide range of other industries.
*4 RoHS: Restriction of Hazardous Substances. An EU directive on the restriction on the use of certain hazardous substances in electrical and electronic equipment.
*5 WEEE: Waste Electrical and Electronic Equipment. An EU directive on waste electrical and electronic equipment.

Management: Material Issues

Risk Evaluation in Line with International Standards

Sharp believes that to ensure global business expansion is accompanied by the creation of a sustainable society, it is extremely important to conform to international standards.
Since fiscal 2015, the Sharp Group has been using the Sharp Supply-Chain CSR Deployment Guidebook, which was created in line with the RBA* Code of Conduct (an international standard), as the guideline for its activities. It has been carrying out ongoing self-assessment surveys of Sharp production sites in Japan and overseas.
These surveys are carried out based on the RBA's Self-Assessment Questionnaire and serve as a review and assessment of the status of SER-related activities at Sharp's production sites. Sharp has added guidance to the self-assessment survey on things like the purpose of each question and the desirable implementation level of management measures in order to use the survey as a means of facilitating better understanding of international CSR standards among local managers.
In fiscal 2020, the survey was carried out at 28 plants in Japan and overseas. Following the survey, the answers to each question about activity status are scored (on a 100-point scale) according to Sharp's independent criteria, and the level of activity in each area is ranked from A to D. Feedback is then provided to each site.
Survey responses from the bases are reviewed by head office functional divisions. If it is determined that a base's efforts are inadequate or latent risks exist, the base in question is interviewed and provided with guidance for undertaking necessary improvement activities.
As a result, the average score for all factories in fiscal 2020 was 91.1 (A rank), which was even higher than last year's survey score (90.7).
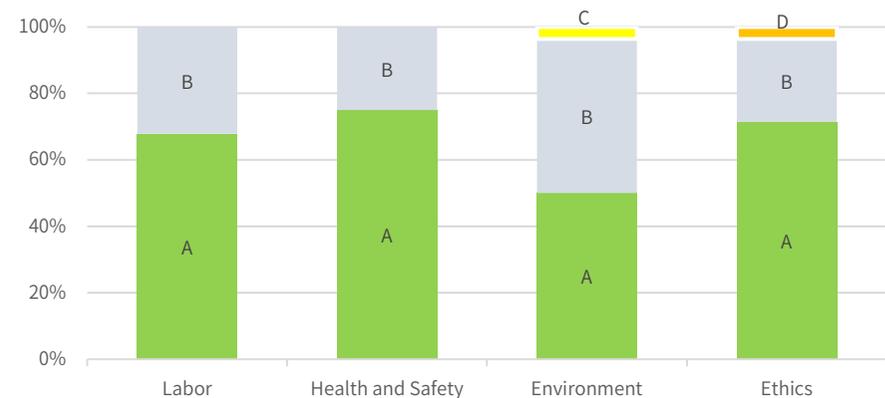
* RBA: Responsible Business Alliance. Founded in 2004 by a group of leading electronics companies including Hewlett-Packard, IBM, and Dell, the RBA, formerly the Electronic Industry Citizenship Coalition (EICC), has a code of conduct covering the social, environmental, and ethical responsibilities in the global supply chain of its members in the electronics and a wide range of other industries.

The survey conducted in fiscal 2020 included new factories that did not yet have a finalized management system in place and that received low scores in some areas. However, Sharp has been in communication with these sites to help them address and improve these issues.
As the graph below shows, nearly all sites scored 70 or higher (B rank) and maintain satisfactory conditions overall. No problems have been identified that pose an immediate, large CSR risk for the Sharp Group as a whole.
Surveys were again conducted in fiscal 2021 for the sake of ongoing improvement in the level of activities.

■ Area-Specific Assessment Ranking Distribution

Rank A: 90 points or more   Rank B: 70 points or more   Rank C: 50 points or more   Rank D: Less than 50 points
(Perfect score is 100 points)

Management: Stakeholder Engagement

Stakeholder Engagement

In order to ensure that, "Our future prosperity is directly linked to the prosperity of our customers, dealers and shareholders," as stated in the company's Business Philosophy, Sharp suitably discloses information to the diversity of stakeholders that it serves, including customers, suppliers, and local communities. Also, amidst the increasing focus on ESG-related investment, Sharp seeks dialogue with shareholders and investors and opens various other channels of communication to verify that it is responding to their needs and expectations. Sharp then applies the feedback it receives to its corporate activities and, thereby, contribute where it can to addressing social issues. Sharp will continue to incorporate the voices of its stakeholders in making further improvements to its corporate activities.

Customers
- Product information (website, newspapers, other media)
- Usability tests
- Telephone inquiries to the Customer Assistance Center
- Questionnaires, interviews
- After-sales service

Others

Suppliers
- Daily procurement activities
- Formulating and communicating Basic Purchasing Principles
- Supply chain CSR (guidebook, guidelines)
- CSR/green procurement surveys, chemical substance content surveys, conflict mineral surveys

Others

Global environment
- Responding to environmental laws and regulations
- Environmentally conscious design
- Sharp Forest projects
- Conservation activities for wetlands covered by the Ramsar Convention
- Participating in environmental events, education
- Greening activities around business sites

Others

SHARP

Shareholders and investors
- Shareholders' meetings, financial results briefings, IR briefings, timely disclosures
- Individual meetings with institutional investors, including ESG investors
- Participating in conferences held by securities companies
- Annual reports, other materials
- Responding to ESG surveys

Others

Local communities
- Educational support activities for children with disabilities
- Clean-up and greening activities around business sites
- Sponsorships of local sports teams
- Volunteer activities around the world

Others

Employees
- Intranet, various hotlines
- Top Message
- In-house training
- Counseling with medical specialists or industrial counselors
- Workplace activity surveys
- Labor-management meetings; Safety, Hygiene, and Health Committees
- Diversity management

Others

Environmental Initiatives

13 CLIMATE ACTION

21%

Improvement rate of
energy intensity
(baseline year: fiscal 2012)

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

98%

Improve the quality of
recovered iron

Environmental Initiatives: Environmental Vision

SHARP Eco Vision 2050 Long-Term Environmental Vision

SHARP Eco Vision 2050

Create more clean energy than all the energy consumed in our supply chain

Minimize the environmental impact of our business activities

Climate Change   Resource Recycling   Safety and Security

The international community has recognized the urgent need to address increasingly serious environmental problems, such as climate change, resource depletion, and plastic pollution. This awareness is accelerating global action to solve these social problems, including efforts associated with the achievement of the Sustainable Development Goals (SDGs)[1] and carbon neutrality[2], and the creation of a circular economy[3].

In 2019 Sharp formulated SHARP Eco Vision 2050, a long-term environmental vision based on its Basic Environmental Policy of "Creating an Environmentally Conscious Company with Sincerity and Creativity," which was established in 1992. Sharp is working toward realizing a sustainable global environment by pursuing long-term goals set in three fields of action with 2050 as the target year: climate change, resource recycling, and safety and security.

In the field of climate change, while keeping in mind the 1.5°C target[4] stipulated in the Paris Agreement, Sharp aims to become carbon neutral in its business activities. It also seeks to broaden and disseminate clean energy-related products and services and to reduce greenhouse gas emissions from its products and services.

In the resource recycling field, Sharp pursues a circular economy by endeavoring to use recycled materials in all product parts and to reduce waste from its business activities.

In the safety and security field, Sharp strictly manages chemical substances that may affect people's health, the natural environment, and ecosystems and restricts their use to eliminate the risk of negative effects.

To accelerate our efforts toward the long-term environmental vision, Sharp is formulating medium-term environmental goals that define specific activities and quantitative targets in each field.

Sharp is aiming to solve social problems and continuously raise corporate value by deepening ties with stakeholders through business activities and environmental conservation efforts geared toward the long-term environmental vision.

[1] Adopted by the United Nations in 2015, the SDGs are a set of 17 development goals for the world to achieve by 2030 in order for society to realize sustainable development.

[2] A state in which CO_2 emissions are balanced out by an equivalent amount removed or absorbed.

[3] An economic system aimed at eliminating wastes and circulating resources. Waste products and raw materials are considered new resources and are thus recycled.

[4] The Paris Agreement sets forth the long-term targets of keeping the rise in global average temperature well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C.

Environmental Initiatives: Environmental Vision

Long-Term Environmental Goals

To bring about SHARP Eco Vision 2050, we have stipulated long-term goals in three fields of action. In pursuing these goals, we will strive to create more clean energy than the total amount of energy consumed in Sharp's entire supply chain, while minimizing the environmental impact of our business activities.

Climate Change

Sharp has up to now striven to use less energy in its business activities and to make products that are increasingly more energy efficient so as to reduce the amount of energy consumed by households and society as a whole.
We began developing solar cells after founder Tokuji Hayakawa said, "All the products we make use electricity. As our company grows, we will need more electricity, so why don't we make electricity ourselves?" Since then, we have spent more than half a century working to spread solar power generation.

It is precisely because Sharp makes products that use electricity that we have a responsibility to reduce the environmental impacts resulting from this electricity use.

By promoting the world goal of carbon neutrality, Sharp is taking on the challenge of achieving the following two goals by 2050 and thus becoming carbon-free throughout its supply chain, including its own business activities.

Goal
- Achieve net zero CO_2 emissions in Sharp business activities.
- Create more clean energy than the total amount of energy consumed in Sharp's entire supply chain.

Resource Recycling

Sharp has up to now provided the world with all kinds of value through the creation of new products. At the same time, we have used many resources to do so.

Sharp should continue to provide its stakeholders with all kinds of value by making the most efficient use of finite resources around the globe.

By making more efficient use of resources and continuing to offer maximum value with minimal resources, Sharp is taking on the challenge of achieving the following two goals by 2050 and thus building a circular economy and realizing a recycling-oriented society.

Goal
- Use no newly extracted resources* for making products.
- Achieve zero final disposal to landfill of waste generated in Sharp business activities.

* Excludes those not suitable for recycling from an environmental standpoint.

Safety and Security

Sharp uses various chemicals in production processes in its factories, and the products themselves contain various chemicals. Such chemicals must be strictly managed because some of them can have negative effects on people's health, the natural environment, or ecosystems.

Sharp's business activities must not have a negative effect on people's health, the natural environment, or ecosystems.

As well as complying with current international standards, Sharp has established its own even stricter in-house standards. Under these far-sighted standards, we thoroughly manage relevant chemicals with the goal of eliminating any negative effects that chemicals may have on people's health, the natural environment, or ecosystems.

Goal
- Properly manage chemicals in order to protect people's health, the natural environment, and ecosystems.

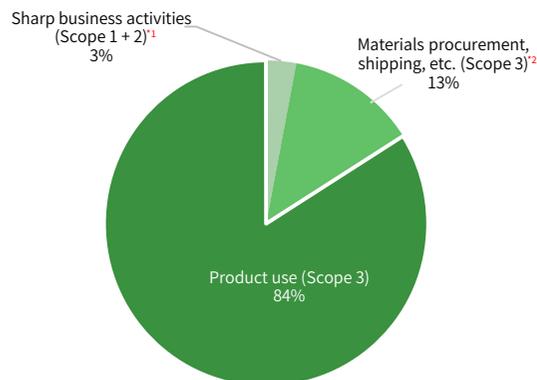# Environmental Initiatives: ⊕ Climate Change

Sharp's Stance on Climate Change

Climate change is the most pressing and important issue currently facing humanity. It is driving an increase in natural disaster severity that significantly impacts, both directly and indirectly, not only our daily life but business as well. Sharp recognizes that climate change is a material management issue and is working to address it through its long-term environmental vision, SHARP Eco Vision 2050, which was created in 2019 and which encompasses a goal to "Achieve net zero CO_2 emissions in Sharp business activities."

Material Issues in Addressing Climate Change

When greenhouse gas emissions for the entire Sharp value chain are calculated and analyzed, the results show that more than 80% of emissions are associated with the use of sold products. Based on this fact, Sharp has identified reducing environmental impact associated with product usage by customers (i.e., improving product energy efficiency) and Sharp business activities (i.e., manufacturing) as material issues in addressing climate change.

■ **Breakdown for Sharp Greenhouse Gas Emissions (Fiscal 2020)**

Sharp business activities (Scope 1 + 2)[1]
3%

Materials procurement, shipping, etc. (Scope 3)[2]
13%

Product use (Scope 3)
84%

[1] Direct GHG emissions from business activities
[2] Indirect GHG emissions from energy usage in business activities

Sharp's Approaches to GHG Emission Reduction

Sharp mainly takes the following two approaches for the reduction of GHG emissions.

> #### Reducing GHG emissions by curbing energy consumption in business activities
>
> - Quantifying and analyzing energy consumption and GHG emissions from business activities
> - Reducing GHG emissions through productivity improvements and energy cost reductions at factories
> - Reducing GHG emissions by using renewable energy
> - Reducing GHG emissions during transportation by switching to more eco-friendly transportation modes

> #### Reducing GHG emissions by creating environmentally conscious products
>
> - Quantifying and analyzing GHG emissions throughout the product life cycle
> - Incorporating AIoT devices and cloud technology to reduce GHG emissions during product use
> - Reducing GHG emissions through the provision of conducive products and services (e.g., solar power systems and storage batteries)

Participation in International Initiatives and Other Efforts

Sharp participates in the Science Based Targets initiative (SBTi) [3], which is focused on pursuing action that will achieve real and reliable results in the fight against climate change. Sharp has submitted its GHG reduction targets to the SBTi team, and they have certified them as being scientifically based and in conformance with the Paris Agreement.
In Japan, Sharp participates in the Liaison Group of Japanese Electrical and Electronics Industries for Global Warming Prevention [4], which is a group focused on further accelerating the pace of industry-wide climate change-related action. The members of this group share information about cutting-edge energy-saving initiatives being implemented in factories, and they engage in discussion related to policy recommendations.

> #### GHG Emissions Reduction Targets
>
> - Scope 1 + 2: By fiscal 2031, reduce GHG emissions by 33% compared with fiscal 2018
> - Scope 3: By fiscal 2031, reduce GHG emissions by 33% compared with fiscal 2018

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

[3] This climate change-related initiative is a collaborative effort of the United Nations Global Compact (UNGC), the CDP (formerly Carbon Disclosure Project), World Resources Institute (WRI), and the World Wide Fund for Nature (WWF). The SBTi promotes the establishment of science-based GHG emissions reduction targets in conformance with the Paris Agreement.
[4] A group comprised of representatives from Japan's electrical and electronics industries, such as the Japan Electrical Manufacturers' Association (JEMA) and the Japan Electronics and Information Technology Industries Association (JEITA). It promotes industry-wide efforts aimed at preventing global warming, such as the adoption of action plans for establishing a low-carbon society.

Environmental Initiatives: 🌐 Climate Change

Disclosure of Climate-Related Information

Action on the TCFD Recommendations

The Task Force on Climate-related Financial Disclosures (TCFD) was established by the Financial Stability Board (FSB), an organization promoting international financial stability. In 2017 the TCFD released recommendations for companies to disclose information on the risks and opportunities of climate change. Sharp is expanding disclosure of climate-related information in accordance with the framework set by the TCFD.

1. Governance

Climate-related issues are monitored and countermeasures supervised by the President & COO. The Sharp Global SER Committee* is chaired by the President & COO, with persons in charge of environmental affairs, administration, and human resources all serving as vice chairs. In addition, the general managers of each business unit and the presidents of subsidiaries are members of the committee, and members of relevant Head Office departments serve as the support team for the committee. The committee deliberates issues related to ESG, such as climate change, the thorough implementation of policies and visions, and important measures. The committee also oversees social issues, including climate change by confirming and reviewing the measures taken by each business unit and subsidiary.

2. Strategy

Climate-related risks can be divided into two major categories: those associated with the transition to a decarbonized economy, such as tighter regulations, technological advancement, and changes in the market; and those associated with physical changes arising from global warming, such as acute extreme weather events and chronic temperature rises.

Meanwhile, opportunities stemming from climate issues include products and services related to the creation of energy-saving products and resource efficiency, that is, the efficient use of resources in factory operations. We recognize that these risks and opportunities are related to Sharp's business as follows.

* See page 28.

■ **Business Risks Facing Sharp**

Type		Timeline	Risk	Primary Response
[2° C Scenario] Transition	Policy	Long-term	Sharp's production sites in Japan account for about 70% of the company's total greenhouse gas emissions (the rest is accounted for by China and the ASEAN region). If regulations are tightened in Japan, the company will face new burdens in the form of increased energy costs and a carbon tax based on the amount of greenhouse gas emissions.	Improve production processes and strengthen the management of facilities to reduce greenhouse gas emissions from operations at each site. In FY2020, high-efficiency equipment to increase energy efficiency was installed and new sensors and switches were added to existing facilities to monitor energy consumption waste.
	Legal	Medium-term	As a solution to climate change, the pace at which energy conservation regulations for products in various countries will be introduced and/or tightened is expected to accelerate. If a product does not meet the energy conservation standards and regulations of each country, or if the degree to which the standards are met is low, there is a possibility that sales of said product will be discontinued or it will not be selected by customers. This will lead to the sales of products and services stagnating or declining.	Sharp has established a system to maintain and improve the environmental friendliness of its products while complying with environmental laws and regulations by administering the Green Product/Device system. In FY2020, by utilizing the guidelines* that summarize the indicators for legal compliance and environmentally friendly design at the product development stage, Sharp was not subject to any lawsuits, fines, or penalties due to violations of environmental laws and regulations. The company also had no serious environment-related accidents. * See page 67.
[4° C Scenario] Physical Change	Acute	Medium-term	Disasters caused by increasingly larger typhoons and increased precipitation have affected the company's production sites and suppliers. Sharp recognizes that 10 of its sites (about 24% of all production sites) are located in areas that have been identified as particularly vulnerable to serious flood damage by Aqueduct, a tool developed by the World Resources Institute (WRI). In addition to the possibility of shutting down operations and harming employees' livelihoods, there is also the possibility of disruptions in the supply of parts from suppliers. This will increase operating costs, due to the cost of recovery and delays in delivery, and lead to decreased sales.	To prepare for these physical risks becoming a reality, it is essential to promptly restore business operations after a disaster and to prevent damage before it occurs. In accordance with the Sharp Group Business Continuity Plan (BCP) Guidelines, which were formulated on the assumption that the company's production sites, suppliers, and employees could be affected by a natural disaster or other event, the company has appropriately formulated, maintained, and improved its BCP*. In addition, systems and roles have been clarified to avoid interruptions in important business operations and to enable early recovery in the event of an unavoidable interruption. Even during the large typhoons that struck Japan in 2020, there were no events that threatened business continuity. * See page 125.

Environmental Initiatives: ◉ Climate Change

Disclosure of Climate-Related Information

■ Business Opportunities in Sharp

Type	Timeline	Opportunities	Primary Response
Products and services	Medium-term	Society in general is seeing a growing interest in renewable energy. Achieve expanded revenue by offering new services that allow everyone to incorporate renewable energy into their daily life.	Offer PV systems that can be installed without any initial costs, thereby enabling renewable energy adoption not only for companies but also personal homes. In fiscal 2020, Sharp introduced a solar power service requiring no initial investment for corporate customers. In June 2021, Sharp launched COCORO POWER, a subscription PPA* service for new homes. * PPA: Power Purchase Agreement model
Products and services	Short-term	Increase product value and expand revenue by creating energy-efficient products that contribute to climate change mitigation and the realization of a decarbonized society.	Certify products that offer an outstanding level of environmental performance, focusing primarily on energy efficiency, as Super Green Products (SGP), and further the development of in-house systems that encourage the creation of such products. There were 25 new SGP models in fiscal 2020 (total sales of 142.6 billion yen).
Resource efficiency	Short-term	Focus on reducing energy consumption via energy-efficient factory operations in order to achieve carbon neutrality in Sharp's business activities by 2050. Achieve cost reduction via greater resource efficiency in direct operations.	Replace older equipment with newer, high-efficiency equipment and perform regular on-site energy efficiency diagnostic testing to monitor unnecessary energy consumption. In fiscal 2020, in order to improve production processes and strengthen infrastructural management, Sharp introduced high-efficiency equipment to boost energy efficiency and equipped existing infrastructure with new sensors and switches to reduce energy consumption.

3. Risk Management

In accordance with the basic approach to risk management established in the Rules of Business Risk Management[1], Sharp incorporates climate-related risks into comprehensive risk management and assesses those risks.

[1] See page 125.

4. Metrics and Targets

Sharp has established corporate targets (for fiscal 2031) aimed at reducing GHG emissions across the entire supply chain. These targets have been certified by the Science Based Targets initiative (SBTi) as being scientifically based and in conformance with the Paris Agreement.

Sharp aims—through the introduction of renewable energy, the adoption of energy-efficient factory operations, and other means—to reduce GHG emissions from business activities (Scope 1 + 2) by 33% compared with fiscal 2018.

The target for indirect GHG emissions from outside the scope of business activities (Scope 3) is focused on GHG emissions associated with the use of sold products (Category 11), as this accounts for more than 80% of such emissions[2]. Here, too, the aim is to reduce emissions by 33% compared with fiscal 2018.

Sharp's progress towards these targets as of fiscal 2020 is shown in the table below. For Scope 1 and 2, a 12% reduction compared with fiscal 2018 (base year) was achieved as a result of closing down older factories, consolidating production sites, and implementing other measures. On the other hand, Scope 3 emissions increased by 8% compared with fiscal 2018 (base year) due to increased product shipments.

In order to successfully achieve the targets it has established for fiscal 2031, Sharp will focus on adopting renewable energy, using more energy-saving measures in factories, and expanding the range and distribution of energy-efficient products, such as Super Green Products (SGP).

■ Progress towards Science Based Targets (Fiscal 2020 Results)

Category	Base Year (fiscal 2018 results)	Fiscal 2031 Target (33% reduction compared with fiscal 2018)	Fiscal 2020 Results	Base Year Comparison
Scope 1 + 2	1,077 thousand tons CO_2	722 thousand tons CO_2	951 thousand tons CO_2	12% reduction
Scope 3 (Category 11)	27,489 thousand tons CO_2	18,418 thousand tons CO_2	29,593 thousand tons CO_2	8% increase

[2] See page 36.

Environmental Initiatives: 🌐 Climate Change

Greenhouse Gas Emissions Based on the GHG Protocol Initiative

Sharp calculates greenhouse gas emissions based on the GHG Protocol[1] and then works to limit those emissions resulting from customer use of Sharp products and from Sharp's business activities, including those in the supply chain.

[1] The GHG Protocol is an international standard for calculating greenhouse gas (GHG) emissions. It was jointly established by the World Business Council for Sustainable Development (WBCSD), a coalition of the world's leading companies, and the World Resources Institute (WRI), a United States-based think tank.
[2] LCD TVs, air conditioners, refrigerators, washing machines, air purifiers, microwave ovens, copiers/MFPs, solar cells
[3] Annual power consumption of each product × number of units sold × product life × CO_2 emission coefficient
[4] TVs (CRT TVs, flat-panel TVs), air conditioners, refrigerators/freezers, washing machines/dryers

■ Greenhouse Gas Emissions by Scope 1/2/3 Categories Based on the GHG Protocol Initiative (Fiscal 2020)

Category		Emissions (Thousand Tons CO_2)	Notes
Scope 1 (direct GHG emissions from business activities)		270	Emissions from combustion of fuel, etc.
Scope 2 (indirect GHG emissions from energy usage in business activities)		681	Emissions from the use of electricity
Total of Scope 1 and Scope 2		951	
Scope 3 (indirect GHG emissions from outside the scope of business activities)	1. Purchased goods and services	3,762	Emissions from the manufacture of materials procured for products in the 8 major categories[2] that the Sharp Group sold in the reporting year
	2. Capital goods	249	Emissions from the construction, manufacture, and transportation of Sharp Group capital goods (such as equipment, machinery, buildings, facilities, and vehicles)
	3. Fuel- and energy-related activities (not included in Scope 1 or 2)	144	Emissions from the procurement of fuels (natural resource extraction, manufacture, and transportation) consumed in the generation of electricity and heat the Sharp Group procures from other companies
	4. Upstream transportation and distribution	225	Emissions from the transportation of Sharp Group parts and materials and products manufactured
	5. Waste generated in operations	2	Emissions from waste disposal and treatment by the Sharp Group
	6. Business travel	2	Emissions from business travel by all employees of Sharp Corporation
	7. Employee commuting	6	Emissions from commuting by all employees of Sharp Corporation
	8. Upstream leased assets	—	Included in Scope 1 and 2 CO_2 emissions
	9. Downstream transportation and distribution	38	Emissions from the transportation (from retailers to end consumers) of products in the 8 major categories[2] that the Sharp Group sold in the reporting year
	10. Processing of sold products	65	Emissions from processing at destination of Sharp Group products
	11. Use of sold products	29,593	Emissions[3] from the use of products in the 8 major categories[2] that the Sharp Group sold in the reporting year
	12. End-of-life treatment of sold products	3	Emissions from recycling 4 types of appliances[4] that Sharp Corporation sold in Japan
	13. Downstream leased assets	—	Not applicable
	14. Franchises	—	Not applicable
	15. Investments	—	Not applicable
Scope 3 total		34,096	
Scope 1 + 2 + 3 total		35,047	

SHARP Sustainability Report 2021

Environmental Initiatives: 🌐 Climate Change

Curbing Business Activity-Linked Greenhouse Gas Emissions

Fiscal 2020 Objectives	Fiscal 2020 Achievements	Self-Evaluation	Priority Objectives for Fiscal 2021
■ Energy intensity: Improve by 20% (baseline year: fiscal 2012)	■ Improved by 21% (baseline year: fiscal 2012)	★★★	■ Energy intensity: Improve by 25% (baseline year: fiscal 2012)

Self-evaluation: ★★★ Achieved more than targeted / ★★ Achieved as targeted / ★ Achieved to some extent

Sharp Group Activities to Control Greenhouse Gas Emissions

Sharp is taking active measures to curb greenhouse gas (GHG) emissions resulting from its business activities in an effort to contribute to the realization of a decarbonized society. The Sharp Group's GHG emissions from business activities in fiscal 2020 decreased by 2.4% to 951,000 tons CO_2 compared to the previous fiscal year thanks to efforts such as transferring manufacturing to more efficient plants and consolidating production bases. The improvement rate of energy intensity rose to 21%, compared to the baseline year of fiscal 2012. Each Sharp production base is strengthening efforts involving all equipment and systems—ranging from production lines to utility systems for supplying electricity, gas, and water—to boost energy efficiency and reduce GHG emissions. In particular, at the LCD and electronic component plants, the production, engineering, and environmental departments work together to reduce consumption of base-load energy. Efforts include installing inverters[1] and optimizing the air conditioning in clean rooms[2]. Going forward, Sharp will pursue further energy-saving measures and boost production efficiency in line with its business expansion.

[1] A device to control the number of motor rotations.
[2] A room where the temperature, humidity, and cleanliness are kept at controlled levels.

■ **Amount of GHG Emissions**

[3] HFCs, PFCs, sulfur hexafluoride (SF_6), nitrogen trifluoride (NF_3)

■ **GHG Emissions by Region (Fiscal 2020)**

■ **Energy Intensity (Baseline Year: Fiscal 2012)**

Environmental Initiatives: Climate Change

Energy-Saving Products and Services

Case Study

Airest Air-Purifying Household Air Conditioner Wins METI Minister's Prize at 2020 Energy Conservation Grand Prize

Sharp's Airest air-purifying household air conditioner was awarded the highest prize, the METI Minister's Prize (household category), in the Products and Business Models category of Japan's 2020 Energy Conservation Grand Prize program.

Organized by the Energy Conservation Center, Japan (ECCJ) and supported by the Ministry of Economy, Trade, and Industry (METI), this awards program recognizes outstanding energy conservation practices in Japan's industrial, business, and transportation sectors, while also recognizing advanced, highly energy-efficient products.

Airest's new construction combines an air conditioner and air purifier in one, making it the only home-use air conditioner in the industry to have met air cleaning standards stipulated by the Japanese air purifier industry[1]. Compared to conventional air conditioners, Airest's dust-collecting filter allows 99% less dust[2] to enter the unit. Airest also limits the amount of humidity inside the air conditioner[3]. These features prevent air volume from decreasing due to dust accumulated inside the air conditioner, thus maintaining energy efficiency. And because users do not need to separately purchase an air conditioner and air purifier, Airest saves on resources and electricity bills. Benefits such as these led to high praise for Airest and are the reason for this award.

Airest L-P Series air-purifying household air conditioner

[1] For residential air conditioners. Based on the JEM 1467 standard for household air purifiers of the Japan Electrical Manufacturers' Association. As of July 2021.

[2] A test comparing the amount of dust accumulated inside the air conditioner indoor units of Sharp's previous model (AY-J22D) and Airest AY-L22P. Result: 365.7 mg of dust inside the AY-J22D, and 1.5 mg of dust inside the AY-L22P.

[3] Based on Sharp research. In a room of 27°C and 60% humidity, Sharp's previous model (AY-J40D) and Airest AY-L40P were operated for two hours in cooling mode, and the humidity inside the air conditioner indoor units was measured during this time. Result: The humidity inside the AY-J40D rose to a maximum of 95%, compared to 65% inside the AY-L40P.

Award certificate and trophy

Environmental Initiatives: 🌐 Climate Change

Energy-Saving Products and Services

Case Study

COCORO AIR AIoT[*1] Function on Plasmacluster Air Conditioners Wins Excellence Award at 3rd EcoPro Awards

COCORO AIR is an AIoT function on Sharp's wireless LAN adapter-equipped Plasmacluster air conditioners (models L-P/X/H/D/S Series, and others). COCORO AIR was awarded the Judging Panel Chair Prize (Award of Excellence) at the 3rd EcoPro Awards. This awards program is organized by the Sustainable Management Promotion Organization's EcoPro Awards Secretariat and sponsored by MOF, MAFF, METI, MLIT, and MOE[*2]

The EcoPro Awards are bestowed in recognition of products, services, technologies, solutions, and business models that incorporate concrete, outstanding eco-friendly features and that are highly regarded by businesses, consumers, investors, and market players in the Japanese market. The program aims to accelerate the development and diffusion of such excellent initiatives and contribute to a sustainable society through commendation in view of shifts in socioeconomic conditions, including economic globalization, enactment of the Paris Agreement, and the establishment of the SDGs.

COCORO AIR is activated by connecting a Sharp wireless LAN adapter-equipped Plasmacluster air conditioner to the internet. Sharp was the first in the industry to equip its air conditioners with a wireless LAN adapter to allow energy-efficient control via cloud-based AIoT services. This functionality has been rolled out in both mass-market models and top-of-the-line models. COCORO AIR's ability to allow energy-efficient control of air conditioners using weather forecasts garnered high praise and led to the award.

Wireless LAN adapter-equipped Plasmacluster air conditioners

Award certificate

Trophy

*1 AIoT is a word coined by Sharp, combining the words AI (artificial intelligence) and IoT (Internet of things). AIoT is a vision for making products and services more integral to people's lives by connecting them via the cloud using AI. AIoT is a registered trademark of Sharp.

*2 Japan's Ministry of Finance (MOF), Ministry of Agriculture, Forestry and Fisheries (MAFF), Ministry of Economy, Trade and Industry (METI), Ministry of Land, Infrastructure, Transport and Tourism (MLIT), and Ministry of the Environment (MOE)
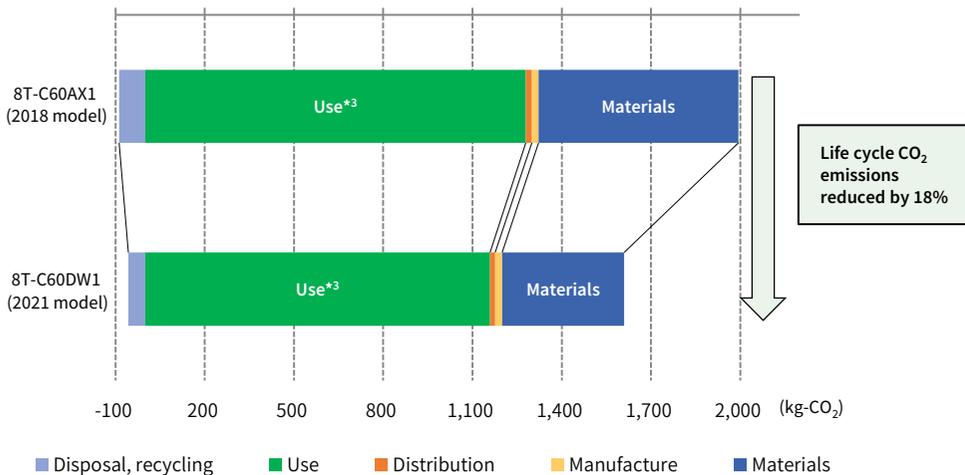
Environmental Initiatives: 🌐 Climate Change

Product Life Cycle Assessment

Identifying and Reducing Environmental Impacts throughout the Life of Products

Sharp performs a life cycle[1] assessment (LCA) on its products to identify their impact on the environment throughout their service life and uses the results in product planning and development.

Consumer electronics generally have a large impact on the environment during use. Thus, by focusing on improving their energy savings, overall environmental impact can be effectively reduced. A decrease in the environmental impact of 8K[2] LCD TVs was achieved by improving energy efficiency and reducing the products' weight.

■ **LCA Data for 8K LCD TVs**

8T-C60AX1 (2018 model): Disposal/recycling | Use[3] | Distribution | Manufacture | Materials

8T-C60DW1 (2021 model): Disposal/recycling | Use[3] | Distribution | Manufacture | Materials

Life cycle CO_2 emissions reduced by 18%

-100   200   500   800   1,100   1,400   1,700   2,000   (kg-CO_2)

■ Disposal, recycling   ■ Use   ■ Distribution   ■ Manufacture   ■ Materials

*1 The life of a product from materials and parts procurement to manufacture, distribution, use, disposal, and recycling.
*2 Ultra-high-definition, next-generation video standard with a resolution of 7,680 x 4,320 pixels (33.18 million pixels)—16 times the resolution of current 2K full high-definition broadcasts (1,920 x 1,080 pixels; 2.07 million pixels) and four times that of 4K (3,840 x 2,160 pixels; 8.29 million pixels).
*3 CO_2 emissions during use are calculated using a CO_2 emission coefficient (adjusted) announced by Japan's Electric Power Council for a Low Carbon Society (ELCS).

Utilizing Renewable Energy

Sharp has introduced the use of PV systems, green power, and other power sources to its domestic and overseas production bases and is advancing the use of renewables to do its part to create a decarbonized society.

In fiscal 2020, Sharp generated 5.81 million kWh of electricity and purchased 5.09 million kWh of green power[4]. This is equivalent to the annual energy consumption amount[5] of roughly 4,000 average households in Japan. Sharp will continue to work hard at reducing carbon emissions even further in the future.

*4 Including green power certificates.
*5 Calculated from data from the Federation of Electric Power Companies of Japan.

Solar power systems installed on the roofs of Sharp production bases (left: Kameyama Plant; right: NSEC in China)

Environmental Initiatives: 🌐 Climate Change

Utilizing Renewable Energy

Actively Spreading the Use of Renewable Energy in Vietnam

In June 2020, Sharp Energy Solutions Corporation (SESJ)[1] completed the construction of a mega solar power plant in Ninh Thuan Province, Vietnam. The project was a collaboration with multiple partners, including T&T Group Joint Stock Company (T&T)[2] of Vietnam and T&T affiliate Ninh Thuan Energy Industry Joint Stock Company[3].

The new plant has an output of approximately 45 MW-dc, with annual power generation capacity estimated at 76,373 MWh/year[4]. This is equivalent to the amount consumed in a year by about 40,500 average Vietnamese households[5].

Also, in December 2020, SESJ built another mega solar power plant in Binh Dinh Province, Vietnam. The project was a collaboration with multiple partners, including power generating company Viet Nam Viet Renewable Energy Joint Stock Company[3] and local construction company NSN Construction and Engineering Joint Stock Company[6].

The new plant has an output of approximately 50 MW-dc, with annual power generation capacity estimated at 82,506 MWh/year[4]. This is equivalent to the amount consumed in a year by about 43,700 average Vietnamese households[5].

As of the end of fiscal 2020, SESJ had constructed seven solar power plants in Vietnam, generating a combined capacity of approximately 340 MW-dc. The Vietnamese government has formulated a plan[7] to raise solar power generation capacity in the country to 12,000 MW by the year 2030. SESJ remains committed to spreading renewable energy in Vietnam.

[1] SESJ is a subsidiary of Sharp Corporation, specializing in energy solutions such as the sales of PV systems and the installation of electrical equipment.
[2] A Vietnam-based conglomerate operating in multiple industries, such as investment, real estate, finance, healthcare, and logistics.
[3] This company is in charge of operating the plant.
[4] Estimate for the initial year of operation.
[5] Calculated at 1,887 kWh per household.
[6] A Vietnamese company handling architectural design, construction, and others.
[7] Source: the Vietnamese government's 7th Power Development Plan (PDP7).

Mega solar power plant in Ninh Thuan Province

Mega solar power plant in Binh Dinh Province

SHARP Sustainability Report 2021

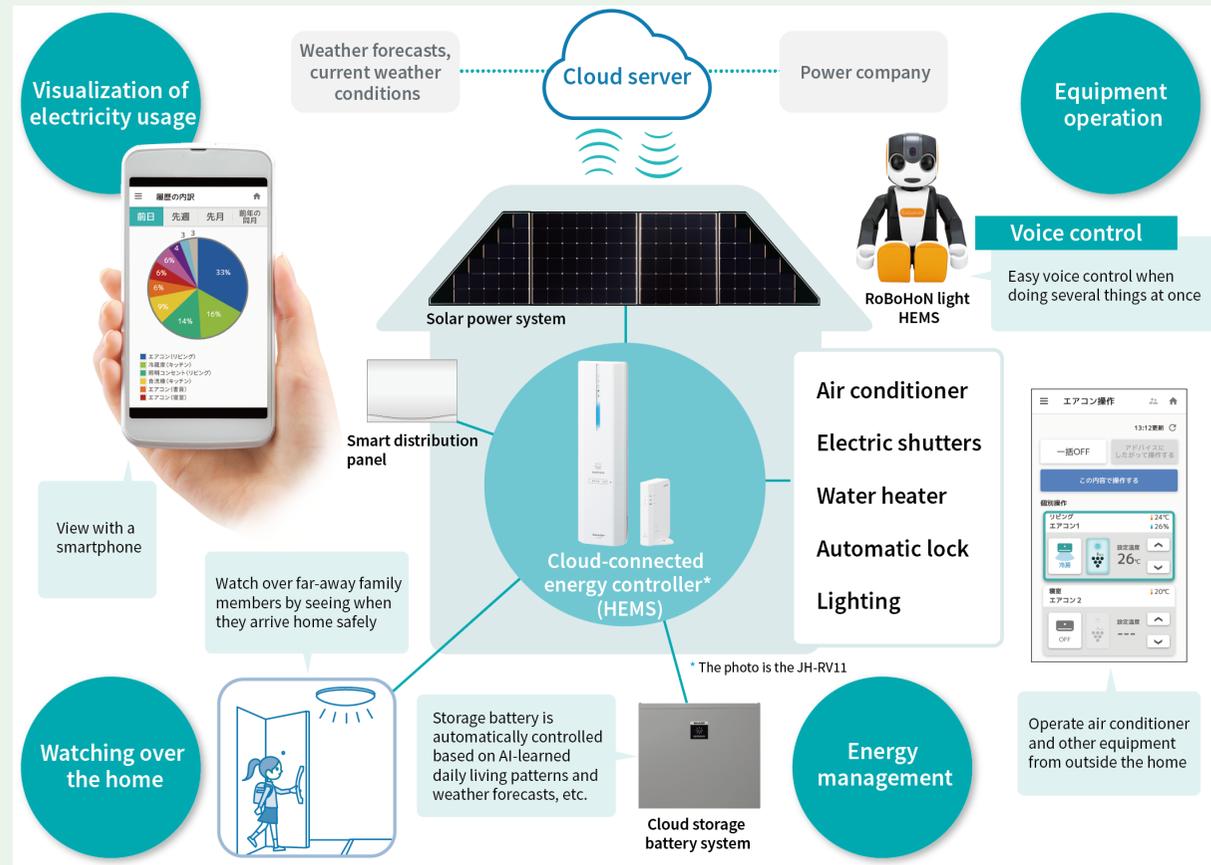# Environmental Initiatives: ◉ Climate Change

Utilizing Renewable Energy

Case Study

COCORO ENERGY, Sharp's Cloud-Based HEMS Service, Wins Agency for Natural Resources and Energy Commissioner's Award at 2020 New Energy Awards

COCORO ENERGY, Sharp's cloud-based HEMS[1] service, received the Agency for Natural Resources and Energy Commissioner's Award in the Products and Services category at the 2020 New Energy Awards. This awards program seek to accelerate society's adoption of renewable energy by honoring outstanding developments in renewable-energy-related products and services, and applications of distributed energy.

COCORO ENERGY is a cloud-based HEMS service in which Sharp's proprietary AI carries out the complex task of managing energy usage inside the home, thus giving the user economy and peace of mind. The cloud-based AI learns the users' daily living patterns and combines this knowledge with weather information to achieve efficient energy management tailored exactly to each home.

[1] HEMS: Home energy management system. A system for managing and controlling the energy used in a home.

Example of how COCORO ENERGY works

Environmental Initiatives: 🌐 Climate Change

Utilizing Renewable Energy

The COCORO ENERGY HEMS system was honored with a New Energy Award for contributing to rising energy self-consumption rates through an AI predictive control function for efficiently storing into the storage battery the excess electricity from post-FIT*2 solar power systems. The system was also lauded for an AI thunderstorm advisory function that automatically stores the necessary electricity in case of a power outage caused by a thunderstorm.

*2 FIT (feed-in tariff) is a system in which power companies pay producers of renewable energy a fixed price for a fixed period of time.
Post-FIT refers to the completion of a 10-year fixed-price contract.

Award certificate and plaque

AI predictive control makes effective use of excess electricity from solar power generation

Day before

1. AI predicts how much excess electricity will be generated the following day by using the following day's solar radiation forecast and the electricity usage status of the home.
   AI
   HEMS

2. Space equivalent to the amount of excess electricity predicted by AI is set aside in the storage battery.
   Leave space for tomorrow's excess electricity
   Storage battery   EcoCute electric water heater

Day after

3. Make efficient use in the home of the electricity generated by the solar power system.
   Electricity
   Solar power system
   Excess electricity
   Consumed electricity
   Night Morning Daytime   Night

   Charge   **Boil water**

   Maximize use of excess electricity with storage battery and EcoCute

   Storage battery   EcoCute electric water heater

Energy self-consumption rate*
No AI control **48**% → AI control **68**%

* Energy self-consumption rate: Percentage of total power generated by a home that is used in the home instead of being sold to the grid.

* Calculation conditions: Median value under a simulation using user data from 43 homes over one year.

AI thunderstorm advisory function provides power outage solutions geared to user needs

1. AI monitors thunderstorm advisories and daily electricity usage to predict how much electricity will be needed in a power outage.
   Thunderstorm advisory
   AI
   HEMS

2. AI predicts the amount of electricity needed in case of a thunderstorm-caused power outage and automatically charges the storage battery.
   Necessary amount of electricity
   Storage battery   Storage battery
   Battery is charged with amount of electricity that customer will need

AI predictive control and AI thunderstorm advisory function

Environmental Initiatives: ◉ Climate Change

Reducing Logistics-Related Environmental Impact

Fiscal 2020 Objectives	Fiscal 2020 Achievements	Self-Evaluation	Priority Objectives for Fiscal 2021
■ Energy intensity: Improve by average of 1% each year (average for fiscal 2016 to 2020)	■ Energy intensity: Improved by average of 5% each year (average for fiscal 2016 to 2020)	★★★	■ Energy intensity: Improve by average of 1% each year (average for fiscal 2017 to 2021)

Self-evaluation: ★★★ Achieved more than targeted / ★★ Achieved as targeted / ★ Achieved to some extent

Reducing the Environmental Impact of Logistics in Japan

Sharp observes a rule set forth in the Japanese Act on the Rational Use of Energy (Energy Conservation Act) that requires specified shippers to reduce energy intensity by 1% or greater per year. All Sharp Group companies in Japan are working to reduce the environmental impact and costs associated with logistics.

In fiscal 2020, Sharp Group greenhouse gas (GHG) emissions from shipping activities in Japan were down 22% from the previous fiscal year to 14,000 tons CO_2. For Sharp Corporation, energy intensity was improved by an average of 5% for the most recent five years (fiscal 2016 to 2020). Sharp is steadily implementing a modal shift[1], a change from conventional trucking to more environmentally friendly modes of transport, such as shipping (non-international coastal trading vessels) and rail (Japan Railways containers). And, by unloading imported goods at harbors chosen for their proximity to their main sales locations, Sharp is reducing re-transport between distribution centers. These efforts enable Sharp to reduce the environmental impact of its distribution activities. For shipments, Sharp has been certified with an Eco Rail Mark[2] by the Ministry of Land, Infrastructure, Transport, and Tourism and the Railway Freight Association.

[1] To shift freight transport from conventional trucking to more environmentally friendly modes of transport, such as rail and shipping.

[2] Products or companies that use a certain amount of rail transport for freight are given Eco Rail Mark certification. The mark is used on items such as product packaging and brochures to inform the public that a company uses environmentally friendly modes of transport.

■ GHG Emissions from Freight Shipments (Japan)

(Thousand tons CO_2)

Fiscal year	Value
2016	17
2017	16
2018	19
2019	18
2020	14

Eco Rail Mark certification

Reducing the Environmental Impact of International Logistics

Sharp has a wide range of initiatives to reduce the amount of GHGs that are emitted as a result of international shipping. The company is reducing airfreight volume as it switches to environmentally friendly modes of transport, and it is also improving load efficiency. Further, it is reviewing shipping routes and switching to harbors that are closer to the final destinations for products. Sharp is also switching to suppliers located closer to its factories. In fiscal 2020, Sharp's GHG emissions from international transport were 158 thousand tons CO_2.

Environmental Initiatives: 🔄 Resource Recycling

Minimizing and Recycling Business Activity-Linked Waste

Fiscal 2020 Objectives	Fiscal 2020 Achievements	Self-Evaluation	Priority Objectives for Fiscal 2021
■ Final landfill disposal rate of 0.5% or less	■ Final landfill disposal rate 0.63%	★	■ Final landfill disposal rate of 0.5% or less

Self-evaluation: ★★★ Achieved more than targeted / ★★ Achieved as targeted / ★ Achieved to some extent

Curbing the Amount of Waste, etc. Generated by the Sharp Group

Sharp has been working to reduce waste and to recycle as much of it as possible in an effort to contribute to building a resource-recycling society. In fiscal 2020, the amount of waste, etc. generated by the Sharp Group decreased by 2% compared to the previous fiscal year to 67,000 tons, thanks to efforts such as transferring manufacturing to more efficient plants and changing the packaging material used in shipping. Additionally, the amount of recycling fell by 5% from the previous fiscal year to 58,000 tons. Furthermore, the final landfill disposal rate remained at 0.63%. In Japan, as a result of continuously advancing efforts, such as recycling waste and waste liquids and turning them into valuable resources, the final landfill disposal rate was 0.03%, marking the 20th consecutive year of achieving zero discharge to landfills* since fiscal 2001. Going forward, Sharp will strengthen waste reduction efforts at overseas bases and aim to achieve zero discharge to landfill on a global scale.

* To shift freight transport from conventional trucking to more environmentally friendly modes of transport, such as rail and shipping.
Final landfill disposal rate (%) = Amount of landfill disposal ÷ amount of waste, etc. generated x 100.

Appropriate Storage and Management of PCB Wastes

In Japan, Sharp properly stores and manages waste PCB (polychlorinated biphenyls) in accordance with the Act on Special Measures Concerning Promotion of Proper Treatment of PCB Wastes. Sharp is on track to finish treating PCB waste to make it harmless by the legally set March 31, 2027 deadline.

■ Amount of Waste, etc. / **■ Amount of Recycling** / **■ Waste, etc. by Region (Fiscal 2020)** / **■ Final Landfill Disposal Rate**

Environmental Initiatives: Resource Recycling

Expanding the Recycling of Used Products

Fiscal 2020 Objectives	Fiscal 2020 Achievements	Self-Evaluation	Priority Objectives for Fiscal 2021
■ Improve the quality of recovered iron	■ Introduced equipment to improve the quality of recovered iron	★★	■ Improve plastic recycling efficiency

Self-evaluation: ★★★ Achieved more than targeted / ★★ Achieved as targeted / ★ Achieved to some extent

Recycling 4 Kinds of Home Appliances in Japan (Air Conditioners, TVs, Refrigerators, and Washing Machines)

As a member of the B Group[*1] for home appliance recycling, Sharp has constructed—and is operating—a highly efficient recycling system consisting of 17 recycling plants in Japan. In fiscal 2020, Sharp collected 2.386 million units (up 13% over the previous fiscal year) of the four types of appliances covered by the Home Appliance Recycling Act. The processed and recycled weight amounted to 70,000 tons (up 11% over the previous fiscal year). For all four appliance types, the B Group's rate of recycling exceeded the legally stipulated levels.

*1 The B Group consists of Sharp Corporation, Sony Corporation, Hitachi Global Life Solutions, Inc., Fujitsu General Ltd., Mitsubishi Electric Corporation, and other companies.

Toward Making Better Use of Resources

Sharp and Kansai Recycling Systems Co., Ltd.[*2] have joined forces to make effective use of resources and to improve recycling efficiency. Additional magnetic separators were introduced in fiscal 2020 to further improve the quality of iron recovered. Collected home appliances are first pulverized by large crushers, after which various separators are used to collect the metal. This time, installing extra magnetic separators increased the opportunities for recovery, which boosted the precision of iron selection (reducing the admixture of impurities). In fiscal 2019, iron selection precision ranged between 95% and 98%, but in fiscal 2020 it was consistently at 98% or higher.

*2 A consumer electronics recycling company established in Japan with joint investment from Sharp, Mitsubishi Materials Corporation, and four other companies.

■ Sharp Corporation's Recycling Results for 4 Home Appliance Types (Fiscal 2020)

Note: All figures are rounded off to the nearest whole number.

	Unit	Air Conditioners	CRT TVs	Flat-Panel TVs	Refrigerators/ Freezers	Washing Machines/ Dryers	Total
Units collected from designated collection sites	Thousand units	353	134	891	489	517	2,386
Processed and recycled units	Thousand units	356	137	883	483	510	2,371
Processed and recycled weight	Tons	14,553	3,020	14,892	28,077	19,897	80,440
Recycled weight	Tons	13,764	2,236	12,929	22,798	18,761	70,490
Recycling rate	%	94	74	86	81	94	—
Legally required recycling rate	%	80	55	74	70	82	—

Iron recovered by magnetic separator

Environmental Initiatives: Resource Recycling

Expanding the Recycling of Used Products

Reusing and Recycling Copiers and MFPs in Japan

Sharp is reusing and recycling copiers and MFPs collected both through Sharp distribution channels and through common industry channels. The company is also collecting used toner cartridges and remanufacturing them to the same quality standard of new products, thus assuring that customers will always get the same high quality. Sharp designs its toner cartridges for easy reuse and recycling. This ensures durability and reduces the amount of time needed to reprocess used cartridges.

Recycling Used Products Overseas

<North America>

In 2007, Sharp's American manufacturing and sales subsidiary SEC (based in New Jersey) established MRM[1] to manage recycling of AV products. Growing nationwide efforts have seen a total of 1,750 collection points established for used products. MRM operates in accordance with the laws and regulations of each state and recycled a total of 56,000 tons of used products in fiscal 2020.

[1] Electronic Manufacturers Recycling Management Company, LLC is a joint venture with Panasonic Corporation of North America and Toshiba America Consumer Electronics, LLC.

< Europe >

The EU WEEE Directive[2] (2012/19/EU) stipulates that the manufacturer is responsible for collecting and recycling products shipped within the EU. Each Sharp European sales company collaborates with established recycling entities in the EU sales region to meet this requirement. Efforts are also made to reduce the volume of landfill waste by taking into account regulations governing packaging materials and batteries.

[2] Waste Electrical and Electronic Equipment Directive

< Vietnam >

In Vietnam, the introduction of a recycling law in 2017 has obliged manufacturers and importers to establish a collection scheme for products sold within the country. Sharp's Vietnamese sales subsidiary SVN (based in Ho Chi Minh City) collects used products at collection points established in Vietnam and ensures they are processed appropriately by licensed recyclers for proper disposal.

< India >

In India, a recycling law (the E-Waste Management Rules 2016, amended in 2018) is in place, which imposes extended producer responsibility (EPR) on manufacturers and others. SBI, Sharp's Indian sales subsidiary, has partnered with a local recycler, 3R Recycler, to carry out the proper disposal of used products. In addition, SBI works with a local NGO, "the Indian Pollution Control Association", to recover plastic waste and recycle it.

Environmental Initiatives: ⚛ Resource Recycling

Environmental Technologies That Contribute to a Sustainable, Recycling-Based Society

Fiscal 2020 Objectives	Fiscal 2020 Achievements	Self-Evaluation	Priority Objectives for Fiscal 2021
■ Practical application of recycled flame-retardant polypropylene	■ Pursued the development of technology for the practical application of recycled flame-retardant polypropylene	★	■ Practical application of recycled flame-retardant polypropylene

Self-evaluation: ★★★ Achieved more than targeted / ★★ Achieved as targeted / ★ Achieved to some extent

Expanding Closed-Loop Plastic Material Recycling Technology

In recycling materials, such as when end-of-life plastic is reused to make new products, the open-loop material recycling scheme is commonly adopted. It involves reusing recycled materials to make things like daily necessities and sundries on the assumption that these goods are disposed of as municipal waste after use.

As opposed to this type of recycling, Sharp and Kansai Recycling Systems Co., Ltd.[1] jointly developed closed-loop plastic material recycling technology with a view to making better use of finite resources and reducing waste. This technology enables the repeated recovery of plastic from used consumer electronics products as well as the reuse of that plastic in parts of new consumer electronics products. The technology has been in practical use since fiscal 2001, when the Act on Recycling of Specified Kinds of Home Appliances (Home Appliance Recycling Act) was enacted in Japan.

Sharp has been striving to make more plastic recyclable through the development of new technologies. These include a technology for recovering high-purity PP (polypropylene) from mixed plastic parts and parts that contain metal; a technology for improving the properties of recovered PP/HIPS[2] and PC+ABS[3] materials so that their quality is on a par with that of virgin materials; a technology that gives materials added value by imparting properties such as flame retardancy, weather resistance, and an antibacterial property, with the aim of expanding applications for recycled plastic; and a quality-control technology for ensuring optimal quality. Thanks to the development and introduction of these technologies that integrate everything from recovery to quality control, Sharp has been able to establish closed-loop material recycling to produce high-grade recycled plastic.

In fiscal 2020, recycled plastic was also used in air conditioner parts. The amount of use of recycled plastic developed through Sharp's closed-loop material recycling technology reached 19,000 tons in fiscal 2020 (in cumulative total from fiscal 2001 to 2020).

■ Amount of Recycled Plastic Used (Cumulative)

(Thousand tons)

Fiscal year	Value
2016	15
2017	16
2018	17
2019	18
2020	19

Related information: > Feature Article "Closed-Loop Plastic Material Recycling Technology"

[1] A consumer electronics recycling company established in Japan with joint investment from Sharp, Mitsubishi Materials Corporation, and four other companies.
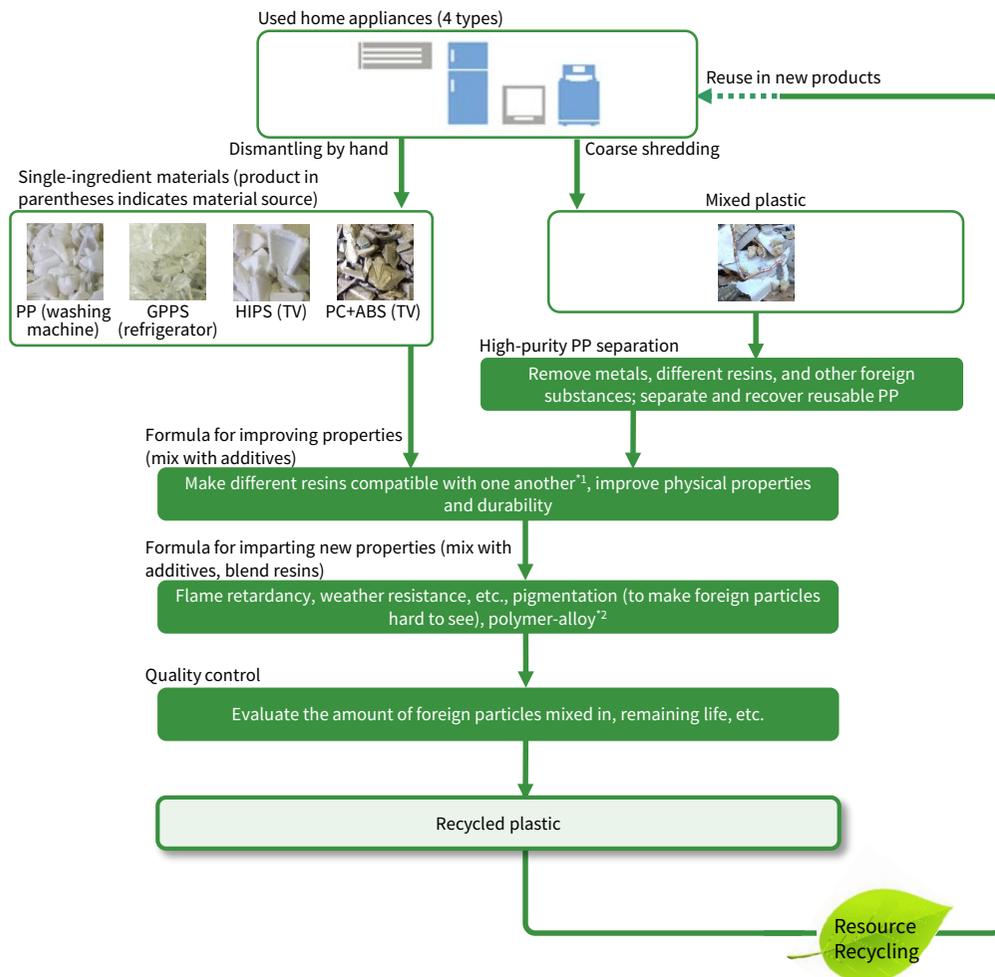[2] High-impact polystyrene (general-purpose polystyrene [GPPS] given impact resistance by adding rubber).
[3] A polymer alloy of polycarbonate and acrylonitrile, butadiene, and styrene (a resin given new properties as a result of mixing in several types of polymers).

Environmental Initiatives: Resource Recycling

Environmental Technologies That Contribute to a Sustainable, Recycling-Based Society

■ Recycling Plastic Recovered from the 4 Types of Home Appliances

Used home appliances (4 types)

Reuse in new products

Dismantling by hand   Coarse shredding

Single-ingredient materials (product in parentheses indicates material source)

PP (washing machine)   GPPS (refrigerator)   HIPS (TV)   PC+ABS (TV)

Mixed plastic

High-purity PP separation

Remove metals, different resins, and other foreign substances; separate and recover reusable PP

Formula for improving properties (mix with additives)

Make different resins compatible with one another[*1], improve physical properties and durability

Formula for imparting new properties (mix with additives, blend resins)

Flame retardancy, weather resistance, etc., pigmentation (to make foreign particles hard to see), polymer-alloy[*2]

Quality control

Evaluate the amount of foreign particles mixed in, remaining life, etc.

Recycled plastic

Resource Recycling

*1 Blending multiple types of resins uniformly and finely dispersed into one another at the molecular level.
*2 A resin given new properties as a result of mixing in several types of resins.

■ Examples of Recycled Plastic Use

Refrigerator   Washing machine   Air Conditioner

Car Plasmacluster Ion generator   Handheld device (Handy Terminal) charger

Product	Recycled Plastic	Part	Source
Refrigerator	PP	Divider	Refrigerator vegetable case
		Duct cover	Refrigerator vegetable case
		Handgrips	Washing machine top plate, outer cabinet, other
		Evaporator cover	Washing machine spin tub, balancer, other
	Flame-retardant PS	Electrical box	Flat-panel TV back cabinet
Washing machine	PP	Washing tub	Washing machine tub
Air Conditioner	PP	Condensation cover, motor holder	Washing machine spin tub, balancer, other
		Vertical louver, interlocking plate	Refrigerator vegetable case
Car Plasmacluster Ion generator	Flame-retardant PC + ABS	Internal parts	Flat-panel TV back cabinet
Handheld device (Handy Terminal) charger	Flame-retardant PC + ABS	Charger	Flat-panel TV back cabinet

Environmental Initiatives: Resource Recycling

Environmental Technologies That Contribute to a Sustainable, Recycling-Based Society

Developing Recycled-Plastic Material with Added Value

In response to the increasing seriousness of pollution from used plastic, countries are enacting and enhancing various laws and regulations related to plastic recycling. In particular, there is a concerted push to move away from the traditional linear economy, characterized by mass production, mass consumption, and mass disposal, and towards a circular economy, characterized by limited input and consumption of new resources and minimal waste production. In Japan, as well, society's attitude towards plastic usage has changed significantly, as evidenced by the enactment of the Act on Promotion of Resource Circulation for Plastics[1], which focuses on resource recycling across the entire life cycle of plastic products, making it increasingly important that plastic materials are properly disposed of and recycled.

Against this background, Sharp is pursuing greater recycling of used plastics, not only through horizontal recycling, in which used plastics are made as good as new material and incorporated into the same parts as they were originally used, but also through upgrade recycling, in which the recycled plastic is given added value with flame retardancy, weather resistance, or high stiffness.

In fiscal 2020, Sharp applied its own technology for rendering plastic flame retardant and improving its durability to develop recycling technology capable of giving strong flame resistance and physical properties coupled with long-term durability to polypropylene recovered from used home appliances. This technology has the potential to change the current situation where metals or expensive engineering plastics[2] are needed to make parts that require high flame retardancy, such as those used around home appliance power switches or heaters. With the practical application of this technology, recycled plastics can be used as alternate materials on such parts, creating promise for lighter and cheaper products that are also more environmentally conscious.

Sharp will steadily move ahead with the development of this recycling technology with the goal of applying it to mass production very soon.

[1] This law is focused on comprehensive plastic recycling across the entire life cycle of plastic-containing products, encompassing everything from manufacturer product design and production to waste disposal (enacted June 4, 2021).
[2] Plastic with engineered characteristics for mechanical strength and heat resistance.

■ **Used Plastic Recycling Method**

Used appliances

Recovered plastic

Commodity plastic

< Horizontal recycling >
Recovered materials are made as good as new materials and used in the same parts as originally used

Functional plastic

< Upgrade recycling >
Recycled plastic is given added value and can be used in a variety of applications

Flame retardancy   Weather resistance   High stiffness

Wider applications

High material performance

Environmental Initiatives: Resource Recycling

Effectively Using Water Resources

Fiscal 2020 Objectives	Fiscal 2020 Achievements	Self-Evaluation	Priority Objectives for Fiscal 2021
■ Water intensity: Improve by 20%(baseline year: fiscal 2012)	■ Water intensity: Improved by 11% (baseline year: fiscal 2012)	★	■ Water intensity: Improved by 20% (baseline year: fiscal 2012)

Self-evaluation: ★★★ Achieved more than targeted / ★★ Achieved as targeted / ★ Achieved to some extent

Sharp's Stance on Water Resources

Water resource problems are arising on a worldwide scale with the increase in the world's population, the economic growth of developing countries, climate change, and other factors. Sharp is striving to make effective use of water resources in line with the environmental conservation guidelines stipulated in Sharp's Basic Environmental Philosophy, the Sharp Group Charter of Corporate Behavior, and the Sharp Code of Conduct. In particular, Sharp recognizes that securing the water resources necessary for the production of LCDs and other electronic devices is a serious issue that could affect business continuity. That is why Sharp is pursuing the reduced use of new water and an increased use of recycled water.

Sharp Group Reducing the Amount of New Water Used and Using More Recycled Water

The volume of new water used by the Sharp Group in fiscal 2020 increased by 23% compared to the previous fiscal year to 9.0 million m3 due to gaining new production bases and other factors. The improvement rate of water intensity was 11%, compared to the baseline year of fiscal 2012.
To minimize the effects on business continuity of the risk of water shortages, Sharp assesses water risk at its plants using the Aqueduct assessment tool developed by the World Resources Institute (WRI).

The Kameyama Plant (Kameyama, Mie Prefecture, Japan) and the Mie Plant (Taki District, Mie Prefecture, Japan) require a large amount of water in the production process for LCDs. All of the water discharged from the production process is collected and reused via a closed-loop recycling system adopted at both plants. Through measures such as this, the Sharp Group is maintaining a recycling rate* of at least 60%. Moreover, Sharp is dedicated to making effective use of water resources globally, such as reducing the amount of new water used by recycling water discharged from the production process at WSEC, a manufacturing base in China.
Looking ahead, Sharp will pursue further water-use efficiency and boost production efficiency in accordance with business expansion.

* Recycling rate = Amount recycled ÷ (amount of new water + amount recycled)

■ **Volume of New Water Used**

(Million m³)

Fiscal year	2016	2017	2018	2019	2020
Volume	7.9	7.8	8.5	7.3	9.0

■ **Water Intensity (Baseline Year: Fiscal 2012)**

(%)

Fiscal year	2016	2017	2018	2019	2020
Value	93	77	85	77	89

■ **Water Recycling Rate**

(%)

Fiscal year	2016	2017	2018	2019	2020
Value	65	66	64	67	65

Environmental Initiatives: Resource Recycling

Effectively Using Water Resources

■ **Water Used and Drainage by Region (Fiscal 2020)**

(m³)

Region	Water withdrawal[1]			Effluent					Amount consumed[3]	Amount recycled
	Third-party water[2]	Groundwater	Total	Surface water	Sewerage	Seawater	Groundwater	Total		
Japan	5,491,912	380,676	5,872,588	2,081,920	369,769	1,651,372	0	4,103,061	1,769,527	16,077,933
Asia	941,473	12,408	953,881	120,257	518,710	0	0	638,967	314,914	103,251
China	2,110,125	7,886	2,118,011	0	1,763,719	0	0	1,763,719	354,292	137,683
North and South America	11,945	0	11,945	0	11,945	0	0	11,945	0	0
Europe	7,818	0	7,818	0	7,623	0	0	7,623	195	0
Total	**8,563,273**	**400,970**	**8,964,243**	**2,202,177**	**2,671,766**	**1,651,372**	**0**	**6,525,315**	**2,438,928**	**16,318,867**

[1] Surface water, seawater, and produced water was 0.
[2] Industrial-use water and tap water
[3] Water consumption = Water withdrawal – Effluent
[4] Under Aqueduct, each region is assigned a water stress score. There are five levels, from rank 1 (low risk) to rank 5 (high risk).
[5] Areas with an Aqueduct water stress score of rank 4 or higher

■ **Volume of New Water Used by Water Stress Rank[4] (Fiscal 2020)**

Rank 1 0%
Rank 2 2%
Rank 3 84%
Rank 4 10%
Rank 5 4%

■ **Volume of New Water Used in Water Stressed Regions[5] (Fiscal 2020)**

(m³)

Region	Third-party water	Ground-water	Surface water	Seawater	Produced water	Total
Japan	20,241	0	0	0	0	20,241
Asia	845,712	0	0	0	0	845,712
China	359,476	0	0	0	0	359,476
North and South America	0	0	0	0	0	0
Europe	0	0	0	0	0	0
Total	**1,225,429**	**0**	**0**	**0**	**0**	**1,225,429**

Environmental Initiatives: ⊚ Resource Recycling

Effectively Using Water Resources

Case Study

Closed-Loop Water Recycling System

The Mie Plant (Taki District, Mie Prefecture) has adopted a closed-loop water recycling system to repeatedly recycle the large amount of water used for the production of LCDs. The water discharged from the production process contains chemicals that must not be released from the plant untreated. All of this water is collected and goes through steps such as biofiltration (the natural decomposition of chemicals using microorganisms) and filter filtration, before being purified with dedicated equipment. The resulting water is used repeatedly in production.

■ **Closed-Loop Water Recycling Flow**

Production process

Large amounts of water are used to wash chemicals off LCDs

Pure water

Effluent

Filtration/pure water production

The water goes through filters and is then purified using dedicated equipment

Recycled water

Effluent treatment

Microorganisms growing in tanks decompose the chemicals

Case Study

Recycling Plant Wastewater to Reduce the Amount of New Water Used (China)

At WSEC, a production base in China, large volumes of greywater[*] are generated when producing pure water for use in the manufacturing process. This greywater was previously treated and disposed of as wastewater. But now WSEC has set up storage tanks for the greywater, which is used in restrooms and air conditioning cooling systems. Thanks to these efforts, WSEC has been able to reduce the consumption of clean water by approximately 63,000 m^3 per year.

* Water that is unfit for drinking but is not harmful to the human body.

■ **Recycling Flow**

Tap water → Pure-water production equipment → Production → Pure water → Production facilities

Pure-water production equipment → Effluent → Greywater

Greywater is discharged during the production of pure water

Greywater → Greywater storage tank → Air conditioning cooling systems and restrooms

Greywater storage tanks

Environmental Initiatives: Safety and Security

Sharp's Stance on Management of Chemical Substances

Sharp's products are built from a plurality of parts and materials and contain wide-ranging chemical substances. Our production processes at factories also use chemical substances. Chemical substances are useful for enhancing the performance and quality of products, whereas some of them may have negative effects on the natural environment and human health. There were pollution and environmental problems caused by chemical substances in the past. Today, regulations to manage chemical substances are imposed in many countries. Some include prohibited or restricted use of specified chemical substances and labeling requirements, and others require the management of information on product content data, reporting of the amounts discharged into the atmosphere and water areas, management of the working environment, and occupational health management.

In accordance with our Basic Environmental Policy of "Creating an Environmentally Conscious Company with Sincerity and Creativity," the Sharp Code of Conduct stipulates the management of chemical substances as follows, on the precondition of compliance with applicable environmental laws, regulations, and regional agreements.

- We will work to compile information related to hazardous substances that might damage the environment or human health, and will not, as a matter of principle, make use of these hazardous substances in our products and services.

- We will ensure proper use and control, and also reduce our consumption of chemical substances in our business activities, including research, development, and manufacturing, at levels meeting or exceeding those stipulated by laws and regulations.

To "properly manage chemicals in order to protect people's health, the natural environment, and ecosystems" is another goal of Sharp. It is a long-term objective set in the SHARP Eco Vision 2050 long-term environmental vision in the safety and security field of action.
An example of our specific efforts to manage chemical substances in products is Delivered Goods Evaluation, in which we check chemical substances contained in components and materials delivered for our production in cooperation with our suppliers. It allows us to monitor and manage information on chemical substances contained in our products. At the factory-level, the process assessment system is in place. It is a preliminary assessment of new chemical substances to be used or equipment retrofitted or modified for handling chemical substances and is performed to check their safety and environmental impact.

■ **Chemical Substance Management System**

Environmental Initiatives: Safety and Security

Managing Chemical Substances Contained in Products

In order to reduce environmental impacts of its products and to comply with chemical substance regulations in relevant countries, Sharp manages chemical substances contained in its products in accordance with its own management categories that take into account applicable laws and regulations in relevant countries, voluntary standards set by industry groups, and even potential future regulations. We determine chemical substances that we should manage according to these categories, notify suppliers, and conduct a survey of chemical substances contained in products to obtain chemical substance content data.

Determining Which Chemical Substances to Manage
Sharp's Standard Manual for Management of Chemical Substances Contained in Parts and Materials is made available to the public to clarify the chemical substances it manages according to its own management categories. This manual divides the target chemical substances into three categories: banned substances, substances banned depending on the application, and managed substances. For each category, applications, criteria values, and the date of total abolition are defined.

■ **Management Categories of Chemical Substances**

Category	Description	Remarks
Banned substances	Substances that cannot be used for any purpose	● Substances whose inclusion in products is currently regulated or is expected to be regulated in the future under laws and regulations and on environmental labels in Japan or overseas
Substances banned depending on the application	Substances regarded as banned by Sharp depending on the application (excluded applications)	● Substances that Sharp regulates on its own initiative in advance of global trends because it is widely known that their environmental impact is high and alternative substances exist
Managed substances	Substances for which it is necessary to ascertain whether the specified substance is present, the amount contained, and so on	● Substances for which disclosure of information on their usage status in products is required, or is expected to be required in the future, under laws and regulations and on environmental labels in Japan or overseas ● Substances for which customers have requested, or for which there is a possibility of being requested, that their usage status information in products be disclosed

Related information: >

Delivered Goods Evaluation
We conduct Delivered Goods Evaluation in cooperation with suppliers. Its purpose is to assess the chemical substances contained in parts and materials (materials, general components, finished and semi-finished products, indirect materials, others) sourced from suppliers according to the chemical substance management categories. Information obtained through the Delivered Goods Evaluation is used for understanding chemical substances contained in products and compiling information to be shared with our supply chain.

Report on Chemical Substances Contained in the Product and Analysis Data
Sharp's suppliers are required to submit a Report on Chemical Substances Contained in the Product before they deliver a new component or material for the first time. This is used to confirm their conformity with the regulations prohibiting the use of specific chemical substances in products in relevant countries. With this report, we check the presence of banned substances and decide whether to purchase the component or material.
Suppliers must also submit analysis data on the 10 substances regulated under the EU RoHS Directive[*] (lead, mercury, cadmium, hexavalent chromium, PBB, PBDE, DEHP, BBP, DBP, and DIBP) for confirmation of compliance with the regulatory requirements.

[*] An EU directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Related information: >
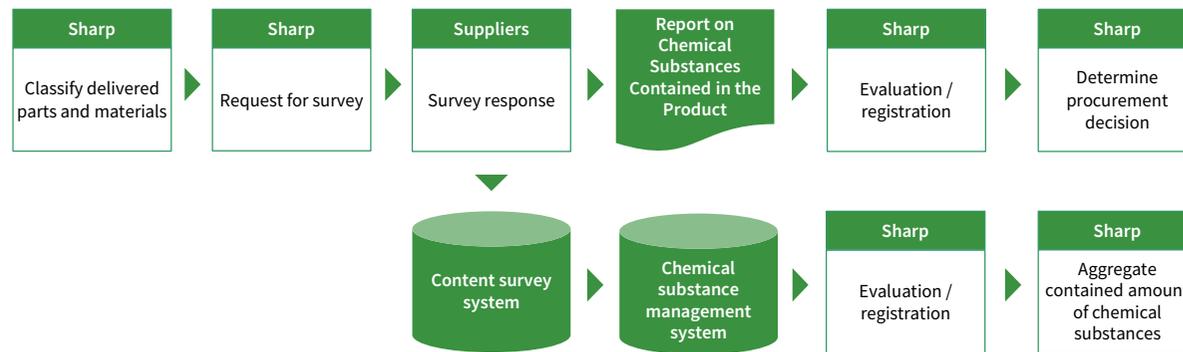
Environmental Initiatives: 🫱 Safety and Security

Managing Chemical Substances Contained in Products

Chemical Substance Content Survey

The EU REACH regulations[*1] and other legal requirements in countries around the world oblige companies to communicate and disclose information on chemical substances contained in their products throughout their supply chain. To meet these requirements, it is necessary to have a system through which all supply chain partners—whether supplying raw materials, materials, parts, or finished products—cooperate to gather, aggregate, and share information on chemical substances. Sharp's suppliers are asked to enter information on how much chemical substances are contained in their parts and materials, and where, in the Chemical Substance Content Survey System. This helps us gather information on chemical substances contained in our products, which is then used to manage and aggregate data on our chemical substance management system. For information collection, Sharp also utilizes chemSHERPA[*2], an information sharing scheme compliant with the IEC 62474[*3] international standard.

Sharp also meets requirements for the EU market obligated by SCIP[*4], which went into effect in January 2021.

[*1] An EU regulation mandating the registration, evaluation, authorization, and restriction of chemical substances manufactured or imported into the EU.
[*2] An information sharing scheme developed under the leadership of the Japanese Ministry of Economy, Trade and Industry for the purpose of efficiently communicating information on chemical substances in products over the entire supply chain.
[*3] An international standard on the procedures and details of information sharing in the supply chain for products and components in the electrical and electronics industry containing chemical substances.
[*4] SCIP: Substances of Concern in articles as such or in complex objects (Products). A database for information on substances of very high concern (SVHCs) managed by the European Chemicals Agency.

■ **Delivered Goods Evaluation (Evaluative Process for Newly Delivered Parts and Materials)**

Environmental Initiatives: Safety and Security

Effective Management of Chemical Substances Used at Factories and Their Risk Management

Sharp strives to minimize the risk of environmental pollution and accidents associated with chemical substances and to properly meet chemical substance regulations. To this end, Sharp controls chemical substances used at, and released from, its production bases by implementing the process assessment system and the monitoring and risk management of chemical substances. To minimize the environmental impact and ensure occupational safety, workers handling chemical substances go through regular education and training. They also receive regular health checks.

Process Assessment System

The process assessment system is Sharp's in-house system for preliminarily assessing the hazards, safety measures, and other factors of chemical substances. This assessment applies when a new chemical substance is to be introduced or when the procedure for handling chemical substances needs to be changed, for example. The system ensures that chemical substances are properly managed at all stages from procurement to disposal and that safety measures are implemented for the equipment handling them. It is designed to review the appropriate disposal of waste chemical substances, the proper treatment of exhaust gas and wastewater, and safety procedures for workers handling chemical substances, and to evaluate and determine the conditions for the safe use of chemical substances. Chemical substances are grouped into four categories according to their gravity of impact on safety/health, hazard/explosion, and environmental conservation: legally banned substances, sensitive substances, managed substances, and registered substances. An appropriate management level is assigned to each category.

■ Chemical Substance Management Categories under the Process Assessment System

Category	Description
Legally banned substances	Chemical substances that are banned for production, etc. under laws and regulations. Substitutes for them need to be searched for.
Sensitive substances	Chemical substances that are not legally banned but are banned by Sharp for use due to their high levels of toxicity (acute toxicity/carcinogenicity) or hazards (explosiveness/flammability). Substitutes for them need to be searched for.
Managed substances	Chemical substances that have toxicity (corrosiveness/irritancy), hazards (combustibility/spontaneous combustibility), or other concerns but may be used under adequate control.
Registered substances	Chemical substances that have limited toxicity or hazards and thus may be used under specified control.

Monitoring and Risk Management of Chemical Substances

Sharp has established voluntary standards that are stricter than either the regulatory requirements or the levels agreed upon with local communities for chemical substances used at its production bases. These standards ensure the comprehensive monitoring and management of the target chemical substances released and transferred, as well as the concentrations and emissions of air and water pollutants.

Environmental Initiatives: 🫶 Safety and Security

Release and Transfer of PRTR-listed Substances

Sharp monitors and reports the release and transfer of chemical substances covered by the Japanese PRTR[1] Act. Of these PRTR chemicals, 13 were handled in Japan and nine overseas[2] in quantities of 500 kg or more by one or more plants during fiscal 2020.

[1] PRTR: Pollutant Release and Transfer Register. A system that mandates the collection and dissemination of information, such as the amount of harmful chemicals discharged and transferred.
[2] Sharp defines target substances based on laws in Japan.

■ PRTR Data for Japan (Fiscal 2020)

(kg)

PRTR No.	Chemical	Amount Handled	Amount Discharged		Amount Transferred		Amount Consumed		Amount Removed
			Into Atmosphere	Into Public Water Areas	Into Sewerage	Into Waste, etc.	Contained in Products	Recycled	
1	Zinc water-soluble compounds	921	0	0	0	852	0	69	0
20	2-Aminoethanol	2,349,197	1,033	0	0	109,091	0	1,968,220	270,853
44	Indium and its compounds	11,734	0	0	0	3,168	353	8,213	0
71	Ferric chloride	52,620	0	0	0	0	0	37,828	14,792
135	2-methoxyethyl acetate	41,000	787	0	0	0	0	30,880	9,333
232	N, N-dimethyl formamide	22,287	0	0	0	0	0	0	22,287
272	Copper salts (water-soluble, except complex salts)	34,759	0	0	0	19,077	13,209	1,738	735
343	Pyrocatechol (also called catechol)	1,771	0	0	0	1,771	0	0	0
374	Hydrogen fluoride and its water-soluble salts	507,665	1,168	0	0	369,705	9,130	81,602	46,060
405	Boron compounds	3,454	24	0	0	2,997	88	345	0
412	Manganese and its compounds	16,598	0	0	0	220	16,378	0	0
438	Methylnaphthalene	12,810	64	0	0	0	12,746	0	0
453	Molybdenum and its compounds	12,850	0	0	0	1,943	385	10,522	0
Total		**3,067,666**	**3,076**	**0**	**0**	**508,824**	**52,289**	**2,139,417**	**364,060**

Environmental Initiatives: Safety and Security

Release and Transfer of PRTR-listed Substances

■ **Overseas PRTR Data (Fiscal 2020)**

(kg)

PRTR No.	Chemical	Amount Handled	Amount Discharged		Amount Transferred		Amount Consumed		Amount Removed
			Into Atmosphere	Into Public Water Areas	Into Sewerage	Into Waste, etc.	Contained in Products	Recycled	
31	Antimony and its compounds	2,015	0	0	0	20	1,342	653	0
71	Ferric chloride	2,606	0	0	0	0	2,606	0	0
82	Silver and its water-soluble compounds	692	0	0	0	98	594	0	0
104	Chlorodifluoromethane (also called HCFC-22)	693	2	0	0	0	691	0	0
291	1,3,5-tris (2,3-epoxypropyl)-1,3,5-triazine-2,4,6 (1H,3H,5H)-trione	2,071	0	0	0	21	1,378	672	0
300	Toluene	3,104	3,104	0	0	0	0	0	0
392	N-hexane	9,173	9,173	0	0	0	0	0	0
413	Phthalic anhydride	3,403	0	0	0	34	2,265	1,104	0
448	Methylenebis(4,1-phenylene) diisocyanate	3,190,758	0	0	0	45,270	3,145,488	0	0
	Total	**3,214,515**	**12,279**	**0**	**0**	**45,443**	**3,154,364**	**2,429**	**0**

Environmental Initiatives: Safety and Security

Managing Environmental Load into Air and Water Areas

Sharp properly manages pollutants that affect air and water quality by establishing voluntary standards that are stricter than those set forth in laws and regulations and stricter than those agreed upon with local communities. It also actively conducts risk communication with local communities.

Reducing VOCs

Sharp strives to reduce the volatile organic compounds (VOCs) it emits. It has set a target of keeping VOCs released into the atmosphere to no higher than fiscal 2010 levels (based on a voluntary action plan by the Japanese electrical and electronics industry). Fiscal 2020 VOC emissions were 134 tons, approximately 34% less than in fiscal 2010.
Sharp is reducing VOCs with the installation of highly efficient abatement facilities in LCD production sites, a major source of VOC emissions.

Atmospheric Emissions in Japan

■ **NOx Emissions**

■ **SOx Emissions**

Emissions into Water Areas in Japan

■ **VOC Emissions into the Atmosphere**

■ **COD (Chemical Oxygen Demand)**

■ **Nitrogen Pollutant Load**

■ **Phosphorous Pollutant Load**

Environmental Initiatives: Safety and Security

Managing Environmental Load into Air and Water Areas

Risk Management of Soil and Groundwater Pollution

Sharp set in-house standards in 1999 to minimize the risk of environmental pollution and accidents caused by chemical substances. It also strives to prevent such incidents from occurring by taking multi-layered leakage prevention measures at facilities that handle chemical substances. For plants where chlorine solvent contamination was found in the past, Sharp regularly notifies local government authorities and others of the cleanup progress.

Case Study

Analyzing Plant Wastewater Samples (Tenri Plant)

Sharp's Tenri Plant (Tenri, Nara Prefecture) has signed an environmental protection agreement with the city of Tenri as part of its risk communication activities. Under the agreement, the Tenri Plant conducts environmental measurements of the atmosphere, water, noise, and vibration.

Regarding effluent released into Takase River—near the Tenri Plant—Sharp has set voluntary standards that are stricter than those mandated by law. In addition to equipment-based water-quality monitoring, the Tenri Plant enlists a third-party institute to analyze the water. No anomalies have been found and the results are reported to the Tenri city government.

As for effluent into the sewerage system, the Tenri Plant undergoes water quality inspections by Tenri city. The Tenri Plant does its utmost to prevent pollution in any form. No problems have been found with the plant's effluent.

Environmental Initiatives: Environmental Management

Putting Sustainable Management into Practice

In accordance with internal environmental conservation guidelines established in line with Sharp's Basic Environmental Philosophy, the Sharp Group Charter of Corporate Behavior, and the Sharp Code of Conduct, Sharp is pursuing environmental consciousness across all of its business activities. Toward realizing a sustainable global environment, Sharp has formulated SHARP Eco Vision 2050, a long-term environmental vision with 2050 as the target year. Under this vision, Sharp is striving to solve social problems and continuously raise corporate value through the development of technologies and the provision of products and services.

Promoting Sustainable Management

Sharp Corporation has set up the Quality and Environmental Promotion Office as an organization to formulate and carry out the company-wide policies, goals, and environmental vision and strengthen company-wide environmental governance. The Quality and Environmental Promotion Office formulates important environmental policies and strategies at the corporate level regarding sustainable management based on Sharp's management policies and environmental vision. Other roles of the organization include establishing the Sharp Global SER Committee,[*] which comprises senior executives such as heads of Sharp business units and subsidiaries, decide on Sharp's environmental measures, formulating Sharp's environmental goals and guidelines, confirming progress toward environmental goals, implementing the PDCA cycle toward them, and supporting environmental activities. Sharp also organizes the meetings of the Quality and Environmental Strategy Promotion Council , where participants review and discuss environmental measures being taken by different teams of Sharp, such as business units and affiliates, to manage their progress and resolve the issues they face. This is Sharp's approach to build a system to put sustainable management into practice throughout the organization.

In the area of product environmental laws and regulations and chemical substance controls, we periodically hold information exchange meetings to ensure compliance with applicable requirements. Working groups and expert committees are also established as required to address environmental issues that call for cross-functional efforts.

* See page 28.

Basic Environmental Philosophy	The Sharp Group Charter of Corporate Behavior (excerpt)	The Sharp Code of Conduct (excerpt)
	Contribution to Conservation of the Global Environment	**Contribution to Conservation of the Global Environment**
Creating an Environmentally Conscious Company with Sincerity and Creativity	The Sharp Group will make efforts to further contribute to global environmental conservation by strengthening our development of proprietary technologies for protecting the global environment and by carrying out business activities in an environmentally conscious manner.	1. To Conserve the Environment 2. To Develop Environmentally Conscious Products and Services, and Conduct Our Business Operations in an Environmentally Conscious Manner

Related information: > Sharp Group Charter of Corporate Behavior (Contribution to Conservation of the Global Environment)
Sharp Code of Conduct (IV. Contribution to Conservation of the Global Environment)

■ **System for Promoting Sustainable Management in the Environmental Area**

Environmental Initiatives: Environmental Management

Putting Sustainable Management into Practice

Environmental Education

In accordance with the basic strategy of its management policy—foster and strengthen human resources—Sharp strives to step up the cultivation of human resources as the foundation of its sustainable management. To this end, since fiscal 2017 the company has been updating its environmental education curriculum and creating new training programs, including basic training open to all employees.

Since fiscal 2019, Sharp has held an e-learning course called environmental awareness training to help all employees acquire a wide range of environmental knowledge, and an introductory online training course on environmental laws and regulations that is mandatory for third-year employees.

In response to the worldwide Covid-19 pandemic, in fiscal 2020 training previously held in the classroom (CMS auditor training, laws and regulations on chemical substances contained in products, and training on surveying chemical substances in products) was switched to online. With the aim of fostering human resources who will contribute to the company in stepping up compliance and achieving its environmental vision, Sharp will continue to improve and expand its environmental education curricula by adjusting them to different duties and roles.

■ **Number of Participants in Environmental Training (Fiscal 2020)**

Category	Course	Number of participants
Specialized training (7 courses)	Product environmental laws and regulations (introductory), product environmental laws and regulations (practical application), CMS[1] auditor training, others	70

[1] Chemical Management of Supplier

Environmental Performance Data Collection and Management

To support sustainable management, Sharp has established a system for efficiently collecting and managing data on Sharp's environmental performance, including energy consumption, waste generation, water usage, and chemical substances handled in Sharp's business activities. This system is in operation at Sharp bases in Japan and overseas. Collecting and analyzing such data helps Sharp grasp the current state of its sustainable management, identify problems, and formulate measures.

Promoting an Environmental Management System

Since 1995, Sharp has been operating an ISO 14001-based environmental management system and has acquired ISO 14001 certification for all worldwide production bases[2]. The purpose of this system is to strengthen environmental sustainability management and improve the environmental awareness of employees.

ISO 14001 was revised in fiscal 2015. It now requires companies to further their efforts with a more strategic perspective—for example, by integrating their environmental activities with business activities. In response to the revision, Sharp is operating a more effective environmental management system that matches the particular needs of each base.

Related information: > Environmental Efforts at Our Plants

[2] Excluding bases operating less than one year.

Product and Plant Audits

Sharp regularly carries out a Green Product/Green Device Audit aimed mainly at ensuring compliance in product development. The company checks compliance with the environmental laws and regulations of each country and the reflection of environmentally friendly design in products, such as energy efficiency, resource savings, and recyclability.

Sharp also reviews and evaluates environmental activities at its production bases as part of the CSR self-assessment survey[3]. To strengthen governance and reduce risks, our survey in fiscal 2020 was focused on interviews at sites that have just joined the Sharp Group through M&A or other partnerships.

[3] See page 31.

Legal Violations, Accidents

In fiscal 2020, Sharp was not subject to any lawsuits or fines related to environmentally related legal violations. There were also no major environmentally related accidents.

Environmental Initiatives: Environmental Management

Developing Environmentally Conscious Products and Devices

Developing Green Products and Devices

Sharp calls its environmentally conscious products "Green Products (GP)". The GP Guidelines, which define development and design criteria in line with seven concepts, have been in use at all product design departments since fiscal 1998. In developing products, Sharp sets specific objectives according to the GP Standard Sheet, which is formulated based on the GP Guidelines. In the trial manufacture and mass production stages, it determines how well the actual product has met these objectives. The content of the GP Standard Sheet—the benchmark for development objectives—is revised each year in order to constantly improve the environmental performance of Sharp products. Sharp sales and manufacturing bases in Europe, ASEAN countries, and the Middle East meet periodically to keep abreast of changing product environmental laws and regulations around the world. The information gathered at these meetings is shared with Sharp business units in Japan and the legal requirements relating to product design are reflected in the GP Guidelines.

Sharp calls its environmentally conscious devices "Green Devices (GD)". To define guidelines for development and design based on seven concepts, Sharp established the GD Guidelines, which it began applying at all device design departments in fiscal 2004. Sharp sets objectives according to the GD Standard Sheet and assesses how objectives have been met in a similar way to GP standards. In fiscal 2013, Sharp revamped the GD assessment system by adding new criteria concerning forward looking initiatives that take customer demands into consideration. The degree to which these criteria are satisfied is represented in points called GD Challenge Points. The assessment criteria are revised every year so that Sharp can continuously raise the environmental performance of its products such as LCD modules and sensors.

■ **Green Product Concepts**

Concept	Description
Energy Saving / Energy Creating	**Products with superb energy-saving / energy-creating performance** Improve the energy efficiency and reduce the energy consumption of products; other measures
Resource Conservation	**Products designed to conserve resources** Reduce the amount of materials used; design products that conserve resources during use; extend the life span of products; other measures
Recyclability	**Products designed for recycling** Design products that are easy to disassemble; use easy-to-recycle materials; other measures
Safe Use and Disposal	**Products that can be used and disposed of safely** Do not use substances that negatively affect people's health or the environment; other measures
Use of Green Materials and Devices	**Products that use green materials and devices** Use recycled materials / plant-based plastics; other measures
Environmental Consciousness Pertaining to Batteries, etc.	**Products that use batteries, manuals, and packaging with enhanced environmental consciousness** Reduce product packaging; design products that allow easy removal of batteries; other measures
Showing Eco Information of Products	**Products that show their environmental performance and information** Acquire environmental labels (eco labels); implement LCA; other measures

■ **Green Device Concepts**

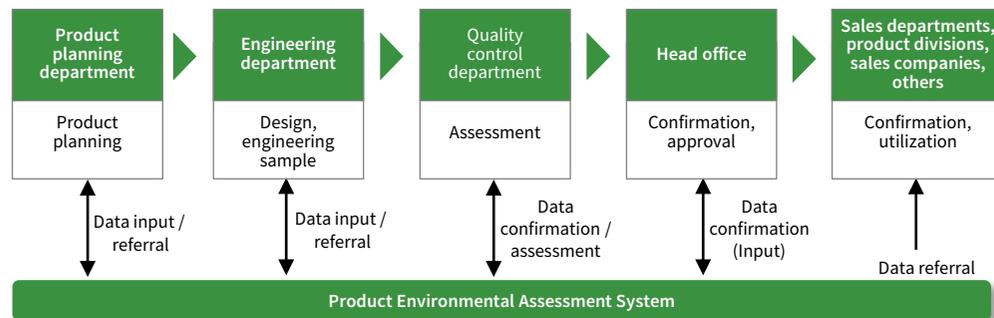| Concept	Description
Energy Efficiency / Energy Creating	**Devices with superior energy efficiency and that consume less energy** Reduce power consumption during operation and in standby mode; other measures
Resource Conservation	**Devices designed to conserve resources** Reduce device weight or volume; other measures
Recyclability	**Devices designed for recycling** Use standard plastic; design devices that are easy to disassemble; other measures
Safe Use and Disposal	**Devices that can be used and disposed of safely** Manage usage of chemical substances contained in parts and materials; other measures
Long Life	**Devices that make products last longer** Extend the life of the product with exchangeable parts and consumables (target: LCD devices); other measures
Packaging	**Devices that use packaging with enhanced environmental consciousness** Reduce packaging; other measures
Information Disclosure	**Devices that give environmental information** Provide information on chemical substances in devices; other measures

Environmental Initiatives: Environmental Management

Developing Environmentally Conscious Products and Devices

Developing Super Green Products

Since fiscal 2004, Sharp has been certifying products that offer a particularly high level of environmental performance as "Super Green Products (SGP)". In fiscal 2020, sales of those products reached 142.6 billion yen, with SGP sales accounting for 29% of all GP sales in Japan.
In fiscal 2016, Sharp revised the criteria for this certification. Products are certified if (1) they offer class-leading energy-saving or energy-creating performance, or (2) they offer significantly high environmental performance through the use of unique Sharp technology. This way, Sharp is aggressively pursuing the development of products that consume as little power as possible or that use resources to the least possible extent, as well as developing high-efficiency solar cells.

■ **Examples of Super Green Products for Fiscal 2020**

Plasmacluster washing machine/dryer
＜ES-W113＞

Smartphone
＜SH-M17＞ （AQUOS sense5G)

Cordless stick vacuum cleaner
＜EC-AR5＞

Solar module
＜NU-JC370＞

Case Study

Developer Interviews

Sharp has the "Going Green Everywhere" website, which features interviews with product planning staff, engineers, designers, salespersons, and other staff involved in products development. The site conveys their commitment to environmentally conscious manufacturing and the difficulties they have faced. Through this site, Sharp aims to boost the added value of products by communicating the products' appeal from an environmental perspective.
In fiscal 2020, the site featured COCORO AIR and the Airest air-purifying household air conditioner.

The COCORO AIR development team

The Airest development team

Environmental Initiatives: Environmental Management

Developing Environmentally Conscious Products and Devices

Product Environmental Assessment System

Sharp operates a product environmental assessment system to ensure compliance with environmental laws and regulations as well as to promote environmentally conscious product design. This system allows Sharp to keep a database of the development know-how and design data that all Sharp design and development bases possess on environmentally conscious products and devices. The database is used to raise design standards and to promote in-house standardization of life cycle assessments (LCA). This way, the system is contributing to the creation of environmentally conscious Sharp products and devices. Since fiscal 2016, Sharp has been strengthening the function for checking products' compliance with environmental laws and regulations.

■ **System Flow**

Product planning department		Engineering department		Quality control department		Head office		Sales departments, product divisions, sales companies, others
Product planning	→	Design, engineering sample	→	Assessment	→	Confirmation, approval	→	Confirmation, utilization

Data input / referral | Data input / referral | Data confirmation / assessment | Data confirmation (Input) | Data referral

Product Environmental Assessment System

Environmental Initiatives: Biodiversity Protection

Protecting Biodiversity

Biodiversity Protection through Business and Social Action Programs

While Sharp's business activities impact biodiversity, the company also benefits from the resources that biodiversity provides. That is why the Sharp Group is carrying out a multifaceted approach in which it protects biodiversity through business activities and social action programs at worldwide bases.

Based on the Sharp Group Policy on the Sustainable Support of Biodiversity, Sharp formulated the Sharp Biodiversity Initiative in fiscal 2009. The Initiative describes biodiversity in an easy-to-understand manner, and it outlines concrete measures for business activities and social action programs that take biodiversity into account.

■ **Sharp's Efforts for Protecting Biodiversity**

Business activities — Multifaceted approach — Social action programs

Efforts throughout the value chain	
Procurement	Procure environmentally conscious parts and materials
Development	Develop environmentally conscious products and devices
Manufacturing	Reduce the amount of greenhouse gases and waste generated in factories
Sales	Reduce the amount of greenhouse gases and waste generated in offices
Logistics	Shift modes of transportation to reduce CO_2 emissions

Direct conservation activities
Sharp Forests, cleanup, etc.

Foster biodiversity-minded employees
Sharp Green Club* activities, etc.

Educate the general public
Participate in environmental events, hold environmental education, etc.

* A joint Sharp labor-management volunteer organization

Case Study

Conserving Freshwater Fish Species

The Kameyama Plant (Kameyama, Mie Prefecture) is working to conserve and propagate Tanakia lanceolata, a freshwater fish, in a biotope on the plant premises. A large population of this fish used to inhabit the municipality of Kameyama, but factors such as increased agriculture and threats from invasive species have put it on the endangered list in Mie Prefecture. The pond of the biotope is suitable for conservation and propagation since there is little chance of invasive species entering it. Plant employees also periodically carry out upkeep of the pond and monitor the health of the fish population.

Pond in the biotope

Tanakia lanceolata inhabiting the pond

Case Study

Planting Mangroves

In Indonesia, Sharp's local production base SSI joined mangrove planting activities conducted under the slogan of "Tree Planting Today, Save Our Water In The Next." SSI employees planted mangroves with people from 35 other companies operating in Karawang and the Indonesian government's environmental department.

Planting mangroves

Environmental Initiatives: Overview of Environmental Impact

Material Balance

Sharp gathers data to gain an overview of the burden its business activities place on the environment. Measured items include the consumption of energy and materials in business activities, the emissions of greenhouse gases, and the generation of waste. Sharp then uses these values to reduce its environmental burden.
Coverage: Sharp Corporation production sites and production bases in Japan and overseas

■ Input

Item			Unit	Fiscal Year		
				2018	2019	2020
Procurement, R&D, product manufacture	Energy		TJ[1]	17,973	16,719	17,205
		Electricity	Million kWh	1,467	1,364	1,419
		Renewable energy[2]	Million kWh	11	12	11
		City gas	Million m^3	67	62	62
		LPG・LNG	Tons	5,479	5,387	5,809
		Heavy oil, kerosene, gas oil, gasoline	Kl	1,989	1,541	1,425
		Hot water, cold water, steam	TJ	160	173	235
	PFCs purchased		Tons	1,177	1,360	1,375
	Water resources		Million m^3	23.6	22.3	25.3
		Water withdrawal	Million m^3	8.5	7.3	9.0
		Third-party water[3]	Million m^3	8.0	7.0	8.6
		Groundwater	Million m^3	0.5	0.3	0.4
		Water reused	Million m^3	15.1	15.0	16.3
	Chemical substances handled (PRTR-listed)		Tons	6,724	5,809	6,282
	Chemical substances handled (VOCs)		Tons	2,973	2,937	3,065
	Materials consumed[4]		Thousand tons	705	674	833
		Recycled plastic[5]	Thousand tons	1	1	1
Logistics	Energy consumed (vehicle fuel)[6]		TJ	272	258	210
Product use	Energy consumed (electricity)[7]		Million kWh	4,294	4,488	5,563

■ Output

Item			Unit	Fiscal Year		
				2018	2019	2020
Procurement, R&D, product manufacture	Greenhouse gases		Thousand tons CO$_2$	1,077	974	951
		CO$_2$	Thousand tons CO$_2$	984	880	839
		Gases other than CO$_2$ (converted into amounts of CO$_2$)	Thousand tons CO$_2$	93	94	112
		HFC	Thousand tons CO$_2$	4	2	2
		PFC	Thousand tons CO$_2$	48	55	62
		SF$_6$	Thousand tons CO$_2$	32	31	38
		NF$_3$	Thousand tons CO$_2$	9	7	10
	Effluent		Million m^3	6.0	4.8	6.6
		Public water areas	Million m^3	3.4	2.6	3.9
		Sewerage	Million m^3	2.6	2.2	2.7
	Chemical substances released and handled (PRTR-listed)		Tons	386	419	570
	Chemical substances released and handled (VOCs)		Tons	76	93	134
	Atmosphere[6]	NOx emissions	Tons	45	34	41
		SOx emissions	Tons	2	1	1
	Water areas[6]	COD (chemical oxygen demand)	Tons	5	4	4
		Nitrogen pollutant load	Tons	35	31	39
		Phosphorous pollutant load	Tons	1	0.5	0.2
	Product shipments[8]		Thousand tons	630	606	766
	Waste, etc.		Thousand tons	75	68	67
		Final landfill disposal	Thousand tons	0.5	0.4	0.4
Logistics	CO$_2$ emissions[6]		Thousand tons CO$_2$	19	18	14
Product use	CO$_2$ emissions[7]		Thousand tons CO$_2$	2,756	2,857	2,967

Environmental Initiatives: Overview of Environmental Impact

Material Balance

■ **Recycle**

Item		Unit	Fiscal Year		
			2018	2019	2020
Amount recycled[6]	Home appliances (4 kinds)	Thousand tons	59	63	70
	Copiers/MFPs	Thousand tons	2.9	2.7	3.6
	PCs	Tons	11	10	15
	Amount of closed-loop material recycling of plastic	Thousand tons	1	1	1
Disposal after recycling[6]		Thousand tons	9	9	9

[1] TJ (terajoule) $= 10^{12}$ J
[2] Amount of solar power generated; amount of green power certificates purchased.
[3] Industrial-use water and tap water
[4] Total weight of product shipments and waste, etc. (estimate).
[5] Amount recycled through closed-loop plastic material recycling technology.
[6] In Japan.
[7] Annual energy used and amount of CO_2 emitted by products in the 8 major categories sold in the reporting year (estimate).
[8] Total weight of products in the 8 major categories sold in the reporting year and packaging materials used (estimate).

Environmental Initiatives: Overview of Environmental Impact

Calculation Standards for Environmental Performance Data

The environmental performance data are calculated based on the following calculation standards.

■ Input

Environmental Performance Indicators		Calculation Method
Procurement, R&D, product manufacture	Energy consumed	Calculated based on the Act on the Rational Use of Energy (Energy Conservation Act) and the Japanese Ministry of the Environment's Greenhouse Gas Emission Calculation and Reporting Manual
	PFCs purchased	HFCs, PFCs, sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3) purchased annually
	Water resources consumed	Consumption and recycled use of water purchased from third parties (industrial-use water, tap water) and groundwater
	Chemical substances handled (PRTR-listed)	Among the substances covered under the PRTR Law, the total amount of substances handled annually at each plant in quantities of 500 kg or more
	Chemical substances handled (VOCs)	Among the 20 types of volatile organic compounds (VOCs) specified by Japan's four major electrical and electronic industry associations, the total amount of substances handled annually at each plant in quantities of 1 metric ton or more
	Materials consumed	Total weight of products in the 8 major categories* sold in the reporting year (estimate), plus waste, etc. generated
Logistics	Energy consumed	Revised ton-km method
Product use	Energy consumed	Estimate of annual energy used by products in the 8 major categories* sold in the reporting year. Calculation based on each product's annual energy consumption rate (using a heat input per unit of 9.97 MJ/kWh).

* LCD TVs, air conditioners, refrigerators, washing machines, air purifiers, microwave ovens, copiers/MFPs, solar cells

■ Output

Environmental Performance Indicators		Calculation Method
Procurement, R&D, product manufacture	Greenhouse gas emissions	● CO_2 emissions from purchased electricity Japan: Using CO_2 emission coefficient by electric power company (adjusted) published by Japan's Ministry of the Environment and the Ministry of Economy, Trade, and Industry Overseas: Using emission coefficient published in the IEA Emissions Factors ● CO_2 emissions from consumed fuel Using emission coefficient published in the Ministry of the Environment's Greenhouse Gas Emission Calculation and Reporting Manual ● Greenhouse gases other than CO_2 Using global warming potential published in the 4th Assessment Report by the Intergovernmental Panel on Climate Change (IPCC)
	Drainage	Annual drainage into public water areas and sewer system
	Chemical substances released and transferred (PRTR-listed)	Among the substances covered under the PRTR Law, the total amount of substances (handled annually at one or more plant in quantities of 500 kg or more) that were released and transferred
	Chemical substances released and transferred (VOCs)	Among the 20 types of volatile organic compounds (VOCs) specified by Japan's four major electrical and electronic industry associations, the total amount of substances (handled annually at each plant in quantities of 1 metric ton or more) that were released and transferred
	NOx emissions	Annual emissions
	SOx emissions	Annual emissions
	COD (chemical oxygen demand)	Drainage into public water areas
	Nitrogen pollutant load	Drainage into public water areas
	Phosphorous pollutant load	Drainage into public water areas
	Product shipments	Total weight of products in the 8 major categories* sold in the reporting year, plus packaging material used (estimate)
	Waste, etc.	Industrial waste + general office waste + valuable resources recovered
	Final landfill disposal	Final landfill disposal of industrial waste + final landfill disposal of general office waste
Logistics	CO_2 emissions	Revised ton-km method
Product use	CO_2 emissions	Amount of CO_2 emitted by products in the 8 major categories* sold in the reporting year, based on their energy consumption (estimate)

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Environmental Initiatives: Overview of Environmental Impact

Calculation Standards for Environmental Performance Data

■ **Recycle**

Environmental Performance Indicators		Calculation Method
Disposal, recycling	Home appliances (4 kinds)*	Amount of used home appliances (4 kinds) recycled
	Copiers/MFPs	Amount of recycled copiers and MFPs
	PCs	Amount of recycled PCs
	Amount of closed-loop material recycling of plastic	Amount of recycled plastic used, which was produced through closed-loop material recycling
	Disposal after recycling	[Weight of 4 kinds of home appliances, PCs, and copiers/MFPs collected] – [Weight recycled into new products or materials, or reused]

* TVs (CRT TVs, flat-panel TVs), air conditioners, refrigerators/freezers, washing machines/dryers

Social Initiatives

10 REDUCED INEQUALITIES

2.46%
Employment Rate of the Disabled in Japan (As of June 2021)

15 LIFE ON LAND

9,683 person
Total number of participants in environmental conservation activities in fiscal 2020

Social Initiatives: Promoting Supply Chain CSR

Determining Procurement from the Standpoint of Providing Equal Opportunity and Fair Evaluation

As Sharp's business philosophy states, "Our future prosperity is directly linked to the prosperity of our customers, dealers and shareholders," Sharp aims for sustainable growth and mutual prosperity with all of its suppliers.

To these ends, Sharp emphasizes maintaining impartiality and fairness in all purchasing activities and chooses who it will procure local parts, materials, and equipment from by providing Japanese and overseas suppliers with an equal opportunity to do business with Sharp. This opportunity includes a fair evaluation of whether a supplier meets Sharp's requirements for quality, standards, and performance.

Close Communication and Mutual Understanding

To ensure sustainable growth and mutual prosperity with its suppliers, Sharp is going beyond initiatives related to the quality, price, and delivery of parts and materials. Sharp is also seeking to fulfill its social responsibilities over a wide range of areas across the entire supply chain. These areas include product safety, environmental protection, human rights and labor, and health and safety.

Sharp's basic concept, concrete policies, and requests to suppliers pertaining to procurement activities are set out in the Basic Purchasing Principles. And in the Sharp Supply-Chain CSR Deployment Guidebook, which is based on the Basic Purchasing Principles, Sharp clearly declares the implementation of CSR initiatives—such as complying with all laws, regulations, and social standards, and protecting the environment—as one of its procurement policies. Specifically, these include elimination of child/forced labor and discrimination, as well as compliance with labor related laws, such as those dealing with employees' right to organize and their right to collective bargaining. Sharp also asks its business partners to actively promote such activities.

To deepen the understanding between Sharp and its business partners, Sharp communicates actively with supplier sales representatives on a daily basis.

Basic Purchasing Principles

Basic Procurement Concept

1. Sharp's procurement activities are conducted in an open and impartial manner, with a fair evaluation given to suppliers in and outside Japan.
2. Sharp will comply with all laws and regulations, and achieve mutual prosperity with suppliers.
3. Sharp will fulfill social responsibility such as the conservation of the environment through its procurement activities.
4. Sharp pursues optimal quality and cost to the fullest.

Related information: > Basic Purchasing Principles

Basic Purchasing Principles Requests to Suppliers

① Compliance with laws and social standards that are applicable in countries and regions where suppliers do business
② Promotion of sound business operations
③ Consideration for the environment
④ Securing optimal quality and cost
⑤ Stable supply of parts and materials
⑥ Leading technology
⑦ No disclosing of confidential information

- Compliance with laws related to manufacture and distribution of material
- Compliance with laws related to labor
- Compliance with laws related to health and safety and arrangement of proper labor environment
- Prohibition of child and forced labor
- Prohibition of discrimination based on race and sex and respect for the dignity of each employee
- Compliance with environmental laws
- Prohibition of bribery and unfair acts

Social Initiatives: Promoting Supply Chain CSR

Promoting CSR across the Entire Supply Chain

Fiscal 2020 Objectives	Fiscal 2020 Achievements	Self-Evaluation	Priority Objectives for Fiscal 2021
■ Continue CSR/Green procurement survey in Japan; expand supplier management system	■ Finished conducting CSR/Green procurement survey in Japan (July 2021)	★	■ Continue CSR/Green procurement survey in Japan

Self-evaluation: ★★★ Achieved more than targeted / ★★ Achieved as targeted / ★ Achieved to some extent

Supply Chain CSR Policy and Systems

The Sharp Group Charter of Corporate Behavior and the Sharp Code of Conduct*1 were formulated as the group's basic CSR policies and have been thoroughly engrained into all employees.
To disseminate these policies throughout the supply chain, the Sharp Global SER Committee (SGSC)*2, which is chaired by the President & COO of Sharp, set supply-chain CSR deployment as a key initiative. At SGSC meetings, members from relevant head office departments such as CSR, environment, and HR, along with business units and subsidiaries, share their policies and measures. The SGSC also monitors and manages progress on supply chain CSR-related measures.

*1 See page 27.　*2 See page 28.

Sharp Supply-Chain CSR Deployment Guidebook

To help suppliers understand and put into action CSR philosophy as stated in Sharp's Basic Purchasing Principles, in fiscal 2007 the company formulated and distributed its own Sharp Supply-Chain CSR Deployment Guidebook. The Basic Products Purchase Agreement also includes articles on CSR initiatives, based on the guidebook, that suppliers are requested to follow.
In fiscal 2015, Sharp fully revised the content of its guidebook to conform to the RBA*3 Code of Conduct. Since then, it has revised the guidebook as needed in line with revisions to the RBA Code of Conduct. In this way, Sharp strives to comply with the increasingly sophisticated international standards for CSR.

*3 RBA: Responsible Business Alliance. Founded in 2004 by a group of leading electronics companies including Hewlett-Packard, IBM, and Dell, the RBA, formerly the Electronic Industry Citizenship Coalition (EICC), has a code of conduct covering the social, environmental, and ethical responsibilities in the global supply chain of its members in the electronics and a wide range of other industries.

Related information: > [Sharp Supply-Chain CSR Deployment Guidebook](#)

Content of Sharp Supply-Chain CSR Deployment Guidebook

A. Labor
1) Freely Chosen Employment 2) Young Workers 3) Working Hours
4) Wages and Benefits 5) Humane Treatment 6) Non-Discrimination
7) Freedom of Association

B. Health and Safety
1) Occupational Safety 2) Emergency Preparedness 3) Occupational Injury and Illness
4) Industrial Hygiene 5) Physically Demanding Work 6) Machine Safeguarding
7) Sanitation, Food, and Housing 8) Health and Safety Communication

C. Environmental
1) Environmental Permits and Reporting
2) Pollution Prevention and Resource Reduction 3) Hazardous Substances
4) Solid Waste 5) Air Emissions 6) Materials Restrictions 7) Water Management
8) Energy Consumption and Greenhouse Gas Emissions

D. Ethics
1) Business Integrity 2) No Improper Advantage 3) Disclosure of Information
4) Intellectual Property 5) Fair Business, Advertising, and Competition
6) Protection of Identity and Non-Retaliation 7) Responsible Sourcing of Minerals
8) Privacy

E. Management System
1) Company Commitment 2) Management Accountability and Responsibility
3) Legal and Customer Requirements 4) Risk Assessment and Risk Management
5) Improvement Objectives 6) Training 7) Communication
8) Worker Feedback and Participation 9) Audits and Assessments
10) Corrective Action Process 11) Documentation and Records
12) Supplier Responsibility

Social Initiatives: Promoting Supply Chain CSR

Promoting CSR across the Entire Supply Chain

Promoting CSR Awareness and Conducting Risk Assessment at Suppliers

Sharp periodically carries out supply-chain CSR surveys to confirm how well suppliers are carrying out CSR based on the Sharp Supply-Chain CSR Deployment Guidebook and to identify, assess, and reduce CSR risk in the supply chain.

On the survey form, there are areas that conform to the RBA self-assessment questionnaire—labor, health and safety, environment, and ethics—as well as Sharp's own areas, which are biodiversity/chemical substances management and business continuity planning (BCP). In fiscal 2020, Sharp added another area, information security, to deal with the rise in cyber security risks.

Through such efforts, Sharp assesses risk in a wider range of areas in response to changing conditions inside and outside of the company.

Sharp also improves the survey form by adding things like guidance on the questions, thus making the survey a medium that prompts suppliers to further their understanding of, and efforts to achieve, international CSR standards.

The survey is carried out separately at each factory that makes products for Sharp. Survey scorecards are given to participating suppliers and those with low-scoring areas are asked to submit corrective action plans. Through such post-survey communication with suppliers, Sharp is continuously working to improve CSR across the supply chain.

In fiscal 2020, Japan-based business units and manufacturing subsidiaries carried out CSR/Green procurement surveys at approximately 650 supplier factories.

At production and procurement bases in China and ASEAN countries, since fiscal 2017 Sharp has been introducing two types of supplier management systems through which it has been carrying out ongoing risk management equivalent to that of Sharp in Japan.

There has been increasing concern around the world in recent years about issues such as slave labor and forced labor. Europe and North America have led the way in enacting laws about human rights due diligence, part of efforts to improve CSR in the corporate supply chain.

Survey results in fiscal 2020 showed no serious cases of problems such as slave labor or forced labor in Sharp's supply chain. If such a case does arise, the supplier in question is immediately required under contract to rectify the problem, and if no improvement is seen, strict measures, which may include suspension or termination of transactions, will be enforced.

Sharp will continue to step up its efforts in response to trends in international human rights due diligence as it fulfills its corporate social responsibility in every facet of the supply chain.

■ **Assessment Distribution of CSR/Green Procurement Survey (Japan)** （Max. score=100 points）

	Labor	Ethics	Health and Safety	Environment
D rank Less than 50 points	0.7%	7.4%	0.2%	0.2%
C rank 50 points or more	7.4%	12.6%	0.5%	2.4%
B rank 70 points or more	61.8%	32.0%	45.8%	72.8%
A rank 90 points or more	30.1%	48.0%	53.5%	24.6%

Social Initiatives: Promoting Supply Chain CSR

Promoting CSR across the Entire Supply Chain

Education for Procurement Personnel

To help all those in procurement positions improve their understanding and implementation of CSR, information about the Basic Purchasing Principles and supply chain CSR is included in training materials for new employees, transferred employees, and management skills improvement[1]. All Sharp Group employees take compliance-related training based on the Sharp Code of Conduct[2], which covers topics such as respect for human rights.

[1] See page 106. [2] See page 104.

Procurement BCP[3]

To ensure that corporate procurement departments secure a stable supply of parts and materials at fair prices, Sharp continuously strengthens partnerships with suppliers regarding long-term supply contracts and other matters, and also purchases from multiple suppliers. Sharp also formulated the Rules of Business Risk Management[4], which it uses to create and periodically revise BCPs. As part of this, Sharp requires suppliers to periodically check the BCPs of the production bases that supply them. It also carries out CSR/Green procurement surveys to confirm how well suppliers are making and maintaining BCPs.

[3] BCP: Business continuity plan [4] See page 125.

Audits and Education to Ensure Full Compliance with the Subcontract Act

To comply with the Subcontract Act (Act Against Delay in Payment of Subcontract Proceeds, etc. to Subcontractors) in Japan, Sharp Corporation and its affiliated companies implement compliance checks and in-house education on an ongoing basis.
As in past years, Sharp encouraged internal voluntary reporting of compliance issues and further strengthened precautionary measures to prevent the recurrence of problems. In-house companies, business units, material purchase departments, Head Office groups, and domestic affiliated companies conducted self-audits in which they checked how well they were complying with the Subcontract Act. Sharp also held internal training sessions for domestic affiliated companies and performed periodic internal audits to raise awareness among employees of the importance of complying with the Subcontract Act.

Social Initiatives: Promoting Supply Chain CSR

Responsible Minerals Procurement Initiatives

Policies and Systems for Responsible Minerals Procurement

In recent years, companies have had to expand the scope of their efforts regarding the minerals, regions, and risks involved in the responsible procurement of minerals. This means not only abiding by legal frameworks such as the Dodd-Frank Wall Street Reform and Consumer Protection Act of the United States and the EU's Conflict Minerals Regulation but also taking a firm CSR stand in light of issues such as child labor and environmental destruction at mining sites.

In the supply chain for procuring minerals from Conflict-Affected and High-Risk Areas, Sharp has a basic policy in place to ensure it is not complicit in human rights abuses and environmental destruction, and so that it does not inhibit sound, legitimate business activities.

Based on this basic policy and under the Sharp Global SER Committee (SGSC) [1], which is chaired by the President & COO of Sharp, we have made responsible minerals procurement a key theme. A survey system has been created in major business units and production subsidiaries and we constantly check on the progress of relevant measures under this system.

Related information:> Responsible Minerals Procurement

Cooperation with Industry

To ensure that responsible minerals procurement is carried out effectively, Sharp believes in the importance of collaborating with industries in Japan and other countries and acting based on widespread consensus.

Since fiscal 2012, as a participant in the Responsible Minerals Trade Working Group of the Japan Electronics and Information Technology Industries Association (JEITA), which is a partner association of RMI[2], we keep abreast of the latest international developments in, and strengthen our global ties in relation to, responsible minerals procurement.

We also actively take part in JEITA's Responsible Minerals Sourcing Inquiry Briefings by helping in planning, creating documents, and joining the briefings as part of our efforts to spread understanding of responsible minerals procurement in the industry supply chain and boosting the capabilities of downstream companies. Together with JEITA, we periodically send outreach letters to smelters or refiners that are not yet participants of the RMAP[3] urging them to undergo audits. These efforts are part of our contribution to effectively stamping out human rights abuses and other problems in the global procurement of minerals.

Survey Activities in Accordance with International Standards

Sharp uses the RMI's industry standard reporting templates (CMRT[4], CRT[5], and MRT[6]) to conduct surveys on 3TG (tantalum, tin, tungsten, and gold), as well as minerals such as cobalt and mica if requested by customers.

In the surveys, primary suppliers are urged to procure minerals from RMAP-conformant smelters or refiners. And based on the CMRT, CRT, and MRT returned by survey participants, we identify and evaluate risk based on the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (OECD Guidance).

In fiscal 2020, as a result of about 500 surveys carried out at major business units and production subsidiaries, 422[7] smelters and refiners were identified and the RMAP conformance rate was about 82%[7].

For smelters and refiners that are not yet conformant with RMAP and those with high risk levels, we urge their participation in RMAP through our primary suppliers. If any smelters or refiners have been found to be dealing with militant forces or complicit in serious human rights abuses, this information is shared with suppliers, with whom we discuss measures such as switching to RMAP-conformant smelters or refiners.

Education and Awareness Raising on Responsible Minerals Procurement

To deepen employees' understanding of responsible minerals procurement, as a rule we hold monthly meetings with those in charge of surveys at major business units and production subsidiaries, where participants share information on the latest international developments and discuss practical survey issues and how to improve the survey system.

Procurement personnel and new employees take part in periodic supply chain CSR training, which covers responsible minerals procurement. Another way we further employees' understanding on responsible minerals procurement is by uploading new and relevant material to the management skills improvement training page on the Sharp intranet.

[4] CMRT (Conflict Minerals Reporting Template) is a free, standardized reporting template developed by the RMI.
[5] CRT (Cobalt Reporting Template) is a free, standardized reporting template developed by the RMI.
[6] MRT (Mica Reporting Template) is a free, standardized reporting template developed by the RMI.
[7] 3TG smelters or refiners that are involved with major business units and production subsidiaries. Conformance rate as of March 2021.

[1] See page 28. [2] RMI: Responsible Minerals Initiative
[3] RMAP (Responsible Minerals Assurance Process) is an RMI program for validating conformance of RMI-listed smelters or refiners.

Social Initiatives: Promoting Supply Chain CSR

Responsible Minerals Procurement Initiatives

Due Diligence Efforts in Line with OECD Guidance

To carry out responsible minerals procurement, Sharp integrates into its management a five-step framework for risk-based due diligence recommended in the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

OECD Five-Step Framework	What Sharp Is Doing
Step 1: Establish strong company management systems	• Formulate and make public a basic policy for responsible minerals procurement, and convey this throughout the company and industry. • Make responsible minerals procurement a key theme under the Sharp Global SER Committee, and constantly check on the progress of relevant measures. • Put articles, including responsible minerals procurement requirements, of the Sharp Supply-Chain CSR Deployment Guidebook into basic parts purchase agreements. • Take part in JEITA's Responsible Minerals Sourcing Inquiry Briefings and promote capacity building through supplier mobilization.
Step 2: Identify and assess risk in the supply chain	• Conduct supplier surveys using CMRT, CRT, and MRT. • Use a proprietary survey system to check CMRT/CRT/MRT returned by suppliers and assess risk. (Detect and identify risks according to Annex II of the OECD Guidance.)
Step 3: Design and implement a strategy to respond to identified risks	• Provide suppliers with information on high-risk smelters/refiners and urge them to stop using such smelters/refiners.
Step 4: Carry out independent third-party audit of supply chain due diligence at identified points in the supply chain	• Periodically confirm and verify RMAP audit results on the RMI website. • Work with industry in sending outreach letters to smelters/refiners that are not yet participants of RMAP urging them to participate.
Step 5: Report on supply chain due diligence	• Disclose the state of due diligence in the Sharp Sustainability Report.

Social Initiatives: Quality

Ensuring Quality and Safety

FY2020 Objectives	FY2020 Achievements	Self-Evaluation	Priority Objectives for Fiscal 2021
■ Expand the scope of quality beyond long-term reliability (being less breakable) to include the usability, quality level, and other needs of customers, and work toward developing products considering these elements	■ Targets for Sharp's company-wide quality policy were expanded beyond long-term reliability to include usability, quality level, and other customer needs, and efforts were carried out to improve all of these	★	■ Continue building on previous efforts to improve quality targets (long-term reliability, usability, quality level, etc.) based on customer needs

Self-evaluation: ★★★ Achieved more than targeted / ★★ Achieved as targeted / ★ Achieved to some extent

Quality Philosophy

To respond to society's needs and make products that satisfy our customers, we keep the slogan "Quality First" in mind at all times.

Quality Slogan

Quality First in Heart and mind

Basic Stance and Vision on Quality

To gain customer trust and improve customer satisfaction, based on its Quality Philosophy and Quality Slogan, the Sharp Group constantly strives to respond to customer needs and demands by providing products and services that are safe, high quality, reliable, and environmentally friendly.

Quality Assurance System

Under the executive managing officer in charge of quality in the Sharp Group, the Quality and Environmental Promotion Office leads governance and supports related efforts, and the Group has a system in place for each business unit and affiliate to autonomously conduct its business.

■ Sharp's Quality Assurance System

President & COO

【Business units and affiliates】
Heads of business units and affiliates

Quality managers

【Divisions】
Quality assurance departments

【Head office department】
Executive managing officer in charge of quality

Quality and Environmental Promotion Office

Governance/support

Social Initiatives: Quality

Ensuring Quality and Safety

Quality Management System

To enable it to conduct a variety of quality assurance activities in all stages of the manufacturing cycle, including planning, design, procurement, production, assessment, and after-sales, the Sharp Group established the Sharp Corporation Standard based on the ISO 9001 international quality management standard. Stipulating systems and methods necessary for quality assurance, the Sharp Corporation Standard is strictly adhered to by all Sharp sites in Japan and other countries, and by consolidated subsidiaries carrying out design, production, and sales.

Through ongoing revision and implementation of the standard, all employees—in product planning, design, production, sales, and after-sales service—know exactly the level of quality they should be guaranteeing customers in Sharp's continuous efforts to improve quality.

Quality Policy

In line with the Quality Policy stipulated in Sharp Corporation's company rules (Quality Assurance Basic Rules), the Sharp Group makes and implements quality plans aimed at achieving the quality targets it has set.

Quality Policy

Provide high quality and attractive products that customers can continuously use them with safety and satisfactory.

(1) Observe laws and regulations and place top priority on safety and reliability.

(2) Pursue convenience and comfort from usability.

(3) Squarely face with voice of the customer and reflect it in products

Efforts to Improve Quality

The Sharp Group established the Quality and Environmental Engineering Committee as a way to advance quality and environmental technologies. The committee decides policies and sets fiscal-year targets related to quality and environmental issues arising in new products, and leads company-wide research and improvement efforts among business units in order to assure quality in new technology areas such as the 8K+5G ecosystem, AIoT[*1], and robotics, as well as in face mask production. The committee is made up of heads of business units and subsidiaries and is chaired by the Sharp executive managing officer in charge of quality.

Within the Quality and Environmental Engineering Committee are Expert Subcommittees made up of experts from the various business units. These Expert Subcommittees work towards prompt solutions to issues that concern multiple business units or the entire company.

[*1] AIoT is a word coined by Sharp, combining the words AI (artificial intelligence) and IoT (Internet of things). AIoT is a vision of how products and services will connect to artificial intelligence via the cloud and become a people-oriented existence. AIoT is a registered trademark of Sharp.
[*2] Subsidiaries of Sharp business unit status

Social Initiatives: Quality

Fostering Quality Experts

Fostering Quality Experts

Based on its Quality Philosophy, Sharp works to foster quality thinking and boost quality-related techniques by carrying out systematic quality-related education with the aim of making products that customers can use with safety and peace of mind.
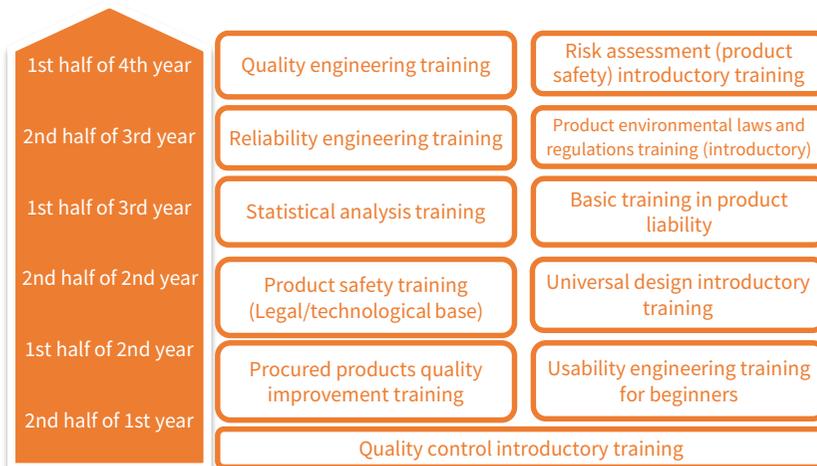
In particular, the company is stepping up basic training through programs that allow young employees (in their first four years with the company) to gradually acquire quality-related techniques.

Training takes a number of forms depending on the goals of participants. Besides an e-learning program and videoconference classes that help maximize learning efficiency, there are group training courses to improve practical skills, which are carried out at various company factories. In fiscal 2020, there were 35 courses in quality training, with a total of 8,873 participants

■ **Fiscal 2020 Training Courses and Number of Participants**

Training form	No. of courses	No. of participants
E-learning	25	8,457
Group training	10	416
Total	35	8,873

OJT
OFF-JT

Practical training — Training in solving problems

Specialized training — Laws and regulations, product safety, packaging, design review, usability, environment

Basic training — Quality thinking, 7 QC tools, statistical analysis, reliability engineering, quality engineering

1st half of 4th year — Quality engineering training — Risk assessment (product safety) introductory training

2nd half of 3rd year — Reliability engineering training — Product environmental laws and regulations training (introductory)

1st half of 3rd year — Statistical analysis training — Basic training in product liability

2nd half of 2nd year — Product safety training (Legal/technological base) — Universal design introductory training

1st half of 2nd year — Procured products quality improvement training — Usability engineering training for beginners

2nd half of 1st year — Quality control introductory training

System for practical QC training

Social Initiatives: Quality

Ensuring Product Safety

Sharp Voluntary Product Safety Action Policy

Keenly aware that product safety assurance is the most important aspect of a company's business and one of its social responsibilities, Sharp strives to provide customers with safety and peace of mind. It does this by prioritizing the safety of the products it manufactures and sells and by making safety-related information public. To this end, the company has formulated voluntary action guidelines on product safety in efforts to earn an even higher level of trust from society.

Efforts to Ensure Product Safety

Sharp strives to ensure its products are safe and to constantly raise levels of safety. Besides abiding by laws and regulations of countries and obtaining safety certifications through activities such as factory audits by third parties, the company utilizes its own risk-assessment-based safety standards. To ensure complete and high levels of safety even in cases where unforeseen defects arise, these in-house safety standards stipulate items like flame-retardant construction and testing for abnormal conditions. These standards are revised as needed and are taught to all relevant employees in design, quality, and other divisions so that they are understood and followed thoroughly.

Since fiscal 2020, Sharp has been using new e-learning material developed exclusively for the company to expand the practice of risk assessment related to product safety. Sharp is enhancing its internal training with this material, hoping that it will help employees embrace the concept of risk assessment more deeply and motivate them to develop safer products.

Sharp will continue to step up efforts to promptly respond to social changes and legal revisions regarding product safety so that customers can use Sharp products with peace of mind.

QC e-learning
XXX risk assessment training
Part 1
Part 2
Part 3
Sharp Corporation

Internet

Sharp's own newly developed e-learning material

Information Disclosure and Response When Problems Occur

If an accident caused by a Sharp product occurs on the market, the company immediately gathers information on the accident and analyzes it to determine the cause. If it is determined that there is a risk of harm or damage to the customer, information is promptly disclosed via media such as newspapers and the Sharp website, and all appropriate measures are taken to ensure the safety of customers.

For major product-related accidents stipulated in the Consumer Product Safety Act, the Sharp website has a list of information on major product-related accidents for which the cause is thought to be the product itself. There are 11 such cases.[1]

*1 Number in fiscal 2020 (as of March 31, 2021).

■ **Flow for dealing with product-related accidents**

Public institutions

< Corporate >
Customer Assistance Center
Quality Promotion Division (for entire company)
Internal Control Planning Division
Senior executives

Centralization of all information

Information on product-related accidents

BRM Committee meeting is held for serious cases

《Business Unit》
Related departments such as the engineering department
Quality control department

Investigation of cause, measures to prevent reoccurrence of problem

Emergency BRM[2] Committee
• Decides how to deal with accidents
• Finds cause, prevents reoccurrences
• Decides on responses, such as a product recall

*2 BRM: business risk management

Social Initiatives: Quality

Ensuring Product Safety

Product Security Policy and Efforts

Products connected to networks are exposed to growing risks as information technology advances and the value of information they handle increases. They are at a risk of cyber-attack taking advantage of their vulnerabilities, which can result in information leakage or a hijacking of the device being hacked. Even security measures considered adequate in the past are quickly becoming compromised, leading to a growing worldwide urgency to improve legislation related to product security.

Such a situation has been prompting Sharp to act to ensure that customers can use its products without worries. We have established teams and reporting lines dedicated to enhancing product security, along with the rules to be followed at the stages of planning, developing, operating, and maintaining products. We also gather vulnerability information and share it internally, as well as train employees thoroughly, to ensure the quality of our product security continuously.

We are expecting a future in which standalone systems are interconnected with one another, perhaps creating added vulnerabilities. To prepare for such a future, we have adopted security by design, a concept that intends to build in security from early stages before design. This approach to product development is shared throughout the organization.

Related information: > Global Basic Policy on Information Security

Social Initiatives: Quality

Making Easier-to-Use Products

Practicing User-Centered Design

Sharp practices user-centered design (UCD) in order to provide products that customers find easier to use.

UCD is a concept—as outlined in the international ISO 9241-210 standard—to provide products and services that satisfy customers by seeing things from their perspective, understanding their needs, and reflecting them in product design. Sharp has its own UCD Basic Policy and the Eight Principles of UCD based on this concept and shares them across the Sharp Group. Sharp investigates customers' latent dissatisfaction and needs as part of its product development process and reflects those findings in the specifications and design of its products. By repeatedly going through evaluations and improvements, Sharp is bringing forth products and services that customers find easy to use and attractive.

Investigating Customers' Dissatisfaction and Needs and Reflecting Them in Product Design

In user-centered design (UCD), Sharp collects customer feedback on ease of use through various methods and applies it to product design.

Through usability tests (observing how people actually use Sharp products), questionnaires, interviews, and opinions gathered from customers during Customer Assistance Center phone calls and repair visits, anonymous information from customers is compiled and shared among Sharp development personnel, who put it to use in new product design.

For in-person information gathering such as usability tests, strict measures are taken to prevent the spread of Covid-19. If necessary, these activities are carried out online using web conferencing systems.

Usability test
(using eye tracking)

Online usability test using a
web conferencing system

Voice

Comments from Participants in Usability Tests

- Thanks to opinions from customers, we were able to pick up things we didn't notice from our own vantage point. It was fortunate that we did a test at the spec discovery stage. (Sharp product planning staff member)
- Even with the restrictions imposed by working remotely, we were able to carry out testing smoothly. (Sharp staff member in his 30s)

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Social Initiatives: Quality

Making Easier-to-Use Products

Efforts in Universal Design

In line with the aforementioned UCD Basic Policy, Sharp also takes into consideration universal design (UD). Universal design is a philosophy for building products, information, and environments so that they can be used by many more customers—regardless of things like nationality, age, gender, or disability. Sharp strives to develop products and services that can be used comfortably by as many people as possible by conducting UD evaluations and surveys of mainly home appliances and digital multifunction printers (MFPs).
As of June 2021, 18 models of Sharp home appliance products support the UD considerations listed on the website of the Association for Electric Home Appliances in Japan.

To continue the aforementioned activities company-wide, Sharp works to foster human resources through training. Major education activities include introduction to universal design (e-learning) to impart the understanding and acquisition of basic UD knowledge, UD experience learning, in which employees see firsthand what it's like to be physically disabled so that they can know how to make products more accessible, and a usability training system for specialized education.
UD experience learning is usually conducted in person in a group, but due to Covid-19, a web conferencing system was utilized for online classes in which participants used smartphone apps for the learning material.

Digital MFP usability test assuming a person in a wheelchair

Using wearable tools to experience what it's like for elderly people to use products

Walking as a vision-impaired person in UD experience learning

In-person class for UD experience learning

Computer screen for online UD experience learning

SHARP Sustainability Report 2021

Social Initiatives: Quality

Making Easier-to-Use Products

Efforts to Ensure Accessibility

Accessibility is the concept of making products and services so that they can easily be used by people who are in some way limited in their physical functions; for example, senior citizens and the physically disabled. Under U.S. federal law[*1], federal agencies purchasing equipment and services are obligated to choose those that are accessible to everyone, including the physically disabled. For Sharp digital MFPs and other products, assessment results of accessibility standards stipulated by federal law are compiled on a product evaluation sheet (VPAT[*2]), which is disclosed on the website of Sharp Electronics Corporation (SEC), Sharp's U.S. sales company.

[*1] Section 508 of the Rehabilitation Act
[*2] VPAT: Voluntary Product Accessibility Template. A table containing information regarding how a particular product or service conforms with Section 508 of the U.S. Rehabilitation Act.

Example of VPAT for a digital MFP

Case Study

Sharp Corporation Wins Overall Customer Satisfaction Top Prize, 2021 IID Awards (Japan)

Sharp's Brain Series electronic dictionary was given the Overall Customer Satisfaction Top Prize in the 2021 IID Awards[*3] in Japan. This was the 10th year in a row for Sharp to win this award. Sharp also won top prizes in all the evaluation categories: operability, search function, easy-to-view screen, readability, audio quality, portability, design, durability, and value for money.

Sharp has been repeating the cycle of obtaining feedback from users and retailers and improving the product's usability. We will continue our product development and improvement efforts to satisfy an even broader user base.

IID Awards logo

IID Awards trophy

Brain Series color electronic dictionary

[*3] Resemom, an education information website run by IID, Inc., conducted on online survey of parents of junior and senior high school students who own an electronic dictionary.

Social Initiatives: Customer Satisfaction

Enhancing Customer Satisfaction

Fiscal 2020 Objectives	Fiscal 2020 Achievements	Self-Evaluation	Priority Objectives for Fiscal 2021
■Increase customer satisfaction by improving service quality	■Improved service quality By improving employees' CS awareness and repair skills: Customer satisfaction rate was 85.4%	★★	■Increase customer satisfaction by improving service quality

Self-evaluation: ★★★ Achieved more than targeted / ★★ Achieved as targeted / ★ Achieved to some extent

Basic Stance on Customer Satisfaction

＜Providing Products and Services That Offer Peace of Mind and Satisfaction＞

Sharp always thinks from the customer's point of view and, as a rule, develops and provides products and services with the customer in mind. To ensure that customers can continue to use Sharp products for many years with peace of mind, Sharp strives to improve its products and its sales and after-sales services by reflecting the opinions of customers.

Sharp will continue to pursue customer satisfaction (CS) so that customers choose Sharp now, next time, and every time.

CS Slogan

Building a relationship of trust through quality and service so that customers choose Sharp now, next time, and every time.

Related information: > Sharp Group Charter of Corporate Behavior

After-Sales Service System

Sharp has an after-sales service system that can handle all kinds of customer inquiries, whether it's instructing them how to use products or repairing products that are not working properly.

Centered on Sharp Corporation's Customer Assistance Center and after-sales service departments at Sharp sales companies, the entire Sharp Group worldwide collaborates to provide high-quality, fast, accurate, and friendly service that truly satisfies customers.

■ Flowchart

Social Initiatives: Customer Satisfaction

Enhancing Customer Satisfaction

Repair and Servicing System (in Japan)

Repair of Sharp products in Japan is carried out by Sharp Marketing Japan Corporation, Customer Service Company. The entire company works together with a user-oriented mindset to satisfy customers and realize its slogan: "Looking customer smile is my pleasure" To this end, service engineers, who work out of more than 90 service bases[1] all over Japan and are familiar with local customers, provide repair service that truly satisfies customers.
Service inquiries are accepted every day of the year[2]. The company puts special effort into prompt response to problems with home appliances that are indispensable to daily life, such as washing machines, refrigerators, and air conditioners.

[1] As of June 2021.
[2] Business days vary from region to region.

Slogan
Looking customer smile is my pleasure

Voice

After-Sales Service Puts a Smile on Customers' Faces (in Japan)
Change Customer Feelings from Dissatisfaction and Worry to Joy and Gratitude

As a service engineer at Sharp Marketing Japan Corporation, Customer Service Company, I constantly strive to better myself and boost customer satisfaction (CS) awareness by sharing opinions with other service engineers and undergoing technical training. With the goal of hearing customers say that Sharp products are great and that they'll purchase Sharp again, we are always conscious of providing prompt and meticulous service that eases the minds of those requesting repairs, listening closely to what they say, detailing clearly the repair performed, and explaining how to use Sharp products.
Customers are naturally wary of repair visits amidst the current pandemic, but service engineers take all the necessary precautions; obvious ones such as wearing a mask and disinfecting with alcohol-based sanitizers, but also extra-careful measures that put customers at ease such as wearing disposable gloves when repairing kitchen appliances like refrigerators and microwave ovens. In the questionnaire following repair completion, some customers have expressed their gratitude for taking such thorough measures to prevent the spread of the virus.
Encouraged by such comments from customers, I will continue to boost my CS awareness and improve technical skills so that customers who were dissatisfied and nervous about repair visits end up feeling happy and grateful.

Takuya Imazu
Chiba Service Center, Customer Service Company, Sharp Marketing Japan Corporation

Social Initiatives: Customer Satisfaction

Enhancing Customer Satisfaction

Customer Questionnaire (in Japan)

In Japan, all customers who are visited by service engineers are asked to answer a questionnaire covering the entire service process, from initial inquiry and appointment to product repair. More than 140,000 customer opinions are received annually via this questionnaire.

To improve convenience for customers and to speed up response, the questionnaire has also been available on the Sharp website since fiscal 2017. Starting in fiscal 2021, the survey will be completely web-based.

Sharp will continue to pass on customers' valuable opinions to relevant company departments, closely analyze problems, and use the information gathered to improve service mechanisms and manufacturing.

■ **Percentage of Customers Giving High Marks to Service Personnel (postcard and online surveys)**

(Satisfaction level)

Fiscal year	Satisfaction level
2016	94.7%
2017	94.9%
2018	94.9%
2019	94.7%
2020	95.4%

(Fiscal year)

Voice

Manufacturing That Reflects Customer Opinions (in Japan)
- Customer Opinions Led to a Better Remote Controller -

Gray text on remote controller screen is difficult to see

Internet video button is poorly positioned

Hard to find most frequently used buttons

Needs too many batteries

Opinions reflected in new remote controller

Social Initiatives: Customer Satisfaction

Enhancing Customer Satisfaction

Aiming for Customer-Oriented Services

＜Customer Assistance Center＞

Through the Customer Assistance Center, which responds to a wide range of customer inquiries concerning products, Sharp is constantly striving to be customer-oriented in its response. To this end, the center meets periodically with product development departments to give them feedback in the form of customer inquiries, which leads to the development of improved and new products.

We are enhancing the troubleshooting information available on the website to help customers solve their problems on their own any time they need to.

Efforts such as these have resulted in a decreasing number of inquiries from customers by phone and email.

By continuing to improve the convenience of customers inquiries, Sharp is striving to respond to diversifying needs and achieve its goal of always serving in a customer-oriented manner.

■ **Number of Calls Received from Customers in Japan**

(Thousand calls)

＜Reliable Operation of Customer Support＞

Factors such as the Covid-19 pandemic, along with more frequent natural disasters such as earthquakes and typhoons, are making it increasingly challenging to deliver customer support services with consistent reliability.

Our business continuity plan (BCP) ensures the continued operation of our customer support services even in emergency situations. Our support offices are distributed across multiple locations and are connected through a system that makes them ready to complement one another.

＜Improving Response to Customers＞

As the face of Sharp, customer consultants study products and learn how to interact properly with customers before they start their jobs.

Even after they have begun their jobs, consultants periodically undergo checks for the quality of their customer interactions and study for upgraded qualifications. These are part of Sharp efforts to maintain and improve person-to-person dealings with customers.

Personnel	Goals
Customer consultants before starting their jobs	Acquire basics in manners, product knowledge, and consumer-related laws and regulations
	Test ability to serve as customer consultants
Customer consultants after starting their jobs	Undergo periodic customer interaction checks
	Improve skills
Supervisors	Ensure person is fit to be a supervisor
	Undergo periodic customer interaction checks
	Acquire skills as a backup consultant

Social Initiatives: Customer Satisfaction

Increasing Service Capabilities (in Asia)

Case Study

Reducing the Hassle of Processing Service Parts Orders

In response to the dramatic increase in the volume of orders for service parts (approx. 60% increase in quantities*, 50% increase in ordered items*), Sharp is using digital transformation (DX) to digitalize work and strengthening internal control through the introduction of check functions. With increasing man-hours needed to process customer orders, we have made receiving orders more convenient by providing a web interface and by visualizing the available parts in stock using a database. By introducing check functions for the order-taking process, we have eliminated missed orders, made possible checking of hard-to-procure parts, and reduced obstacles of long delivery times. We are currently developing new additions that will improve usability of the web interface as part of ongoing efforts to improve customer satisfaction.

Customer (Sales subsidiary) → Receive order → Web interface → Record → [Check] → Picking/shipment → [Check] → Process

	Fiscal 2018	Fiscal 2019	Fiscal 2020
No. of orders	21,260	31,889	33,243
Types of parts in stock	4,621	5,857	6,766

Volume of parts handled

* No. of orders: Number of order lines each fiscal year
  Types of parts in stocks: At end of each fiscal year

Case Study

Managing After-Sales Service Activities by distributors (Middle East and Africa)

In the Middle East and Africa region, local Sharp distributors provide the after-sales service to customers. To give customers there the same level of Sharp-brand customer satisfaction expected in Japan, sales company Sharp Middle East FZE (SMEF) provides information that boosts the level of customer satisfaction provided by distributors. For example, it regularly publishes the CS Newsletter for distributors, thoroughly implements customer satisfaction control indices, sends notifications of online training that improves service techniques, and shares case studies on product repairs.

	Goals	Content
1	Clarify definition of KPI	CS KPI Announcement
2	Assess local dealers	TRAINING Achievement on overall
3	Foster human resources	E-Academy Training Schedule
4	Provide product information	New/Discon Models Information
5	Share information	New rules / New Scheme / Tips

Content of CS Newsletter

Notification of online training   Providing repair information

Social Initiatives: Customer Satisfaction

Increasing Service Capabilities (in Asia)

Case Study

After-Sales Service in the Pandemic

Sales and manufacturing company P.T. Sharp Electronics Indonesia (SEID) has made rules for preventing the spread of Covid-19 so that it can provide after-sales service uninterrupted and so that customers can continue to use Sharp products with safety and peace of mind. During customer interaction at service branches and repair companies, temperatures are taken, and the wearing of gloves and face shields is strictly enforced. The thorough enforcement of these measures keeps the risk of virus transmission to a minimum and allows SEID to provide ongoing after-sales service.

Taking body temperature before a repair visit

Wearing masks and gloves at a customer's home

Preventing exposure to droplets at reception

Infection prevention measures are stressed at a videoconference for third-party repair providers

Social Initiatives: Communication with Shareholders and Investors

Communication with Shareholders and Investors

FY2020 Objectives	FY2020 Achievements	Self-Evaluation	Priority Objectives for Fiscal 2021
■ Strengthen communication with shareholders and investors through IR events such as management policy briefings	■ Strengthened communication with shareholders and investors in Japan and overseas through the continued engagement of senior executives in attending online conferences and holding management briefings for shareholders	★★	■ Strengthen IR communication, such as through the continued and active participation of senior executives in conferences

Self-evaluation: ★★★ Achieved more than targeted / ★★ Achieved as targeted / ★ Achieved to some extent

IR Disclosure Policy

Sharp discloses information to shareholders and investors in a fair and timely manner, in order to increase trust in its IR activities and to ensure a proper assessment of Sharp's corporate value in capital markets.
Sharp discloses information designated under the laws and regulations of Japan, and it also adequately discloses other information, such as business overview, management policy, and strategy.

Basic Policy on Allocating Profits

Sharp considers distributing profits to shareholders to be one of management's top priorities. Sharp pays dividends from surplus, comprehensively taking into account its consolidated business performance, financial situation, and future business development, while making active investments in R&D and other areas and strengthening the financial standing from a long-term perspective. In line with this, Sharp's basic policy is to ensure stable dividends at a payout ratio of 30%. For fiscal 2020, the annual dividend paid per common share was 30 yen, which represents a payout ratio of 34.4% and an increase of 12 yen per share compared with the previous fiscal year.
On February 26, 2021, Sharp acquired and canceled as compensation for common shares all of the outstanding shares (795,363 shares) of Class C stock, which are equivalent to common shares for dividend payment purposes. As a result, no shares issued since the start of management reconstruction in 2015 remain, which are in share classes that would complicate investors' decision-making.

Communicating with Investors

With regard to its communications with institutional investors and analysts, Sharp conducts one-on-one meetings and holds management policy briefings and quarterly financial results briefings. Sharp senior executives take part whenever possible in conferences organized by securities companies in Japan and overseas, where they explain and answer questions on financial results, management policy, and business strategy. In recent years, due to a growing focus on ESG, an increasing number of investors are including medium-to-long-term value creation in their investment decision-making. Sharp has been increasing inter-departmental cooperation in response to this trend. Sharp will continue to use IR activities to help a wide range of investors better understand Sharp's management situation and business policy, with the company's senior executives being actively involved to ensure the strength of IR-related communications. Sharp's IR department also keeps the senior executives updated on the reputation of Sharp and market views on the segments where we operate.

General Shareholders' Meeting, Management Briefings

Sharp strives to create an environment that enables shareholders to easily exercise their voting rights. Efforts include sending out early notices of the meetings, disclosing notices of the meetings before they are sent out, participating in an electronic voting platform (for institutional investors), posting English notices about the meetings on its website, and allowing shareholders to exercise voting rights via the Internet.
Also, after the general shareholders' meetings, Sharp holds management briefings to exchange opinions with shareholders on topics which are not limited to the agenda of the general shareholders' meetings.

Social Initiatives: Communication with Shareholders and Investors

Communication with Shareholders and Investors

IR Activities Designed to Meet the Diversifying Needs of Investors

In response to diversifying needs, Sharp makes every effort to properly disclose a wide range of information promptly and accurately, and enhance its communication with shareholders and investors in Japan and overseas.

Detailed financial information is disclosed in IR documents that include summaries of financial results and presentation materials. ESG-related information is attracting considerable interest these days. In this area, Sharp is enhancing the content of its integrated reports and providing detailed explanations in presentation materials covering financial results.

In addition to updating and expanding information on the IR website, Sharp has made the site compatible with smartphone viewing. Sharp also provides information needed by investors in a timely manner, including trends in major performance data, financial materials, and reports given at briefings. There is also a webpage dedicated to individual investors, where they can easily access relevant information presented in an easy-to-understand format.

Related information: > Investor relations

> Annual Report

> Learn about Sharp

Investor relations website

2021 Annual Report

Preventing Insider Trading

Sharp has effectuated regulations restricting insider trading, established strict controls on undisclosed material facts ("insider tips"), and instituted restrictions on the buying and selling of stocks and other securities. Sharp has also implemented in-house training related to insider trading. This training includes, among other approaches, an educational campaign on the corporate intranet that targets Sharp Group employees in Japan with the aim of preventing insider trading by Sharp Group directors, audit and supervisory board members, executive officers, or employees.

In addition, given the importance of disclosure, when "material facts specified in the Financial Instruments and Exchange Act" and/or "important company information that should be disclosed in a timely manner as stipulated by securities exchanges" is generated, Sharp does its utmost to promptly disclose and publicize the relevant details. Further, regarding media and analyst coverage, Sharp deals with it while fully honoring the spirit of disclosure and remaining attentive so as not to violate insider-trading regulations.

Webpage for "Learn about Sharp"

SHARP Sustainability Report 2021

Social Initiatives: Communication with Shareholders and Investors

ESG* Indexes

As of September 2021, Sharp is included in the following ESG indexes.

* Environmental, Social, and Governance

FTSE4Good Developed Index

An ESG index that assesses corporate social responsibility initiatives from an ESG perspective, operated by FTSE International Ltd., part of the London Stock Exchange Group. Sharp has been included in this index for 12 consecutive years.

FTSE Blossom Japan Index

An ESG index reflecting the performance of Japanese companies that demonstrate strong ESG practices, operated by FTSE. The Government Pension Investment Fund (GPIF) of Japan uses this as a stock index for ESG investments. Sharp has been included in this index for five consecutive years.

MSCI ESG Leaders Indexes

ESG indexes operated by MSCI Inc. They are composed of companies that have the highest ESG rated performance in each sector. Sharp has been included in this index for four consecutive years.

S&P/JPX Carbon Efficient Index

An environmental stock index adopted by the Government Pension Investment Fund (GPIF) of Japan.
Because of the level of environmental reporting and carbon efficiency (carbon emissions per unit sales) maintained by Sharp, the company has been selected as a constituent of this index since 2018.

2021 MSCI ESG Leaders Indexes Constituent

THE INCLUSION OF Sharp Corporation IN ANY MSCI INDEX, AND THE USE OF MSCI LOGOS, TRADEMARKS, SERVICE MARKS OR INDEX NAMES HEREIN, DO NOT CONSTITUTE A SPONSORSHIP, ENDORSEMENT OR PROMOTION OF Sharp Corporation BY MSCI OR ANY OF ITS AFFILIATES. THE MSCI INDEXES ARE THE EXCLUSIVE PROPERTY OF MSCI. MSCI AND THE MSCI INDEX NAMES AND LOGOS ARE TRADEMARKS OR SERVICE MARKS OF MSCI OR ITS AFFILIATES.

Social Initiatives: For Local Communities

Promoting Social Contribution Activities

FY2020 Objectives	FY2020 Achievements	Self-Evaluation	Priority Objectives for Fiscal 2021
■ Continue to collaborate with local communities to solve social problems, with employees taking the lead role in conducting activities that benefit communities	■ Total number of participants in environmental conservation activities: 9,683 (including family members), total number of activities: 649 ■ Career education provided to total of 1,844 students at special-needs schools	★★	■ Continue to collaborate with local communities to solve social problems, with employees taking the lead role in conducting activities that benefit communities

Self-evaluation: ★★★ Achieved more than targeted / ★★ Achieved as targeted / ★ Achieved to some extent

Based on its business philosophy of "contributing to the culture, benefits, and welfare of people throughout the world," Sharp contributes to regional advancement as a member of the communities where it does business. To help foster a relationship of mutual prosperity with communities, Sharp employees take the initiative in carrying out voluntary and ongoing social contribution activities centered on the environment, education, and social welfare.

Environmental Conservation Activities

Sharp carries out environmental conservation activities at its factories and sales and service bases across Japan. The activities are led by Sharp Green Club (SGC)*, a volunteer organization composed of Sharp and its labor union. SGC volunteers participate in Sharp Forest projects conducted in five areas to protect biodiversity and regenerate satoyama (areas that lie between the foot of a mountain and arable land) and roll out a campaign at four locations that is aimed at protecting wetlands listed under the Ramsar Convention. To demonstrate our commitment to communities, our employees also cooperate with local residents to organize cleanup and tree-planting events in the neighborhood of Sharp business sites.

In fiscal 2020, 649 such activities took place with the participation of a total 9,683 volunteers, including Sharp executives, employees, and their family members. Looking ahead, Sharp will continue to contribute to communities by broadening locally oriented initiatives.

Case Study

As part of its community service and to maintain beautiful and pleasant rivers, Sharp's Tenri Plant takes part in a local river support project run by the Nara prefectural government. Several times a year, employees pick up litter and cut weeds along the Takase River, a tributary of the Saho River that runs on the south side of the Sharp premises.
To limit the spread of Covid-19, in fiscal 2020 the scale of activities and number of participants were limited. Still, the Tenri Plant still managed to hold three cleanups, in May, December, and March and attended by a cumulative total of 23 employees, that helped beautify the Takase River.

Picking up litter

Weeding the area

Case Study

Through forest and biodiversity preservation activities, Sharp's Kameyama Plant partners in a council to reforest the headwaters of the Suzuka River.
In fiscal 2020, employees and their families took part in numerous events held by the council. At one, participants made Christmas wreaths from tree branches, leaves, and pine cones, while at another they made a shimenawa, a rope used to ward off evil in the Shinto religion. To prevent the spread of Covid-19, the Kameyama Plant took measures such as limiting participant numbers and taking temperatures, and having participants wear masks, disinfect their hands, and gather in family units only.

Making Christmas wreaths

Making shimenawa

* Sharp's joint labor-management volunteer organization that conducts activities such as forest preservation and community cleanups.

Social Initiatives: For Local Communities

Promoting Social Contribution Activities

Educational Support Activities for Disabled Children

Since fiscal 2012, Sharp Corporation and Sharp Tokusen Industry Co., a Sharp special subsidiary*, have been working together to enhance career education activities conducted at special-needs schools and similar organizations for disabled students. The aim of these activities is to foster a career-minded perspective in students and motivate them to work and achieve greater self-sufficiency. The following courses are provided.

- Workplace tour: Visit the workplace of disabled employees and attend a lecture
- Workplace experience: Experience work where disabled employees are active
- School visit: Disabled Sharp employee visits schools to give talks on what it means to work

A workplace visit

A participant in a workplace experience

A classroom during a school visit

* A subsidiary that has made special efforts supporting the employment of disabled people, as defined in Japan's Act on Employment Promotion, etc. of Persons with Disabilities (for example, improving facilities where the disabled work).

Case Study

Online School Visits

Due to the need to prevent the spread of Covid-19, it has become difficult to visit schools to teach classes, hold workplace tours, and host workplace experience and other career education. Sharp thus responded to requests from special-needs schools and other schools and is holding online school visits. These began in July 2020 and will continue until the pandemic is over.

In-person school visits by Sharp were limited to nationwide schools for the hearing impaired and special-needs schools and other schools in Osaka Prefecture only, but holding the school visits online allows participation by nationwide special-needs schools and other schools. In fiscal 2020, a cumulative total of 102 schools joined the online school visits.

Lessons taught students to think about the value and meaning of work, and to seek self-understanding by setting targets for workplace experience. On the request of participating school teachers, in fiscal 2021 a new section was added to the curriculum in which students learn the importance of work fundamentals such as health maintenance and interpersonal skills by looking at employees in the workplace. School teachers themselves lead the lessons by having students watch videos while tackling problems on worksheets.

School teachers' comments included "I was able to give lessons in line with students' actual situations and the school's career education" and "Talks by Sharp employees are very persuasive, so students listen intently." Meanwhile, students said, "It got me really excited about working" and "I understood that the fundamentals of day-to-day school life are important for my future working career." Schools for the health impaired were grateful for the online school visits because it is normally difficult for them to invite teachers from outside the school.

Sharp will continue to contribute to students' future careers while at the same time seeking ways to adapt its education to changing career needs.

Online school visit

Social Initiatives: For Local Communities

Promoting Social Contribution Activities

Voice

Comment from the principal of a special-needs school participating in career education

Chieko Tsuchiguchi
Principal, Osaka Prefectural Sungawawa
High School for Special-Needs Education

We really appreciate all that Sharp Tokusen Industry Co. does to help our students progress. Since opening in 2014, our special-needs school has sought to help students with intellectual disabilities gain independence in society through employment. Through its annual school visits, workplace experience, and workplace tours Sharp Tokusen has given our students a deeper understanding of working life.

To prevent the spread of Covid-19, in the 2020 academic year in-person classes were often cancelled, and we weren't able to hold our entrance ceremony until June 2021 after the state of emergency was lifted. Despite the late start, we have done everything possible to move ahead with courses that deepen students' understanding of their future paths. While taking measures to prevent the spread of the virus, in October Sharp Tokusen held school visits for second- and third-year students on the themes of what is important for working and the importance of sticking to a job. The school visits were valuable opportunities for our students to take part in group work and other stimulating, fun activities that allowed them to learn and notice things on their own and in doing so get a clearer picture of their future possibilities.

In 2021, with the state of emergency in effect, classes were held from April while taking anti-Covid-19 measures, and in June workplace experience began, with priority given to students in third year, an important time for determining their future after graduation. Second-year students are also preparing for their upcoming workplace experience. In preparing for workplace experience, the most important thing is to set goals. To this end, Sharp Tokusen held online school visits to help students know themselves and to use this knowledge to set appropriate goals. The focused lessons had students using worksheets while looking back on

their lives and realizing the importance of setting goals for their workplace experience. After watching online videos, students asked the Sharp Tokusen instructors questions, and the lessons ended with instructors wishing students all the best in future endeavors. I really think this warm and enthusiastic support gave students greater confidence about their futures. Our school will continue work closely with organizations like Sharp Tokusen to make students more enthusiastic about working, and all of our teachers and staff will work as one team to help students achieve their dream of joining the workforce. I look forward to more guidance and support from Sharp Tokusen and wish them further success and growth in future.

Comment from a Sharp Tokusen Employee

We have so far welcomed many student trainees, all with unique personalities, to experience Sharp Tokusen. Even though all the students have a disability, each one of them is special in their own way. That is why we strive to match them with a job, an environment, and a work style that is right for them. For example, we try to simplify students' work (through visualization of work procedures and work volume, clear placement of items, etc.), and we have special tools that make work easier (for affixing labels in the proper position, making tri-fold leaflets, etc.).

We want the trainees to experience success, even in small ways, and to build up their confidence. Even if they don't get the results they want, we help them understand and assess work processes and make them feel they are progressing. That being said, things often don't go as planned and I have done a lot of self-reflection. But there is much to be learned from this process of trial and error, and I find that the workplace experience program has helped me grow as much as the students have. We will continue to give the trainees opportunities to make discoveries and develop self-understanding that they can use to get a job and to keep on working.

Tomohisa Saeki
Assistant Manager,
Sharp Tokusen Industry Co.

Social Initiatives: For Local Communities

Promoting Social Contribution Activities

Activities around the World

At Sharp bases around the world, employees take on a range of social problems through activities such as tree planting, forest rejuvenation, and releasing young fish into the wild to protect and foster biodiversity, as well as local cleanups. Sharp will continue to be firmly rooted in the community as it carries out social contribution activities in every way possible.

Case Study

SEID：P. T. Sharp Electronics Indonesia

In Indonesia, the effects of the pandemic have put limitations on the ancient Islamic tradition of Ramadan.
Sharp production and sales base SEID held its Sharp Bersedekah, a charity event for sharing smiles and happiness. This event called on consumers to make donations virtually through various social network platforms.
In June 2020, the monetary donations were converted into Boxes of Happiness filled with basic foodstuffs and smiling masks, with a total of 1,000 of these boxes donated to orphanages in five major Indonesian cities.

A Box of Happiness

Case Study

SMM：Sharp Manufacturing Corporation (M) Sdn. Bhd.

In June 2020, employees of Sharp Malaysian production base SMM took part in a blood donor event held on the SMM premises in cooperation with a public hospital. This blood drive is one of the company's regular CSR activities. Ninety employees volunteered to donate blood.

SMM employees donate blood

Case Study

SEID：P. T. Sharp Electronics Indonesia

The Covid-19 pandemic has ushered in what is being called "the new normal" worldwide. It has also forced healthcare workers in Indonesia to become severely overworked and mentally and physically exhausted.
In August 2020, Sharp production and sales base SEID ran a cause-related marketing (CRM*) program called Bakti Untuk Negeri – Terima Kasih Pahlawan Kesehatan Indonesia ("Thank You Heroes of Indonesian Health").
Under the program, SEID donated 980 million rupiah (approximately $69,100), which supported healthcare workers through purchases of personal protective equipment, foodstuffs, Sharp air purifiers, and school tuition fees for their children.

* Cause-related marketing:
  A portion of the sales from certain products or services is donated for causes such as environmental protection or community service.

Presentation of the donation

Social Initiatives: For Local Communities

Promoting Social Contribution Activities

Case Study

SEID：P. T. Sharp Electronics Indonesia
People in Java, Kalimantan, and Sulawesi have experienced hardships due to disasters such as landslides, flash floods, earthquakes, and volcano eruptions.
In January 2021, Sharp production and sales base SEID donated various items through a non-profit organization. The items included foodstuffs, baby supplies, sanitary equipment, and healthcare goods, as well as items needed for temporary shelter tents such as blankets, masks, and waterproof sheets.

The signing and presentation ceremonies for the donation

Case Study

SEID：P. T. Sharp Electronics Indonesia
Although Covid-19 remained prevalent during the 2021 Ramadan period, the situation was much improved compared to the previous year in Indonesia, allowing numerous activities to restart as long as infection-prevention measures were taken. Sharp production and sales base SEID held its annual Sharp Bersedekah (Let's Share Happiness) charity event. The company placed refrigerators in various locations and called on the public to leave food inside them. All the food gathered was donated to the nearest orphanages and other social welfare organizations.

A donor places food in a Sharp refrigerator

SHARP Sustainability Report 2021

Social Initiatives: Efforts Related to Human Rights

Efforts Related to Human Rights

Guiding Principles on Human Rights

As a participant in the United Nations Global Compact, the Sharp Group promotes initiatives that conform to international principles about human rights and labor standards, such as those advocated in International Labour Organization (ILO) conventions.

The Sharp Group's fundamental policies with regard to human rights are embodied in the Sharp Group Charter of Corporate Behavior and the Sharp Code of Conduct. These stipulate that the Sharp Group respects fundamental human rights and individuality by eschewing practices that are discriminatory or which infringe upon human rights, such as child labor or forced labor, and every effort is made to ensure that all Sharp employees are aware of and adhere to these policies.

Human Rights Education and Training

In Japan, new employees and mid-career hires of the Sharp Group learn about Sharp's philosophy on human rights by studying the Sharp Group Charter of Corporate Behavior and the Sharp Code of Conduct. Each site carries out ongoing human rights awareness activities, including annual human rights training. In fiscal 2020, Sharp held online training and sent out email newsletters on preventing all forms of harassment, as well as on other important topics. A total of 24 sessions and newsletters were provided to around 10,000 employees.

In fiscal 2020, compliance-related training based on the Sharp Code of Conduct was also provided to all Sharp Group employees. In this training, employees learned about how discrimination and harassment are prohibited and how forced labor should be prevented—key themes in the human rights and labor field. Employees were also asked to comply with the Sharp Code of Conduct. About 19,000 employees took part in this e-learning program.

Sharp Group Charter of Corporate Behavior (excerpt)

The Sharp Group respects fundamental human rights and does not engage in discriminatory actions or human rights violations in any of our business activities. The Sharp Group does not sanction child labor or forced labor.

Sharp Code of Conduct (excerpt)

1. We respect the fundamental human rights and the dignity of individuals in all business activities, and will not be complicit in human rights violations. In case business activities, products and services are found to adversely affect human rights, we will take all appropriate measures.

2. We will not sanction child labor or any form of forced labor, and we will support its effective abolition.

3. In any corporate activities, including employment practices such as hiring, payment, promotion, opportunities for training and the like, we do not take any action that constitutes discrimination based on nationality, race, ethnic group, color, sex, physical health, pregnancy, sexual orientation, age, marital status, religion, creed, social status, birth, property, bodily feature, physical or mental disability, political opinion, and the like.

4. We do not engage in acts and speech that constitute inhumane acts, such as abusive behavior, expressions of contempt, verbal abuse, sexual harassment, power harassment and the like, in our offices and other work places.

5. Based on global standards and applicable laws and regulations, we will respect and consider the rights of employees, such as freedom to associate, freedom to join a trade union, freedom to take industrial action, freedom to join a worker's council and the like without revenge, threats, and/or harassments to employees.

Human rights-related initiatives in line with the Sharp Group Charter of Corporate Behavior, the Sharp Code of Conduct, local laws and regulations, and other requirements are also being promoted at Sharp's overseas bases.

Additionally, Sharp carries out ongoing human rights compliance checks at its production sites via SER self-assessment surveys* conforming to international principles, such as those advocated in ILO conventions.

* See page 31.

In the UK, we have disclosed a statement to prevent forced labor and human trafficking based on the UK Modern Slavery Act 2015. In Australia, we have submitted reports as required under the Modern Slavery Act.

Related information: > Modern Slavery Act Transparency Statement

SHARP Sustainability Report 2021

Social Initiatives: Efforts Related to Human Rights

Labor-Management Relationship

Good Labor-Management Relationship That Prioritizes Dialogue and Respect for Employee Rights

Sharp respects employees' right to organize and the right of collective bargaining based on the laws of each country or region, and it works to strengthen its trusting relationships with labor unions.

At Sharp Corporation, for example, labor agreements between the company and the union give the union the right to organize, the right to bargain collectively, and the right to take collective action.

Under labor agreements, Sharp provides periodic opportunities for labor-management meetings, such as the Central Labor-Management Council, which involves top executives from both sides, and labor-management meetings at each production site and affiliate. In addition, labor and management periodically meet to exchange opinions and information regarding the company's financial condition and issues in the work environment. When there are issues that will have an impact on the working conditions of union members, both sides meet for discussion before action is taken.

As of April 1, 2021, a total of 4,526 Sharp Corporation employees are members of the Sharp Workers Union. This represents a union participation rate* of 95.8%.

In Europe, Sharp holds European Works Council meetings every year to review the financial condition and managerial issues throughout Europe. In China, companies are obligated to hold meetings with employee representative assemblies to decide on issues such as employee working conditions. In line with relevant local laws, Sharp strives to build cooperative labor management relationships.

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* The percentage of union members among employees excluding those in management positions as defined under the Labor Standards Act of Japan. The above employee figure counts employees whose labor agreement stipulates non-union status (personnel affairs, accounting, etc.) as not belonging to a labor union.

Preventing Workplace Harassment

FY2020 Objectives	FY2020 Achievements	Self-Evaluation	Priority Objectives for Fiscal 2021
■ Hold e-learning for all employees to prevent power harassment ■ Provide training for staff engaged in harassment consultation service ■ Respond to and resolve harassment-related consultation cases	■ E-learning for all employees postponed to fiscal 2021 ■ Training provided at all key sites for staff engaged in harassment consultation service ■ Harassment consultation service staff received 22 harassment-related consultations; all matters were properly handled and resolved in line with established rules	★★	■ Raise awareness of consultation service in order to prevent harassment ■ Respond to and resolve harassment-related consultation cases ■ Hold anti-harassment training at least once a year

Self-evaluation: ★★★ Achieved more than targeted / ★★ Achieved as targeted / ★ Achieved to some extent

Basic Concept

Workplace harassment is socially unacceptable behavior damaging to human dignity. It prevents employees from being effectively empowered, hinders workplace cohesion and operations, and negatively affects the company's image in society.

Harassment-related consultations are handled swiftly and fairly, and disciplinary action is taken in accordance with the rules of employment if any prohibited behavior considered to be harassment is identified.

Prohibited behavior considered to be harassment
- Sexual harassment
- Harassment relating to pregnancy, childbirth, childcare, caregiving, etc.
- Power harassment (workplace bullying)

Harassment Prevention Measures

In order to help prevent harassment, Sharp provides all employees with harassment-prevention training.

Additionally, Sharp utilizes employee surveys to help ascertain the status of workplace harassment and to identify whether warnings and guidance should be issued in order to prevent potential problems.

Harassment Consultation Service

Sharp has also set up a harassment consultation service for all of its bases in Japan in order to handle harassment-related reporting and consultations, thereby helping to ensure that, in the event that harassment occurs, a system is in place to immediately deal with it. In addition, Sharp has established the Crystal Hotline as a general consultation service for all workplace-related concerns, particularly those related to compliance.

Consultation services are available to Sharp employees, temporary staff, employees of business partners, and other relevant parties.

Sharp has developed harassment response guidelines, which stipulate the appropriate way to handle harassment reports, such as how to ensure those making the reports do not suffer any negative repercussions or have any personally identifiable information leaked or disclosed without their consent.

Social Initiatives: Human Resource Development / Personnel System

Human Resource Development

FY2020 Objectives	FY2020 Achievements	Self-Evaluation	Priority Objectives for Fiscal 2021
■ Expand the technical categories of the specialized technical training (workshops) ■ Further encourage learning for self-development to foster a culture for continued learning	■ Launched basic skills-building seminar and device seminar ■ Rolled out best practices in learning for self-development across different business units	★★	■ Expand education and training system aimed at developing the next generation of human resources ■ Strengthen individual skills improvement initiatives

Self-evaluation: ★★★ Achieved more than targeted / ★★ Achieved as targeted / ★ Achieved to some extent

Personnel, Education, and Training System for Fostering Strong Individuals

Sharp works to cultivate an environment in which employees can pursue independent learning whenever and wherever they are, in order to build up the basic business knowledge and expertise that they need as professionals.

Specialized Technical Training

Sharp pursues a variety of initiatives aimed at helping employees improve/deepen their expertise (technical competency). In addition to technical workshops, which incorporate a practical program that is directly linked to job skills in specific technical fields, we launched a new basic skills-building seminar (e-learning), in which primarily younger engineers learn the basics of technology.

A device seminar was also launched, which introduces employees in product development to Sharp's latest devices. We continue to provide all of the previously established study sessions and seminars, but from fiscal 2020, they are being expanded and enhanced further.

Sharp's education and training initiatives are aimed at strengthening technical expertise company-wide, going beyond the limited framework of specific business and products to share technical know-how across internal functions and to develop younger employees by passing existing skills and techniques on to them.

Learning for Self-Development

We continue offering management skills improvement training, in which basic business knowledge and skills essential for any employee are taught, while broadening the scope of topics. With regard to the study sessions and management skills improvement training, Sharp actively supports employee self-development by providing an e-learning environment, which complements the group training sessions, allowing employees to use their home computers and smartphones to easily pursue learning anywhere, any time.

By providing these various education and training initiatives on an ongoing basis, Sharp is fostering a corporate culture of employee-driven mutual learning and instruction in which personnel who are capable of delivering the sorts of innovation that strengthen the company will be cultivated.

■ **Sharp Group Learning for Self-Development Participation (Fiscal 2020)**

No. of Participants (Total)	Total Learning Hours	Participation Rate
26,678	42,212 hours	38.6%

Social Initiatives: Human Resource Development / Personnel System

Human Resource Development

Job-Level-Specific Human Resource Development

In job-level-specific training, special emphasis is placed on the development of young employees so that they can acquire the knowledge, skills, and mindset essential to each stage of their careers. Towards that end, young people receive training starting from when they are first selected to join Sharp, training upon joining the company, and training in their first few years at the company. Candidates for promotion take manager candidate training as part of Sharp's efforts to systematically strengthen its management capabilities.

Besides mandatory job-level-specific training, Sharp has other human resource development programs, such as business unit-specific training, training for selected employees, and open-recruitment training.

Social Initiatives: Human Resource Development / Personnel System

Personnel System Conducive to Talent Development and Motivation Boosting

Employee Evaluations and Compensation

To ensure fair evaluations, employees have an interview with their managers at the beginning, middle, and end of each evaluation term, at which time both sides confirm how well the employee is doing in terms of progress towards targets, contribution to the company, and job results. Evaluation results are given to employees every half year along with explanations of the evaluations with the aim of contributing to employees' growth.

Personnel Declaration System

All employees submit a career development plan along with a self-assessment of their job aptitude. Sharp then stores this information—along with records of interviews with supervisors—in a personnel database. This provides an overview of how employees are progressing with respect to their career goals, and it allows Sharp to effectively develop human resources.

Step-Up Campaign (Qualification Acquisition Encouragement Plan)

To support employee self-development, Sharp offers monetary rewards to employees who have acquired qualifications, with the amount depending on the difficulty of acquiring the qualification. This plan covers about 200 qualifications, including some for field-specific techniques and skills, some directly related to daily duties, and some for language skills.

Employee Survey

Employee surveys cover employees at Sharp Group companies in Japan. The surveys have been conducted periodically since 2005 with the aim of invigorating and improving the workplace. In 2020 the survey took place in August and 18,796 people responded to the survey (97% response rate). The survey results, obtained from questions about the current situation regarding the respondent's work, workplace, superiors, and so forth, are summarized for each workplace and shared with every employee. Workplace meetings are held based on the survey results to identify the issues to be addressed and carry out voluntary improvement activities.

Welfare

Sharp Group companies in Japan have introduced a variety of employee benefits and welfare systems, which contribute to a stable and secure working environment for employees.

Corporate pension system	In addition to the public pension system, Sharp has introduced its own corporate pension system (defined benefit corporate pension) to help support employees after their retirement.
Health insurance association	Sharp Health Insurance Association provides enrolled employees and their dependents with specific supplemental benefits above and beyond those mandated by law when sick or injured. A variety of health promotion services are also provided to those enrolled in the Health Insurance Association.
Other employee benefits and welfare systems	Property accumulation savings, employee stock ownership plan, Group health insurance plan, medical examination subsidy (e.g., for comprehensive medical screenings), special incentive leave (an extra five days of paid leave for every five years of continued employment)

Social Initiatives: Diversity Management

Developing Diversity Management

Fiscal 2020 Objectives	Fiscal 2020 Achievements	Self-Evaluation	Priority Objectives for Fiscal 2021
■ Promote measures in line with action plan for Act on Promotion of Women's Participation and Advancement in the Workplace ■ Maintain 2.4% employment rate for the disabled	■ Percentage of female managers: 4.3% as of April 1, 2021 ■ Employment rate for the disabled: 2.46% as of June 1, 2021	★	■ Promote measures in line with action plan for Act on Promotion of Women's Participation and Advancement in the Workplace ■ Maintain 2.4% employment rate for the disabled

Self-evaluation: ★★★ Achieved more than targeted / ★★ Achieved as targeted / ★ Achieved to some extent

Basic Concept

Sharp's business philosophy, established in 1973, embraces the concept of diversity by stating that "It is the intention of our corporation to grow hand-in-hand with our employees, encouraging and aiding them to reach their full potential and improve their standard of living." We aim to produce new value based on mutual respect among employees and to develop and propose products and services that can contribute to better lives, creating the next future with customers.

Diversity management is a human resources strategy for utilizing a diverse range of employees, but we regard it as a business strategy at the same time. Also, the Sharp Code of Conduct states that, "In any corporate activities, including employment practices such as hiring, payment, promotion, opportunities for training and the like, we do not take any action that constitutes discrimination based on nationality, race, ethnic group, color, sex, physical health, pregnancy, sexual orientation, age, marital status, religion, creed, social status, birth, property, bodily feature, physical or mental disability, political opinion, and the like," and that, "We will actively take part in efforts to enhance the work environment where employees with diverse characteristics can fully demonstrate their abilities." This is what Sharp is actively working towards, giving individual consideration based on need.

Promoting Activities of Female Employees

Sharp formulated an action plan based on Japan's Act on Promotion of Women's Participation and Advancement in the Workplace, which came into effect in April 2016. In line with this action plan, Sharp is working to raise the percentage of women in all job categories and increase the number of women in managerial positions. This will enable it to achieve further diversity in its workforce and contribute to society through better products and services. To this end, Sharp has set the following goals and is actively pursuing further engagement of its female employees.

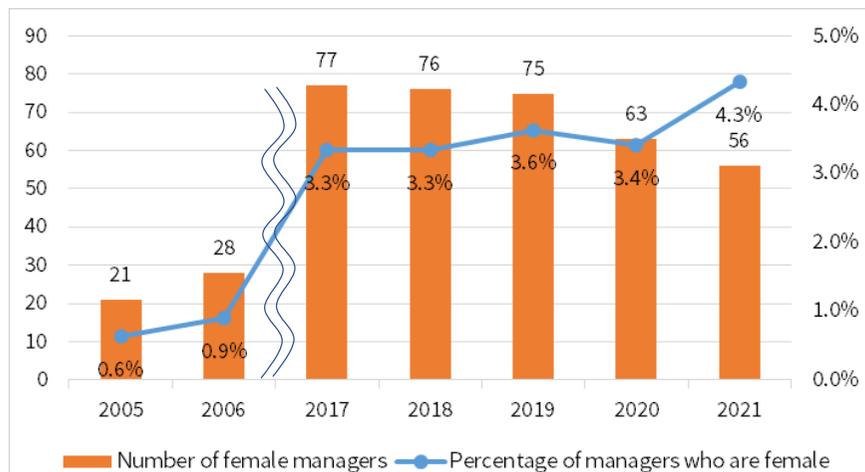| Goal	Deadline
• Have at least 15% of new graduates hired for engineering jobs and 50% of new graduates hired for non-engineering jobs be women • Have at least 5% of managers be women • Have at least 95% of female employees having returned to work after taking childcare leave stay at Sharp beyond 12 months after their reinstatement	By the end of fiscal 2024

SHARP Sustainability Report 2021

Social Initiatives: Diversity Management

Developing Diversity Management

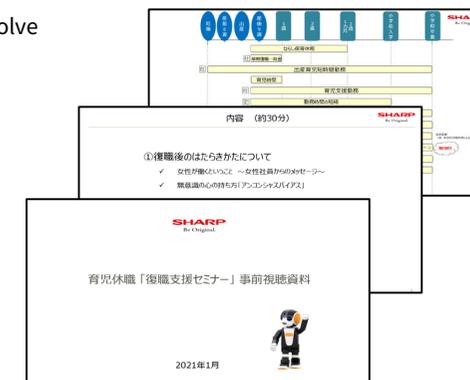### Promoting Female Employees to Managers

For years, Sharp has striven to expand the roles of women in the workplace and promote female employees to managers. In April 2021, the percentage of managers who were female was 4.3%, an almost seven-fold increase compared to 0.6% in 2005, the year Sharp launched a program to promote more women to managerial positions.

■ Number of Female Managers

■ Number of female managers ● Percentage of managers who are female

Supporting Employees Returning from Maternity or Childcare Leave

Sharp has held reinstatement support seminars every year since fiscal 2014. These seminars involve an explanation of the company's current circumstances and the various support systems related to childbirth and nursing. As well, employees who have returned to work after taking childcare leave share their experiences and provide advice on how to balance work and child rearing. Attendees are also given the opportunity to build networks with other working mothers. These seminars help to resolve anxiety during time off from work and foster a positive mindset about returning to work.

Screen shots of the reinstatement support video

In fiscal 2020, based on feedback from reinstatement support-related interviews with employees conducted in May and June, Sharp changed the existing classroom-style seminar to an online seminar to make it easier to participate from home while looking after children. Additionally, in order to help build a stronger support system, which encompasses both the returning employee's family and workplace, the seminar video was also distributed to their spouses and supervisors. Sharp will continue to listen to employees and incorporate their feedback as it works to become an even better and more attractive place to work. Sharp also has two systems in place to support employees who are eager to advance their careers after returning to work after childbirth. One is for giving one-off payments to employees making an early return from childcare leave and the other is for subsidizing the fees for non-registered daycare facilities for employees with children at age two or younger, who fall outside the scope of the government program for free early childhood education and care.

Social Initiatives: Diversity Management

Developing Diversity Management

■ **Sharp Corporation Personnel Composition, by Gender**

		Men	Women	Total
Directors, audit and supervisory committee members		7	0	7
Employees	Executive officers	9	0	9
	Managers	1,229	56	1,285
	General staff	4,003	723	4,726
	(New employees who are graduates of universities and technical colleges)	(105)	(27)	(132)
	Subtotal	5,241	779	6,020
Total		5,248	779	6,027
Ratio		87.1%	12.9%	

(As of April 1, 2021)

■ **Ratio of Men and Women at Major Overseas Subsidiaries**

Base		Directors, managers		Non-supervisory employees (permanent employees)		Total	
		Men	Women	Men	Women	Men	Women
SEC (US)	Sales, production	81.4%	18.6%	70.4%	29.6%	71.3%	28.7%
SEE (UK)	Sales, production	77.6%	22.4%	74.3%	25.7%	74.9%	25.1%
SEID (Indonesia)	Sales, production	84.2%	15.8%	69.2%	30.8%	70.0%	30.0%
SATL (Thailand)	Production	70.2%	29.8%	29.8%	70.2%	30.9%	69.1%
SMM (Malaysia)	Production	81.4%	18.6%	41.8%	58.2%	44.8%	55.2%
SOCC (China)	Production	82.1%	17.9%	25.6%	74.4%	30.3%	69.7%
NSEC (China)	Production	63.4%	36.6%	64.1%	35.9%	64.0%	36.0%
WSEC (China)	Production	61.5%	38.5%	44.5%	55.5%	45.7%	54.3%

(As of March 31, 2021)

Social Initiatives: Diversity Management

Developing Diversity Management

Expanding Opportunities for Non-Japanese Employees in Japan

With the globalization of business, Sharp is working globally to secure and systematically train human resources who can meet the needs of each workplace. In recent years, Sharp has promoted greater employment of international students and people of other nationalities residing in Japan. As of April 2021, we have approximately 100 non-Japanese employees from 12 countries working in various departments and job categories. To avoid illegally employing undocumented workers, Sharp checks the residence status of all foreign nationals before hiring them. This follows the advice of the Immigration Services Agency of Japan's Ministry of Justice. (Sharp uses an Agency website to validate residence card numbers.)

Reemployment of Retirees

In 2001, Sharp introduced a professional employee system that reemploys employees who have reached the mandatory retirement age of 60. This stems from the company's stance on promoting the utilization of senior employees who have a strong work ethic. It also takes into consideration employees who wish to give back and contribute to society through the skills and knowledge they have accumulated over many years.

At present, employees who have reached the mandatory retirement age of 60 (and who wish to continue working until the age of 65) are redeployed to fill roles where they can make a valuable contribution to the company. In response to the Act on Stabilization of Employment of Elderly Persons—which came into effect in April 2021—Sharp is considering offering guaranteed employment up to the age of 70.

Promoting Employment of the Disabled

Ever since Sharp founder Tokuji Hayakawa established the "accumulation of community service" as one of the "Five Accumulations of Competency*," Sharp has been actively involved in social service and welfare. The entire Sharp Group makes efforts to promote the employment of the disabled and to create a better work environment for these employees.

Specifically, Sharp launched a recruitment website addressing the employment of disabled people. This website contains information on initiatives to hire such individuals to work in the Sharp Group. Sharp is also striving to make the working environment more accessible for disabled employees. For example, during training sessions attended by hearing-impaired participants, there are support measures such as voice recognition software and PC note-taking (a method for conveying audio information by entering it into the keyboard of a PC) so that voice communication is converted into text for participants to read and understand.

Employment Rate of the Disabled in Japan

As of June 1, 2021, the Sharp Group employed approximately 320 disabled persons. The percentage of disabled employees among all employees was 2.46%, above the 2.3% rate mandated by law (as stated in the Act on Employment Promotion etc., of Persons with Disabilities).

■ **Employment Rate of the Disabled in Japan**

Online Recruitment Interviews

Sharp started to use online interviews for recruitment in the first half of fiscal 2019. With fewer time and location constraints, this new form of recruitment has allowed us to interview applicants flexibly, regardless of the place they live or work, the level of disability, and other factors. We are creating and increasing opportunities to approach a diverse range of talents by leveraging the benefits of online interviews.

For fiscal 2020 as well, all of Sharp's recruitment interviews were done online to protect the safety and health of both applicants and interviewers under the Covid-19 pandemic.

* Accumulation of trust, accumulation of capital, accumulation of community service, accumulation of human resources, and accumulation of trading partners

SHARP Sustainability Report 2021

Social Initiatives: Activities to Support Work-Life Balance

Activities to Support Work-Life Balance

Basic Concept

In line with its promotion of diversity, Sharp supports its employees by creating a rewarding workplace. Sharp gives employees a choice of work styles—allowing them to select the style that best suits them at various stages in their lives—thereby helping them achieve a work-life balance that will enable them to lead rich lives both at work and at home.

Specifically, Sharp is expanding support programs for childcare and nursing care and is distributing guidebooks and other information to promote use of these programs.

In addition, Sharp has established a support system for balancing work with medical treatment. Employees undergoing medical treatment are able to work comfortably without being pressed by time. An employee's health and capacity for work are the key considerations in determining their work schedule and obligations.

On top of all this, Sharp is continuously implementing initiatives aimed at helping employees find a work style that is both efficient and satisfying, such as by establishing No Overtime Day and by actively encouraging employees to schedule and take their annual paid leave.

Promoting Childcare Leave for Men

To create a more employee-friendly workplace, Sharp has made efforts to establish a support system and environment in which both male and female employees can participate in child rearing. Japan is undergoing a low birth rate, diversifying work and life styles, and an increase in double-income households. In light of this, Sharp is expanding and improving its childcare leave system and encouraging more male employees to take part in child rearing. As a result, many male employees have taken childcare leave (51 people at Sharp Corporation in fiscal 2020).

Sharp will continue to support its employees' active participation in childcare and in family life with their children.

Act on Advancement of Measures to Support Raising Next-Generation Children

In 2007, 2009, 2012, 2015, and 2020, Sharp Corporation was recognized by the Minister of Health, Labour and Welfare as a company supportive of childrearing based on the Act on Advancement of Measures to Support Raising Next-Generation Children and received the "Kurumin" mark of certification.

Work-Life Balance Guidebook and
Nursing Care Guidebook

Social Initiatives: Activities to Support Work-Life Balance

Activities to Support Work-Life Balance

■ **Work-Life Balance Support Programs (Main Programs and Participation at Sharp Corporation)**　　　　　　　　　　　　　　　　（Person）

Program Name	Description	Participation		
		Fiscal 2018 （usage rate）	Fiscal 2019 （usage rate）	Fiscal 2020 （usage rate）
Childcare Leave[*1]	Allows leave until the child turns two years old. (The 10-day period beginning at the start of the childcare leave is treated as a period with pay.) ＜FY2020＞ Return to work rate Men: 100% Women: 97.7% Retention rate[*2] Men: 98.2%	152 (44.2%) Men: 93 (32.7%) Women: 59 (98.3%)	125 (42.8%) Men: 85 (33.7%) Women: 40 (100%)	75 (42.9%) [*3] Men: 51 (33.8%) Women: 24 (100%)
Reduced-Hours Employment during Childbearing/Childcare	A system by which an employee can reduce work time by up to three hours per day (in units of 30 minutes) during pregnancy. Also allows a female/male employee to work under the same reduced-hours employment system until the last day of March after her/his child has reached the sixth year of elementary school.	15	13	7
Childcare Support Work Program	Allows flexible work schedules (work day start and end times) until the last day of March after the child has reached the sixth year of elementary school. This allows an employee to shorten working hours up to an average of three hours per day in one-hour units.	366	313	215
Nursing Care Leave[*1]	Allows an employee to take leave to care for a family member requiring nursing care for a total of two years (can be divided up).	6	6	3
Nursing Care Support Work Program	Allows flexible work schedules (work day start and end times) during a six-month period in order to carry out nursing care. (Can be changed if necessary.) This allows an employee to shorten working hours up to an average of three hours per day in one-hour units.	12	9	7
Other Programs	Multipurpose Leave Taken in One-Hour Units (or half-day units), Staggered Commuting Hours during Pregnancy, Guaranteed Reemployment after Childbearing/Childcare, Reemployment after Returning from a Spouse's Overseas Transfer, Reemployment after Nursing Care, Reduced-Hours Employment or Reduced Weekly Working Days for Nursing Care, Support for Unmarried Employees with Family Nursing Care Obligations (commuting costs and other relevant expenses), Paternity Leave, Daycare Adaptation Leave, Nursing Care Leave (in one-hour units), Nursing Leave (in one-hour units), Home Helper Expense Subsidies, Leave of Absence or Annual Paid Holidays for Fertility Treatment, Fertility Treatment Financing System, Reduced-Hours Employment for Career Development Support, Volunteer Leave, Subsidy for Fees of Non-Registered Daycare Facilities, One-off Payments for Employees Making an Early Return from Childcare Leave, Subsidy for Fees for Sick Children Daycare and Extended Daycare			

[*1] Personnel evaluations conducted while an employee is on childcare leave or nursing care leave will never work against the employee in terms of receiving a raise, promotion, or bonus.
[*2] Percentage of employees still working 12 months after returning to work.
[*3] In previous years, we calculated the participation rate based on Sharp's childcare leave policy. But to conform with the revised Act on Childcare Leave, Caregiver Leave, and Other Measures for the Welfare of Workers Caring for Children or Other Family Members (coming into effect on April 1, 2023), the rate from fiscal 2020 onward will be calculated in line with Japan's Ministry of Health, Labour and Welfare's standard.

Social Initiatives: Promoting Occupational Safety and Health

Promoting Occupational Safety and Health

Sharp Group Basic Policies on Safety and Health

Basic Philosophy

The Sharp Group regards protecting the safety, security, and health of employees all over the world as indispensable to its business activities, and is dedicating appropriate management resources in a spirit of Sincerity and Creativity, in order to achieve a safe and pleasant working environment.

Basic Policy

1. Legislative Compliance
   In addition to strict compliance with legislation related to safety and health in each country and region, all Group companies must comply with in-house standards established in line with the standard Group policy,
2. Establishment of Management Organization
   The Sharp Group has established a management organization to deal with safety and health, with clearly delineated roles, authority, and responsibilities, and is promoting activities at the structural level.
3. Establishment and Operation of Management System
   The Sharp Group has established an occupational safety and health management system, and is engaged in continuous evaluation and improvement of its activities, with a view to eliminating potential hazards and risks to safety and health in the workplace.
4. Implementation of Education and Training
   The Sharp Group is endeavoring to raise awareness of safety and health and to promote voluntary activities by implementing for all employees the education and training required to improve safety and health.
5. Setting Targets and Full Employee Participation in Practical Activities
   The Sharp Group sets targets for preventing accidents and improving employees' health, and is striving to meet these targets by means of practical activities in which all employees participate.

Organization Promoting Safety, Hygiene, and Health

Sharp works to ensure the safety and to maintain and improve the health of all of its employees, as well as further the creation of a pleasant working environment. Towards that end, it has developed a clear administrative responsibility system for preventing industrial accidents and improving occupational safety and health levels. Also, in order to show Sharp's commitment to maintaining and improving health, it calls the names of its organizations and activities "safety, hygiene, and health" instead of "safety and health" and has established the following organizational system for promoting safety, hygiene, and health.

In order to ensure that activities for the maintenance and improvement of safety, hygiene, and health go smoothly, Sharp holds Central Safety, Hygiene, and Health Committee meetings that bring the management and the labor union together to discuss and decide basic policies for the entire company. The Committee establishes annual company-wide policies, objectives, and priority action items related to safety, hygiene, and health and rolls them out to business sites and affiliated companies.

At each business site or affiliated company, the Safety, Hygiene, and Health Committee consisting of labor and management representatives, as well as chemical, electrical, and gas subcommittees, meets every month to report, discuss, and review safety, hygiene, and health activities. The discussion and decision outcomes are communicated to all employees through the various departments.

In addition, in order to establish comprehensive safety, hygiene, and health management on company premises, every month at each business site a Safety and Hygiene Council meeting is convened, which includes subcontractors permanently stationed on-site. This committee discusses safety, hygiene, and health-related policy, targets, and planning, shares updates about safety, hygiene, and health initiatives, and works to prevent industrial accidents.

■ **Organization Promoting Safety, Hygiene, and Health**

Social Initiatives: Promoting Occupational Safety and Health

Promoting Occupational Safety and Health

FY2020 Objectives	FY2020 Achievements	Self-Evaluation	Priority Objectives for Fiscal 2021
■ Eliminate severe accidents, reduce industrial accidents ■ Prevent health problems caused by overwork	■ Severe accidents: Thoroughly enforced rules for working with hazardous and toxic materials to eliminate the occurrence of severe accidents ■ Number of industrial accidents (including cases without lost work time) By implementing priority measures for workplaces with many industrial accidents, 7.6% year-on-year reduction was achieved ■ Strengthened measures against long work hours • Reduced the number of employees working long hours • Had employees working long hours interviewed and guided by a physician	★★	■ Eliminate severe accidents, reduce industrial accidents ■ Prevent health problems caused by overwork

Self-evaluation: ★★★ Achieved more than targeted / ★★ Achieved as targeted / ★ Achieved to some extent

Occupational Safety and Health Management System

Sharp has established an occupational safety and health management system and is promoting measures to ensure the further penetration and establishment of "proactive safety," an initiative under which potential workplace accident risks are identified in advance and eliminated or reduced.
Four of Sharp's major business sites in Japan have received ISO 45001 certification, and one has received OSHMS certification from the Japan Industrial Safety and Health Association (JISHA).
Sharp has also established and is promoting occupational safety and health management systems at other workplaces and affiliated companies to promote systematic, organized, and continuous safety and health management and raise the level thereof.

Initiatives to Reduce Industrial Accidents

At workplaces where there are many industrial accidents, Sharp is taking concentrated efforts to develop systems for safety and health education and pre-work meetings to eradicate unsafe behavior in accordance with the thorough implementation of measures by the senior management of each workplace. In addition, the entire company is working on measures to eradicate industrial accidents by preventing falls and crashes, strengthening danger-prevention activities, preventing traffic accidents, and prohibiting unsafe behavior.
As a result of these efforts, the Sharp Group's industrial accident rate (frequency rate of lost-worktime industrial accidents[*1]) in Japan in fiscal 2020 was 0.37, which was continuously lower than the national average for all industries (1.95), the manufacturing industry (1.21), and the electrical machinery, equipment, and supplies manufacturing industry (0.52). In addition, the Sharp Group has not experienced any fatalities since fiscal 2013.

■ **Example of Company-Wide Effort to Eradicate Industrial Accidents (Promotional Posters)**

■ **Annual Industrial Accident Rates (Frequency Rate of Lost-Worktime Industrial Accidents)**

All-industry average: 2011: 1.62, 2012: 1.59, 2013: 1.58, 2014: 1.66, 2015: 1.61, 2016: 1.63, 2017: 1.66, 2018: 1.83, 2019: 1.80, 2020: 1.95

Manufacturing industry average: 2011: 1.05, 2012: 1.00, 2013: 0.94, 2014: 1.06, 2015: 1.06, 2016: 1.15, 2017: 1.02, 2018: 1.20, 2019: 1.20, 2020: 1.21

Electrical machinery, equipment, and supplies manufacturer average: 2011: 0.44, 2012: 0.39, 2013: 0.41, 2014: 0.41, 2015: 0.54, 2016: 0.51, 2017: 0.45, 2018: 0.58, 2019: 0.54, 2020: 0.52

Sharp Group (Japan): 2011: 0.23, 2012: 0.20, 2013: 0.19, 2014: 0.21, 2015: 0.25, 2016: 0.29, 2017: 0.23, 2018: 0.29, 2019: 0.27, 2020: 0.37

[*2]

*1 Indicator that represents the incidence of industrial accidents per million work hours (one day or more of suspended operations).
*2 National averages for all industries, the manufacturing industry, and manufacturers of electrical machinery, equipment, and supplies are based on a 2020 survey by the Japanese Ministry of Health, Labor, and Welfare.

Social Initiatives: Promoting Occupational Safety and Health

Promoting Occupational Safety and Health

Making Employees Healthier

Sharp is committed to making its employees healthier. Our activities include providing workplace physician interviews and health guidance to employees who are overweight or who have lifestyle diseases. Employees are given specific guidance based on their health check results. The company offers support to those who want to quit smoking, and it has made all company buildings smoke-free. We also encourage regular exercise through a competitive walking campaign among workplaces, which runs via a health-promotion smartphone app.

Enhancing Mental Health Care

Sharp uses its employee stress check system, which is required under the Japanese law, to let employees realize their level of exposure to stress. The system is expected to lead to the prevention, early detection, and early treatment of mental health issues. Stress check results are also analyzed for each organization, so that we can improve the workplace environment.
Sharp also offers comprehensive mental health services to employees, including counseling with mental health doctors and workplace counselors at business sites and counseling at outside specialized institutions. Mental health information is also made available to employees on the intranet.
Our return-to-work support program also demonstrates our commitment to supporting reinstatement after absence and prevention of a recurrence of mental health issues. Employees returning to work will have a preliminary talk with the workplace physician and their department, and they can choose to return to work on a trial basis and work shorter or flexible hours.

■ **Measures to Prevent Employees' Mental Disorders**

Primary prevention	Secondary Prevention	Tertiary prevention
Prevention, health improvement	**Early detection, early treatment**	**Return to work, prevent reoccurrence**
Measures to prevent mental health issues	Measures to prevent worsening of mental health issues	Measures to ensure a smooth return to work and prevent the reoccurrence of mental disorders
Legally designated stress check		
Outside counseling hotline for mental health (Contact with specialized institution by phone, website, and e-mail; in-person counseling at affiliated institution)		
Mental health training		Return-to-work support program (Trial return to work, consultation upon returning to work, shorter work hours, and work support systems)
Event-related screening (joining the company, workplace transfer [with or without family], promotion, long work hours, etc.)		
Mental health counseling meetings		

Social Initiatives: Promoting Occupational Safety and Health

Promoting Occupational Safety and Health

Preventing Health Problems Caused by Overwork

Sharp is working to prevent health problems caused by overwork, including efforts to curb long working hours, so that all employees can work in full physical and mental health.

Specifically, in order to limit the amount of overtime work, Sharp has set upper limits on working long hours and has designated days on which no overtime is allowed. Other measures which Sharp utilizes are established break times during working hours and mandating physician consultation and guidance for employees working long hours.

The total hours actually worked by Sharp Corporation general staff were 1,819 hours per employee in fiscal 2020, and annual overtime work hours per employee were 114 hours.

Measures Related to Work Hours	Description
Upper limits on overtime work	• A general staff member may work overtime (1) for not more than 80 hours per month and (2) for not more than 720 hours per year • A manager may work overtime (1) for less than 100 hours per month to the extent that (2) overtime above 80 hours per month is limited to two consecutive months and that (3) the average overtime per month for the past six months is not more than 80 hours
No overtime days	• Two no overtime days are set per week
Rules to secure rest time	• Seven consecutive workdays are prohibited • At least 10 hours of rest time should be secured between the end of one work period and the start of the next
Encouragement for scheduled annual paid leave	• Employees are encouraged to schedule and take their annual paid leave (In fiscal 2020, general staff at Sharp Corporation took 75.9% of their annual paid leave.)
Criteria for mandatory physician consultation and Guidance	• All employees whose overtime above the weekly limit of 40 hours has exceeded 80 hours in the given month must receive physician consultation and guidance

Protecting Employees from Covid-19

Protecting the health of employees, their families, customers, business partners, and all other stakeholders is the number one priority for Sharp. Towards that end we work with relevant organizations to prevent the spread of infection. Sharp undertakes careful measures developed in line with governmental policy and the conditions at each base in Japan to prevent the spread of Covid-19 while ensuring the continuation of business activities.

■ Primary Measures Taken by Sharp Corporation and Its Affiliates in Japan*

Initiatives	Description
Telework and other initiatives aimed at preventing the spread of infection	Each business unit undertakes measures at its own discretion and based on such considerations as the surrounding traffic infrastructure, the workplace physical environment, employees, job categories, and job duties Examples • Teleworking • Flexible working options (e.g., flextime and staggered work hours to avoid commuting during rush hours; having employees go straight to and return home directly from their business destinations) • Changing commuting modes (changing from public transportation to cars or other modes) • Having employees who may be infected (e.g., have an elevated temperature based on a temperature check before coming to work or who have cold symptoms) stay at home • Having employees with family members suspected or confirmed to be infected stay at home • Workplace entrance temperature checks (and denying entry to anyone with an elevated temperature; the same applies to visitors) • Distributing masks to employees • Requiring employees to wear masks • Enforcing hand washing and disinfection (putting sanitizing solution at building entrances/exits, in bathrooms, hallways, etc.) • Regular disinfection of contact surfaces inside buildings (doorknobs, elevator buttons, etc.) • Enforcing physical distancing and coughing etiquette • Suspending the requirement for in-person meetings and holding online meetings instead, from the standpoint of preventing infection and reducing contact • Spacing out seating and installing partitions in rooms • Installing Plasmacluster ion generators in rooms, meeting areas, etc.
Other infection risk reduction measures	• As a rule, banning overseas and domestic business trips • Suspending in-house and external events, get-togethers, etc. • Staggering cafeteria meal times, installing seating partitions, discouraging talking while eating, etc.
Handling of infections occurring within the Sharp Group	If someone at one of Sharp Group's bases becomes infected, we will work with the appropriate public health authorities and swiftly implement the following. • Confirm where the infected person has been and investigate and identify who they have been in close contact with • Disinfect the areas in the base where the person has been • If the infected person lives in a dormitory or other such communal housing, quarantine him or her from other occupants, etc. Public notification is put up on the company website whenever there is an infection at a Sharp Group base in Japan.

* These are measures implemented in April 2020 to June 2021, and they are changing according to Japan's infection situation and the circumstances of each site.

Governance

Governance: Corporate Governance

Corporate Governance

Fiscal 2020 Objectives	Fiscal 2020 Achievements	Self-Evaluation	Priority Objectives for Fiscal 2021
■ Change to the new system of Chairman & CEO and President & COO, with the Chairman leading overseas business expansion and the President leading business expansion in Japan ■ Step up the comprehensive strength of the company as "One Sharp" by having the chairman and president be responsible for building company-wide strategy and having five senior executive managing officers be responsible for business field and region, thus building distinct systems for business strategy and regional strategy	■ Amidst a harsh business environment created by the prolonged impact of the Covid-19 pandemic, as well as a semiconductor shortage and other associated issues, successful business expansion under "One Sharp" was carried out, achieving an increase in both sales and profits over the previous year ■ Inappropriate accounting by subsidiaries was identified, and Group governance-related issues remain	★	■ Pursue structural development aimed at further improving the functioning of the Board of Directors ■ Strengthen Group governance ■ Ensure comprehensive, ongoing implementation of auditing measures to prevent the reoccurrence of inappropriate accounting-related issues

Self-evaluation: ★★★ Achieved more than targeted / ★★ Achieved as targeted / ★ Achieved to some extent

Basic Policy

Sharp's basic policy on corporate governance is to maximize corporate value through timely and appropriate management while ensuring transparency, objectivity, and soundness supported by the concept, "Our future prosperity is directly linked to the prosperity of our customers, dealers and shareholders…" as stated in the company's Business Philosophy.

Based on this policy, Sharp is strengthening the supervisory function over the Board of Directors and enhancing the flexibility of decision-making by appointing outside director and operating an Audit and Supervisory Committee. Sharp has also introduced an executive officer system that clearly separates supervisory and decision-making functions from business execution functions, thereby creating a structure that steadily facilitates nimble and efficient business execution.

Further, Sharp is implementing deep-rooted enhancements to individual fields of business and operations by establishing a divisionalized management system in which each business unit assumes responsibility for their earnings, to be regulated by the Chairman's Office and the Corporate Strategic Planning and Control Group at the head office.

In addition, Sharp has formulated the Sharp Group Charter of Corporate Behavior as action guidelines for all directors, executives, and employees to raise their awareness of compliance, and it is working for its permeation across the entire Sharp Group.

Corporate Governance System
＜Supervisory and Decision-Making Functions＞

Sharp Corporation Board of Directors meetings are held on a monthly basis in principle to make decisions on matters stipulated by law and on management-related matters of importance, and to supervise the state of business execution. The Board of Directors comprises internal directors who are experts in the fields of business of the Sharp Group and outside directors appointed from talent with high specialism and abundant experience in fields such as social and economic trends and management.

Sharp has established a voluntary Nominating Committee and Compensation Committee as advisory committees to the Board of Directors. The Nominating Committee recommends candidates for directorships to the Board of Directors and the Compensation Committee determines the value of

remuneration and bonus packages for directors undertaking a role on the Board of Directors. Additionally, matters pertaining to dealings between the parent company group and the Sharp Group that are within the purview of the Executive Management Meeting shall, before any decision is made, be subject to study and approval by a special committee with regard to the necessity, reasonableness, and appropriateness of the dealings in question.

Further, as a strategy to enhance corporate governance, more than half of all committee members are outside directors, and each committee chairperson is an outside director. Similarly, Sharp has established an Internal Control Committee to serve as an advisory committee to the Board of Directors. The Internal Control Committee discusses basic policy, consolidation and operation of internal control and internal audits, reports to the Board of Directors, and makes decisions on arising matters.

Governance: Corporate Governance

Corporate Governance

■ Composition of Supervisory and Decision-Making Organs

	All Members (Persons)	Internal Directors (Persons)	Outside Directors (Persons)	Non-directors (Persons)	Chairperson / Committee Chair
Board of Directors	7	3	4	0	Chairperson: Chairman & CEO
Nominating Committee	5	2	3	0	Committee chair: Independent outside director
Compensation Committee	5	2	3	0	Committee chair: Independent outside director
Special Committee	3	0	3	0	Committee chair: Independent outside director
Internal Control Committee	7	2	3	2	Committee chair: Chairman & CEO

■ Directors (except Audit and Supervisory Committee members)/ Directors who are Audit and Supervisory Committee members

	All Members (Persons)	Internal Directors (Persons)	Outside Directors (Persons)	Independent Directors (Persons)	Term
Directors (except Audit and Supervisory Committee members)	4	3	1	1	1 year
Directors who are Audit and Supervisory Committee members	3	0	3	2	2 years

＜Business Execution Functions＞

The Board of Directors' rules stipulate matters on which the Board must decide upon. These matters include Sharp's basic management policy, management plans, other important matters of management, and matters prescribed by laws, regulations, and articles of incorporation. As for decisions on other matters of management and business operations, these are stipulated in in-house rules such as the Internal Authorization Rules, and the most relevant rules are used to make decisions.

For matters that are key to company-wide management and business operations, these are deliberated on at an Executive Management Meeting that comprises Sharp executives. The meeting convenes in a timely manner, which allows rapid management decision-making.

＜Auditing Functions＞

The Audit and Supervisory Committee is composed of three directors, all of whom are outside directors with a high level of expertise. Two of them have specialisms to an appropriate extent in finance or accounting. Further, two members are independent directors and one is a full-time member of the Audit and Supervisory Committee. On the Sharp website can be found the "Standards for Independence of Outside Directors," which stipulates standards for judging the independence of outside directors.

The Audit and Supervisory Committee exchanges opinions periodically with the executive directors, accounting auditors, and the head of the internal audit division, and seeks to attain legality, propriety, and efficiency in business execution. Sharp has also established an Audit and Supervisory Committee Office composed of employees with specialisms in specific fields such as accounting and law, which supports the Audit and Supervisory Committee.

Sharp undergoes audits by its accounting auditor, PricewaterhouseCoopers Arata LLC, in order to ensure the reliability of financial documents and other finance-related information. Through audits, Sharp receives proposals on how to make operational improvements. To preserve the independence of the internal audit division from the business execution divisions, an Internal Audit Division has been established directly under the jurisdiction of the President.

It audits the propriety of business execution and the fairness and efficiency of management. It also makes defined proposals on operational and business improvements as a means of increasing management efficiency and supporting the internal control system.

Management of Related Party Transactions and Others *

Sharp has established the Regulations on Related Party Transactions. Sharp manages these transactions so that they will not adversely affect the company's finances or business performance.

Sharp has also created a list of related parties. When entering into business with the counterparty, Sharp determines whether or not the transaction should be considered a related party transaction. Such transactions undergo all of the internal procedures that are followed for conventional transactions. In addition, Sharp assesses the necessity, reasonability, and appropriateness of the transaction terms and conditions. This allows Sharp to exercise prudence when deciding on business deals. Once a year Sharp verifies the content of transactions specified by outside directors, and the results are reported to the Board of Directors

*Related party transactions and management-involved transactions:
 Related party transactions are transactions with a company or person having a certain level of connection with Sharp, including Sharp's officers, subsidiaries, and major shareholders.
 Management-involved transactions are transactions that Sharp's management personnel have introduced or planned.

Governance: Corporate Governance

Corporate Governance

■ Corporate Governance System of Sharp Corporation (as of June 29, 2021)

Governance: Internal Control

Internal Control

Fiscal 2020 Objectives	Fiscal 2020 Achievements	Self-Evaluation	Priority Objectives for Fiscal 2021
■ Implement comprehensive design and operation of measures based on Basic Policy for Internal Control; complete those measures as initially scheduled ■ Design, improve, and assess internal controls according to key system changes	■ A subsidiary was found to be using inappropriate accounting procedures, and Sharp determined that this constituted a material deficiency that should be disclosed. As a result, three of the measures based on the Basic Policy for Internal Control could not be completed by the end of the fiscal year. ■ Documented and worked on improving issues in each internal control area, carried out internal control assessments, and submitted Internal Control Report in June 2021	★	■ Implement 55 measures based on Basic Policy for Internal Control, including the three unattained measures of FY2020; assess and confirm the effectiveness of internal controls and take corrective action ■ Re-design internal control across the Sharp Group, including the subsidiary found to have used inappropriate accounting procedures; confirm operation of the Sharp Group's internal controls, and complete corrective actions

Self-evaluation: ★★★ Achieved more than targeted / ★★ Achieved as targeted / ★ Achieved to some extent

As one way to ensure that its corporate governance is functioning effectively, Sharp is developing and maintaining its internal control system to ensure the properness of business activities of the entire Sharp Group based on the provisions of Japan's Companies Act and of the Internal Control Report System falling under the Financial Instruments and Exchange Act.

In response to the enforcement of the Companies Act in 2006, the Board of Directors passed a resolution to adopt a basic policy related to the development of the systems for ensuring the properness of business activities (internal control system). Sharp is working to properly design and operate those systems. In accordance with this policy, Sharp also established the Internal Control Committee to serve as an advisory panel to the Board of Directors. The Internal Control Committee discusses various policy measures related to the internal control system, while also affirming their design and operation.

Sharp also thoroughly affirms the design and operation of various measures in line with the Basic Policy for Internal Control, and it makes sure the measures are established across the company. In addition, in response to the Financial Instruments and Exchange Act, Sharp has been assessing the effectiveness of its internal control over financial reporting. It has also taken steps to reduce various business risks and increase the effectiveness of its internal control system.

In fiscal 2020 as well, Sharp implemented various measures to boost the control functions of each internal control area as well as the efficiency of assessments. Sharp also mounted intensive efforts to resolve material issues (problems) discovered in the assessments and it submitted an Internal Control Report in June 2021.

For fiscal 2021, Sharp will continue to respond rapidly and flexibly to accelerated structural reforms (e.g., spinning off and/or adding subsidiaries) including those at affiliated companies in Japan and overseas, document and work on improving issues in each internal control area, and conduct assessments of internal control over financial reporting.

■ **Internal Control System (As of June 2021)**

Governance: Internal Control

Internal Control

Inappropriate Accounting by Subsidiaries

Background

Inappropriate accounting practices, such as recording sales that did not meet sales accounting criteria, were identified at Sharp's consolidated subsidiary, Kantatsu Co., Ltd., and its subsidiaries. In response, in March 2021, Sharp corrected its financial statements by removing these sales from its accounting records, amending loss from inventory revaluation and impairment for fixed assets, and making other necessary adjustments to its consolidated financial statements. Also, as a result of this situation, Sharp concluded that its financial reporting-related internal control for fiscal 2018 and 2019 was ineffective and has made revisions accordingly to its Internal Control Report. It has further been concluded that the company's internal control for fiscal 2020 is also ineffective.

Sharp deeply regrets the inconvenience and uncertainty that this situation has created for its shareholders, investors, and other concerned parties, and it is enacting the following measures to prevent a reoccurrence and to win back trust.

Reoccurrence Prevention Measures

The following improvement measures are being implemented based on the conclusions of the investigation committee's report and the results of causal analysis carried out by Sharp.

- Raise compliance-related awareness, particularly accounting standards-related compliance, and strengthen accounting-related expertise
- Promote more robust checks and balances; ensure thorough procedural compliance; strengthen auditing and monitoring
- Strengthen the systematic management, monitoring, and auditing of subsidiaries by Sharp

Governance: Risk Management

Risk Management

Fiscal 2020 Objectives	Fiscal 2020 Achievements	Self-Evaluation	Priority Objectives for Fiscal 2021
■ At newly established and acquired subsidiaries, build a management system based on risk management-related rules, and establish and firmly convey response rules for the occurrence of a major risk incident	■ Built and firmly put into operation a risk management system at subsidiaries Sharp Display Technology and Sharp NEC Display Solutions	★★	■ Improve and maintain a rule-based risk-management system across the Sharp Group, and ensure response rules for the occurrence of a major risk incident

Self-evaluation: ★★★ Achieved more than targeted / ★★ Achieved as targeted / ★ Achieved to some extent

Management Based on the Rules of Business Risk Management

Sharp believes risk management is essential to fulfilling its corporate social responsibility, which entails meeting the expectations of stakeholders through the sustainable development of business. To this end, Sharp has formulated the Rules of Business Risk Management as a basic approach to risk management. In the Rules, risk items that could have a major impact on management are identified and managed as "specific risks" through the creation of a risk management system. For each specific risk, a functional department responsible for risk management across the entire company and a business unit responsible for risk management in their respective business domains collaborate to minimize risks and to prevent risks from actually occurring.

To be able to respond to changes in the business environment and market, Sharp is constantly working to prevent specific risks from occurring and considering and formulating responses should risks occur, in line with the Rules of Business Risk Management. It does this by periodically making changes and additions to specific risks, assessing them, and changing their order of priority. The results are reported to the Internal Control Committee, which is chaired by the Chairman of the Board.

Response to Occurrence of Major Risks

The Rules of Business Risk Management prescribe rules for emergency response, detailing responses if a major risk incident does come to pass. Taking prompt and appropriate action when an emergency situation occurs works to minimize loss and to prevent the damage from spreading not only across the company, but also to society at large. These emergency rules also specify action items to be implemented to ensure prompt and appropriate information disclosure to stakeholders. In fiscal 2020, at newly established and acquired subsidiaries, Sharp built a management system based on risk management-related rules, and established and firmly conveyed response rules for the occurrence of a major risk incident.

Promoting Business Continuity Management

Sharp's major plants and group companies have formulated BCPs (business continuity plans). This effort is intended to expedite the continuation or early recovery of business in a large-scale disaster, such as an earthquake or an outbreak of an infectious disease. By regularly reviewing BCPs and holding training sessions, Sharp works to maintain and improve the business continuity capacity of the organization.

Basic policies for BCPs shared across the Sharp Group are "First priority to human life," "Proactive program and program for recovery from disasters," and "Support for local community and business connections." Sharp seeks to maintain and improve the business continuity performance of its organization through reviews to account for organizational and business changes and through drills. If, in the event of a major disaster, a significant impact on its business activities is anticipated, Sharp will establish an emergency headquarters at the head office to support and work with Sharp sites in affected areas and to implement an initial response focused on ensuring the safety of employees and their families and a business continuity and recovery response.

In fiscal 2020 as in fiscal 2019, there were natural disasters, including earthquakes, typhoons, and torrential rains. To respond to this situation, Sharp held drills in confirming the safety and whereabouts of employees as part of efforts to thoroughly convey measures to all departments. In response to the global Covid-19 pandemic, the company put in place infection-prevention measures for employees. These measures are based on considerations such as the workplace physical environment, the number of employees in a given team, the job category, and job duties. When an employee was found to have been infected, we took steps to ensure business continuity. We would report the case promptly to the Head Office and work with local health authorities to help track and identify close contacts.

Going forward, Sharp will continue to work towards business continuity management as responses to all forms of disasters and pandemics.

Governance: Compliance

Compliance

Fiscal 2020 Objectives	Fiscal 2020 Achievements	Self-Evaluation	Priority Objectives for Fiscal 2021
■ Continue global compliance enhancement	■ At affiliated companies in Southeast Asia, Oceania, and the Middle East, introduced bribery and corruption risk management processes and updated rules for preventing bribery and corruption	★★	■ Continue global compliance enhancement

Self-evaluation: ★★★ Achieved more than targeted / ★★ Achieved as targeted / ★ Achieved to some extent

System to Promote Compliance

Sharp defines compliance as "observing laws, regulations, and company rules, and acting in line with corporate ethics." Accordingly, Sharp is pursuing management practices that give priority to compliance.

The person most responsible for leading compliance at Sharp is the general manager of the Corporate Strategic Planning and Control Group. This person is in charge of formulating basic policies for compliance and making sure these policies are firmly established within the company. Meanwhile, the person responsible for leading compliance for the entire Sharp Group is the general manager of the Chairman's Office. This person is in charge of devising concrete measures for compliance and thoroughly implementing them. As well as affirming the implementation status of compliance measures, they draw up corrective measures where necessary and makes sure they are thoroughly executed.

Under these two general managers, the general managers of the business units are responsible for compliance within their respective organizations. The business unit general managers are also responsible for guiding and supervising compliance measures at subsidiaries and affiliated companies (hereafter, "affiliates") under their business units.

Promoting compliance at each affiliate is the responsibility of the affiliate president.

Among the laws and regulations that pertain to business execution, some are considered to be critically important and capable of affecting the entire Sharp Group. For each of these material categories of laws and regulations, the company sets up a dedicated legal department. The aim is to achieve thorough compliance with these laws and regulations. Each legal department fully understands the content of the critically important law and studies the effects it could have on the business of the entire Sharp Group and on operations shared by different departments. It then reviews—as needed—business operations and processes, revises company regulations, formulates or revises routine operation standards, communicates these changes, and provides guidance and supervision to executives and employees.

If a compliance-related risk occurs, Sharp will respond appropriately in accordance with the Basic Rules for Compliance and the Rules for Business Risk Management, and take comprehensive corrective measures and prevent recurrence.

Compliance Training

As a means of promoting compliance, the Sharp Group has formulated the Sharp Group Compliance Guidebook, which states defined standards for matters to be observed, matters which are prohibited, and actions to be taken for all executives and employees, and publishes and disseminates this throughout the company.

Sharp also periodically carries out compliance training (including e-learning) on the Sharp Code of Conduct and material categories of laws and regulations (such as competition laws, anticorruption, and personal information protection). Approximately 19,000 employees took part in this training in fiscal 2020.

Governance: Compliance

Consultation Hotline for Compliance Issues

Sharp Corporation and its affiliated companies in Japan have set up the Crystal Hotline, a hotline to provide counseling services for problems in the workplace, such as compliance issues. The company has also set up a competition law hotline, which serves as a contact point specifically for issues related to competition laws. These hotlines have been set up both inside the company and externally (via an outside law firm providing legal counsel). In line with the spirit of Japan's Whistleblower Protection Act, they are available via e-mail, phone, and other means for employees and temporary staff, as well as employees of business partners*, to make reports or request consultation. The hotlines also accept anonymous reports and consultations. Sharp also has a consultation service dedicated to addressing workplace harassment (which includes sexual harassment, pregnancy discrimination, and abuse of authority). Besides operating under strict rules, the hotlines and consultation service have measures that are put into effect if anything that is reported turns out to be illegal. If the people who made the reports or requested the consultation have provided a means of contacting them, they are informed of the results.

In fiscal 2020, the Crystal Hotline received 54 reports and consultation requests. For each of these, Sharp investigated the facts of the matter, issued orders for any necessary corrective measures, and took disciplinary action against those involved (including reprimands for compliance violations). Meanwhile, the competition law hotline received no reports or requests for consultations in fiscal 2020.

The hotlines are operated in line with the clear stipulation of both the Sharp Code of Conduct and the rules governing hotline service operation that the privacy of individuals contacting the hotlines will be strictly protected and that those persons will suffer no unfavorable treatment or penalties. Six months after any corrective action is taken, we check that the whistleblower contacting the Crystal Hotline has not been disadvantaged.

Similar reporting and consultation services have been set up at Sharp's major overseas bases, with consideration for the legal system and other matters in each country. Action is taken to swiftly address any problems. In fiscal 2020, there were 79 reports and consultation requests.

* Only the compliance hotline is available for use by employees of business partners.

Compliance with Competition Laws

In order to comply with Japan's Act on Prohibition of Private Monopolization and Maintenance of Fair Trade, as well as with equivalent overseas laws and treaties enacted to protect the interests of consumers by maintaining and promoting free and fair markets (hereafter, "competition laws"), Sharp has put in place rules across the entire Sharp Group on observing competition laws. It has also created an Antimonopoly Act Compliance Manual (Action Guidelines). These guidelines stipulate basic compliance matters that employees must adhere to in their duties with regard to cartels. To raise awareness amongst employees, Sharp has prepared a guidebook summarizing the key points of competition laws for each field of business, and it carries out periodic internal training via e-learning. Sharp also raises awareness internally of case studies relating to competition laws from within Japan and internationally as well as information on major revisions to the laws. Sharp prevents actualization of competition law-related risks in transactions with business partners by reviewing all contracts and consulting with its legal department when approving new contracts. Sharp's legal department monitors the status of compliance with competition laws by confirming the circumstances of matters such as transactions and contacts with competitors in each field based on the reports from the business departments to the legal department. This enables Sharp to more effectively prevent the actualization of competition law risks (such as cartel activities or bid-rigging). Such efforts maintain the effectiveness of Sharp's compliance program.

No violations were reported in fiscal 2020.

Governance: Compliance

Preventing Corruption in All Forms and Dealing Properly with Donations

The Sharp Group Charter of Corporate Behavior and the Sharp Code of Conduct contain provisions that strictly prohibit any form of corrupt behavior, such as extortion or direct or indirect bribes of money, goods, or services. The Group Charter and Code of Conduct also stipulate that donations must be handled in a proper manner.

Systems and Rules for Preventing Bribery

In March 2015, Sharp instituted the Rules for Prohibition of Bribery (hereinafter "the Rules"), which govern both executives and employees, with a view to preventing corrupt practices such as bribery. Under the Rules, Sharp is working to clarify and strengthen an internal checking system and prevent any act of bribery. Particular attention is paid to the employment of third parties such as agents and consultants, providing or exchanging gifts or entertainment to government employees, and participation in associations, with defined issues for relevant departments to confirm. Sharp sets up a consulting department for providing internal approval for each issue above. In order to further augment this checking system and clarify the targets for checking, a partial revision of the relevant rules was undertaken in August 2018.
The Rules define "facilitation payments" and clearly state that they are considered a form of bribery and are prohibited in principle.

Global Response

In order to ascertain the risk of bribery and corruption among overseas affiliates and institute a more effective checking system, in fiscal 2020 Sharp analyzed risk at affiliates in Southeast Asia, Oceania, and the Middle East. Based on this analysis, the company proceeded to update its internal rules of anti-bribery and incorporate bribery risk management processes utilized at Sharp in Japan into operations at overseas affiliates.

Raising Awareness within the Sharp Group

To raise awareness among employees in Japan and overseas, Sharp has created and published an in-house guidebook and training materials to ensure compliance with Japan's Unfair Competition Prevention Act and other relevant laws. And with the US taking a more proactive stance on punishing foreign companies in recent years, Sharp has also invited US attorneys to come and conduct a training session on the US Foreign Corrupt Practices Act (FCPA), which included how it affects the entire Sharp Group.
Sharp's intranet for affiliates in Japan and its global intranet for overseas affiliates periodically feature articles on bribery in Japanese, English, and Chinese. These articles present bribery-related cases and analyze and explain related issues. The aim is to deepen understanding and raise awareness of bribery among employees of affiliates in Japan and overseas.
No violations were reported in fiscal 2020.

Dealing Properly with Donations

In Japan, Sharp prevents illegal payoffs and improper expenditures through a system of compulsory reviews that check legality, reasonableness, and transparency. In place since December 2008, this system serves to assess the propriety of monetary disbursements such as donations and contributions made by Sharp Corporation and its affiliated companies. In fiscal 2020, 11 cases of contributions were reviewed.
The Sharp Code of Conduct states, "Regarding political donations, we will observe all applicable laws and regulations and we will ensure transparency and proceed in strict conformance with internal company rules when making such donations in line with the company policy to build a healthy and responsible relationship with politics and government." Based on this policy, any political donations abide by relevant laws and follow the necessary internal procedures.

Governance: Compliance

Management of Personal Information

Domestic Response

In order to thoroughly ensure that personal information is appropriately managed and to prevent incidents of data leakage, Sharp Corporation provides e-learning training once a year to all employees in Japan about the protection of personal information. In addition, training seminars are conducted for employees who handle personal information as part of their job duties.

Learning about protecting personal information

To ensure the effectiveness of Sharp's efforts to protect personal information, processes that require approval from the department specialized in personal information protection are incorporated into Sharp's internal approval system regarding the handling of personal information. This contributes to consistently appropriate management of personal information obtainment, sub-processing, and provision to third parties by relevant departments. Also, following approval, the handling status—e.g., obtainment, storage, management, usage, deletion—of each customer's personal information is to be recorded in Sharp's own management database and updated as needed so that it can be checked and reviewed on an ongoing basis.

Appropriate handling of personal information is further ensured through the management of database audits of all departments that obtain customers' personal information, checking the handling status against what is recorded in the management database. Moreover, on-site audits are also performed for specific departments that must follow even more stringent handling requirements.

Global Response

The General Data Protection Regulation (GDPR) in the EU was enacted to protect personal data. Governments around the world have been increasingly enforcing measures and formulating new laws based on the GDPR. With data protection taking on growing importance, the Sharp Group has been periodically conducting fact-finding surveys and risk analysis on the various areas related to the acquisition and processing of personal data in the EU. Based on its findings, it has been taking measures that include providing appropriate privacy notices, signing agreements, and putting in place internal rules required for proper handling of personal data. In addition, Sharp is raising awareness among employees through online education on global personal information protection.

Sharp is also continuously gathering and analyzing information on data protection laws around the world—the California Consumer Privacy Act (CCPA), for example—as part of global efforts to formulate and implement measures to comply with laws on the handling of personal information.

Exclusion of Antisocial Forces

Fundamental Stance on the Exclusion of Antisocial Forces

As a matter of basic policy, Sharp prevents or excludes any association with antisocial forces without exception, and deals with them in a resolute manner. It has established specific guidelines in the Sharp Group Charter of Corporate Behavior under the section entitled "Practice of Fair and Open Management," as well as clearly stipulated in the Sharp Code of Conduct that Sharp shall seek to exclude antisocial forces by being "cooperative in the maintenance of social order, and will not engage in antisocial activity."

Activities Aimed at Excluding Antisocial Forces

Sharp Corporation has established Rules for Excluding Antisocial Forces, which serve as the basis for Sharp's effort to prevent antisocial transactions, as well as Sharp's preparation and updating, as needed, of such resources as manuals for dealing with antisocial forces.

In order to facilitate its handling of antisocial forces, Sharp maintains a system of prompt communication and cooperation with the police, legal advisors, and other external experts, from whom it regularly obtains information, which is then thoroughly disseminated and managed amongst the Sharp Group. Sharp also works to raise employee awareness by conducting once-a-year compliance training, which includes how to deal with antisocial forces.

In addition, Sharp Corporation and its affiliated companies in Japan take other steps to exclude antisocial forces, such as including a stipulation of antisocial forces exclusion in all basic agreements for ongoing transactions and concluding memorandums containing the equivalent stipulation with existing suppliers.

Governance: Compliance

Appropriate Advertising and Promotion, Representation-Related Law Compliance

Under its business creed of "Sincerity and Creativity," Sharp strives to reliably fulfill its corporate social responsibilities to customers and all stakeholders in the provision of correct information useful for selecting products and services. To this end, Sharp prioritizes appropriate advertising and promotion activities. It also complies with product and service representation-related laws, such as the Act against Unjustifiable Premiums and Misleading Representations, Pharmaceutical and Medical Device Act[1], and Fair Competition Code. Sharp positions compliance with these laws as a control item within its Rules of Business Risk Management[2], and implements various measures to promote compliance.

Systems and Rules for Preventing Legal Violations

With regard to product and service representation within Japan, Sharp follows internal rules, which stipulate the basic approach to representation and a practical system for checking appropriate representations.

(1) A dedicated supervisor is appointed to work with departments involved in the production of representations and to perform a final check prior to the publication of brochures and mass advertising

(2) A senior committee is established to make decisions about any questionable representations (Representation Review Committee, Sharp Fair Representation Council)

(3) Operations are carried out in line with the Manufacturing Labeling Standards[3]

(4) Public external organizations[4] are consulted for objective guidance and advice on representation-related problems and other matters

Fostering Awareness via Upskilling Support for Relevant Personnel

Regular in-house training related to the Premiums and Representations Act, Pharmaceutical and Medical Device Act, and Fair Competition Code is provided to departments involved in the production of representations. Additionally, Sharp actively participates in outside seminars led by public institutions and then uses in-house training to provide feedback on the most recent trends.

Further, Sharp uses the "Fair Representation" page on its intranet to ensure the thorough dissemination of in-house standards and rules for performing checks, which are based on in-house specifications and manuals. The intranet page also provides information, such as the latest trends connected with the Premiums and Representations Act.

In fiscal 2020, there were no violations of the Premiums and Representations Act or the Pharmaceutical and Medical Device Act by the Sharp Group

Ensuring Representations Keep Up with Social Changes

Sharp strives to create appropriate representations that keep up with current events and laws.

In fiscal 2020 against the backdrop of the Covid-19 pandemic, Sharp focused on strictly abiding by the Pharmaceutical and Medical Device Act by strengthening training for departments in the health-related business. The training included explanations of relevant rules and case studies of actions taken by government agencies. Sharp also distributed company-wide reminders and enhanced checking and consultation regarding the labeling of antibacterial and antiviral-related products.
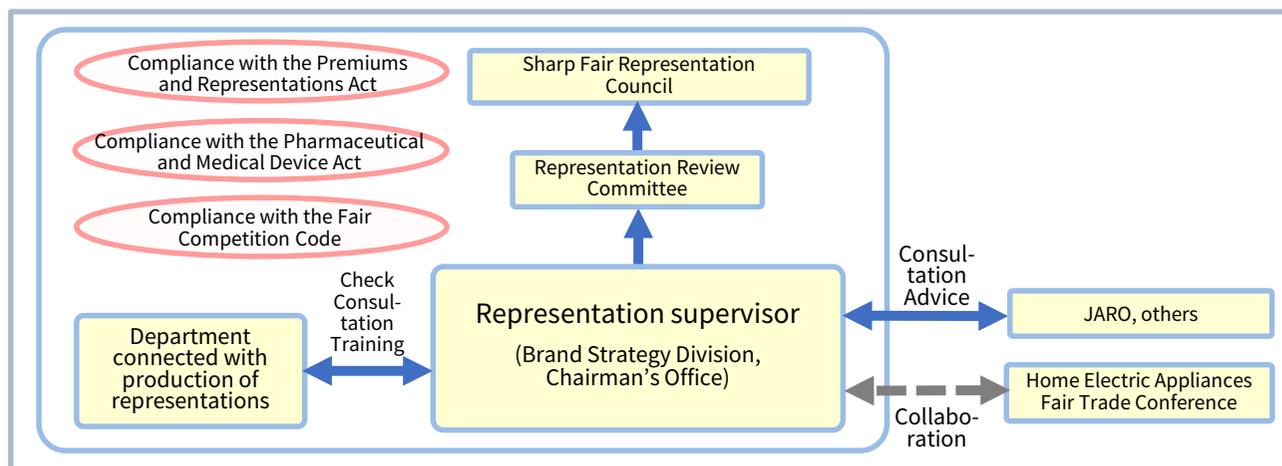
[1] Act on Securing Quality, Efficacy, and Safety of Products Including Pharmaceuticals and Medical Devices
[2] See page 125.
[3] Voluntary industry standards for product representation formulated by the Home Electric Appliances Fair Trade Conference and recognized by the Consumer Affairs Agency and Japan Fair Trade Commission
[4] Home Electric Appliances Fair Trade Conference, Japan Advertising Review Organization (JARO), others

■ **Representation Review Framework**

Governance: Compliance

Tax Management Initiatives

Tax Policy and Governance System

Sharp demonstrates sincerity and creativity in its pursuit of sound business activities, in the process fulfilling its responsibilities as a member of society. A basic policy of the Sharp Group Charter of Corporate Behavior and Sharp Code of Conduct is the "Practice of fair and open management" in all corporate activities and operations, conforming to the laws and regulations of each country and region, international rules and company rules, as well as social norms and corporate ethics. Based on this basic policy, Sharp works to maintain and improve its compliance with tax laws and other tax-related regulations through proper payment of taxes and employee education.

In line with its basic tax policy, and with the support of the Finance and Administration Office in the Head Office, which oversees the tax obligations for the Sharp Group as a whole, Sharp has a responsibility to understand and comply with the relevant tax laws and regulations of each country. The Accounting Department in the Finance and Administration Office handles tax-related duties and endeavors to reduce tax-related risk, obtaining advice from tax specialists when necessary.

Proper Payment of Taxes

Legal and regulatory compliance is Sharp's top priority. It endeavors to maximize corporate value through the use of tax incentives and other mechanisms established in each country and region, in line with the legislative intent behind said mechanisms, across the entire scope of its normal business activities. It is our policy to not employ mechanisms that excessively reduce the amount of tax we pay in each country by taking advantage of the differences in tax systems between countries.

Compliance with Transfer Pricing Rules

Regarding transactions with parties related to Sharp, appropriate pricing is established based on the arm's-length principle, in line with OECD transfer pricing guidelines and in accordance with each company's functions and risks. Sharp also draws up transfer pricing documentation based on the laws and regulations of each country. Also, for important transactions, Sharp takes steps to reduce tax-related uncertainty, such as actively working with tax authorities to make use of advance pricing arrangements.

Relationship with Tax Authorities

In order to maintain good relations with tax authorities, Sharp endeavors to be diligent and responsive to the requests of tax authorities in each country, such as by providing them with information in an appropriate and timely manner. Whenever tax authorities raise questions about Sharp's filing and payment of taxes, Sharp examines the validity of their claims and, if it has an objection, may opt to formally file a petition against the tax authority with regard to the matter. However, if any corrective action is required, such action will be promptly implemented.
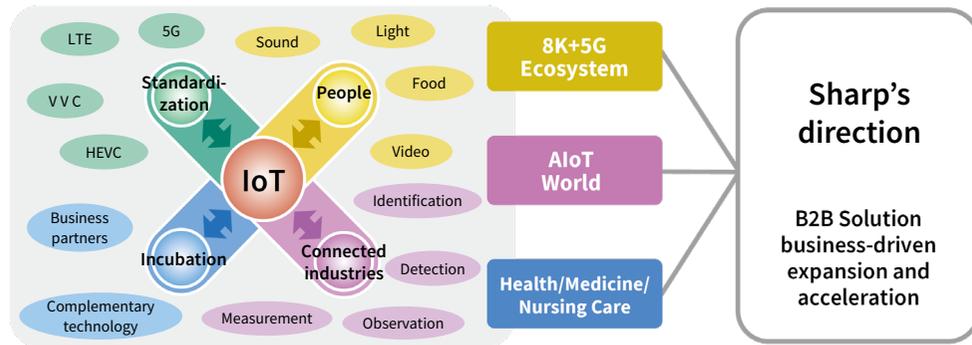
Governance: Innovation Management

Corporate R&D Initiative

R&D Initiative and the Development System

As "One Sharp" business innovation focused on "Changing the World with 8K+5G and AIoT*" continues, the Corporate Research and Development Business Unit is pursuing a mission to develop pioneering, groundbreaking, proprietary technology that creates new ecosystems and new and expanded businesses contributing to the realization of a sustainable society. We are particularly focused on integrating IoT with people, standardization, incubation, and connected industries in order to develop new technologies that will help address the challenges facing society and serve as a seed for future new business. In addition to the 8K + 5G Ecosystem and AIoT World, Sharp is accelerating the creation of new business, particularly in the fields of health, medicine, and nursing care, with a focus on B2B and solution business expansion for the sake of pioneering new applications and facilitating Sharp's entry into other industries.

*AIoT is a word coined by Sharp, combining the words AI (artificial intelligence) and IoT (Internet of things). AIoT is a vision of how products and services will connect to artificial intelligence via the cloud and become a people-oriented existence. AIoT is a registered trademark of Sharp.

■ **Priority Initiatives**

Notable Initiatives

In the area of 8K+ 5G Ecosystem solutions development, Sharp is creating new platforms built from the knowledge and experience it has gained through various initiatives, including using drones to improve the efficiency of infrastructure inspection carried out by local governments; developing practical applications for 8K broadcasting utilizing 5G technology, such as obtaining situational assessments during disasters when manpower is limited; and carrying out research studies and verification testing of different applications intended to facilitate digital transformation of local government operations. In addition, Sharp has obtained more than 6,000 essential patents in over 50 countries relating to telecommunication standards, which include 5G, and it is developing business built around the licensing of these patents.

With the aim of building an AIoT World, Sharp is working on contactless vital sensing solutions capable of measuring a full range of vital indicators, including heart rate, blood pressure, respiratory rate, and surface temperature, without the need for touching the subject, thereby lowering the various risks associated with human contact. Sharp is also developing new logistics-related business via proprietary technological applications in the area of optimal temperature storage media, having already brought to market cold-retention materials enabling novel delivery systems capable of keeping fruits and vegetables at an optimal chill point of 12℃ and vaccines, pharmaceuticals, blood, biological samples, and cell cultures at an optimal chill point of 3℃.

In addition, as part of its growing business focused on supporting startups through open incubation, which was begun in 2016, Sharp has launched Product Quality.net to provide contracting services for everything from quality and reliability testing and analysis to improvement consulting, relying on an in-house and external network of resources. This will both strengthen the level of business development support that Sharp provides to startups, as well as accelerate collaboration between companies that will spur technological innovation.

Governance: Innovation Management

Intellectual Property Protection

Intellectual Property Strategy and Management System

Sharp regards its intellectual property strategy as one of its critically important management strategies, and it is promoting it together with its business strategy and R&D strategy. By aggressively obtaining patents, Sharp is boosting the superiority of its product and device businesses and strengthening its business foundation. The company's intellectual property department was spun off into ScienBiziP Japan Co., Ltd. (SBPJ) in 2016, with a view to making it a profit center of Sharp. Because SBPJ is well versed in Sharp's products, technologies, and businesses, it can offer a high level of specialized service and improved efficiency. SBPJ gives Sharp more driving force in its intellectual property management, generating strong patents and economic value from Sharp's state-of-the-art technologies.

Regarding patent applications, Sharp defines core technology areas with respect to each business and strategically files patent applications that are tightly coupled with its business development. Sharp is also acquiring useful patents invented in cooperation with other companies or derived from the activities of alliances, such as industry-university cooperation. In addition, Sharp is filing applications and registering rights for designs and trademarks globally under its brand strategy.

Protecting Intellectual Property

Sharp maximizes the use of its intellectual property by linking it to its business strategy and R&D strategy. It is also firmly committed to protecting its own intellectual property rights, while also respecting the intellectual property rights of others. While Sharp takes an amicable approach to resolving issues of infringement, it is the company's policy to seek the judgment of a third party, such as the courts, when its intellectual property rights are not respected.

Sharp is also working to bolster protection for trade secrets and to prevent unauthorized disclosure of production technologies and manufacturing know-how, particularly those that are unique or critically important to Sharp. Further, counterfeit Sharp-brand products have had a growing impact in overseas markets in recent years, and Sharp is taking measures to counter these imitations through cooperation with industry groups and with regulatory authorities taking enforcement actions.

Governance: Information Security

Information Security

Fiscal 2020 Objectives	Fiscal 2020 Achievements	Self-Evaluation	Priority Objectives for Fiscal 2021
■ Pass the certification renewal screening for ISO 27001 ■ After holding training for employees aimed at dealing with Emotet* malware emails, hold individual preventative training for employees who had inadvertently opened the malicious emails sent during training	■ Maintained ISO 27001 certification (renewed July 22, 2020) ■ After holding training for employees aimed at dealing with Emotet* malware emails, held individual preventative training for employees who had inadvertently opened the malicious emails sent during training	★★	■ Pass the recertification for ISO 27001 ■ After holding training for employees aimed at dealing with new types of malware email, hold individual preventative training for employees who had inadvertently opened the malicious emails sent during training. Also, progressively expand training to overseas bases as well

Self-evaluation: ★★★ Achieved more than targeted / ★★ Achieved as targeted / ★ Achieved to some extent

Sharp is working to ensure information security by setting forth a Global Basic Policy on Information Security for the safe and appropriate management and use of information and information systems.

As part of its efforts to enhance information security, Sharp also acquired ISO 27001 (IS 635826) certification on June 30, 2015 and has secured an appropriate information security management system.

■ **Summary of Certification Activities**

Organization	Sharp Corporation
Scope of Certification	• Planning, management and operation of call center service • Taking care of use's complaints • Administration and operation of a web site to sell digital books • Administration and operation of an affiliated web site • Customer satisfaction on service in photovoltaic generation system an energy related businesses • Implementation of in-company information management
Certification Number	IS635826
Certification Body	BSI Group Japan K.K.
Initial Certification Date	June 30, 2015

Related Information: > <u>Global Basic Policy on Information Security</u>

Information Security Measures

In Japan, online sessions on information security are provided annually to all employees.

Also, since 2019, Sharp has worked to keep employees aware and informed by promptly sharing information company-wide about the characteristics, as well as actual examples, of targeted email attacks that have caused data security breaches to companies and organizations outside Sharp. Sharp also developed and introduced its own training system to tackle these targeted email attacks and held training four times for all employees in fiscal 2020 .

Training emails mimicking the Emotet* malware emails, which have wrought havoc globally were sent out, and any employees who opened the file attachment or accessed the link in the training emails were provided with educational content to help them become more knowledgeable and vigilant.

Sharp will continue to stay abreast of the increasingly sophisticated attack methods being utilized and will continue to adapt its training to mimic the latest attack patterns, as well as progressively expand this training outside Japan to Sharp's overseas bases in order to ensure a more robust and global preparedness.

Sharp is also continuing with strengthening measures, such as a vulnerability assessment of publicly accessible websites. It is also addressing the issue of information leaks caused by targeted cyber-attacks as well as the accessing of illicit websites. The company is putting in place hacking countermeasures and using log analysis for early detection of fraudulent actions. In addition, to verify company-wide information security measures, Sharp implements information security self-checks, and seeks to maintain and improve its level of information security.

*A sophisticated, targeted email attack that uses content from actual emails sent and received by recipients in order to fool them.

Governance: Export and Import Control

Export and Import Control

Security Export Control

Missiles and nuclear threats, terrorist attacks in various regions, and other such unexpected contingencies have necessitated the implementation of even stricter export controls. Sharp was one of the first companies in Japan to consistently engage in export control, an approach which dates back to the Cold War, when COCOM regulations were in effect.

With today's advances in technology, the line between civilian and military technologies is becoming blurred. There have been a number of cases of civilian technologies being applied in a military context. Manufacturers must therefore be extremely cautious when exporting products and components and transferring technologies—even if they are explicitly intended only for civilian use. As rival countries vie for technological supremacy, technology transfers must be managed with the utmost strictness.

In line with the Japanese Foreign Exchange and Foreign Trade Act (Foreign Exchange Act), each Sharp Group company, including domestic and overseas subsidiaries, has a system in place for secure export control based on the Sharp Code of Conduct and Sharp Compliance Program on Export Control.

Through this system, Sharp strictly monitors goods and technologies that fall under local export control regulations, while rigorously screening the destination and the end use of Sharp products and technologies. Sharp strives for legal compliance by responding rapidly to revisions whenever laws are revised due to changes in international circumstances. In addition, Sharp strictly complies with rules on the re-export of products from the US, a country that demands stringent control of cargo exports and technology transfers for reasons of security and human rights. Sharp responds promptly to rapidly changing regulatory content.

The key to Sharp's stringent export control is education. Sharp has various education programs that foster awareness of export control for all employees.

Sharp will maintain and further improve these systems to secure comprehensive export control.

Trade Control

Exporting and importing require proper control in compliance with the Customs Act and the Customs Tariff Act of Japan. In particular, there is a strong need for appropriate logistics control regarding the safety of goods for export and import. This is to prevent illegal cross-border trade in weapons by international terrorist groups and to ensure border control of illegal drugs, a major social issue.

Regarding export and import, Sharp is licensed as an AEO (authorized economic operator) exporter* and importer*. It strives for appropriate export/import by strictly observing laws and regulations in the control of distribution, security, customs clearance, customs duties payments, and other procedures in the export and import of goods. This provides the advantage of reducing the time required for customs procedures and contributes to ensuring the safety of the global supply chain. When it comes to export/import items other than AEO exports and AEO imports—for example, international courier/mail or hand luggage carried by business trip travelers and visitors— Sharp has in place a system to ensure compliance with relevant export/import laws and regulations. As well as strengthening its internal control organization, Sharp reviews and updates current internal operational rules, makes a database of export/import records, and conducts thorough training.

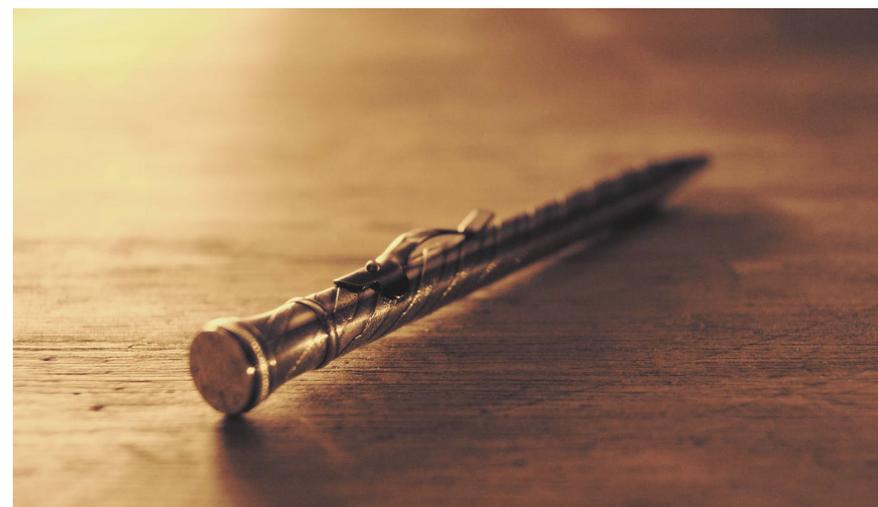Sharp will continue to conduct appropriate export/import control.

* An exporter or importer recognized by the Japan Customs as having a system for security control and compliance in place.

Company Information：Outline of Sharp Group / Main Data

Outline of Sharp Group

Sharp's business activities comprise "electric and electronic application equipment" (i.e., end-user consumer products and information electronics) and "Electronic Components" (i.e., key components of electronic products).By undertaking the development both of key devices based on proprietary technologies and of products in which these devices and technologies are applied, Sharp aims to inspire and impress its customers. The company is working actively to develop its business by pioneering new markets and by bringing forth never-before-seen, uniquely featured products and devices.

◇ Corporate Name   : Sharp Corporation

◇ Head Office   : 1 Takumi-cho, Sakai-ku, Sakai City, Osaka 590-8522, Japan Tel. +81-72-282-1221

◇ Representative   : Jeng-Wu Tai, Chairman & CEO
 Katsuaki Nomura, President & COO

◇ Operations   : Mainly manufacturing and sales of telecommunications equipment, electric and electronic application equipment, and electronic components.

◇ Founding   : September 15, 1912

◇ Origin of Company Name   : Mr. Hayakawa continued to research and improve the techniques for making metal writing instruments, and in 1915, he invented a mechanical pencil that, after further improvements, would take the world by storm. In 1916, Mr. Hayakawa's mechanical pencil was named the "Ever-Ready Sharp Pencil." The present name of the company and its trademark are derived from that product.

◇ Incorporation   : In May 1935, the structure of the company was modified to become a joint-stock corporation under the name Hayakawa Metal Works Institute Co. (capitalization: 300,000 yen.)
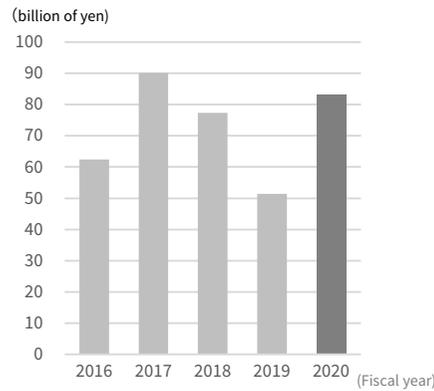
◇ Capital Stock   : 5 billion yen (as of June 30, 2021)

◇ Sales   : 2,425,910 million yen (consolidated)
 1,179,143 million yen (unconsolidated)
 (Fiscal 2020 Financial Results)

◇ Employees   : Consolidated: 49,965 (as of June 30, 2021)
・Japan : 18,756
 (Sharp Corporation 5,906/ other Consolidated 12,850）
・Overseas: 31,209 (Consolidated)

Company Information：Outline of Sharp Group / Main Data

Main Data

Net Sales
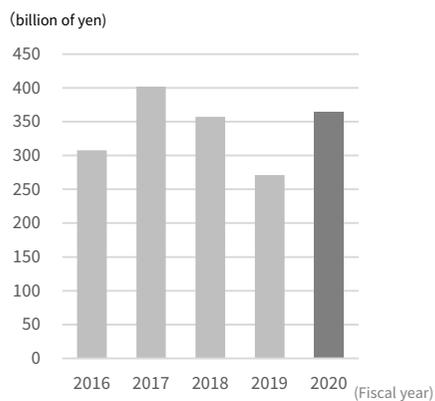(billion of yen)

Operating Profit
(billion of yen)

Profit Attributable Owners of Parent (Loss)
(billion of yen)

Net Assets
(billion of yen)

Capital Investment
(billion of yen)

R & D Expenditures
(billion of yen)

Sales by Segment （Fiscal 2020）

ICT 14%
Smart Life 35%
8K Ecosystem 51%

Sales by Region （Fiscal 2020）

Other 10%
Japan 35%
The Americas 6%
Europe 7%
China 42%

Related Information: > Financial Data

Company Information：Main Products and Services

Main Products and Services (Bland Businesses)

Smart Life

AIoT-compatible smart appliances

Industrial Solar Power System

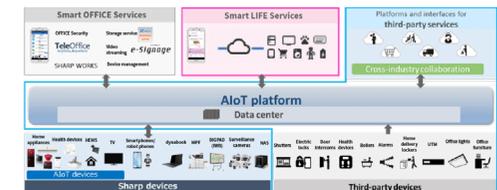### 8K Ecosystem

8K LCD TV

Digital full-color MFP

COCORO +

ICT

5G smartphone

dynabook

AIoT platform

SHARP Sustainability Report 2021

Company Information：Main Products and Services

Main Products and Services (Device Businesses)

Display Devices

Outdoor signage (smart bus stop)

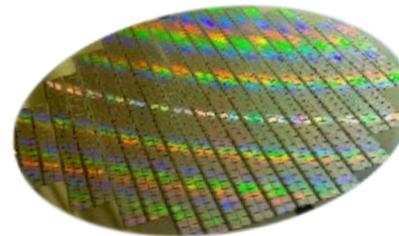

Transparent Display Partition
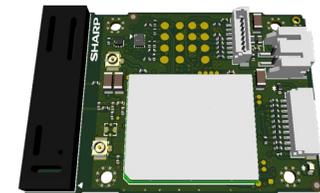

Free Form Display

Electronic Devices

Smartphone with multiple camera modules

CMOS image sensor

Semiconductor integrated circuit

IoT module

SHARP

Be Original.