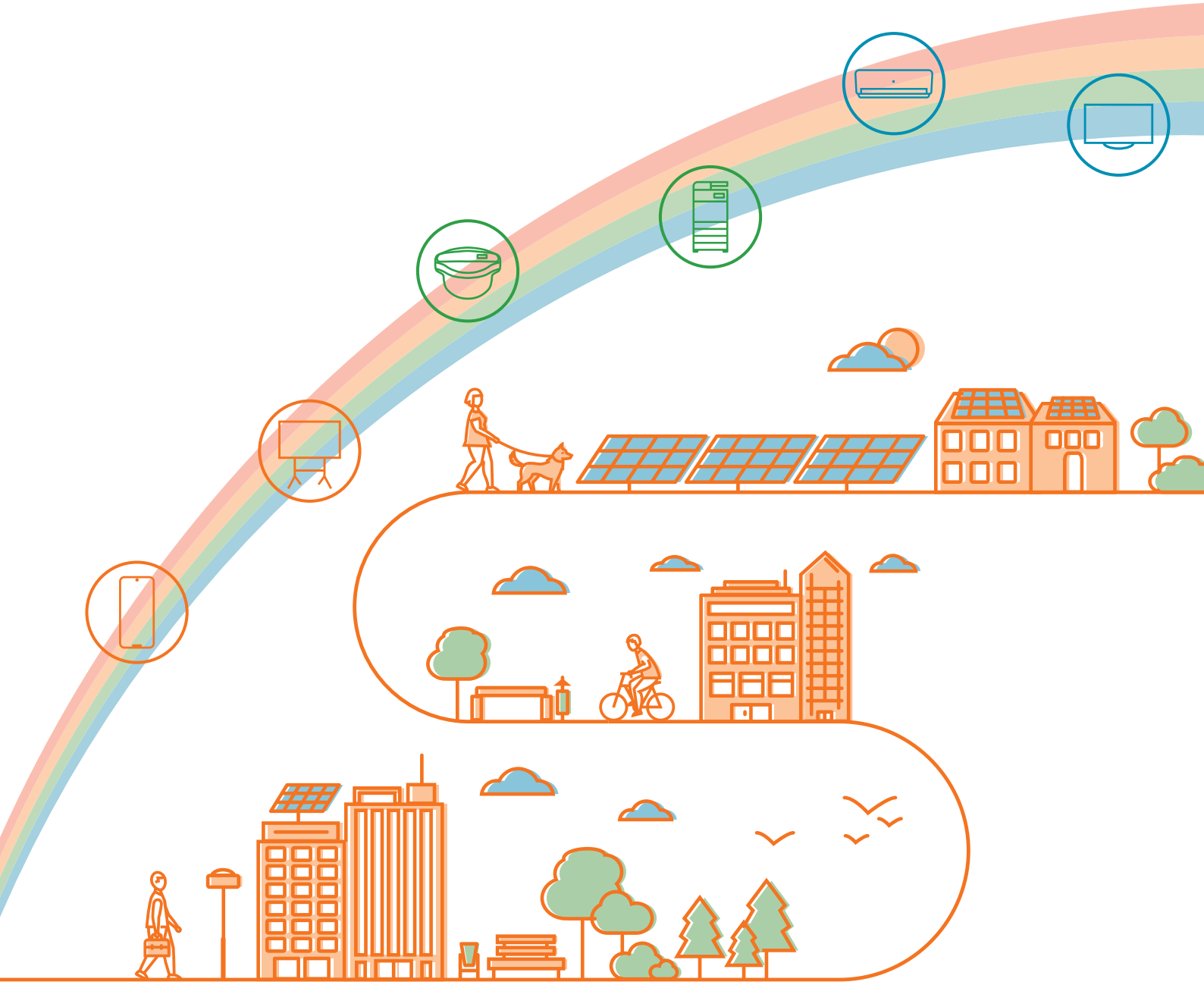
2020

SUSTAINABILITY REPORT



Changing the World with 8K+5G and AIoT

SHARP

Be Original.

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Editorial Policy / Disclosure System

◇Policy for Information Disclosure:

The Sharp Sustainability Report 2020 discloses information on Sharp's corporate social responsibility (CSR) efforts, which contribute to creating a sustainable society.

＜Non- Financial Information (ESG Information)＞

CSR / Environment

Sustainability Report
(This report)

- Sustainability Report
- Green Procurement
- CSR Procurement
- For Suppliers
- Environmental Information

etc.

ESG Information (Excerpt)

＜Financial / Non-Financial Information>

Investor Relations

- Annual Report (Integrated Report)
- Consolidated Financial Results
- Fact Book
- Corporate Governance

etc.

Annual Report
(Integrated Report)

> CSR / Environment

> investor Relations

◇Period Covered:

Fiscal 2019 (April 2019 to March 2020)

However, some actual facts prior to and after this period, as well as subsequent policies, Objectives, and plans, are also included.

◇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 Data for Next Report:

September 2021 (published annually since 1999)

◇Inquiries:

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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

Message from the Chairman and President

Ongoing Contribution to the Safety and Security of the International Community with Our Dedication and Technology

Jeng-Wu Tai
Chairman & Chief
Executive Officer

Katsuaki Nomura
President & Chief
Operating Officer

On September 15, 2020, Sharp celebrated its 108th anniversary. I would like to thank all of our stakeholders for making this possible through their heartfelt support.
Since early 2020, we have been facing changes more drastic than anything we have experienced, as the novel coronavirus pandemic threatens people's health and the economy on a global scale.

Amid this situation, we intend to return to our founding spirit expressed in our business philosophy, "we are dedicated to the use of our unique, innovative technology to contribute to the culture, benefits and welfare of people throughout the world." Based on this mindset, Sharp will contribute through its business activities to the early establishment of the "new normal," a new lifestyle in the "with coronavirus" and "post-coronavirus" worlds that allows people to live fulfilling lives with ensured safety and security.

Specifically, under our business vision of "Changing the world with 8K+5G and AIoT*1," we are working to create innovative services and solutions centered on 8K, 5G, AI, IoT, robotics, and other cutting-edge technologies while collaborating with various companies. As we focus efforts in these areas, we will take the initiative in building social infrastructure for the new era by rapidly rolling out proposals responding to the soaring needs in society amid the Covid-19 pandemic, such as demand from staying at home, teleworking, and digitized education and healthcare.

In response to a request by the Japanese government, Sharp decided to contribute to society's fight against Covid-19 by producing face masks, and in just one month, late March 2020, we launched production using clean rooms at our Mie Plant (Taki, Mie Prefecture). We were widely lauded for this venture into a new field and our rapid response, and Sharp-made masks have been highly popular with many people.
Although we garnered significant attention for our new business of producing and selling face masks, we have in fact been contributing to people's healthy lifestyles for many years. Examples are Sharp air purifiers equipped with our proprietary Plasmacluster ion technology, which has been proven in experiments by third-party test institutes around the world to be effective in controlling viruses and eliminating mold; and the Healsio Superheated Steam Oven and other Sharp healthy cooking appliances. Besides stepping up efforts like these, we plan to expand into fields such as medicine and nursing care and at the earliest possible dates release a series of uniquely Sharp solutions that help people live in comfort and abundance.

*1 AIoT is a word coined by Sharp, combining the words AI (artificial intelligence) and IoT (Internet of things). "AIoT" is registered trademark of Sharp Corporation.

Message from the Chairman and President

In addition to these efforts, Sharp contributes to the achievement of the Sustainable Development Goals (SDGs) through its business activities. It also seeks to realize SHARP Eco Vision 2050, a long-term environmental vision under which we have set goals in the fields of climate change, resource recycling, and safety and security. We are pursuing these goals by striving to create more clean energy than all the energy consumed in our supply chain and minimizing the environmental impact of our business activities.
As a signatory to the United Nations Global Compact,*2 we support the 10 Principles in the areas of human rights, labor, the environment, and anti-corruption, as well as help in addressing such global challenges as protection of human rights and responsible procurement of minerals.

Sharp reviewed its management structure and has moved to one led by the CEO and the COO after obtaining approval at the ordinary general meeting of shareholders in June 2020. Under the new business promotion system, we will make a concerted effort to build an 8K+5G Ecosystem and an AIoT World at the earliest possible date and to achieve sustainable growth. And our contribution to the further development of the international community will continue.

*2 Signed in June 2009

September 2020

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.

Business Vision "Changing the World with 8K+5G and AIoT*"

Sharp's vision is to change the world with 8K+5G and AIoT. We aim to build an 8K+5G Ecosystem and AIoT World to produce new value that only we can by working with various business partners and leveraging our unique innovative technologies in 8K, 5G, AI, IoT, and robotics. We will achieve innovation in the fields of smart homes, smart offices, entertainment, education, health, security, industry, and automobiles and attain sustained growth.

* AIoT is a word coined by Sharp, combining the words AI (artificial intelligence) and IoT (Internet of things).
"AIoT" is registered trademark of Sharp Corporation.

Related information: > Business Fact Book (8K+5G Ecosystem)
Business Fact Book (AIoT World)

Contributing to the SDGs through Business

Mega solar power plant in Ninh Thuan Province, Vietnam

By acting as “One Sharp,” we aim to provide new value to the world and offer solutions to global social challenges by bringing to life our business visions of 8K+5G Eco System and AIoT* World.

Each of our business groups is working in their own realm of business themed on the contributions they will make to achieving the Sustainable Development Goals (SDGs) adopted by the United Nations in 2015, in an effort to both expand their business and produce solutions to social challenges.

* AIoT is a word coined by Sharp, combining the words AI (artificial intelligence) and IoT (Internet of things). “AIoT” is registered trademark of Sharp Corporation

SDGs That Sharp Aims to Contribute to

Business Group	Target SDGs
Smart Life	3, 4, 5, 7, 9, 11, 12, 13
8K Ecosystem	3, 4, 7, 8, 9, 11, 12, 13
ICT	3, 4, 5, 8, 9, 10, 11, 17

＜Case Study 1＞

Providing solar power systems and energy solutions (systems and services) to help solve the pressing energy challenges we face

2019 marked the 60th anniversary of Sharp's journey in solar power systems, which began from this observation made by Sharp's 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 remained true to these words, and works 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, through the expanding installations of solar power systems on rooftops of housing and factories to mega-solar projects, we are working to achieving goals 7 and 13 of the SDGs.

With a view towards promoting the use of renewable energy sources, we are also working to create smart homes that merge with people-oriented AIoT home appliances. We are also creating new solutions, like self-consumption systems that efficiently link solar power systems with storage batteries and systems to cut peak demand to help achieve goals 11 and 12 of the SDGs.

To expand installations of solar power systems, we built some mega solar power plants in Japan and abroad in fiscal 2019: two in Fukushima Prefecture with a combined output of approximately 60 MW-dc, a 49 MW-dc plant in Vietnam, and a 16.4 MW-dc plant in Mongolia. In the Philippines, we installed a solar power system with an output of approximately 4 MW-dc on the rooftop of a tire factory run by Yokohama Rubber Co., Ltd.

To support introduction of solar power generation by small and medium-sized companies in Japan, we have started offering Sunvista lease plans, which allow them to install solar power systems with no initial investment. Servicing and maintenance are also included.

In the residential sector, the COCORO ENERGY cloud HEMS*1 service was launched, which intelligently and automatically controls the charging of storage batteries according to the amount of surplus power of the solar power system*2 predicted by AI. With this service, households can use electricity generated by their solar power systems more efficiently.

In the transport sector, Sharp, together with Japan's NEDO*3 and Toyota Motor Corporation, conducted public road trials to assess the effectiveness of improvements in cruising range and fuel efficiency of electric vehicles equipped with high-efficiency solar batteries. Sharp created an onboard solar battery panel with its world-class, high-efficiency solar cells.

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

Yokohama Rubber's tire factory in the Philippines

Prius PHV demo model equipped with solar battery panel

＜Smart Life Group＞ Sharp Energy Solutions Corporation (SESJ)

＜Case Study 2＞

IGZO*1 displays offering solutions to social challenges emerging with the evolution of healthcare, education, infrastructure, and self-driving

Display Device Company develops, manufactures, and sells display modules for a variety of uses. Among these, an LCD that utilizes IGZO, 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 personal devices, such as smartphones and tablets, as well as industrial equipment and commercial displays.

In the coming era of 8K+5G, massive, high-resolution image data will be transmitted at high speed. Sharp's display technology is essential for showing such information in real time with high quality. Ultra-high-speed and high-quality monitors supporting smooth high-definition video are suitable for making subtle abnormalities visible and detectable for their ability to show clear images. Therefore, they are expected to play a key role in wide-ranging fields, including healthcare, security, and infrastructure maintenance and inspection systems. There are also expectations for the creation of innovative displays useful in every aspect of our lives. These include mobile device and outdoor signage displays with high luminosity and ultra-low power consumption and in-vehicle devices with entirely new designs having a curved shape or plane.

The evolution of our IGZO technology continues daily to make these visions into reality. To add to our longstanding efforts put into LCDs, we have recently taken on the development of future displays that you can bend or roll. For this we are applying IGZO technology to OLED displays, which are becoming more common.

IGZO technology even expands into non-display applications. An example can be found in the healthcare field, where IGZO-based high-sensitivity sensors convert X-rays into high-definition images. While constantly evolving IGZO, we collaborate with diverse business sectors to go beyond simply displaying images, in search of ways to better contribute to the creation of a society where everyone can live a fulfilling life with ensured safety and security. At the same time, we continue to move forward to achieve the SDGs.

*1 An oxide semiconductor comprising indium, gallium, zinc, and oxygen.
*2 Mass produced through joint development with Semiconductor Energy Laboratory Co., Ltd.

Medical display (diagnostic monitor)

Outdoor signage (smart bus stop)

＜8K Ecosystem Group＞ Display Device Company

＜Case Study 3＞

Working towards solutions that make a more comfortable world through computing and the creation of new added value and services

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 software ("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 hardware domain, we have released laptops with advanced functions that help customers diversify their work styles, as well as dynaEdge DE100, a model that facilitates enhanced productivity on the manufacturing floor and in other workplace environments. In the service domain, we offer life-cycle management services that meet the needs of corporate customers. These include kitting services, which refer to setting up PCs to make them ready to use as soon as customers receive and unpack them, and the operation and administration of PCs. On the technological innovation side, Dynabook has been proposing new value to society by leveraging the synergies with Sharp. One example is the development of the 8K Video Editing PC System.

Another strength of Dynabook is the ability to help people adapt to the "new normal" or a new lifestyle in the "with coronavirus" and "post-coronavirus" worlds. We can deliver solutions to new working styles and new ways of learning by integrating hardware with services. One of them is dynaTeams, released in January 2020. Building on Microsoft Teams, it is a one-stop, smart work (telework) solution package that consists of PCs, Sharp's BIG PAD large touchscreen display, and service and support for the operation and maintenance of the entire system. We are also accelerating support for the introduction of ICT to schools. A typical example is our dynabook GIGA School Package, which has been adopted as a solution to the GIGA School Program of Japan's Ministry of Education, Culture, Sports, Science and Technology. This package combines dynabook K50, a 2-in-1 laptop with a detachable display designed to meet the needs of educators, with original apps and PC management tools.

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."

dynabook K50 10.1-inch compact laptop with detachable display

dynabook G83 laptop supporting diversified work styles

＜ICT Group＞ Dynabook Inc.

Our Action on the Covid-19 Pandemic

The Covid-19 pandemic is threatening people's health and pushing the global economy into a sharp downturn, as governments across the world responded with a state of emergency or other measures. The international community sees things changing in a way that it has never experienced before.
Likewise, Japan is facing difficult times. The Tokyo Olympics have been postponed and people have been requested to refrain from various activities. Amid this situation, Sharp has acted under the leadership of top management, which has given utmost priority to protecting employees' health. The company's fundamental policy for dealing with the pandemic has been disseminated throughout the organization. That includes restricting overseas business trips and asking employees to use flexible work options (staggered work hours, flextime, others) and telecommuting as needed according to the spread of infections.
Sharp has also acted on the pandemic in other fields.

Manufacturing Face Masks

In the hope of contributing to society in the Covid-19 crisis, Sharp decided to produce face masks in February 2020 in response to the Japanese government's request. Production began in March 2020 at our factory in Taki, Mie Prefecture, after quick preparations.
Our masks were later made available to consumers as well at the online store of Sharp Cocoro Life Inc. Our effort has been appreciated by many, making us realize that we have been able to contribute to the safety and security of society through mask production and sales.

Mask production line

Helping to Make New Lifestyles Possible

Temporary school closures and teleworking rapidly expanded as infections spread, urging people to shift to a new lifestyle.
To support schools and companies in this move, Sharp Marketing Japan Corporation's Business Solutions Company offered three services convenient and useful for online learning and teleworking for free for a limited time.

(1) Interactive Study, a personal learning support system, and Super Interactive School, a set of online learning materials from Shingakukai, available for free to elementary and middle schools under temporary closure until they reopen
(2) TeleOffice, a web conference system suited to teleworking environments, available for free until August 31, 2020 to those who signed up by June 30, 2020
(3) Network Print for Biz, a service in which users can print out their business documents from MFPs installed at about 30,000 convenience stores across Japan, available in a limited-time plan at no initial registration fees and basic service charge until September 30, 2020

Supporting the Education of People with Disabilities

Sharp has been promoting the employment of people with disabilities in various ways, including school visits*, in which Sharp employees with disabilities visit special-needs schools as instructors. The need to prevent the spread of infections forced us to restrict some of the activities, but our instructors started to teach online in July 2020 in response to requests from school officials. This will continue until March 31, 2021.

* See page 79.

Recording a video for online classes

Support Offered outside Japan

Sharp's Indonesian production company SSI practiced CSR by donating a total of 90 units of personal protective equipment, including face masks, to healthcare professionals working at Dewi Sri Hospital in Karawang, UGM Hospital in Yogyakarta, and Regional General Hospital in Kebumen, Central Java Province.

Donating to a hospital

CSR Management

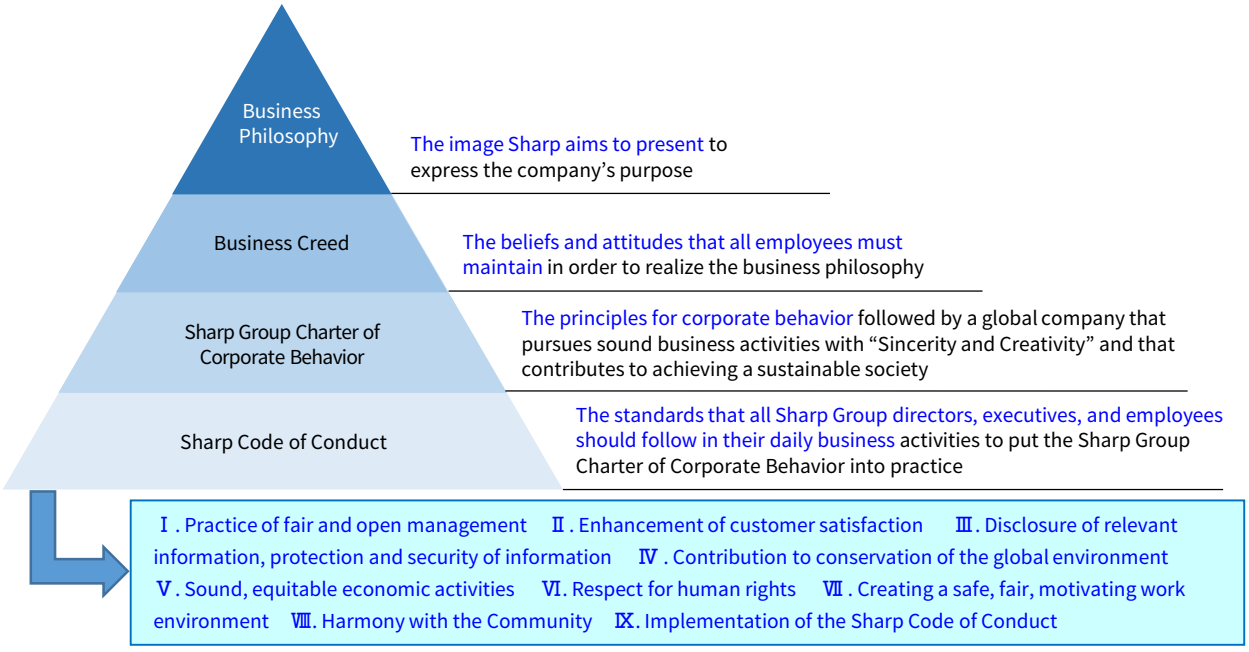
Basic Policy on CSR

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 of society and its stakeholders, and these aspirations for sustained mutual growth of the company and society are maintained as its basic philosophy behind Sharp's CSR (corporate social responsibility).

Related information: > Business Philosophy and Business Creed

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 CSR 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.



Making Everyone Aware of the Sharp Group Charter of Corporate Behavior and the Sharp Code of Conduct

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.

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. In addition, internal notices are circulated and annual training sessions are held to ensure that employees are fully aware of these documents. At overseas subsidiaries and affiliate companies that have adopted the Sharp Group Charter of Corporate Behavior and the Sharp Code of Conduct, Sharp translates these documents into the local languages to ensure the entire Group becomes fully aware of them.

In fiscal 2019, Sharp used e-learning to carry out a compliance workshop based on the Sharp Code of Conduct 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 19,576 employees.

This training aimed to engrain a mindset in participants to prevent problems from occurring. It covered the importance of conducting business activities thoroughly in line with the Sharp Code of Conduct. It also covered a wide range of themes, including the whistleblowing system, labor and human rights issues such as work hours management, competition laws, eliminating bribery and corruption, protection of personal information, and information security.

*Revisions: April 2003; May 2005; April 2010; January 2015

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

CSR Management

Sustainability Policy and Implementation System

In line with Sharp's basic philosophy and policy towards CSR and amidst its CSR 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

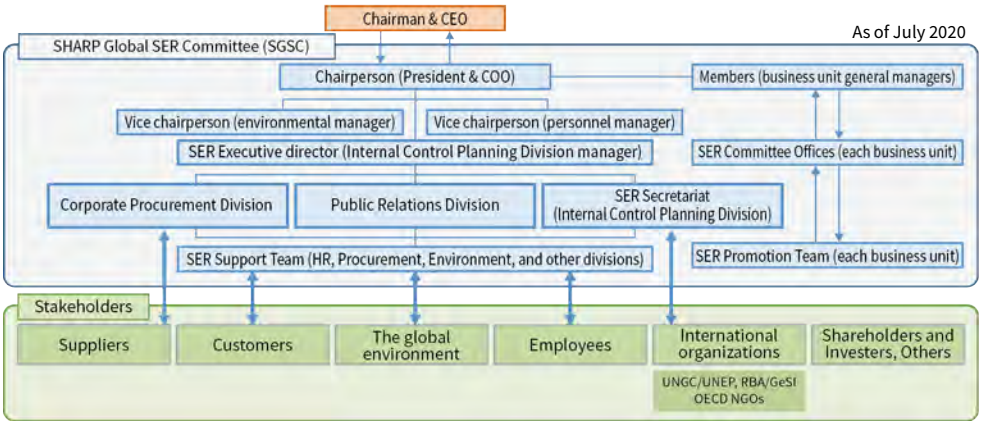
1. Value the rights of employees and ensure their health and safety.
2. Fulfill environmental responsibilities in business activities and manufacturing processes.
3. Build and operate an SER management system based on international standards, regulations, and client requests.

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 the promotion of actionable SER measures in line with the SER Policy. Sharp is stepping up efforts through a fundamental strategy of proceeding with sustainable management aimed at contributing to the achievement of the SDGs while also continuing to respond to ESG* investments.

* Environment, Social, Governance

To execute these policies and manage them in a PDCA cycle, in 2016 the company launched the Sharp Global SER Committee (SGSC) comprising members of top management, Head Office divisions such as environment, personnel, and procurement, in-house companies, and business units. The SGSC engrains policies and visions into the Sharp Group, discusses crucial measures, and shares the latest worldwide trends in social issues.

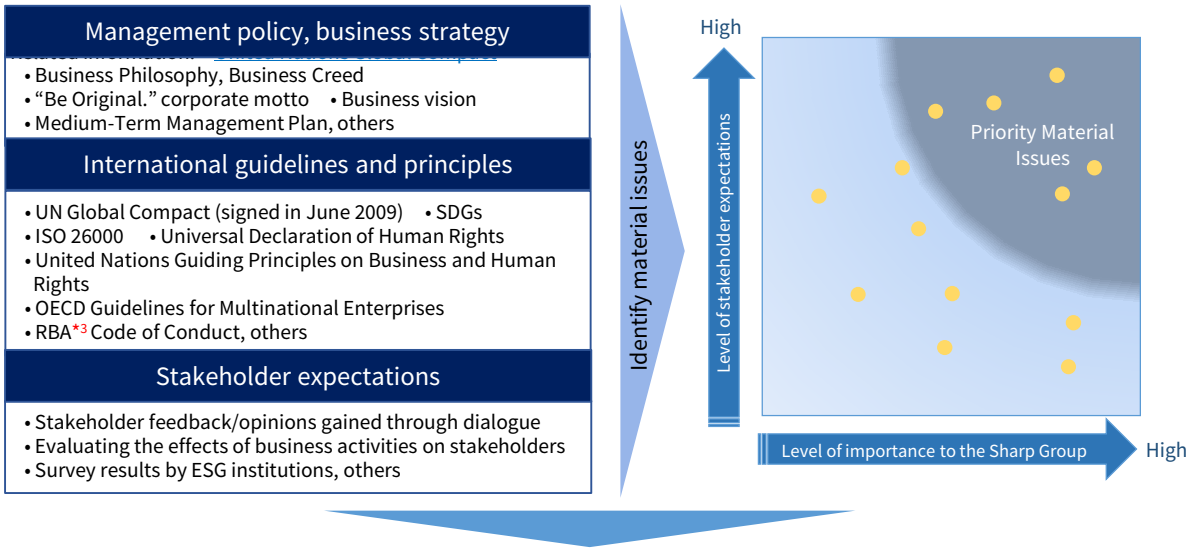
Sharp Global SER Committee Organization Chart



Material Issues

In recent years, there has been a spate of international long-term goals announced that seek solutions for social issues at the global level, such as the Sustainable Development Goals (SDGs) and the Paris Agreement*1. Expectations continue to grow for companies to put forth an effort towards these goals.
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 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 various surveys by ESG*2 survey 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.

Related information: > United Nations Global Compact



Solutions to social issues through innovation	Reducing the social and environmental impact of Sharp's business activities
Constructing an 8K + 5G Ecosystem Provide solutions in the fields of medicine, security, inspection, and infrastructure maintenance using ultra-high-definition 8K	**Labor and human rights** • Ensuring the health and safety of employees by preventing overwork • Preventing harassment • Respect for human rights
Expanding people-oriented AIoT*4 Expand the various applications for AI and IoT-capable devices to offer a safe, convenient, and comfortable smart lifestyle	**Environment** Efforts towards SHARP Eco Vision 2050 long-term environmental vision*5 • Climate change (achieving a carbon-free society) • Resource recycling (achieving a circular economy) • Safety and security (thorough management of chemicals)
Utilizing ICT Utilize computing to provide remote support systems in factories, conference, solutions, and education solutions	**Supply Chain Management** • ESG risk management across the entire supply chain • Responsible mineral procurement
Strengthening governance	
Corporate governance, risk management, compliance, information security, others	

*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 Environmental, social, governance

*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 AIoT is a word coined by Sharp, combining the words AI (artificial intelligence) and IoT (Internet of things). "AIoT" is registered trademark of Sharp Corporation.

*5 See page 20

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 for each in-house company and business unit 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 in-house company and business unit 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 in-house company and business unit. Company-wide progress is shared and evaluated. The fiscal 2019 SER measures progressed largely as planned in all in-house companies and business units. 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 of the Sharp Sustainability Report.

Related information: > Contributing to the SDGs through Business (page 8-11)
Governance (page 96-111)

Fiscal 2019 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	3, 8
Prevent harassment	All employees in Japan	5, 16
Respect for human rights at overseas bases	All employees at overseas bases	8, 10, 16
Comply with and efficiently respond to relevant Japanese and overseas laws related to conflict minerals	Applicable business units	16
Carry out SER performance survey/audit at Sharp plants based on international SER standards (RBA*1 Code of Conduct)	All production sites and consolidated production subsidiaries in Japan	1, 3, 5, 6, 7, 8, 10, 12, 13, 16
Restructure supplier SER management system	Suppliers	
Reduce and recycle waste	All production sites	6, 9, 12
Suppress greenhouse gas emissions associated with business activities (Improve energy use efficiency)	All production sites	7, 9, 13
Suppress greenhouse gas emissions associated with product use (Make products more energy-efficient)	Product-related business units	7, 12, 13
Comply with EU RoHS Directive*2, WEEE Directive*3, and REACH*4	All business units	3, 6, 8, 9, 12

*1 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.
*2 RoHS: Restriction of Hazardous Substances. An EU directive on the restriction on the use of certain hazardous substances in electrical and electronic equipment.
*3 WEEE: Waste Electrical and Electronic Equipment. An EU directive on waste electrical and electronic equipment.
*4 REACH: Registration, Evaluation, Authorisation, and Restriction of Chemicals. A set of EU regulations on the registration, evaluation, authorization, and restriction of chemicals.

Material Issues

CSR 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 CSR 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 (CSR-related international standard), as the guideline for CSR activities. It has been carrying out ongoing CSR 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. In fiscal 2019, 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, and a summary of the assessment results are reported at company-wide meetings.

In the fiscal 2019 self-assessment surveys, with the goal of boosting understanding of international CSR standards among local managers through survey responses, guidance was added to the self-assessment questionnaire on things like the purpose of each question and the implementation level of desirable management measures.

As a result, the average score for all factories in fiscal 2019 was 90.9 (A rank), a point higher than last year's survey.

The assessment scores of fiscal 2019 are shown in the graph at right (by area), with almost all sites scoring well with 70 points or more (B rank). No problems have been identified that pose an immediate, large CSR risk for the Sharp Group as a whole.

Survey responses from the bases are reviewed by relevant head office divisions. If it is determined that efforts are inadequate or latent risks exist, individual interviews are conducted with the bases in question in order to instill them with a thorough understanding of international CSR standards and have them carry out the necessary improvement 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)

Surveys were again conducted in fiscal 2020 for the sake of ongoing improvement in the level of CSR activities.

* 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.

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, verifies that it is responding to the needs and expectations of shareholders by opening various channels of communication, and makes use of the feedback it receives in its corporate activities.
Sharp will continue to incorporate the voices of its stakeholders in the improvements made to its corporate activities.

Stakeholders

- 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

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

7 AFFORDABLE AND CLEAN ENERGY
13 CLIMATE ACTION

1%
Improvement rate of energy intensity of logistics

6 CLEAN WATER AND SANITATION

23%
Improvement rate of water intensity

> Environmental Vision ..... P. 20
> Climate Change ..... P. 22
> Resource Recycling ..... P. 31
> Safety and Security ..... P. 41
> Environmental Management ..... P. 47
> Biodiversity Protection ..... P. 53
> Overview of Environmental Impact ..... P. 54

Environmental Initiatives: Environmental Vision

SHARP Eco Vision 2050 Long-Term Environmental Vision

SHARP Eco Vision 2050 Long-Term Environmental Vision

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 compliance with the Paris Agreement,*2 and 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 seeks to broaden and disseminate clean energy-related products and services and to reduce greenhouse gas emissions from its corporate activities as well as products and services.

In the resource recycling field, Sharp pursues a circular economy by promoting the recycling of products and reducing waste generation 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 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.

*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 striving to reduce energy consumption and create clean energy, Sharp is taking on the challenge of achieving the following two goals by 2050 and thus realizing a carbon-free society.

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

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

Extreme weather in recent years, presumably attributable to climate change, have led to an increasing number of natural disasters throughout the world. Among natural disasters, typhoons, hurricanes, localized torrential rains, and floods in particular can cause devastating damage to people's lives and businesses.

The major cause of climate change is believed to be global warming resulting from the increasing concentrations of CO_2 and other greenhouse gases (GHGs) on the Earth. Against this background, the Paris Agreement came into force in November 2016, setting the target of keeping the global temperature rise below 2°C above pre-industrial levels and calling for efforts to limit warming to 1.5°C. The agreement even stipulates the aim of reducing GHG emissions to essentially zero by the second half of this century.

To support these GHG emission reductions, we announced SHARP Eco Vision 2050. This long-term environmental vision sets forth two key goals to reach by 2050: to create more clean energy than the total amount of energy consumed in Sharp's entire supply chain and to achieve net zero CO_2 emissions in Sharp business activities. We have already embarked on initiatives to achieve them.

Sharp recognizes the material effects that climate change can have on our business in terms of risks and opportunities. We are preparing to disclose climate-related information in accordance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) established by the Financial Stability Board (FSB).

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 CO_2 emissions by creating environmentally conscious products

- Quantifying and analyzing GHG emissions throughout the product life cycle
- Reducing GHG emissions during use of products by improving the energy-saving performance of products
- Reducing GHG emissions through the provision of conducive products and services (e.g., solar power systems and storage batteries)
- Reducing GHG emissions by offering smart life/office services incorporating AIoT devices and cloud technology

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

We have established a Sharp Global SER Committee* to drive corporate climate actions. The Sharp Global SER Committee ensures that specific measures are implemented in accordance with the guidelines and KPIs set every year regarding risks and opportunities in the climate change field in line with the long-term environmental vision. It is also responsible for initiating further improvements and new measures by carrying out the PDCA cycle involving evaluating progress and discussing actions to be taken on a quarterly basis, as well as reporting to senior executives as appropriate.

* See page 14

2. Strategy

Climate-related risks and opportunities 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. We recognize that these risks and opportunities are related to Sharp's business as follows.

Category			Relation to Sharp's Business
Risks	Transition	Policy and legal	Increased operational costs and burdens due to policy changes, tighter regulations (a major rise in the carbon tax rate), stricter energy-saving standards for products, etc. [Action] Comply with existing regulations and standards, stay informed on the latest legal and regulatory developments, and take advantage of policymaking opportunities
	Physical changes	Acute	Business continuity risks associated with delayed production and the loss of sales opportunities due to production shutdowns and disrupted material procurement in the wake of increased or intensified natural disasters (e.g., typhoons and floods) [Action] Shore up facilities at sites vulnerable to flood hazards, secure diversified procurement sources, and prepare disaster response manuals
Opportunities	Transition	Products and services	Wider use of solar power systems and storage battery systems that contribute to climate change mitigation and adaptation, and growth of the business dealing with AIoT technology and related devices and products that meet the increasing demand for energy-efficient products
	Physical changes	Products and services	Expansion of the social innovation business that enables efficient management of energy conservation and generation through integration of AIoT technology to combat natural disasters

Environmental Initiatives: Climate Change

3. Risk Management

Sharp has formulated the Rules of Business Risk Management* as a basic approach to risk management. In accordance with the Rules, we have classified climate-related risks as "specific risks" that could have a major impact on management, and manage and assess them together with the rest of the specific risks.

* See page 101

4. Metrics and Targets

Under its Basic Environmental Policy of "Creating an Environmentally Conscious Company with Sincerity and Creativity," Sharp has formulated SHARP Eco Vision 2050, a long-term vision with 2050 as the target year. In the climate change field, in particular, our vision sets forth two long-term goals regarding GHG emission reduction in line with the 1.5°C target of the Paris Agreement: to create more clean energy than the total amount of energy consumed in Sharp's entire supply chain and to achieve net zero CO_2 emissions in Sharp business activities. To reach these long-term goals, we are committed to developing and delivering environmentally conscious products and services and introducing more energy-saving technologies and renewable energy to our factories. 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 its climate change action.

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.

Greenhouse Gas Emissions by Scope 1/2/3 Categories Based on the GHG Protocol Initiative (Fiscal 2019)

Category		Emissions (Thousand Tons CO_2)	Notes
Scope 1 (direct GHG emissions from business activities)		252	Emissions from combustion of fuel, etc.
Scope 2 (indirect GHG emissions from energy usage in business activities)		722	Emissions from the use of electricity
Total of Scope 1 and Scope 2		974	
Scope 3 (indirect GHG emissions from outside the scope of business activities)	1. Purchased goods and services	3,184	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	164	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	210	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	8	Emissions from business travel by all employees of Sharp Corporation
	7. Employee commuting	10	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	31	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	70	Emissions from processing at destination of Sharp Group products
	11. Use of sold products	28,438	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		32,265	
Scope 1 + 2 +3 total		33,239	

*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

Environmental Initiatives: Climate Change

Curbing Business Activity-Linked Greenhouse Gas Emissions

Fiscal 2019 Objectives	Fiscal 2019 Achievements	Self-Evaluation
■ Energy intensity: Improve by 20% (baseline year: fiscal 2012)	■ Improved by 18% (baseline year: fiscal 2012)	★
Priority Objectives for Fiscal 2020	■ Energy intensity: Improve by 20% (baseline year: fiscal 2012)	

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

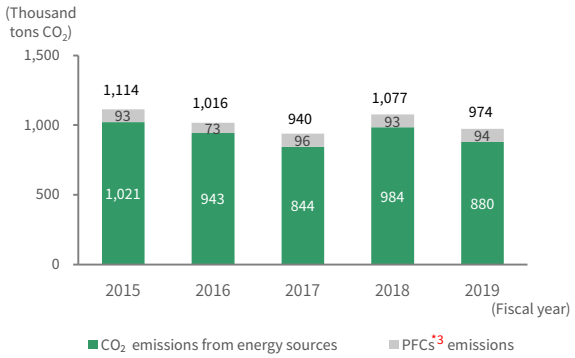
Sharp Group Activities to Control Greenhouse Gas Emissions

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 2019 decreased by 9.6% to 974,000 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 was 18%, 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.

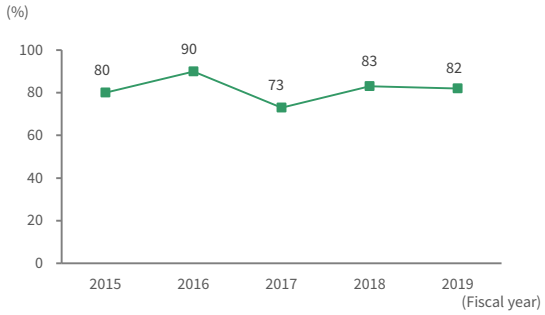
*1 A device to control the number of motor rotations. *2 A room where the temperature, humidity, and cleanliness are kept at controlled levels.

■ Amount of GHG Emissions

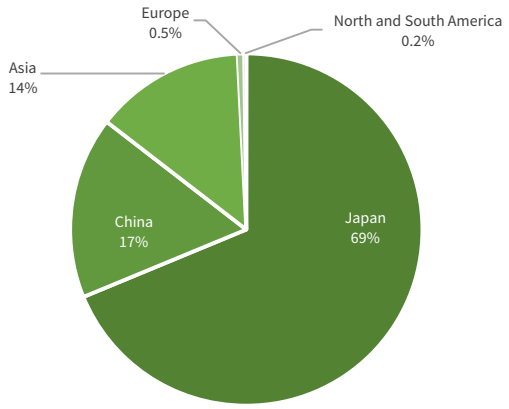


*3 HFCs, PFCs, sulfur hexafluoride (SF_6), nitrogen trifluoride (NF_3)

■ Energy Intensity (Baseline Year: Fiscal 2012)



■ GHG Emissions by Region (Fiscal 2019)



Environmental Initiatives: Climate Change

< Case Study >

Mie Plant Wins ECCJ Chairman's Prize at 2019 Energy Conservation Grand Prize for Thorough Energy Conservation Activities in LCD Manufacturing

Sharp's Mie Plant (Taki, Mie Prefecture) was awarded the ECCJ Chairman's Prize in the Energy-Saving Initiatives category at Japan's 2019 Energy Conservation Grand Prize program for its thorough energy conservation activities in LCD manufacturing. Organized by the Energy Conservation Center, Japan (ECCJ) and supported by the Ministry of Economy, Trade and Industry (METI), this awards program recognizes best energy conservation practices and highly energy-efficient products and business models demonstrated by companies, their offices, and so forth. Its aim is to contribute to building an energy conservation society through the spread of energy conservation awareness and the diffusion of energy-saving products.

At the Mie Plant, small-group activities were conducted to pursue different energy conservation objectives, resulting in the achievement of a reduction in energy consumption equivalent to 1,319 kiloliters of crude oil a year. This also means that the plant used 1.4% less energy than it did in fiscal 2018. Sharp received this award for the second year in a row after its Kameyama Plant was honored in 2018.

Main Energy Conservation Measures

- High-efficiency operation of deodorizer/scrubber*1
  The motor used for concentrating the VOCs*2 included in the exhaust from production equipment has been retrofitted with inverter*3 control to increase the concentration rate of the treated gases and achieve higher concentrations. This has resulted in less gas volumes and thus less use of LP gas for VOC combustion and a lower airflow requirement for the fan.
- High-efficiency operation of chillers
  The load on the chiller has been lightened by using water warmed in the production process for the production of cold water needed for preventing cold water coils from freezing during winter.
- Energy conservation of outdoor-air processing units
  Efforts to reduce exhaust have turned out to be more effective than expected at the time of plant design, resulting in the overcapacity of outdoor-air processing units used to take in outside air. Inverter control has been employed to adjust airflow volume.
- Streamlined operation of wet-type chemical air-conditioning systems*4
  A reduction in water consumption and the optimization of the number of spray pumps have been achieved through a review of the concentration management of the water used for adsorbing contaminants.
- High-efficiency operation of microbial wastewater treatment systems
  The aeration of the biological treatment tank*5 has been made adjustable to the load on each treatment system through the modification of the piping and the addition of inverter control.

*1 Equipment designed to clean harmful gases generated in the production process. *2 Volatile organic compounds. *3 A device designed to control the RPM of the motor. *4 An air-conditioning system that removes airborne chemical contaminants in the cleanroom with pure water. *5 Feeding air into the biological treatment tank to dissolve oxygen into the water.

表彰状

液晶ディスプレイ製造工場(株)殿
省エネ活動

シャープ株式会社
三重事業所殿

貴事業所の省エネ事例は(財)団法人
省エネルギーセンター主催による
令和元年度省エネ大賞(省エネ事
例部門小集団活動分野)に
おいて特に優れていると認められる
のでこれを表彰します

令和二年一月二十九日

(財)団法人省エネルギーセンター
会長 藤 洋作

Award certificate

Trophy

Environmental Initiatives: Climate Change

Utilizing Renewable Energy

Sharp has introduced PV systems 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 2019, Sharp generated 8.86 million kilowatt-hours of electricity. This is equivalent to the annual energy consumption amount*1 of roughly 3,000 average households in Japan. Sharp will continue to work hard at reducing carbon emissions even further in the future.

*1 Calculated from data from the Federation of Electric Power Companies of Japan

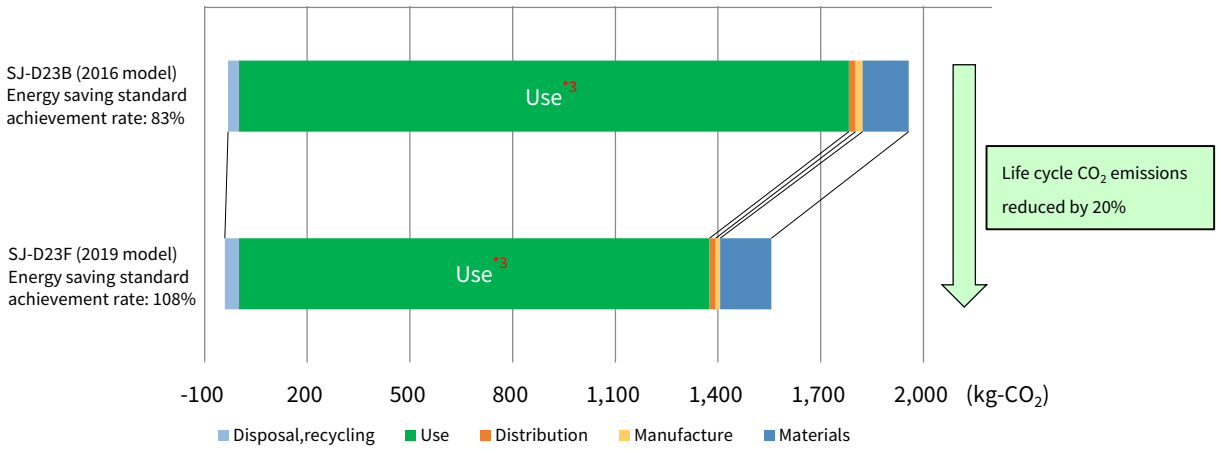
Solar power systems installed on the roofs of Sharp production bases (left: Kameyama Plant; right: NSEC in China)

Identifying and Reducing Environmental Impacts throughout the Life of Products

Sharp performs a life cycle*2 assessment (LCA) on its products to identify their impact on the environment throughout their service life. Converting this impact into CO_2 emissions provides a quantitative measure that Sharp uses in its efforts to reduce environmental impacts.

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. For example, energy saving standards under Japan's Energy Conservation Act were revised in 2016 for refrigerators, which consume a comparatively large amount of electricity. These tougher standards are aimed at improving energy savings towards the target year of fiscal 2021.

LCA Data for Refrigerators



*2 The life of a product from materials and parts procurement to manufacture, distribution, use, disposal, and recycling.

*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).

Environmental Initiatives: Climate Change

< Case Study >

Sharp Builds Mega Solar Power Plant in Quang Ngai Province, Vietnam

In May 2019, Sharp Energy Solutions Corporation (SESJ)*1 completed a mega solar power plant in Quang Ngai Province, Vietnam. The project was a collaboration with multiple partners, including Sermsang Power Corporation (SSP)*2 of Thailand, and SSP affiliate Truong Than Quang Ngai Power and High Technology Joint Stock Company*3.

The new plant has an output of approximately 49 MW-dc, with annual power generation capacity estimated at 73,143 MWh/year. This is equivalent to the amount consumed in a year by 38,762*4 average Vietnamese households. Sharp has so far constructed three solar power plants in Vietnam, for a combined capacity of approximately 146 MW-dc. This new plant raises the total capacity to approximately 195 MW-dc*5.

The mega solar power plant is well into operation

*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 SSP's main business is constructing solar power plants in ASEAN countries. *3 This company is in charge of operating the new plant. *4 Calculated at 1,887 kWh per household. *5 As of June 5, 2019.

< Case Study >

Sharp Installs Solar Power System on Rooftop of Yokohama Rubber*6 Tire Factory in the Philippines

In July 2019, Sharp Energy Solutions Corporation (SESJ) installed a solar power system on the rooftop of a production plant*7 run by the production and sales subsidiary of the Yokohama Rubber Co., Ltd. in Pampanga Province, the Philippines.

The solar power system has an output of approximately 4 MW-dc. The generated electricity is used within the tire factory, allowing the factory to reduce the amount of electricity it purchases from the grid. The tire factory's environmental policy covers items such as the conservation of natural resources and the reduction of greenhouse gas emissions, which are the cause of global warming. The solar power system was installed as part of this policy. The estimated annual power generation capacity is approximately 5,363 MWh. This is equivalent to a reduction in greenhouse gases of roughly 2,858 t-CO_2/year.

Yokohama Rubber tire factory

*6 The Yokohama Rubber Co., Ltd. manufactures tires, industrial products, sporting equipment, and other items.
*7 A tire factory operated by Yokohama Tire Philippines, Inc., a tire manufacturing and sales subsidiary of the Yokohama Rubber Co., Ltd.

Environmental Initiatives: Climate Change

Reducing Logistics-Related Environmental Impact

Fiscal 2019 Objectives	Fiscal 2019 Achievements	Self-Evaluation
■ Energy intensity: Improve by average of 1% each year (average for fiscal 2015 to 2019)	■ Energy intensity: Improved by average of 1% each year (average for fiscal 2015 to 2019)	★★
Priority Objectives for Fiscal 2020	■ Energy intensity: Improve by average of 1% each year (average for fiscal 2016 to 2020)	

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

Reducing the Environmental Impact of Logistics in Japan

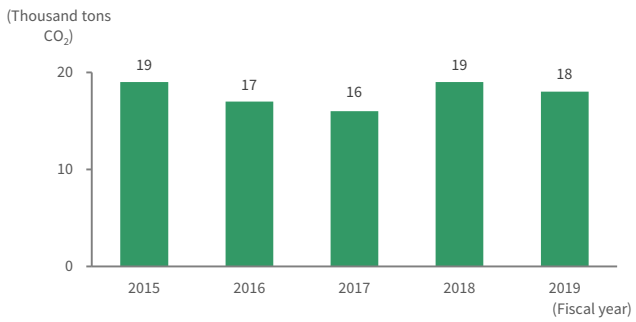
Sharp observes a rule set forth in the Japanese Act on the Rational Use of Energy (Energy Conservation Act) that requires specified shippers to reduce energy intensity by 1% or greater per year. All Sharp Group companies in Japan are working to reduce the environmental impact and costs associated with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

In fiscal 2019, Sharp Group greenhouse gas (GHG) emissions from shipping activities in Japan were down 5% from the previous fiscal year to 18,000 tons CO_2. For Sharp Corporation, energy intensity was improved by an average of 1% for the most recent five years (fiscal 2015 to 2019). 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)



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 2019, Sharp's GHG emissions from international transport were 158 thousand tons CO_2, an increase of 0.7% from the previous fiscal year.

Environmental Initiatives: Resource Recycling

Minimizing and Recycling Business Activity-Linked Waste

Fiscal 2019 Objectives	Fiscal 2019 Achievements	Self-Evaluation
■ Final landfill disposal rate of 0.5% or less	■ Final landfill disposal rate 0.6%	★
Priority Objectives for Fiscal 2020	■ Final landfill disposal rate of 0.5% or less	

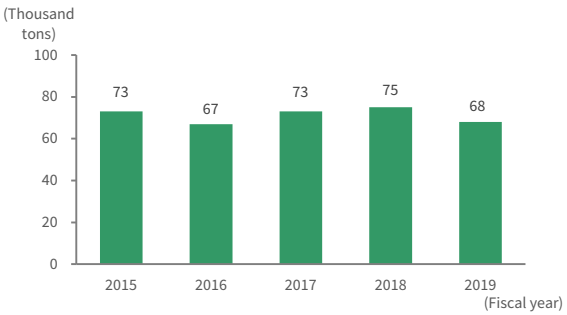
Self-evaluation: ★★★ Achieved more than targeted / ★★ Achieved as targeted / ★ Achieved to some extent

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

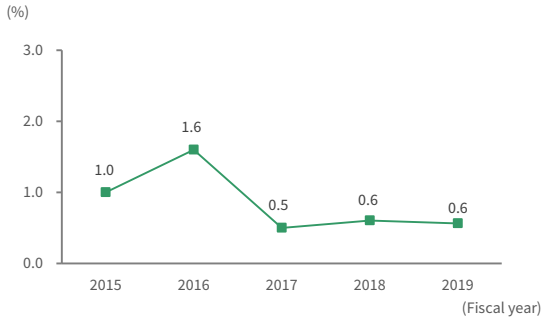
Sharp has been working to reduce waste and to recycle as much of it as possible in an effort to contribute to building a resource-recycling society. In fiscal 2019, the amount of waste, etc. generated by the Sharp Group decreased by 10% compared to the previous fiscal year to 68,000 tons, thanks to efforts such as transferring manufacturing to more efficient plants and changing the packaging material used in shipping.
Additionally, the amount of recycling fell by 13% from the previous fiscal year to 62,000 tons. Furthermore, the final landfill disposal rate remained at 0.6%. 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 0.01%, marking the 19th 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.

* Sharp defines "zero discharge to landfill" as a final landfill disposal rate of less than 0.5%.
Final landfill disposal rate (%) = Amount of landfill disposal ÷ amount of waste, etc. generated x 100.

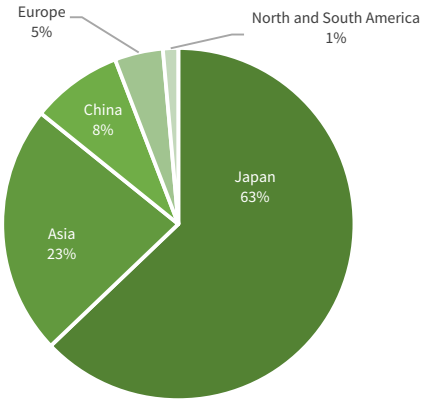
■ Amount of Waste, etc.



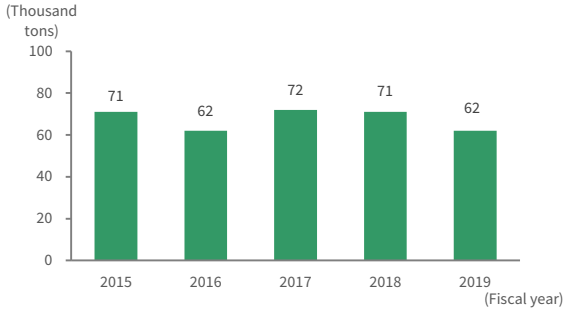
■ Final Landfill Disposal Rate



■ Waste, etc. by Region (Fiscal 2019)



■ Amount of Recycling

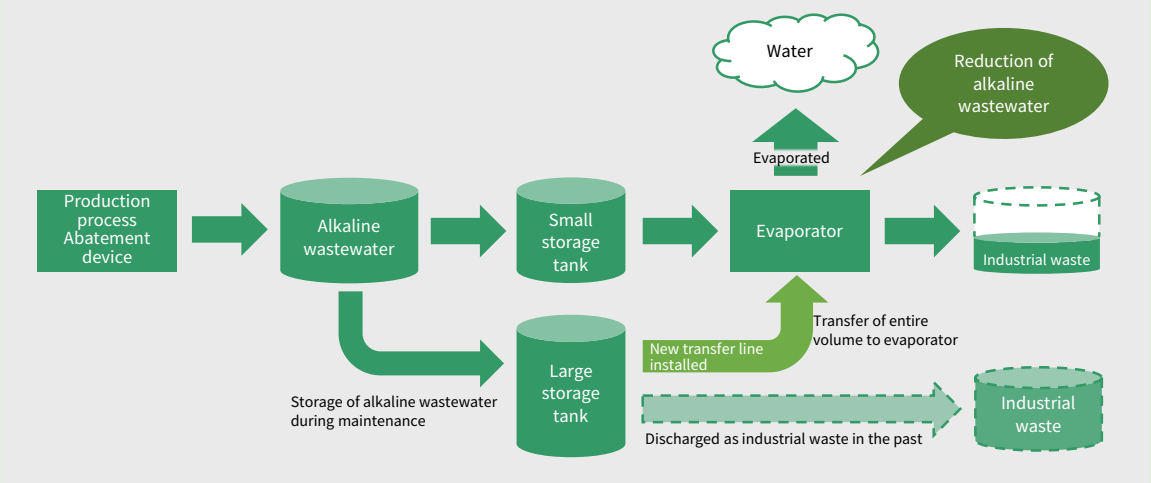


Environmental Initiatives: Resource Recycling

< Case Study > Reducing Industrial Waste by Building a New Transfer Line for Alkaline Wastewater

Sharp's Kameyama Plant (Kameyama, Mie Prefecture) strives to reduce industrial waste from its LCD production process. Alkaline wastewater is generated constantly during regular operation and in particularly large volumes during maintenance of the production equipment. In fiscal 2019, a new transfer line reaching the evaporator was built from the large storage tank to keep the alkaline wastewater during maintenance. This has enabled the entire volume of alkaline wastewater to undergo the evaporation process, resulting in a reduction of 120 tons of it per year.

Alkaline Wastewater Treatment Process



< Case Study > Reducing Industrial Waste through Introduction of a Solder Recovery Machine

Sharp's Malaysian production base SMM disposes of solder waste from the production process as industrial waste. SMM introduced a solder recovery machine in fiscal 2019 and began recycling the recovered solder waste. This has resulted in a 75% reduction of solder waste disposal as well as in solder-related cost savings.

Solder recovery machine

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.

Drums containing waste PCB

Unloading waste PCB

Environmental Initiatives: Resource Recycling

Expanding the Recycling of Used Products

Fiscal 2019 Objectives	Fiscal 2019 Achievements	Self-Evaluation
■ Recycle waste refrigerator parts into valuable resources	■ Recycled door gaskets	★★
Priority Objectives for Fiscal 2020	■ Improve the quality of recycled (recovered) material	

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 19 recycling plants in Japan. In fiscal 2019, Sharp collected 2.102 million units (up 12% 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 63,000 tons (up 6% 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.

■ Sharp Corporation's Recycling Results for 4 Home Appliance Types (Fiscal 2019)

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	324	135	713	459	469	2,102
Processed and recycled units	Thousand units	318	133	682	442	463	2,041
Processed and recycled weight	Tons	13,043	3,008	12,074	26,393	17,863	72,385
Recycled weight	Tons	12,301	2,228	10,506	21,253	16,716	63,006
Recycling rate	%	94	74	87	80	93	—
Legally required recycling rate	%	80	55	74	70	82	—

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. In fiscal 2019, we focused on improving the recycling rate of refrigerators by recycling waste refrigerator door gaskets, which had been disposed of as waste before, into valuable resources. A door gasket is a tube-shaped resin (PVC*3) seal with a magnet inside. A newly installed special fine shredder has enabled us to break door gaskets into small pieces, which are then magnetically sorted. After separation, the resin and magnet can be treated as two different recycled materials. In fiscal 2019, Kansai Recycling Systems recycled approximately 72 tons of door gaskets into valuable materials while successfully reducing waste disposal costs.

Recycled resin (left) and magnet (right)

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

Environmental Initiatives: Resource Recycling

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 1,700 collection points established for used products. MRM operates in accordance with the laws and regulations of each state and recycled a total of 58,500 tons of used products in fiscal 2019.

* 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 (E-Waste Management Rules 2016) was enforced by the Ministry of Environment, Forest and Climate Change in 2016 (and revised in 2018), which imposed extended producer responsibility on manufacturers and other parties. SBI, Sharp's New Delhi-based sales subsidiary, has partnered with the Indian Pollution Control Association, an NGO, to carry out the proper disposal of used products.

Environmental Initiatives: Resource Recycling

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

Fiscal 2019 Objectives	Fiscal 2019 Achievements	Self-Evaluation
■ Develop technology for the practical application of recycled flame-retardant polypropylene	■ Established recycling technology for giving well-balanced properties suitable as materials of home appliances (flame retardancy, physical properties, moldability, etc.)	★
Priority Objectives for Fiscal 2020	■ Complete the development of technology for the practical application of recycled flame-retardant polypropylene and its application to commercial products	

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.

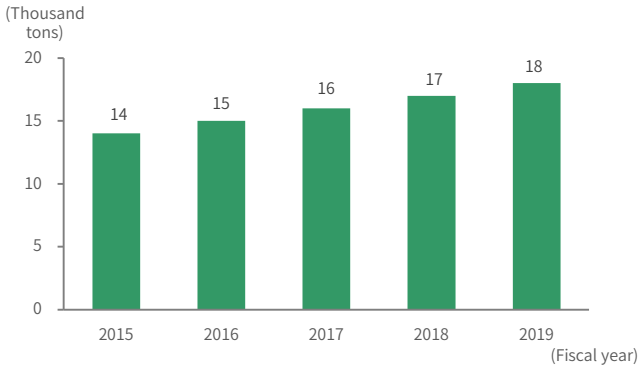
The amount of use of recycled plastic developed through Sharp's closed-loop material recycling technology reached 18,000 tons in fiscal 2019 (in cumulative total from fiscal 2001 to 2019).

*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).

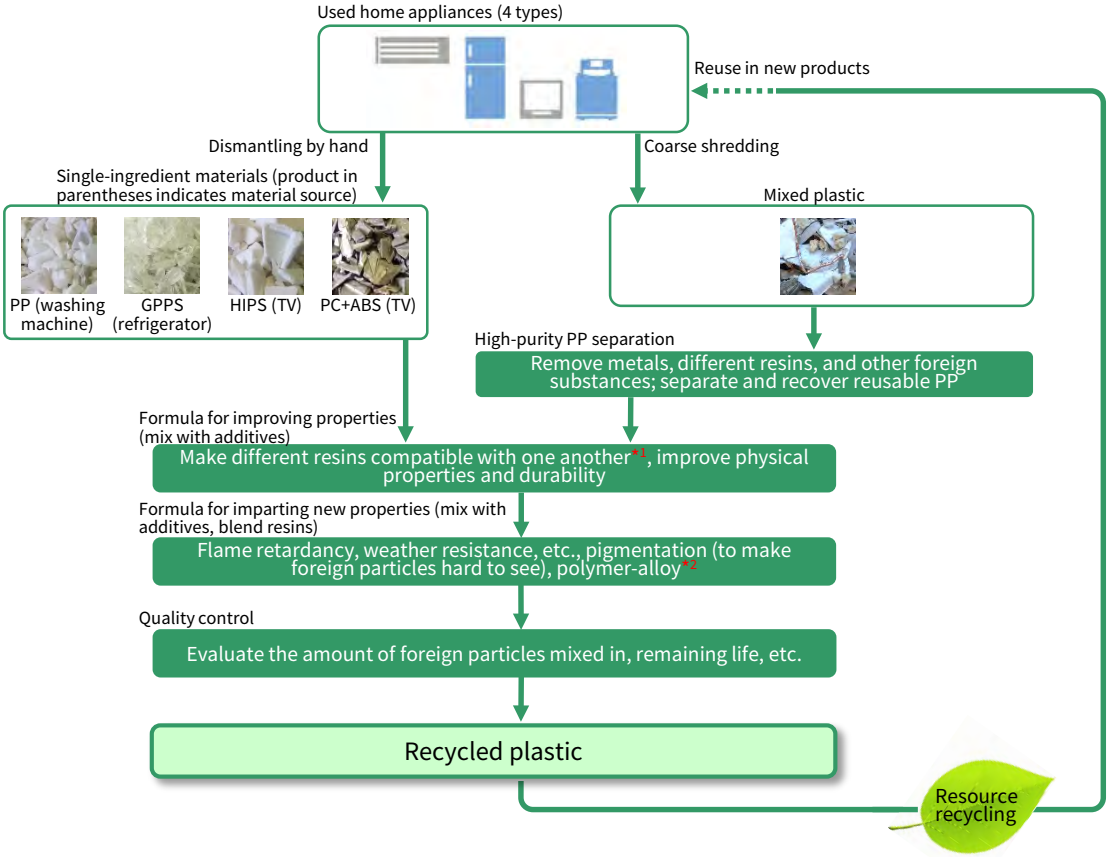
■ Amount of Recycled Plastic Used (Cumulative)



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

Environmental Initiatives: Resource Recycling

Recycling Plastic Recovered from the 4 Types of Home Appliances



*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

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
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

Related information: > Examples of Recycled Plastic Use

Environmental Initiatives: Resource Recycling

< Case Study >

Sharp's Closed-Loop Material Recycling of Used Home Appliances Receives Judging Panel Chair Prize (Award of Excellence) in 2nd EcoPro Awards

Sharp's closed-loop material recycling of used home appliances received the Judging Panel Chair Prize (award of excellence) in the 2nd EcoPro Awards. This commendation program is organized by the Japan Environmental Management Association for Industry's EcoPro Awards Secretariat and sponsored by MOF, MAFF, METI, MLIT, and MOE*. Formerly known as the Eco Products Awards, the program was renewed in fiscal 2018 to adapt to socioeconomic changes while taking over the philosophy and accomplishments of the previous scheme. 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 is aimed at accelerating the development and diffusion of such excellent initiatives and contributing 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 Sustainable Development Goals (SDGs).

Sharp's closed-loop material recycling of used home appliances was found to be excellent for the use of original technology for stabilizing the quality of recycled materials as well as for contribution to cost-effectiveness against the backdrop of growing awareness of the need to reuse more plastic in society.

* 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)

Award certificate

Trophy

Environmental Initiatives: Resource Recycling

Developing Recycled-Plastic Material with Added Value

In response to the increasing seriousness of pollution from used plastic, the world has embarked on numerous initiatives such as the UN Sustainable Development Goals (SDGs).*1 Countries are making laws regarding the recycling of used plastic and strengthening restrictions on importing plastic waste. In Japan, systems are gradually being put in place for recycling used plastics, with the Plastic Resource Recycling Strategy*2 formulated and the Circular Economy Vision 2020*3 announced by the government. The social situation surrounding used plastic has drastically changed as it becomes increasingly important to properly dispose of and recycle the material.

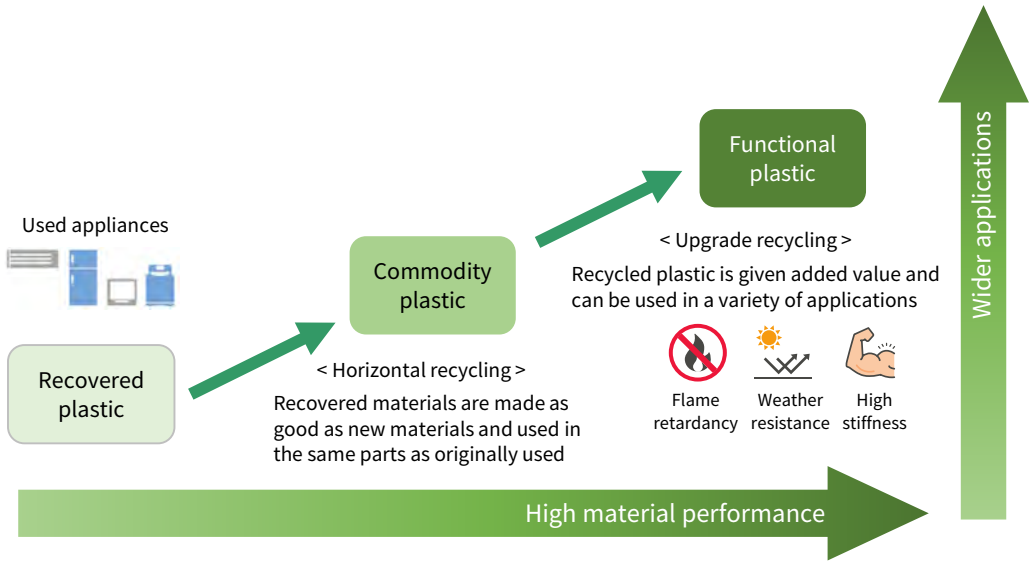
Against this background, Sharp is working on new initiatives toward creating more uses for recycled plastics, not only through horizontal recycling, in which recovered plastics are made as good as new material and used in the same parts as originally used, but also through upgrade recycling, in which the recycled plastic is given added value with flame retardancy, weather resistance, or high stiffness.

In fiscal 2019, by applying the basic technology for rendering plastic flame retardant, Sharp established recycling technology for giving well-balanced properties (flame retardancy, physical properties, moldability, etc.) to polypropylene (PP) recovered from used refrigerators, washing machines, and air conditioners to make it suitable as a material for home appliance parts. This technology has the potential to change the current situation where metals or expensive engineering plastics*4 are indispensable for making parts requiring high flame retardancy, such as those used around the power switch or heater. 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 developing technology for rendering recycled plastic durable enough to be used in home appliance parts and technology for producing such plastics with the goal of applying them to mass production very soon.

*1 Adopted by the United Nations in 2015, the SDGs are a set of 17 goals for the sustainable development of society to be achieved by 2030.
*2 Formulated on May 31, 2019 by the Japanese government, it aims to address a wide range of issues, such as restrictions on resources and waste, ocean plastic, global warming, and restrictions in Asian countries on the importing of waste. The strategy's basic principle is "3Rs + Renewable."
*3 Released on May 22, 2020 by the Japanese government, this document presents basic future directions of policies for a circular economy.
*4 Plastic with engineered characteristics for mechanical strength and heat resistance.

Used Plastic Recycling Method



Environmental Initiatives: Resource Recycling

Effectively Using Water Resources

Fiscal 2019 Objectives	Fiscal 2019 Achievements	Self-Evaluation
■ Water intensity: Improve by 20% (baseline year: fiscal 2012)	■ Water intensity: Improved by 23% (baseline year: fiscal 2012)	★★★
Priority Objectives for Fiscal 2020	■ Water intensity: Improve by 20% (baseline year: fiscal 2012)	

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

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

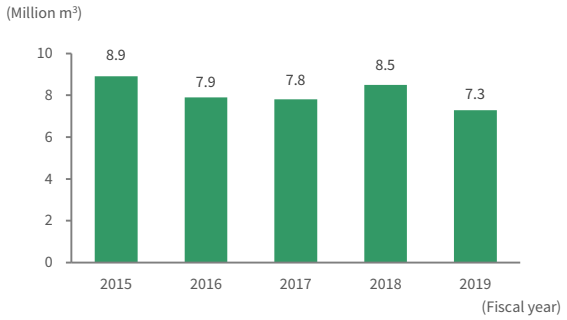
Sharp is striving to make effective use of water resources by reducing the amount of new water (i.e., water from the water supply system) it uses and by increasing the use of recycled water. The volume of new water used by the Sharp Group in fiscal 2019 decreased by 14% compared to the previous fiscal year to 7.3 million m3 due to factors such as consolidating production bases. The improvement rate of water intensity was 23%, 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*1 of at least 60%.

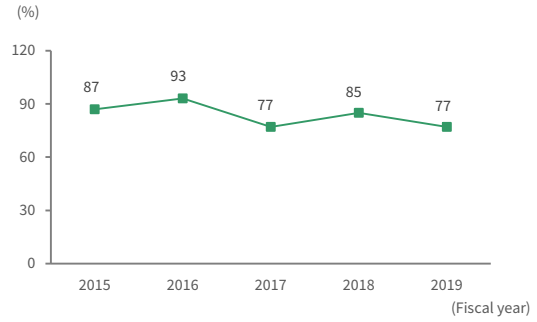
Looking ahead, Sharp will pursue further water-use efficiency and boost production efficiency in accordance with business expansion.

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

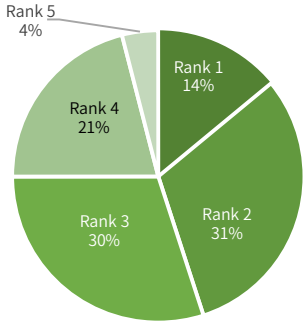
■ Volume of New Water Used



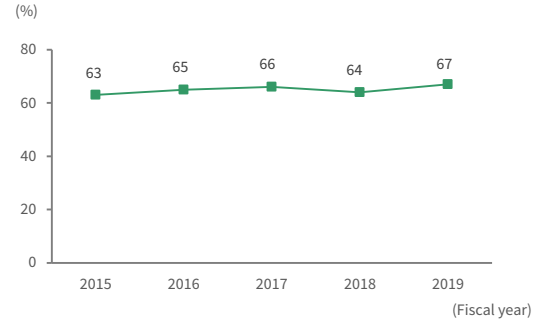
■ Water Intensity (Baseline Year: Fiscal 2012)



■ Volume of New Water Used by Water Stress Rank*2 (Fiscal 2019)



■ Water Recycling Rate



*2 Under Aqueduct, each region is assigned a water stress score. There are five levels, from rank 1 (low risk) to rank 5 (high risk).

Environmental Initiatives: Resource Recycling

Water Used and Drainage by Region (Fiscal 2019)

(m³)

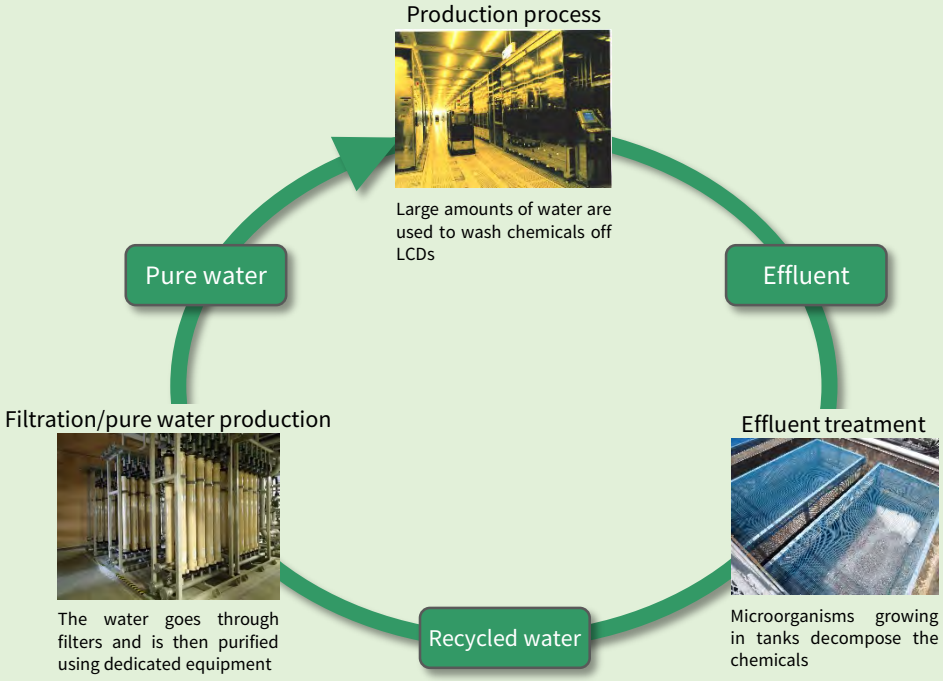
Region	Water Used					Drainage			
	Industrial-use water	Tap water	Ground Water	Water reused	Total	Sewerage	Freshwater area	Seawater area	Total
Japan	3,972,573	540,815	264,272	14,790,457	19,568,117	452,920	993,025	1,452,255	2,898,200
Asia	0	919,180	14,629	71,137	1,004,946	485,514	150,905	0	636,419
China	0	1,546,693	4,893	123,150	1,674,736	1,244,441	0	0	1,244,441
North and South America	0	7,432	0	0	7,432	7,432	0	0	7,432
Europe	0	8,266	0	0	8,266	8,016	0	0	8,016
Total	3,972,573	3,022,386	283,794	14,984,744	22,263,497	2,198,323	1,143,930	1,452,255	4,794,508

< 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



Environmental Initiatives: Safety and Security

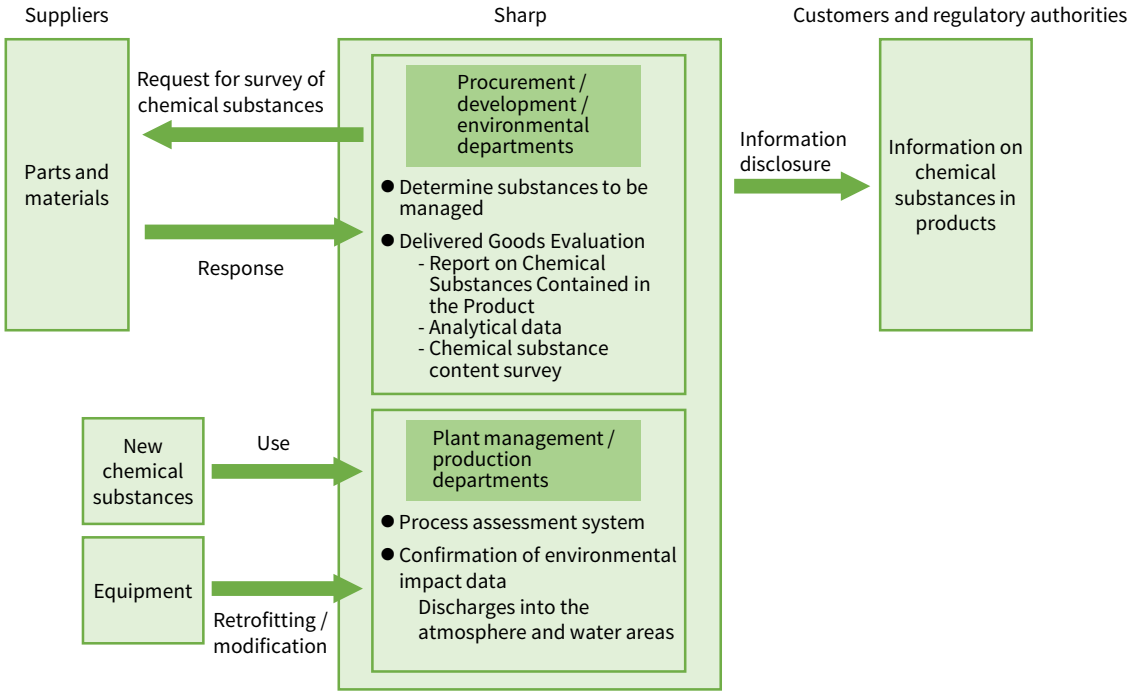
Sharp's Stance on Management of Chemical Substances

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 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
Substances banned depending on the application	Substances regarded as banned by Sharp depending on the application (excluded applications)	
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: > Standard Manual for Management of Chemical Substances Contained in Parts and Materials

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.

Related information: > Report on Chemical Substances Contained in the Product, Analysis Data

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

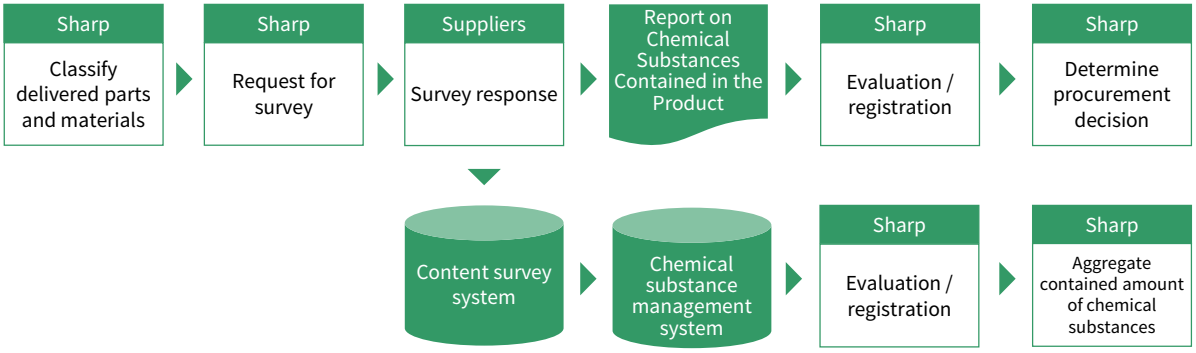
Environmental Initiatives: Safety and Security

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, there should be 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.

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



*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.

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*1 (Fiscal 2019)

Sharp monitors and reports the release and transfer of chemical substances covered by the Japanese PRTR 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 2019.

*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 2019)

(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	1,429	0	0	0	937	0	492	0
20	2-Aminoethanol	2,274,241	247	39	0	12,343	0	1,882,815	378,797
44	Indium and its compounds	12,097	0	0	0	3,266	363	8,468	0
71	Ferric chloride	53,015	0	0	0	0	0	40,411	12,604
232	N, N-dimethyl formamide	18,630	0	0	0	0	0	0	18,630
272	Copper salts (water-soluble, except complex salts)	14,792	0	0	0	14,218	574	0	0
343	Pyrocatechol (also called catechol)	1,584	0	0	0	1,584	0	0	0
374	Hydrogen fluoride and its water-soluble salts	448,282	193	0	34	337,284	0	61,337	49,434
401	1,2,4-benzenetricarboxylic 1,2-anhydride	698	0	0	0	25	673	0	0
405	Boron compounds	3,571	0	0	0	3,136	78	357	0
412	Manganese and its compounds	23,625	0	0	0	0	23,625	0	0
438	Methylnaphthalene	14,055	70	0	0	0	12,380	0	1,605
453	Molybdenum and its compounds	10,562	0	0	0	1,220	317	9,025	0
Total		2,876,581	510	39	34	374,013	38,010	2,002,905	461,070

Overseas PRTR Data (Fiscal 2019)

(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	1,935	0	0	0	19	1,288	628	0
82	Silver and its water-soluble compounds	1,513	0	0	0	132	1,381	0	0
104	Chlorodifluoromethane	2,436	8	0	0	0	2,428	0	0
291	1,3,5-tris (2,3-epoxypropyl)-1,3,5-triazine-2,4,6 (1H,3H,5H)-trione	2,330	0	0	0	23	1,551	756	0
300	Toluene	3,675	3,675	0	0	0	0	0	0
355	Bis (2-ethylhexyl) phthalate	2,400	0	0	0	0	0	2,400	0
392	N-hexane	17,950	17,950	0	0	0	0	0	0
413	Phthalic anhydride	1,646	0	0	0	16	1,096	534	0
448	Methylenebis(4,1-phenylene) diisocyanate	2,898,890	0	0	0	22,140	2,876,750	0	0
Total		2,932,775	21,633	0	0	22,330	2,884,494	4,318	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.

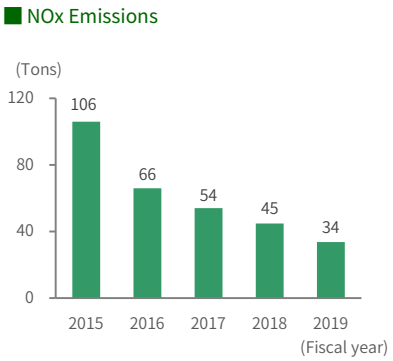
< Case Study >

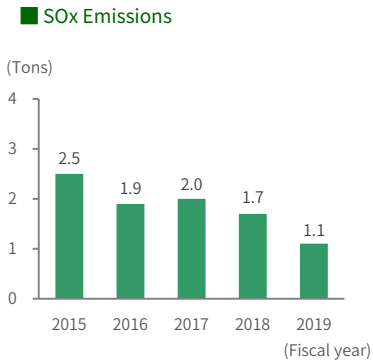
Analyzing Plant Wastewater Samples (Fukuyama Plant)

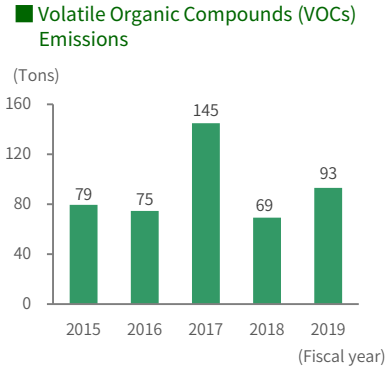
Sharp's Fukuyama Plant (Fukuyama, Hiroshima Prefecture) collects and analyzes plant wastewater in collaboration with local residents and Fukuyama city officials as part of its risk communication activities.
The collected wastewater undergoes individual analyses by the three parties. The results are then shared and used for an exchange of views.
This also provides Sharp the opportunity to foster good relations with all relevant parties.

Wastewater sampling and analyses by three parties

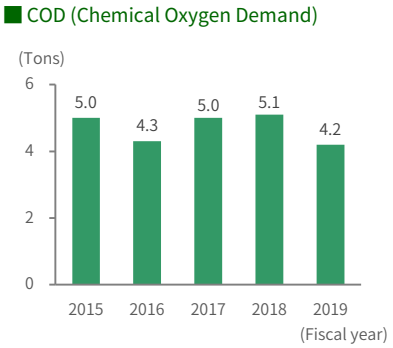
Atmospheric Emissions in Japan

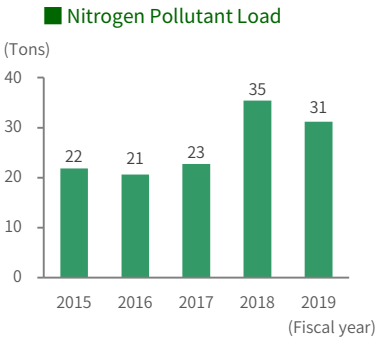


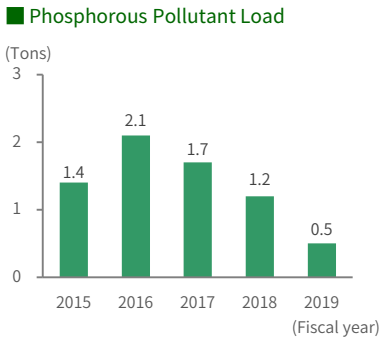




Emissions into Water Areas in Japan







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.

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 Unit 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 Unit 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 in-house companies and business units, 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 in-house companies and business units, 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.

Basic Environmental Philosophy

Creating an Environmentally Conscious Company with Sincerity and Creativity

The Sharp Group Charter of Corporate Behavior (excerpt)

Contribution to Conservation of the Global Environment

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.

The Sharp Code of Conduct (excerpt)

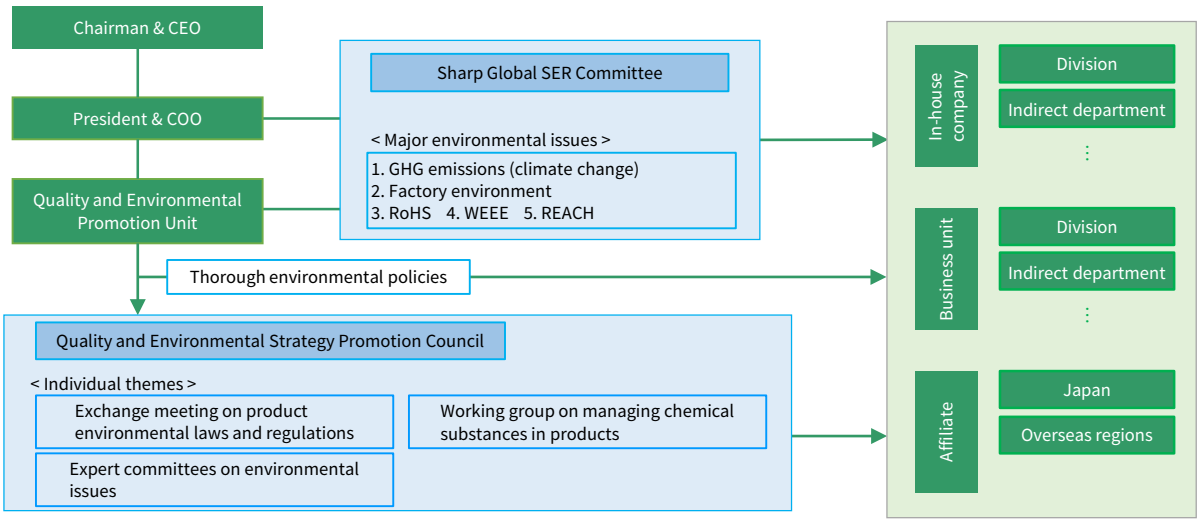
Contribution to Conservation of the Global Environment

1. To Conserve the Environment
2. To Develop Environmentally Conscious Products and Services, and Conduct Our Business Operations in an Environmentally Conscious Manner

* See page 14.

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

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.

Classroom training on environmental laws and regulations

In fiscal 2019, Sharp continued basic e-learning courses called environmental awareness training, which allow all employees to acquire a wide range of environmental knowledge. We also offered an introductory online training course on environmental laws and regulations, which was mandatory to third-year employees.

Classroom training was also conducted, including a specialized training course on the practical application of environmental laws and regulations and a CMS* auditor training course. 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.

* Chemical Management of Supplier

■ Number of Participants in Environmental Training (Fiscal 2019)

Category	Course	Number of participants
Basic training (2 courses)	Environmental awareness (environmental problems), environmental awareness (environmental protection activities)	34
Specialized training (7 courses)	Product environmental laws and regulations (introductory), product environmental laws and regulations (practical application), CMS auditor training, others	499

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. 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

Legal Violations, Accidents

In fiscal 2019, 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

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.
In addition, compliance systems are strengthened on an ongoing basis in response to changing product environmental laws and regulations in each country. In fiscal 2019, Sharp's sales and manufacturing bases in ASEAN countries, Europe, and the Middle East collaborated to form a new organizational structure to deal with such laws and regulations.

Green Product Concepts

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

Developing Super Green Products

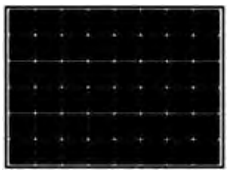
Since fiscal 2004, Sharp has been certifying products that offer a particularly high level of environmental performance as "Super Green Products (SGP)". In fiscal 2019, sales of those products reached 170.9 billion yen, with SGP sales accounting for 34% of all GP sales in Japan.
In fiscal 2016, Sharp 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 2019

Plasmacluster washing machine/dryer
ES-PW8D-N

Smartphone
SH-M13 (AQUOS zero2)

Humidifying air purifier
KI-LX75-W


High-efficiency monocrystalline solar module
NQ-256AF

Environmental Initiatives: Environmental Management

< Case Study > SGP Developer Interviews

Sharp has the “Going Green Everywhere” website, which features interviews with product planning staff, engineers, designers, salespersons, and other staff involved in SGP 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 2019, the site featured a front-loading washer/dryer and the AQUOS sense3 smartphone.

Development team of the front-loading washer/dryer

Development team of the AQUOS sense3 smartphone

Environmental Initiatives: Environmental Management

Developing Green Devices

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.

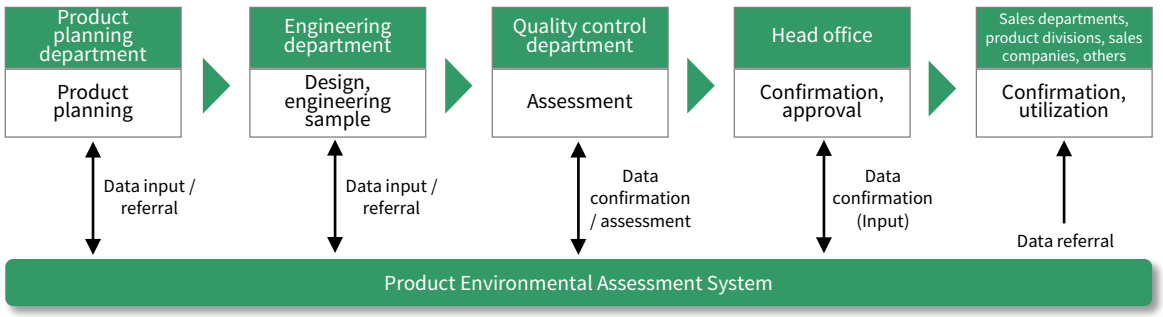
Green Device Concepts

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

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



Environmental Initiatives: Environmental Management

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.* To strengthen governance and reduce risks, our survey in fiscal 2019 was focused on interviews at sites that have just joined the Sharp Group through M&A or other partnerships.

A yellow line drawn to visualize the allowable stacking height of containers in a hazardous material storage area

* See page 17.

Examples of latent risks identified through site interviews and remedied

- Insufficient capacity of the drain pan in a hazardous material storage area (Chinese production base)
- Unclear stacking height limit for containers in a hazardous material storage area (ASEAN production base)
- Incomplete calculation of data on the amount of PRTR-listed substances used (ASEAN production base)
- Incomplete calculation of data on fuel use (ASEAN production base)

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.

Environmental Initiatives: Biodiversity Protection

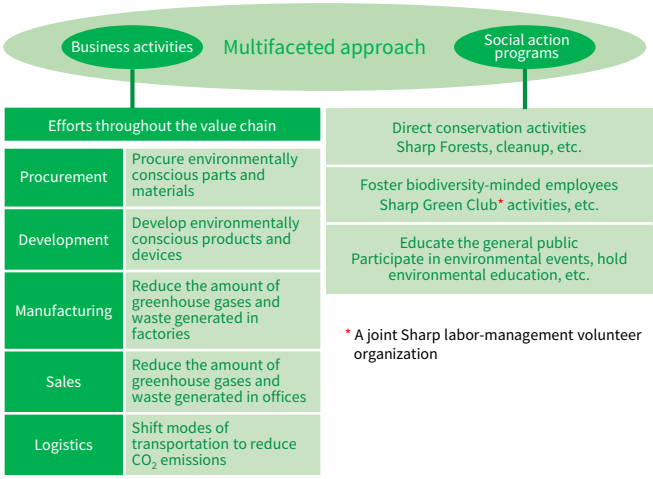
Protecting Biodiversity

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



< Case Study > Conserving Bamboo Lilies

The Tenri Plant (Tenri, Nara Prefecture) is committed to preserving biodiversity on ancient burial mounds located within its grounds. Bamboo lilies, a rare wild plant species, naturally grow on these mounds. This species has become scarce in Japanese fields and mountains due to land development and overharvesting. To nurture and conserve these lilies, our employees maintain the area by periodically cutting down withered bamboos and weeding the grounds.

Bamboo lily, a rare wild plant

< Case Study > Planting Mangroves

In Indonesia, Sharp's local production base SSI joined mangrove planting activities conducted under the slogan of "Plant Mangroves to Save Our Coast." SSI employees planted mangroves with people from 37 other companies operating in Karawang and the Indonesian environmental and sanitation bureau.

Planting mangroves on the seashore

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.

Material Balance in Business Activities (Fiscal 2019)

(The boundary of environmental performance data and calculation standards for each item are listed on pages 55 and 56.)

Input		Output	
Product development			
Energy consumed	16,719 TJ*1	GHG emissions	974 thousand tons CO_2
Electricity	1,370 million kWh	CO_2	880 thousand tons CO_2
(Electricity purchased)	1,124 million kWh	Gases other than CO_2 (converted into amounts of CO_2)	94 thousand tons CO_2
(Alternative energy*2)	12 million kWh	(HFC)	2 thousand tons CO_2
City gas	62 million m^3	(PFC)	55 thousand tons CO_2
LPG	5,387 tons	(SF_6)	31 thousand tons CO_2
Heavy oil, kerosene, gas oil, gasoline	1,541 kl	(NF_3)	7 thousand tons CO_2
Hot water, cold water, steam	173 TJ	Drainage	4.8 million m^3
PFCs purchased	1,360 tons	(Public water areas)	2.6 million m^3
		(Sewerage)	2.2 million m^3
Product manufacture			
Waster resources consumed	22.3 million m^3	Chemical substances released and transferred (PRTR-listed)	419 tons
New water	7.3 million m^3	(VOCs)	93 tons
(Industrial-use water)	4.0 million m^3	Atmosphere*5 NOx emissions	34 tons
(Tap water)	3.0 million m^3	SOx emissions	1 tons
(Groundwater)	0.3 million m^3	Water areas*5 COD (chemical oxygen demand)	4 tons
Water reused	15.0 million m^3	Nitrogen pollutant load	31 tons
		Phosphorous pollutant load	1 tons
Chemical substances handled (PRTR-listed)	5,809 tons	Product shipments*7	606 thousand tons
(VOCs)	3,929 tons		
Materials consumed	674 thousand tons*3	Waste, etc.	68 thousand tons
(Recycled plastic*4)	1 thousand tons	(Final landfill disposal)	0.4 thousand tons
Logistics			
Energy consumed (vehicle fuel)*5	258 TJ	CO_2 emissions*5 CO_2	18 thousand tons
Product use			
Energy consumed (electricity)*6	44,747 TJ (4,488 million kWh)	CO_2 emissions*6 CO_2	2,857 thousand tons
Recycle		**Disposal, recycling**	
Amount recycled*5		Disposal after recycling*5	9 thousand tons
Home appliances (4 kinds)	63 thousand tons		
Copiers/MFPs	2.7 thousand tons		
PCs	10 tons		
Amount of closed-loop material recycling of plastic	1 thousand tons		

Recycled into new products, reused as new parts, closed-loop material recycling, etc.

Other use

*1 TJ (terajoule) = 10^{12} Joules *2 Amount of solar power generated; amount of green power certificates purchased.
*3 Total weight of product shipments and waste, etc. (estimate). *4 Amount recycled through closed-loop plastic material recycling technology.
*5 In Japan. *6 Annual energy used and amount of CO_2 emitted by products in the 13 major categories sold in the reporting year (estimate).
*7 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

Boundary of Environmental Performance Data, Calculation Standards for Environmental Performance Indicators

The environmental performance data are calculated based on the following period, coverage, and calculation standards.

< Period Covered, Coverage >

Period covered: Fiscal 2019 (April 2019 to March 2020)

Coverage: Sharp Corporation production sites and production bases in Japan and overseas

Calculation Standards for Environmental Performance Indicators

Environmental Performance Indicators			Calculation Method
Input	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
		Water resources consumed	Consumption and recycled use of industrial-use water, tapwater, and groundwater
		PFCs purchased	HFCs, PFCs, sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3) purchased annually
		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*1 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*1 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).
Recycle	Disposal, recycling	Home appliances (4 kinds)*2	Amount of used home appliances (4 kinds) recycled
		Copiers/MFPs	Amount of recycled copiers and MFPs
		PCs	Amount of recycled PCs
		Closed-loop plastic material recycling	Amount of recycled plastic used, which was produced through closed-loop material recycling

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

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

Environmental Initiatives: Overview of Environmental Impact

Environmental Performance Indicators			Calculation Method
Output	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 GHG Protocol Calculation Tools (GHG emissions from purchased electricity) • 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*1 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*1 sold in the reporting year, based on their energy consumption (estimate)
	Disposal, recycling	Disposal after recycling	[Weight of 4 kinds of home appliances*2, PCs, and copiers/MFPs collected] – [Weight recycled into new products or materials, or reused]

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

*2 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 2020)

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

94.7%

Percentage of Customers Giving High Marks to Service Personnel

15 LIFE ON LAND

14,579 person

Total number of participants in environmental conservation activities in fiscal 2019

> Fair and Impartial Procurement Activities ..... P. 58
> Quality ..... P. 62
> Customer Satisfaction ..... P. 70
> Communication with Shareholders ..... P. 78
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Social Initiatives: Fair and Impartial Procurement Activities

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.

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

Related information: > Basic Purchasing Principles
> CSR Procurement

Social Initiatives: Fair and Impartial Procurement Activities

Promoting CSR across the Entire Supply Chain

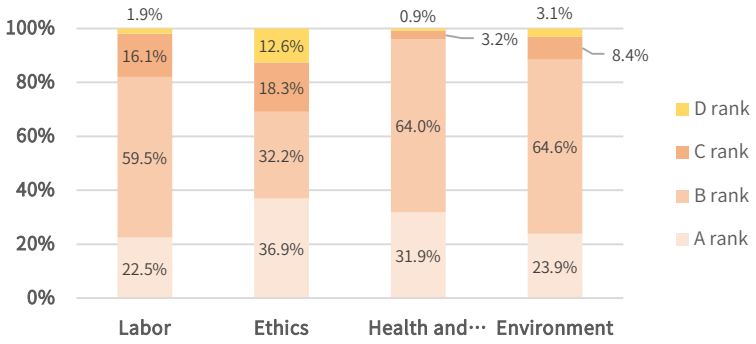
Fiscal 2019 Objectives	Fiscal 2019 Achievements	Self-evaluation
■Continue CSR/green procurement survey in Japan; expand supplier management system	■ Finished conducting CSR/green procurement survey in Japan ■ Completed rollout and expansion of supplier management system at production/procurement bases in China and ASEAN countries (7 sites)	★★
Priority Objectives for Fiscal 2020	■Continue CSR/green procurement survey in Japan; expand supplier management system to new factories	

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

Promoting CSR Awareness and Conducting Risk Assessment at Suppliers

To help its suppliers gain an understanding of Sharp's CSR philosophy and to promote CSR-related measures among suppliers, in fiscal 2007, Sharp formulated and distributed its own Sharp Supply-Chain CSR Deployment Guidebook. The Basic Parts 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*1 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.
In fiscal 2019, Japan-based business units carried out the CSR/green procurement survey at approximately 1,400 supplier plants using a survey format conforming to the RBA self-assessment questionnaire.
Following the survey, Sharp gave suppliers their survey scorecards and asked those with low scores to submit improvement plans. Through such communication with suppliers, Sharp strives to step up CSR efforts throughout the entire supply chain.

■ Assessment Distribution of CSR/Green Procurement Survey (Japan)



■ Number of Factories Assessed for CSR (cumulative total from fiscal 2017)

Country/region	Number of factories
Japan	1,438
South Korea	37
China	157
Hong Kong	39
Thailand	263
Indonesia	233
Malaysia	329
Philippines	72
Vietnam	4
Total	2,572

In China and ASEAN countries, regarding two types of supplier management systems Sharp began implementing starting in fiscal 2017, in 2019 rollout and expansion of these systems was carried out at seven production/procurement bases*2, and a cumulative total of over 2,500 factories in Japan and other countries have been asked to conduct surveys.
In fiscal 2020, Sharp will continue to carry out the CSR/green procurement survey in Japan and plans to expand the supplier management system overseas as well to new factories and other bases that do not yet have it.
Going forward, Sharp will continue to further promote CSR initiatives throughout the entire global supply chain.

*1 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.

*2 The seven sites and affiliates are: (1) SSEC (China), (2) Lianyungang Kantatsu Fine Technology Co., Ltd. (China), (3) Kanto Tatsumi Electronics (Pinghu) Co., Ltd. (China), (4) Saigon Stec Co., Ltd. (Vietnam), (5) SHK (Hong Kong), (6) SEM (Malaysia), and (7) SEM Korea (South Korea).

Social Initiatives: Fair and Impartial Procurement Activities

Responsible Mineral Procurement Initiatives

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.

Sharp respects the spirit of the Dodd-Frank Act, which came into effect in July 2010. It makes it a basic policy to not procure or use conflict minerals, and it takes appropriate action in line with the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

Basic Policy on Conflict Minerals

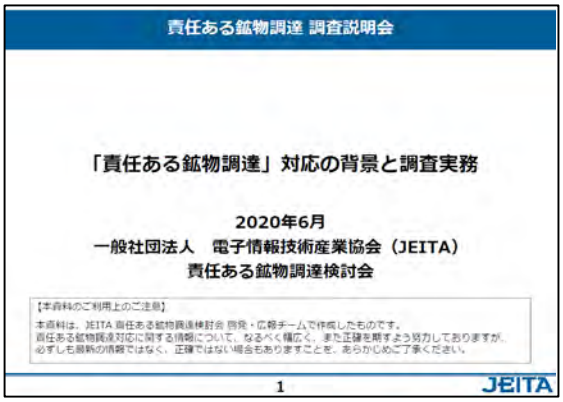
For the purpose of not being complicit in the human rights abuses and environmental disruptions, etc. associated with conflicts in the Democratic Republic of the Congo, any raw materials, parts, products, etc. which include any conflict minerals mined illegally in the Democratic Republic of the Congo or in an adjoining country shall neither be procured nor used. In addition, appropriate measures, etc. to that effect shall be taken.

Since fiscal 2012, Sharp has been participating in the Responsible Minerals Trade Working Group of the Japan Electronics and Information Technology Industries Association (JEITA). In this capacity, Sharp has been collaborating with the RMI*1 and with the Japanese automotive industry to conduct conflict mineral surveys, based on industry standard reporting templates (CMRT*2 and CRT*3). Sharp uses the results of these surveys to respond appropriately to changing international trends in mineral procurement.

The awareness and PR team of JEITA's Responsible Minerals Trade Working Group holds ongoing responsible minerals procurement orientation meetings. Sharp contributes to this industry effort by making materials for the orientation meetings.

In fiscal 2020, Sharp boosted suppliers' understanding by telling them about videos on the JEITA website that explain international trends in responsible minerals procurement and how to fill in forms such as the CMRT and CRT. It also called on suppliers to participate in procurement surveys.

Sharp will continue to enhance the precision of surveys through ongoing improvement of its own survey system. It will also expand and improve due diligence efforts in line with the OECD guidance, while taking into consideration new trends in mineral procurement so that it can procure minerals in a responsible manner.



Materials for JEITA's responsible minerals sourcing inquiry briefings

*1 RMI: Responsible Minerals Initiative. JEITA is a partner association.
*2 CMRT (Conflict Minerals Reporting Template) is a free, standardized reporting template developed by the RMI.
*3 CRT (Cobalt Reporting Template) is a free, standardized reporting template developed by the RMI.

Related information: > Responsible Minerals Procurement

Social Initiatives: Fair and Impartial Procurement Activities

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: Quality

Ensuring Quality and Safety

Fiscal 2019 Objectives	Fiscal 2019 Achievements	Self-evaluation
■ Step up efforts across the entire company in order to realize products with the quality and environmental consciousness worthy of the Sharp brand	■ Aligned internal rules and standards with international standards and worked to receive higher external evaluations based on them, resulting in benefits such as the establishment of risk assessment practices in compliance with international standards	★★
Priority Objectives for Fiscal 2020	■ Expand the scope of quality beyond long-term reliability (being less breakable) to include the ease of use, grade, and other needs of customers, and work toward developing products considering these features	

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

Basic Stance and Vision on Quality

To gain customer trust and improve customer satisfaction, the Sharp Group meets customer needs and demands and offers high-quality products and services that are safe, reliable, and environmentally friendly.

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

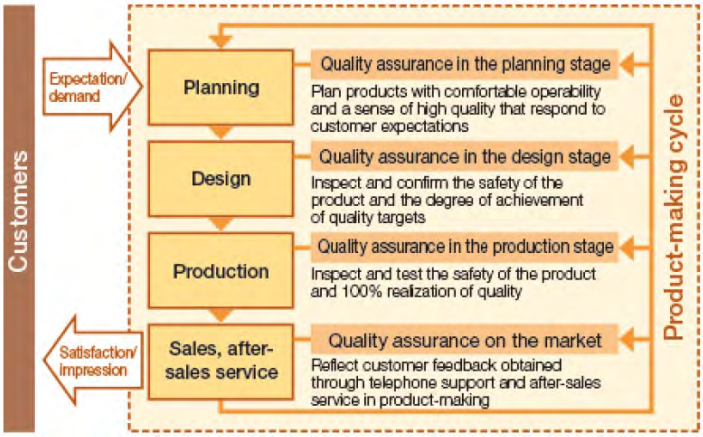
Quality First in Heart and mind

Quality Assurance System

Sharp specifies the quality levels it provides to customers, thus ensuring that all employees in product planning, design, production, sales, and after-sales service aim for the same targets in their ongoing pursuit of quality improvement.

All Sharp sites in Japan and abroad and major production sites of consolidated subsidiaries (29 out of 30 sites) have obtained the international ISO 9001 certification of quality management.

Sharp has also established the SHARP Corporation Standards—the Sharp Group's proprietary quality assurance standards. And they conduct various quality assurance activities at each stage of the product-making process, from planning, design, and manufacture to testing/evaluation and marketing.



Social Initiatives: 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.

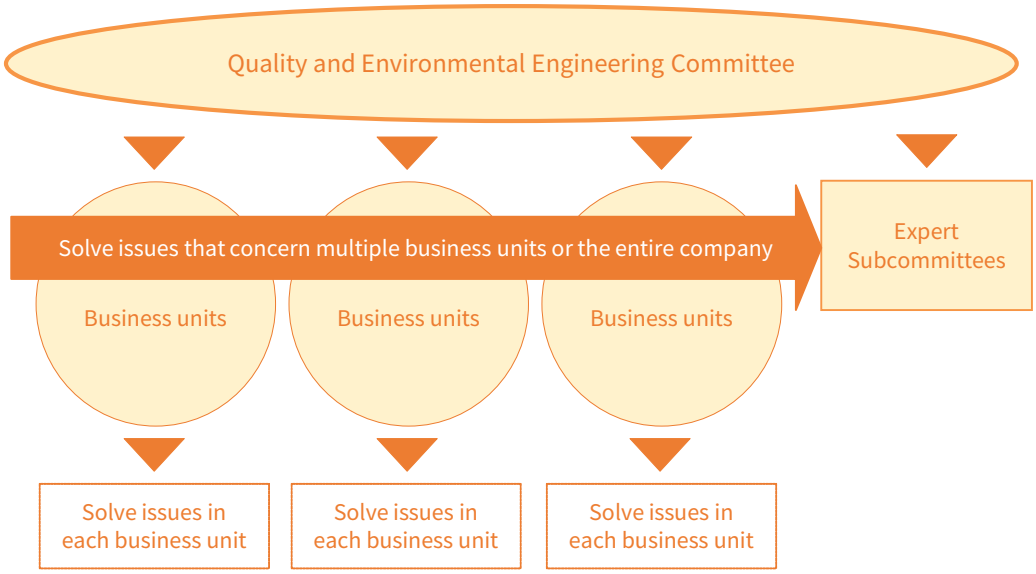
(2) Pursue convenience and comfort from ease of use.

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

Efforts to Improve Quality

The Sharp Group has established the Quality and Environmental Engineering Committee as a way to advance quality and environmental technologies. With members representing all business units at Sharp, the committee is aimed at sharing updated information related to quality and environmental issues arising in new products, and leading company-wide research and improvement efforts among business groups in order to assure quality in new technology areas such as the 8K+5G ecosystem, AIoT*, and robotics, as well as in face mask production.

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.



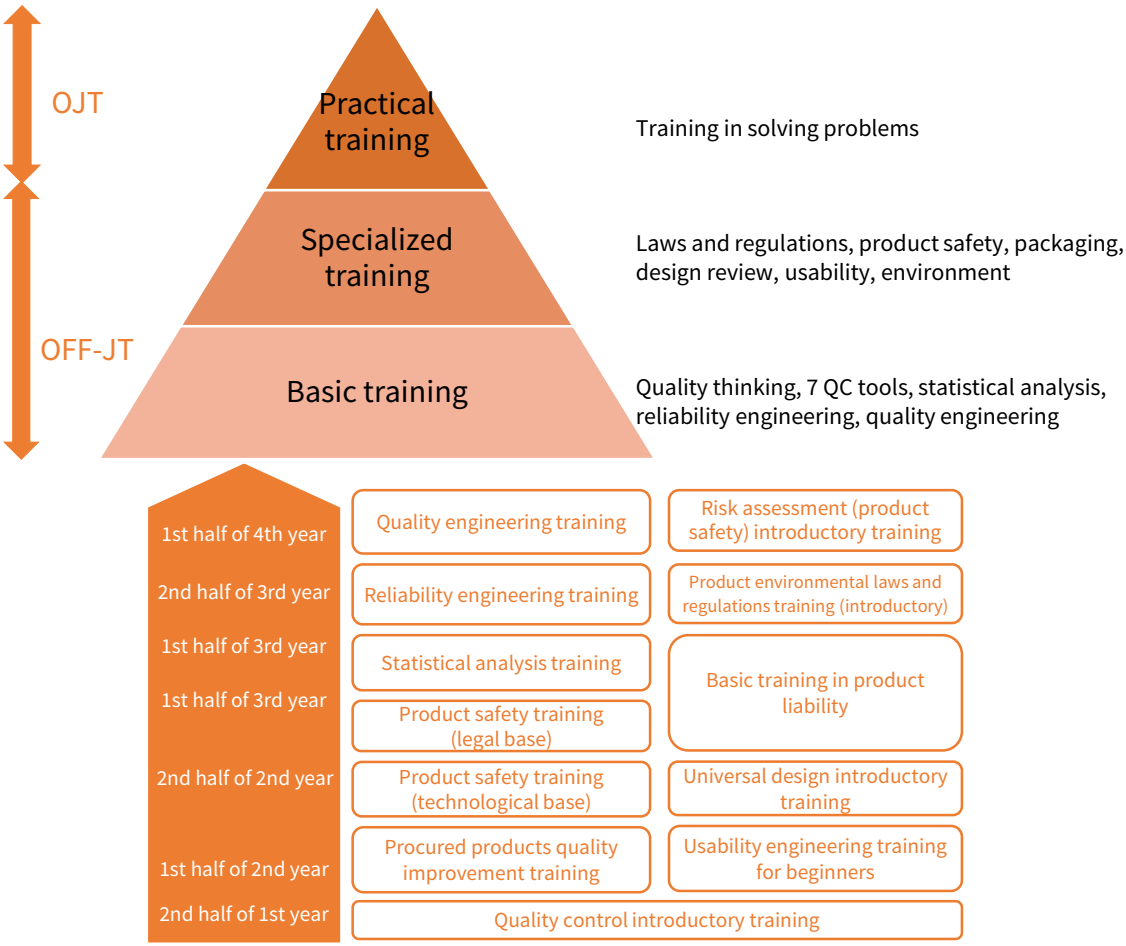
* AIoT is a word coined by Sharp, combining the words AI (artificial intelligence) and IoT (Internet of things).
"AIoT" is registered trademark of Sharp Corporation.

Social Initiatives: Quality

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.



System for practical QC training

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 2019, there were 34 courses in quality training, with a total of 12,197 participants

Training form	No. of courses	No. of participants
E-learning	26	12,071
Group training	8	126
Total	34	12,197

Fiscal 2019 training courses and number of participants

Social Initiatives: Quality

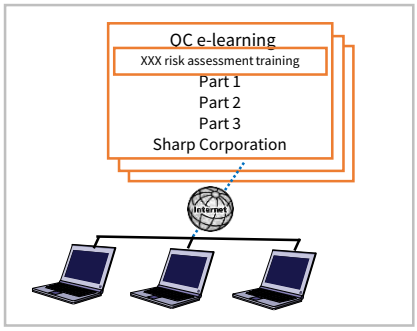
Ensuring Product Safety

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, abiding not just by laws, regulations, and official standards of countries around the world, but also by its own safety standards that consider risk assessment to raise levels of safety. To ensure complete and high levels of safety even in cases where unforeseen defects arise, these in-house safety standards stipulate items like fireproof construction and testing for abnormal movement. 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.



Sharp's own newly developed e-learning material

In fiscal 2020, Sharp is starting to use new e-learning material developed exclusively for the company to expand the scope of risk assessment related to product safety. Sharp will enhance 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.

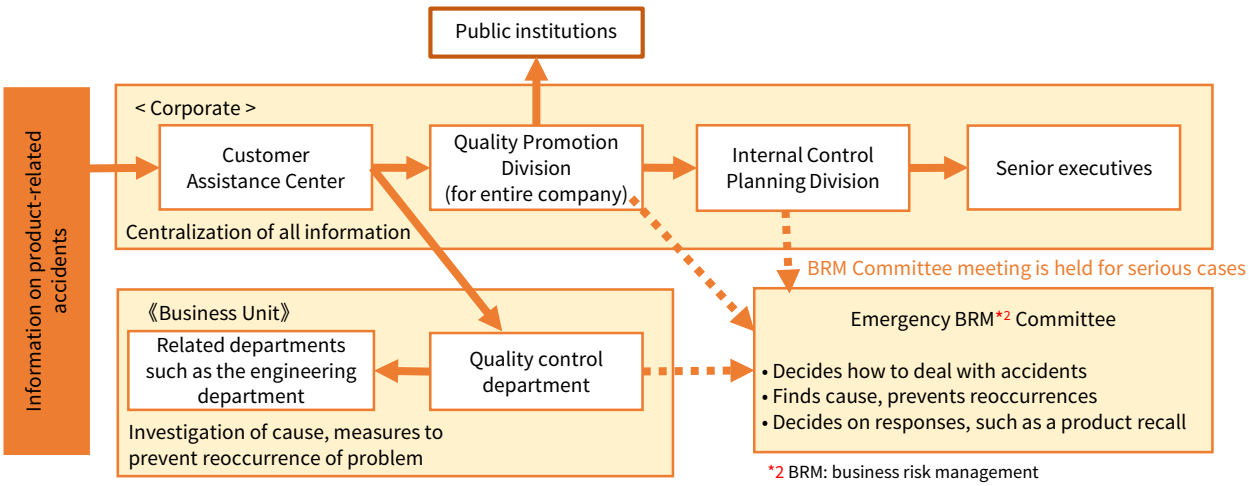
Information Disclosure and Response When Problems Occur

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 15 such cases. *1

■Flow for dealing with product-related accidents

*1 Number in Fiscal 2019



*2 BRM: business risk management

Social Initiatives: Quality

Product Security

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 that have been considered adequate are becoming ineffective ever more quickly.

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

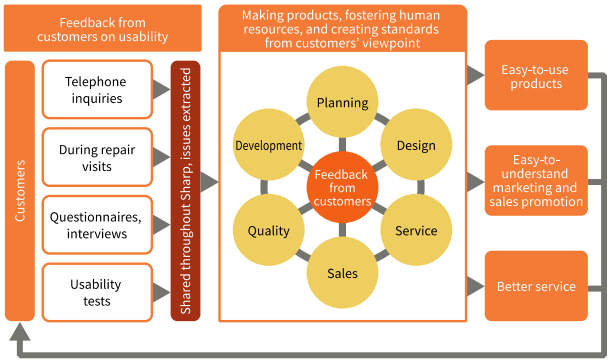
Practicing User-Centered Design

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 all 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

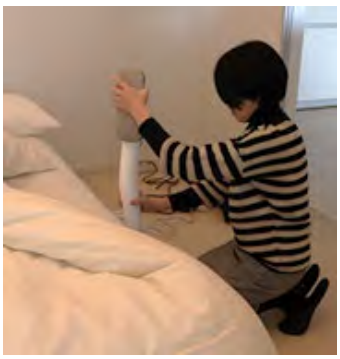
In user-centered design (UCD), Sharp collects customer feedback on ease of use through various methods and applies it to product design.

Sharp collects information on how customers interact with products via telephone inquiries to the Customer Assistance Center, repair visits, questionnaires, interviews, and usability tests (observing how customers actually use Sharp products). This information is shared among the relevant departments, while protecting the anonymity of the customer. The feedback is used to understand, from a user's point of view, challenges related to planning, design, development, quality, sales, service, and other areas.



Airest L-P Series air conditioner

Prototype usability test for things like ease of maintenance



UD-CF1 futon dryer

Usability test in a real-world environment

<Voice> Comments from Participants in Usability Tests

- I usually maintain appliances without much thinking. It was a meaningful experience to join the test because it gave me a chance to think from the user's perspective. (Sharp staff member in his 50s)
- In addition to having found some usability issues, I have realized that some users operate the product in ways I have never imagined. I'm sure that the outcomes of the test will lead us to better improvements. (Sharp product planning staff member)

Social Initiatives: Quality

Efforts in Universal Design

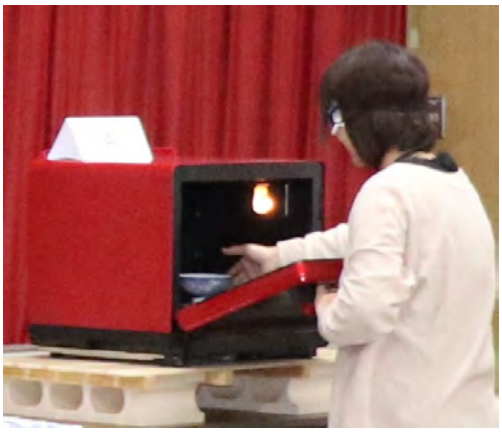
In line with the aforementioned UCD Basic Policy, Sharp also takes into consideration universal design (UD). Universal design is a philosophy for building products, information, and environments so that they can be used by many more customers—regardless of things like nationality, age, gender, or disability. 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 2020, 18 models of Sharp home appliance products support the UD considerations listed on the website of the Association for Electric Home Appliances in Japan.

Digital MFP usability test assuming a person in a wheelchair

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 universal design knowledge, universal design 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.

Vision-impaired training (walking)



Vision-impaired training (using a product)

Elderly experience training

Social Initiatives: Quality

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.

Sharp Imaging and Information Corporation of America
Accessibility Conformance Report
VPAT® Version 2.2
Name of Product/Version:
MX-3071, MX-3571, MX-4071, MX-5071, MX-6071, MX-2651, MX-3051, MX-3551, MX-4051, MX-5051, MX-6051
Product Description: Color Multifunction Document System
Date: August, 2019
Contact information: VPAT_Support_Team@sharpusa.com
Notes: Covers MFP, Applications and Drivers
Evaluation Methods Used: Hardware, Application and Driver Testing
Applicable Standards/Guidelines: Section 508 standards
Standard/Guideline | Included in Report

Example of VPAT for a digital MFP

< Case Study >

Sharp Corporation Wins Overall Customer Satisfaction Top Prize, 2020 IID Awards (Japan)

Sharp's Brain Series electronic dictionary was given the Overall Customer Satisfaction Top Prize in the 2020 IID Awards*3 in Japan. This was the ninth 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 trophies received for nine consecutive years

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 2019 Objectives	Fiscal 2019 Achievements	Self-Evaluation
■Increase customer satisfaction by improving service quality	■Improved service quality By improving employees' CS awareness and repair skills: ・Customer satisfaction rate was 82.9% ・Repairs were completed on the first visit 73.9% of the time	★★
Priority Objectives for Fiscal 2020	■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.

Related information: > Sharp Group Charter of Corporate Behavior

CS Slogan

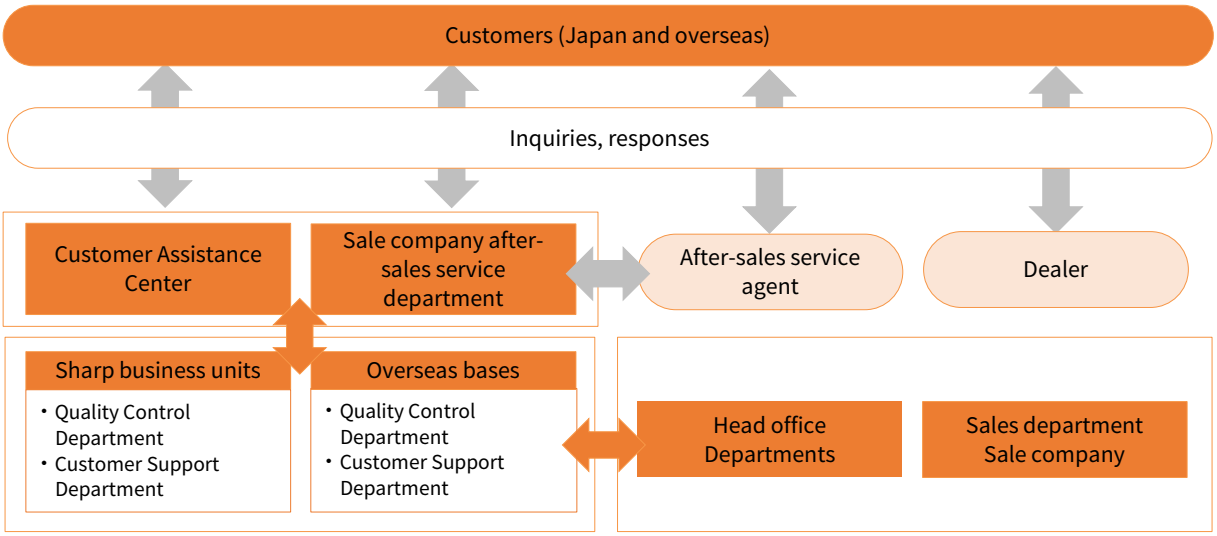
Building a relationship of trust through quality and service so that customers choose Sharp now, next time, and every time.

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

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: “Seeing customers smile makes us happy.” To this end, service engineers, who work out of 91 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.

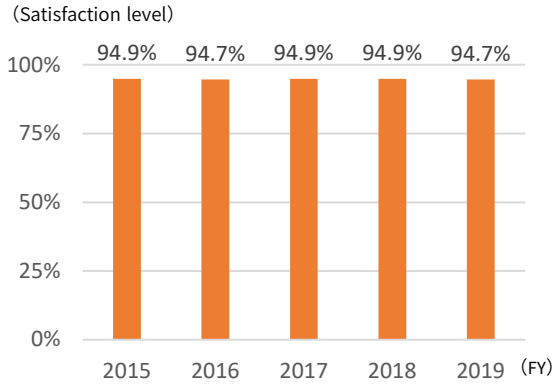
*1 As of June 2020
*2 Business days vary from region to region

Social Initiatives: Customer Satisfaction

Customer Questionnaire (in Japan)

In Japan, all customers who are visited by service engineers are given a postcard questionnaire on which they can write their opinions on the entire service process, from initial inquiry and appointment to product repair.
To make it easier for customers to respond to surveys, the questionnaire has been available on the Sharp website since fiscal 2017. We receive more than 150,000 customer opinions annually via postcards or the website.
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



<Voice> Feedback on Our Anti-Covid-19 Measures from Japanese Customers: Delivering Service While Easing Customers' Concerns

◎Customer feedback to Tokyo Service Center (refrigerator)

I felt unsure when I made an inquiry, but the problem was quickly solved with their support. I'm very satisfied. People who came for the repair were kind, although I was concerned about Covid-19 . I was relieved to see them wearing masks, of course, and disinfecting their hands with alcohol before starting work. Thank you very much!

◎Customer feedback to Shonan Service Station (washing machine)

I think Sharp products are easy to use and excellent in function and performance. Your staff responded nicely and did a thorough job of after-sales service. As we were concerned about the coronavirus, it was reassuring that the service person wore rubber gloves and a mask during the work.

◎Customer feedback to Yokohama Service Center (LCD TV)

It was during the stay-at-home period, and my car happened to be unavailable. So I'm very glad you sent someone to our home. I really liked the way the service person was diligent about disinfecting their hands and things during work.

Social Initiatives: Customer Satisfaction

Aiming for Customer-Oriented Services

＜Customer Assistance Center＞

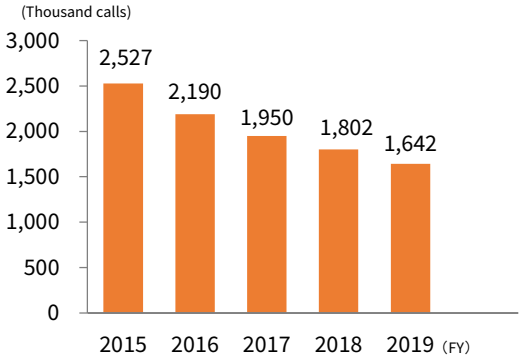
At the Customer Assistance Center, which responds to a wide range of customer inquiries concerning Sharp products, Sharp is constantly striving to be customer-oriented in its response.

Now that smartphones are widely used, a growing number of customers visit and check our customer support website before making a phone call to inquire. We are enhancing the troubleshooting information available on the website to help customers solve their problems on their own any time they need to.

The customer support website offers, in addition to FAQ, information on separately sold options, instructional videos for users, failure diagnostic tools, and online service booking forms. A chatbot and the LINE communication app are also used to automatically provide answers to customer inquiries.

Sharp continues to pursue customer satisfaction by responding to diversifying customer needs and improving access to support services.

Number of Calls Received from Customers in Japan



＜ Reliable Operation of Customer Support＞

Delivering customer support services with constant reliability is becoming increasingly challenging for unexpected factors such as more frequent natural disasters, typically torrential rains, and the current Covid-19 pandemic.

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.

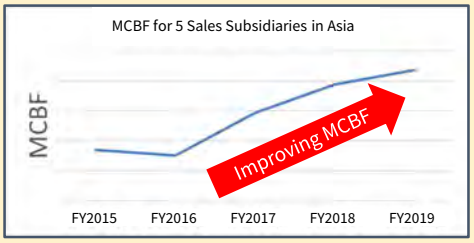
Social Initiatives: Customer Satisfaction

Increasing Service Capabilities (in Asia)

<Case Study> Fewer Service Calls As a Result of Improved Maintenance Quality and Efficiency

Digital multifunction printers (MFPs) are a flagship product of Sharp's Business Solutions Business Unit. These machines require periodic maintenance to retain image quality and performance. However, overdoing it will result in an increase in service costs and lower maintenance quality, for example, in the form of incomplete cleaning by overburdened service engineers. By contrast, insufficient maintenance service can lead to a decline in image quality and performance and consequently to more service calls and less satisfied customers. Balance is the key to successful maintenance.

In Asia, Sharp's local service managers are responsible for reviewing service records to retrieve and analyze individual customers' product usage and the frequency and purpose of service calls they made. The findings are used to optimize the maintenance schedule and reduce service calls.



These efforts have led to a successful improvement in the MCBF*, as shown in the graph to the right, as well as to enhanced customer satisfaction.

Sharp will aggressively increase its servicing skills and service management capabilities to better satisfy customers and expand MFP sales.

* MCBF stands for Mean Cycles Between Failure, or Mean Copies Between Failure in the case of MFPs. It is calculated by dividing the total number of prints made by the number of service calls made. Providing better servicing or maintenance will reduce the number of service calls and increase the number of prints, which will then improve the MCBF and customer satisfaction.

<Case Study> Service on the Go (Mobile Service) to Reach Isolated Islands of Indonesia

Indonesia consists of over 13,000 islands of various sizes. To reach the far corners of this large country, including isolated islands, Sharp has built a service network of more than 400 sites, which is the industry's widest in Indonesia. In 2011 Sharp introduced a mobile service truck, dubbed SMSS (Sharp Mobile Service Station), to extend its reach even farther. The SMSS travels to areas distant from any of the Sharp service bases to offer repair services. In 2019 the SMSS responded to about 1,000 service requests. The truck also plays other varying roles, including displaying Sharp products at sales events and serving as the SMLS (Sharp Mobile Learning Station) for CSR activities. In the latter, the vehicle carries books to support local children's learning.

SMSS truck

Repair services at SMSS

SMLS

Social Initiatives: Communicating with Shareholders and Investors

Communicating with Shareholders and Investors

Fiscal 2019 Objectives	Fiscal 2019 Achievements	Self-Evaluation
■Step up the provision of information through IR events such as business policy briefings	■ Strengthened communication with shareholders and investors in Japan and overseas through the continued engagement of senior executives in holding business policy briefings, attending investor conferences, and holding management briefings for shareholders	★★
Priority Objectives for Fiscal 2020	■ Strengthen communication with shareholders and investors through IR events such as management policy briefings	

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.

Related information: > IR disclosure policy

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 fiscal 2019, we paid an annual dividend per common share of 18 yen. To boost the quality of equity, we also acquired and cancelled the entire 108,000 shares of Class A stock , which, among other things, posed a risk of dilution and had preferred dividends.

Communicating with Investors

In fiscal 2019, besides one-on-one meetings with institutional investors and analysts, Sharp held business policy briefings and quarterly financial results briefings. Sharp senior executives took part whenever possible in conferences organized by securities companies in Japan and overseas, where they explained and answered questions on financial results, management policy, and business strategy. Sharp will continue to use IR activities to help a wide range of investors better understand Sharp's management situation and business policy, and our senior executives are poised to be more involved in these activities. 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 holds ordinary general shareholders' meetings earlier than many other Japanese companies, sends out early notices of the meetings, and discloses notices of the meetings before they are sent out. It also strives to create an environment that enables shareholders to easily exercise their voting rights. Efforts include 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: Communicating with Shareholders and Investors

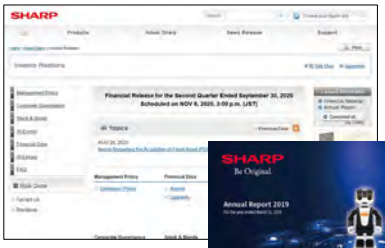
IR Activities Designed to Meet the Diversifying Needs of Investors

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.

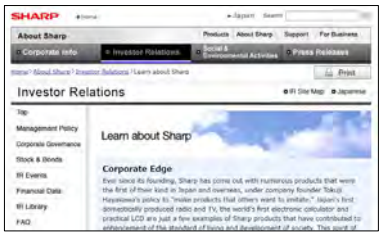
In addition to updating and expanding information on the IR website, Sharp has made the site compatible with smartphone viewing. Sharp also provides information needed by investors in a timely manner, including trends in major performance data, financial materials, and reports given at briefings. There 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

2019 Annual Report



Webpage for Learn about Sharp

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.

Social Initiatives: Communicating with Shareholders and Investors

ESG* Indexes

* Environmental, Social and Governance

As of June 2020, Sharp is included in the following ESG indexes

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 eleven 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 four 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 three consecutive years.

MSCI Japan ESG Select Leaders Index

An ESG index for Japanese companies operated by MSCI. The GPIF uses this as a stock index for ESG investments.
Sharp has been included in this index for three consecutive years.

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Social Initiatives: For Local Communities

Promoting Social Contribution Activities

Fiscal 2019 Objectives	Fiscal 2019 Achievements	Self-Evaluation
■ 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: 14,579 (including family members), total number of activities: 873 ■ Career education provided to total of 1,712 students at special-needs schools	★★
Priority Objectives for Fiscal 2020	■ 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 six 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.
n fiscal 2019, 873 such activities took place with the participation of a total 14,579 volunteers, including Sharp executives, employees, and their family members. Looking ahead, Sharp will continue to contribute to communities by broadening locally oriented initiatives.

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

<Case Study>

Employees at our Nara site join the volunteer activities organized by the Yatadera Pilgrimage Path Conservation Society twice a year. The group's purpose is to preserve nature in the satoyama area around Yatadera Temple. A total of 39 employees took part in clearing away the undergrowth of maple trees in Momiji Park, located along the Yatadera Pilgrimage Path.
We are eager to continue to play a role in the conservation of this beautiful natural landscape and protect satoyama.

<Case Study>

The Yatsu-higata tidal flat in Chiba Prefecture is an important stopover area for migratory water birds. A wide variety of wild birds can be observed here in all seasons.
Seventeen people, consisting of employees of Sharp and its subcontractors as well as their family members, took part in a program to support the conservation of the tidal flat. With the help of the Yatsu-higata Nature Observation Center, they observed winter birds that had migrated from the Arctic to spend the winter, cut down reeds in and around the freshwater pond, and carried them into the woods.

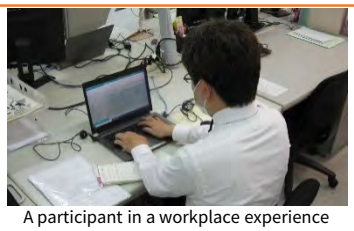
Social Initiatives: For Local Communities

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).

<Voice> Comment from member of non-profit organization (NPO) participating in workplace experience

174 Find Employment After Learning Essentials Through Workplace Experience

We opened the first office of Cross Job, a Nonprofit Corporation in April 2010 in Sakai, Osaka Prefecture to help people find employment and switch careers. We currently have four offices in Osaka Prefecture at which close to 100 disabled people undergo daily training towards procuring employment. Workplace experience at companies constitutes a key part of this training. In accepting trainees for the program, Sharp Tokusen Industry Co. starts with an orientation for participants, followed by a little over a week of our trainees and company staff working out goals of workplace experience and holding various meetings. In this way, Sharp Tokusen Industry Co. staff provide trainees with the proper support. Upon completion of workplace experience, the company provides each trainee with a standardized assessment report that gives him or her personalized information on what they will need to work in a company. How well the trainees internalize the information in this assessment is extremely important to their finding and keeping steady employment.

Kazuhide Hamada,
Representative Director,
Cross Job, Nonprofit Corporation

Cross job conducted its first workplace experience on December 20, 2010. In the 10 years since then up to the end of last fiscal year, 360 trainees from our four sites have found employment. Of these, 187 participated in workplace experience—more than 50%. Looking back, I remember that, at a time when people didn't know much about things like developmental disabilities and high-order brain dysfunctions, Sharp Tokusen Industry Co. published a booklet on this subject and spoke straightforwardly about how its role as a special Sharp subsidiary was to accept trainees.

It's not an exaggeration to say that if it weren't for Sharp Tokusen Industry Co., Cross job wouldn't be where it is today. We look forward to the company's continuing cooperation.

<Voice> Comment from an Instructor at a School Visit

At school visits, I have students talk about what they envision for their future working career. For part of the lesson, I talk to the hearing-impaired students about my experience as a hearing-impaired person in the working world. I tell them that it's especially difficult for hearing impaired people to communicate with normal hearing people. To help them overcome this difficulty, I use my own experience to tell them how they must begin preparing. To ensure smooth communication in the workplace, I think it's important to develop ways to make yourself easily understood to other people. I feel really good when the school's teachers tell me how valuable it is for his or her students to learn from a working person with the same disability.

I will continue thinking of ways that I can be useful in these educational activities.

Yuki Takahashi
Supervisor, Sharp Tokusen Industry Co.

Social Initiatives: For Local Communities

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> SPC : Sharp (Phils.) Corporation

Employees of Sharp sales subsidiary SPC collaborated with employees of the local board of education, school teachers, parents, and other members of the community on maintenance (cleaning, repair, repainting) of an elementary school. SPC also donated classroom desks and chairs to another 10 schools.
In this way, the company seeks to contribute to society by not just manufacturing products but also by carrying out CSR activities.

<Case Study> SMM : Sharp Manufacturing Corporation (M) Sdn. Bhd.

Sharp Malaysian production base SMM held a safety, health, and environmental protection exhibition to raise awareness among employees about these issues. Booth exhibits included making packaging from recycled materials and an explanation of how materials are recycled after they are discarded. There was also a poster contest. There was also a poster contest, in which staff members from several Malaysian government agencies, such as the Fire and Rescue Department, the Department of Environment, and the Health Department took part.

<Case Study> SEID : P. T. Sharp Electronics Indonesia

Indonesian production base SEID has an initiative called the Sharp Class through which it strives to contribute to the government's goal of eliminating unemployment. SEID engineers lead the classes by providing technical and theoretical teaching materials, as well as career advice and leadership training.

Social Initiatives: For Local Communities

<Case Study> SSI : Sharp Semiconductor Indonesia

Indonesian production base SSI collaborated with Karawang International Industrial City (KIIC) and its other tenants in a CSR program called School Go Green at a state-run environment and culture school. The program donated 20 garbage bins, 30 fruit trees, and 150 cover trees.
The School Go Green program aims to raise environmental awareness among students and teachers and reflect the important role environment and culture schools play in daily life.

<Case Study> SEID : P. T. Sharp Electronics Indonesia

As part of its Sharp Greenerator environmental activities, SEID held an Eco-brick Workshop towards reducing plastic waste. Planned in coordination with the eco-venture Waste4Change, the workshop had participants make environmentally friendly bricks by compacting shards of used plastic bottles.
It is hoped that the workshop will make participants more aware of the importance of recycling plastic waste, spread the idea to more homes and workplaces, and contribute to reducing plastic waste.

<Case Study> SPC : Sharp (Phils.) Corporation

After the Taal volcano eruption in January 2020, Sharp sales subsidiary SPC called on employees to come to the assistance of evacuees, and the company gathered 200 food packages, personal hygiene kits, and clothing for donation.
The company also worked with the local municipality to provide 24 washing machines and laundry detergent, 24 fans, and donations from SPC employees. The local mayor publicly expressed gratitude for SPC's spirit of volunteering for the community.

Social Activities: 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.

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 its business activities. The Sharp Group does not sanction child labor or forced labor.

Sharp Code of Conduct (excerpt)

1) We respect—and will not violate—fundamental human rights and the dignity of individuals in all business activities. If it becomes evident that any of our business activities, products, or services has a negative impact on human rights, we will take corrective action.
2) We do not allow child labor or any form of forced labor, and we support initiatives for the effective abolition of such labor practices.
3) With respect to all corporate activities—including employment practices concerning recruitment, salary, promotion, and training opportunities—we do not discriminate based on nationality, race, ethnic group, color, sex, health status, 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 will refrain from all unacceptable acts and behavior, including any kind of abuse, mocking, verbal insult, sexual harassment, or power harassment.
5) On the basis of international standards and applicable laws, we respect employees' right to the freedom of association—for example, their right to join a union, carry out protests, participate in workers' councils, and the like—without being subjected to retaliation, intimidation, or harassment.

Activities Related to Respect for Basic Human Rights and Personal Dignity

In Japan, new employees and mid-career hires learn about Sharp's philosophy on human rights by studying the Sharp Group Charter of Corporate Behavior and the Sharp Code of Conduct. In addition, each site carries out ongoing human rights awareness activities, including annual human rights training. A total of 42 sessions of this training were held in fiscal 2019.

In fiscal 2019, compliance-related training based on the Sharp Code of Conduct was provided to all Sharp Group employees. In this training, employees learned about working hours, wages, employee benefits and welfare, and freedom of association and collective bargaining, as well as about their behavioral obligations under the Sharp Code of Conduct.

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.

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.

* See page 17.

Related information: > Modern Slavery Act Transparency Statement

Social Activities: Efforts Related to Human Rights

Preventing Workplace Harassment

Fiscal 2019 Objectives	Fiscal 2019 Achievements	Self-evaluation
■ Provide at least one training session in preventing harassment	■ Held anti-harassment training at all sites and affiliates	★★
■Resolve harassment consultation matters	■ Received and properly responded to 18 harassment-related reports and consultations in fiscal 2019	★★
■Conduct employee surveys and implement measures to address the issues identified from them	■ Had anti-harassment measures planned and implemented in workplaces indicating a high harassment risk based on employee survey results Priority Objectives for Fiscal 2020	★★
Priority Objectives for Fiscal 2020	■ 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	

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

Harassment is socially unacceptable behavior damaging to human dignity. In order to help eradicate harassment, Sharp provides all employees with harassment-prevention training. Additionally, Sharp utilizes employee surveys to help ascertain the status of workplace harassment and put in place preventative measures.

Sharp has also set up a harassment consultation service for all of its bases in Japan, thereby helping to ensure that, in the event that harassment occurs, a system is in place to immediately deal with it.

Furthermore, 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.

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, 2020, 8,930 out of 10,977 employees of Sharp Corporation are members of the Sharp Workers Union.

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.

Social Initiatives: Human Resource Development, Personnel System

Human Resource Development

Fiscal 2019 Objectives	Fiscal 2019 Achievements	Self-Evaluation
■ Hold new courses to further enhance employee expertise	■ Specialized training: Held two new technical workshop courses	★★
Priority Objectives for Fiscal 2020	■ Expand the technical categories of the specialized technical training (workshops) ■ Further encourage learning for self-development to foster a culture for continued Learning	

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.

In fiscal 2019, Sharp launched technical workshops to support professional growth in specific technical fields. This is a new initiative to increase and deepen personal expertise.

As part of efforts to improve technological capacity across the Sharp Group, there have been study sessions held on cutting-edge future technologies and technologies essential to Sharp business development. A new form of learning added in fiscal 2019 is technical workshops, a practical program that is directly linked to job skills. It is aimed at sharing technical know-how across internal functions and developing younger employees by passing existing skills and techniques on to them. Having covered such topics as material technology and circuit design technology so far, the workshops have been helping Sharp engineers enhance their technical expertise.

We also 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.

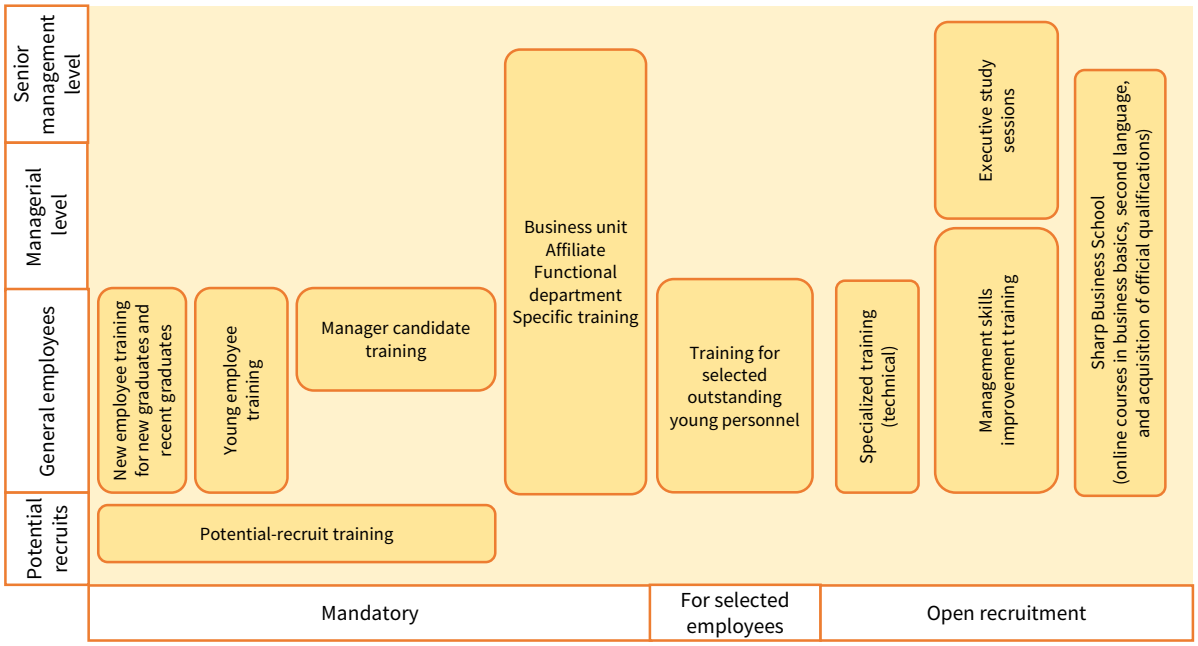
With regard to the study sessions and management skills improvement training, Sharp actively supports employee self-development by providing an e-learning environment, which complements the group training sessions, allowing employees to use their home computers and smartphones to easily pursue learning 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.

Social Initiatives: Human Resource Development, Personnel System

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.



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 2019 the survey took place in June and received responses from 98% of the target employees. 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.

Social Initiatives: Diversity Management

Developing Diversity Management

Fiscal 2019 Objectives	Fiscal 2019 Achievements	Self-Evaluation
■ 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	■ Promoted measures in line with action plan for Act on Promotion of Women's Participation and Advancement in the Workplace ・Percentage of female managers: 3.4% as of April 1, 2020 ■ Maintained employment rate for the disabled ・2.46% as of June 1, 2020	★
Priority Objectives for Fiscal 2020	■ 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.

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.

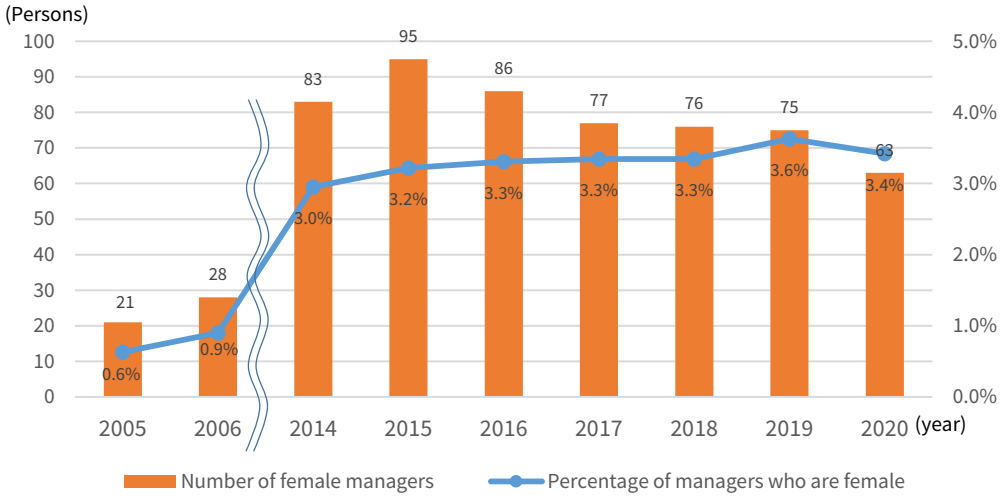
Goal	Deadline
・Have at least 15% of new graduates hired for engineering jobs and 50% of new graduates hired for non-engineering jobs be women ・Have at least 5% of managers be women ・Have at least 95% of female employees having returned to work after taking childcare leave stay at Sharp beyond 12 months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

Social Initiatives: Diversity Management

Promoting Female Employees to Managers

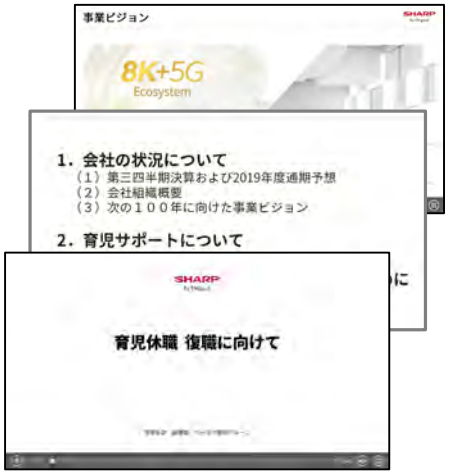
For years, Sharp has striven to expand the roles of women in the workplace and promote female employees to managers. In April 2020, the percentage of managers who were female was 3.4%, an almost six-fold increase compared to 0.6% in 2005, the year Sharp launched a program to promote more women to managerial positions.

Number of Female Managers



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. The classroom seminar in fiscal 2019 was replaced by an online seminar to prevent the spread of Covid-19. Eighty-eight employees attended the seminar via the web. The seminar video was also distributed to the supervisors of employees returning to work to help build a stronger, workplace-wide support system.



Screen shots of the reinstatement support video

In November 2019, we conducted a questionnaire survey of all employees who returned to work after taking childcare leave in fiscal 2014 or later. This was our attempt to create a working environment where employees can balance work and childcare and where women can play more active roles. The findings will be used to make Sharp a 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 from maternity leave or childcare leave. 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

Sharp Corporation Personnel Composition, by Gender

(Person)

		Men	Women	Total
Directors, audit and supervisory committee members		9	0	9
Employees	Executive officers	8	0	8
	Managers	1,773	63	1,836
	General staff (New employees who are graduates of universities and technical colleges)	8,066 (110)	1,067 (23)	9,133 (133)
	Subtotal	9,847	1,130	10,977
Total		9,856	1,130	10,986
Ratio		89.7%	10.3%	

(As of April 1, 2020)

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	81.8%	18.2%	70.6%	29.4%	71.4%	28.6%
SEE (UK)	Sales, production	80.0%	20.0%	73.7%	26.3%	75.1%	24.9%
SEID (Indonesia)	Sales, production	84.3%	15.7%	69.0%	31.0%	30.3%	69.7%
SATL (Thailand)	Production	73.9%	26.1%	28.9%	71.1%	30.0%	70.0%
SMM (Malaysia)	Production	29.2%	70.8%	37.6%	62.4%	44.8%	55.2%
SOCC (China)	Production	17.8%	82.2%	27.8%	72.2%	31.6%	68.4%
NSEC (China)	Production	36.8%	63.2%	63.0%	37.0%	63.0%	37.0%
WSEC (China)	Production	39.9%	60.1%	46.2%	53.8%	46.9%	53.1%

(As of March 31, 2020)

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 2020, there are approximately 160 non-Japanese employees from 14 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.)

Social Initiatives: Diversity Management

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. Sharp reviewed its standards in response to the revised Act on Stabilization of Employment of Elderly Persons, which came into effect in April 2013. Employees who have reached the mandatory retirement age of 60 and wish to continue working can be reemployed until the age of 65 in jobs that the company needs them for.

Promoting Employment of the Disabled

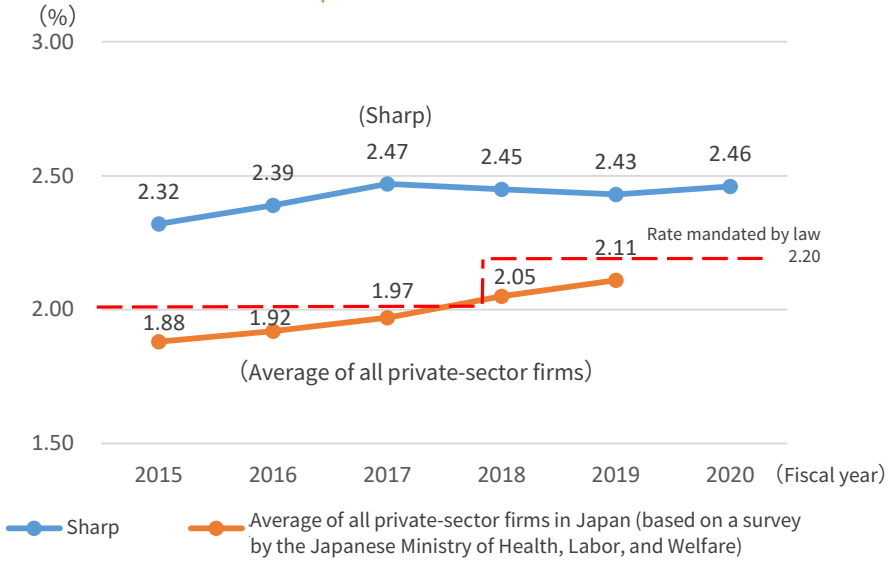
Ever since Sharp founder Tokuji Hayakawa established the "accumulation of community service" as one of the "Five Accumulations of Competency*," Sharp has been actively involved in social service and welfare. The entire Sharp Group makes efforts to promote the employment of the disabled and to create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

As of June 1, 2020, the Sharp Group employed approximately 320 disabled persons. The percentage of disabled employees among all employees was 2.46%, well over the 2.2% rate mandated by law (as stated in the Act on Employment Promotion etc., of Persons with Disabilities).

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

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 less 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.

Sharp's entire recruitment interviews have gone online since the latter half of fiscal 2019 to protect the safety and health of both applicants and interviewers under the Covid-19 pandemic.

Social Initiatives: Activities to Support Work-Life Balance

Activities to Support Work-Life Balance

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.

Work-Life Balance Guidebook and Nursing Care Guidebook

Promoting Childcare Leave for Male Employees

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 (85 people in fiscal 2019).

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

Social Initiatives: Activities to Support Work-Life Balance

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

(Person)

Program Name	Description	Participation		
		Fiscal 2017 ( ): Men	Fiscal 2018 ( ): Men	Fiscal 2019 ( ): Men
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.) < Fiscal 2019 > Return to work rate Men: 100% Women: 91.2% Retention rate*2 Men: 97.0% Women: 95.2%	153 (104)	152 (93)	125 (85)
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.	14	15	13
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	366	313
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	6
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.	9	12	9
Other Programs	Multipurpose Leave, 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.

Social Initiatives: Promoting Occupational Safety and Health

Promoting Occupational Safety and Health

Fiscal 2019 Objectives	Fiscal 2019 Achievements	Self-Evaluation
■ Eliminate severe accidents, reduce industrial accidents (in particular, step up prevention of the causes of critical accidents: tumbles and falls) ■ Prevent health problems caused by overwork ■ Promote health management (Healthy Sharp 23)	■ Had no severe accidents but saw an increase in the number of industrial accidents (including cases without lost work time) despite the following efforts: ・Strengthened measures dedicated to preventing accidents caused by tumbles and falls ・Emphasized actions on business sites experiencing frequent industrial accidents ■ 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 ■ Prevented health problems under the Healthy Sharp 23 initiative ・Enhanced advice on overcoming lifestyle diseases and reducing weight from the industrial physician ・Formulated and implemented company-wide anti-smoking policies, including making the entire buildings smoke-free	★
Priority Objectives for Fiscal 2020	■ 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

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

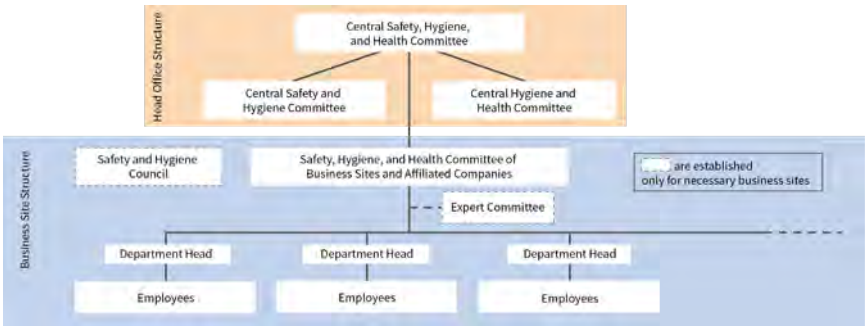
1. Legislative Compliance
   In addition to strict compliance with legislation related to safety and health in each country and region, all Group companies must comply with in-house standards established in line with the standard Group policy, with the aim of improving levels of safety and health.
2. 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.

Social Initiatives: Promoting Occupational Safety and Health

Organization Promoting Safety, Hygiene, and Health

At Sharp, “maintaining and improving health” has been added to the framework of safety and health activities. 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 it has established an organizational system to promote safety, hygiene, and health.

Organization Promoting Safety, Hygiene, and Health



Aiming for a Secure, Safe, and Healthy Workplace

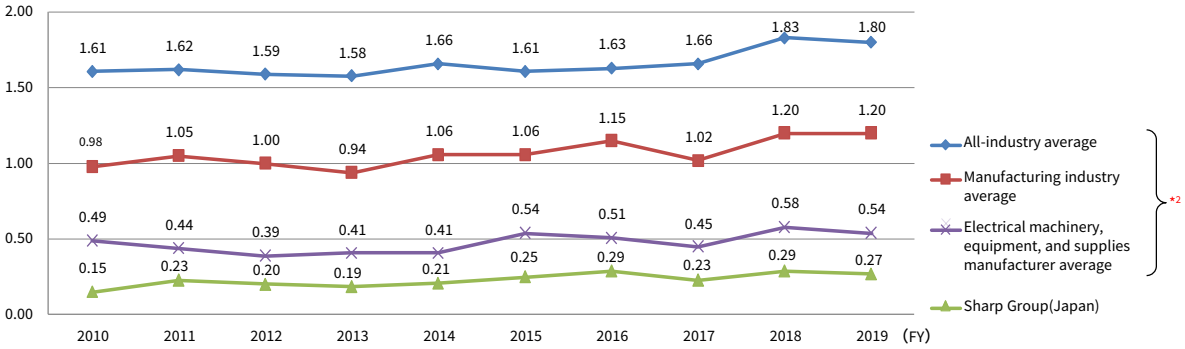
In order to ensure that activities for the maintenance and improvement of safety, hygiene, and health go smoothly, Sharp holds Central Safety, Hygiene, and Health Committee meetings that bring the management and the labor union together to discuss and decide basic policies for the entire company. The Committee establishes and rolls out annual company-wide policies, objectives, and priority action items related to safety, hygiene, and health. At each business site or affiliated company, the Safety, Hygiene, and Health Committee consisting of labor and management representatives meets every month to report and discuss safety, hygiene, and health activities and decide on improvement measures in accordance with the corporate policy. The outcomes are shared with the heads of the departments, who are responsible for putting them into practice at the workplace level. At production sites, the occupational safety and health management system is in place to help employees identify potential risks of accidents in the workplace and to firmly set in motion proactive safety activities aimed at eliminating or reducing such risks. Under the system, they renew the OHSAS 18001 certification and work to enhance the occupational safety and health levels at the site. Meanwhile, Sharp is preparing for transition from OHSAS 18001 to ISO 45001, which has been issued to replace the OHSAS standard.

Sharp takes numerous measures to reduce the number of industrial accidents. These include strengthening compliance with the work rules to prevent hazardous substance-related incidents that could lead to severe accidents, implementing measures particularly aimed at preventing tumbles and falls amid an upward trend, reinforcing the practice of the 5S (Sort, Set in order, Shine, Standardize, and Sustain), visualizing danger, holding near-miss training, stepping up hazard prediction activities, and mutual on-site inspections for cross-checks among different business sites.

As a result of these continuing efforts, the Sharp Group’s industrial accident rate (Frequency Rate of Lost-Worktime Industrial Accidents*1) in Japan in fiscal 2019 stood at 0.27. Our rate remained below the national averages for all industries (1.80), for the manufacturing industry (1.20), and for the manufacturers of electrical machinery, equipment, and supplies (0.54).

Poster for company-wide safety campaign to step up prevention of accidents caused by tumbles and falls

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



*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 2019 survey by the Japanese Ministry of Health, Labor, and Welfare.

Social Initiatives: Occupational Safety and Health

Making Employees Healthier

Sharp is committed to making its employees healthier. Our activities include having employees with lifestyle diseases or overweight receive the industrial physician's interviews or health guidance to overcome their health problems based on their health check results, an anti-smoking campaign to make the entire company buildings smoke-free by closing the smoking rooms, and a program to encourage regular exercise through a competitive walking campaign among workplaces via a health-promotion smartphone app.

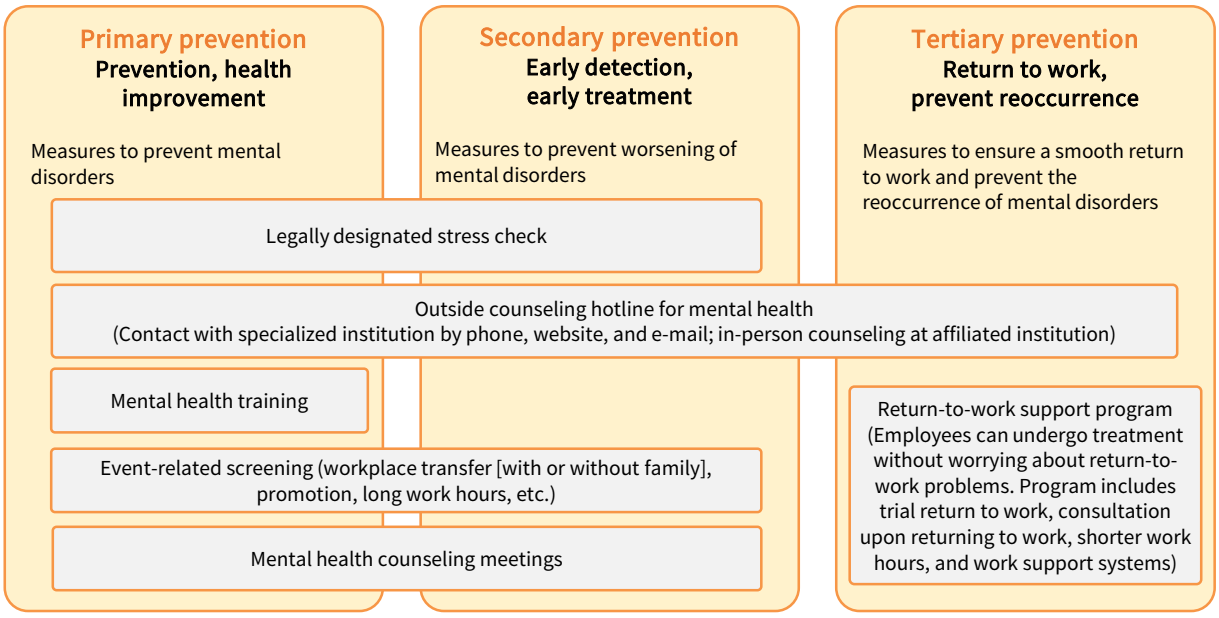
Enhancing Mental Health Care

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 disorders. Stress check results are also analyzed for each organization so that we can identify workplaces with high stress risks and help them improve the situation.

Sharp also offers comprehensive mental health services to employees, including counseling with mental health doctors and industrial 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 problems. Employees returning to work will have a preliminary talk with their supervisor, general affairs department manager, and industrial physician and can choose to return to work on a trial basis and work shorter or flexible hours.

Measures to Prevent Employees' Mental Disorders



Social Initiatives: Occupational Safety and Health

Preventing Health Problems Caused by Overwork

The total hours actually worked by Sharp Corporation general staff were 1,823 hours per employee in fiscal 2019. Annual overtime work hours per employee were 149 hours. Sharp strives to ensure that all employees can work in good mental and physical condition. By carrying out diverse measures related to work hours, we prevent health problems caused by overwork.

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
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
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 2019, general staff at Sharp Corporation took 77.5% of their annual paid leave.)

Protecting Employees from Covid-19

Giving top priority to protecting employees' health, Sharp seeks to act flexibly and painstakingly according to the Covid-19 pandemic situation. The head of each business or regional unit has taken anti-infection measures suited to the local context.

Sharp Corporation and its affiliates in Japan have responded with a varied mix of measures adapted to their local circumstances, including teleworking, flexible working options (staggered work hours, flextime, etc.), temperature checks before entry into the site, and measures to avoid closed spaces, crowded places, and close-contact settings.

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

Action	Description
Teleworking	• Employees use teleworking to reduce contact with others and avoid crowded situations in the office
Flexible working options	• Staggered work hours and flextime are applicable to employees to allow them to avoid commuting during rush hours in public transportation • Employees reduce contact with others by working at satellite offices or by going straight to their business destinations and returning home directly
Change commuting modes	• Commuting modes have been changed from public transportation to cars or other modes
Check temperature before entry	• We have asked employees to check their temperature before coming to work and made those with temperatures higher than the specified level stay home • Temperature checks at the entrance (with a thermal camera, etc.) are mandatory to all those entering the site to keep anyone with a temperature higher than the specified level from entering
Wear masks at all times	• Employees wear masks at workplaces
Ensure disinfection	• We have placed hand sanitizers at the reception, building entrances, restrooms, and other key locations throughout the site • We disinfect doorknobs, railings, elevator buttons, etc. at the site on a regular basis
Avoid closed spaces, crowded places, and close-contact settings	• Employees are dispersed across different rooms and separated by partitions • The cafeteria has fewer seats available, separated by partitions, and supports staggered lunch time

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

Governance

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Governance: Corporate Governance

Corporate Governance

Fiscal 2019 Objectives	Fiscal 2019 Achievements	Self-Evaluation
■ Reorganize into three business groups and engage in business reinvention as "One Sharp" ■ Expand the decision-making authority and responsibility of the co-CEOs ■ Contribute to improved appropriateness and efficiency of group-wide business operations through cross-organizational implementation of improvement points based on audit results	■ On July 1, 2019, reorganized into three business groups, and reinvented business by expanding the decision-making authority and responsibility of the co-CEOs leading each business group ■ Contributed to improvement of business operations through cross-organizational implementation of improvement points based on audit results	★★
Priority Objectives for Fiscal 2020	■ 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	

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. Further, as a strategy to enhance corporate governance, 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

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	4	3	0	Chairperson: Chairman & CEO
Nominating Committee	4	2	2	0	Committee chair: Outside director
Compensation Committee	4	2	2	0	Committee chair: 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	4	0	0	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 Aarata 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.

Governance: Corporate Governance

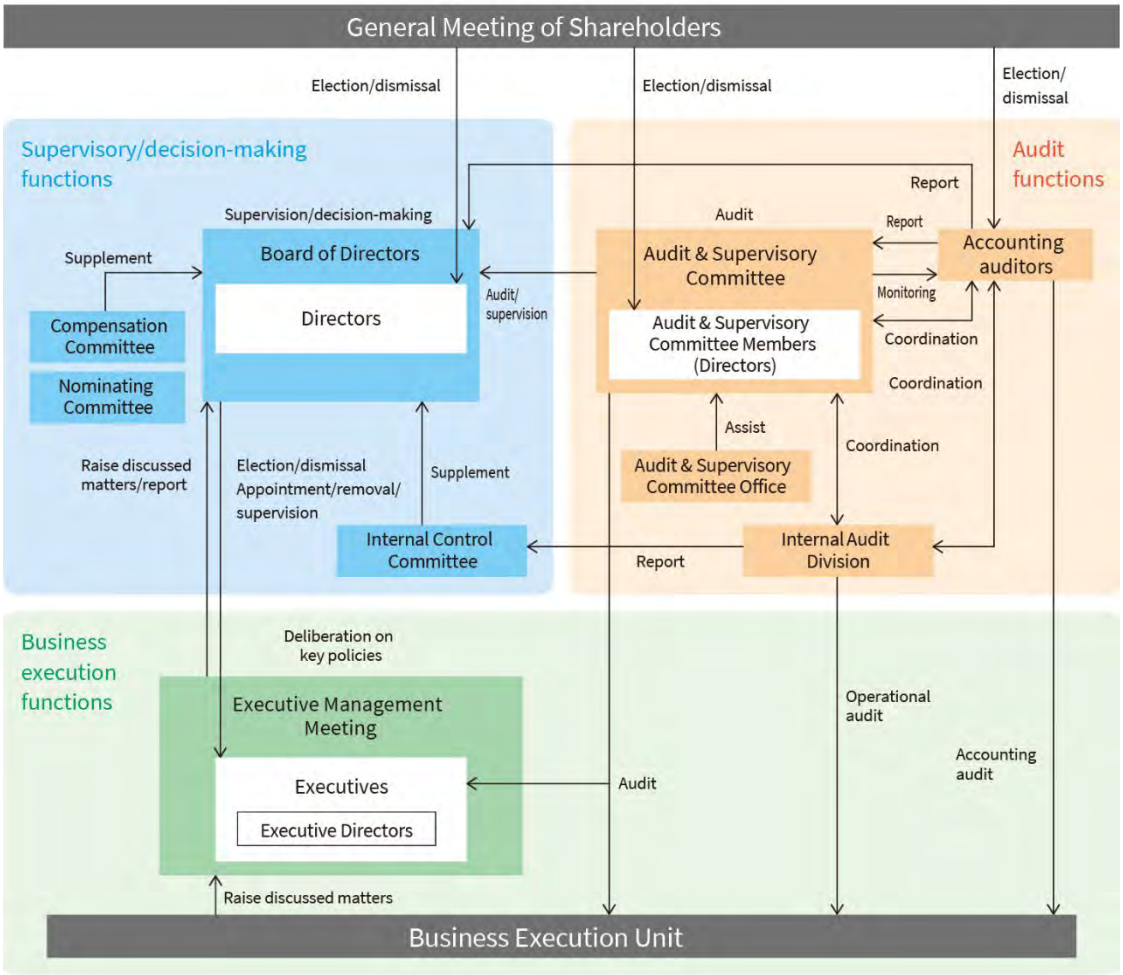
Management of Related Party Transactions*

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 need for the transaction, its soundness, and the propriety of its terms. This allows Sharp to exercise prudence when deciding on business deals.

* 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.

Corporate Governance System of Sharp Corporation (as of June 29, 2020)



Governance: Internal Control

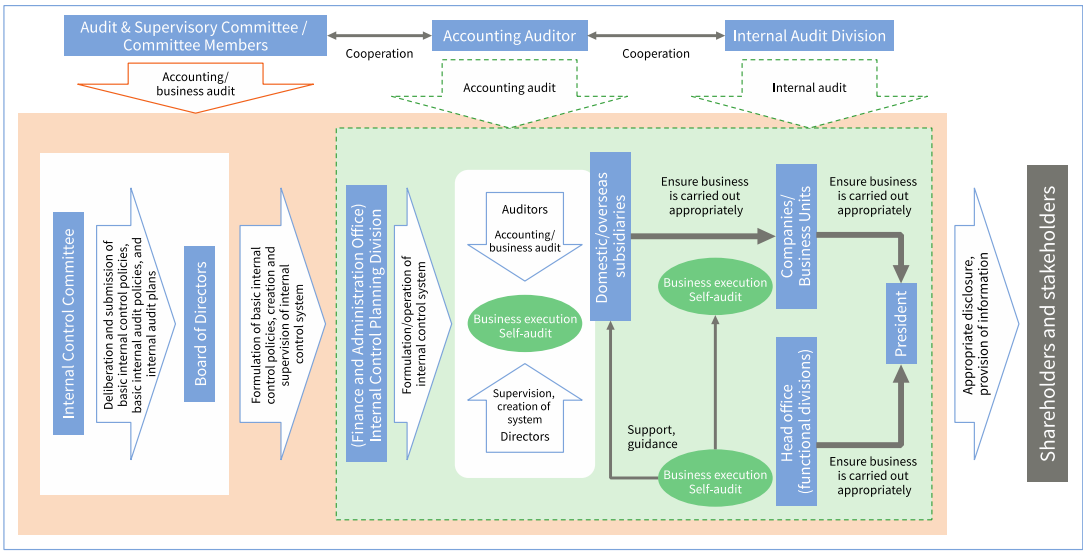
Internal Control

Fiscal 2019 Objectives	Fiscal 2019 Achievements	Self-Evaluation
■ Implement comprehensive design and operation of measures based on Basic Policy for Internal Control; complete those measures as initially scheduled ■ Document and work on improving issues in each internal control area according to key system changes, carry out internal control assessments, and submit Internal Control Report in June 2020	■ Completed measures as initially scheduled through continuous operation of those measures ■ Documented and worked on improving issues in each internal control area, carried out internal control assessments, and submitted Internal Control Report in June 2020	★★
Priority Objectives for Fiscal 2020	■ Implement comprehensive design and operation of measures based on Basic Policy for Internal Control; complete those measures as initially scheduled ■ Document and work on improving issues in each internal control area according to key system changes, carry out internal control assessments, and submit Internal Control Report in June 2021	

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 2019 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. In June 2020 it submitted an Internal Control Report stating that Sharp's internal control over financial reporting is effective.
For fiscal 2020, Sharp will respond rapidly and flexibly to accelerated structural reforms including affiliated companies in Japan and overseas, identify processes and related IT systems that will be affected by key system changes, 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 2020)



Governance: Risk Management

Risk Management

Fiscal 2019 Objectives	Fiscal 2019 Achievements	Self-Evaluation
■ 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 Dynabook, Kantatsu, Sharp Fukuyama Semiconductor, Sharp Fukuyama Laser, AIoT Cloud, and Sharp Cocoro Life	★★
Priority Objectives for Fiscal 2020	■ 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	

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 company/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.

Response to Actualization 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 2019, 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 BCPs

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 2019 as in fiscal 2018, Japan experienced numerous 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 Covid-19 pandemic causing worldwide havoc, the company took steps to ensure business continuity, such as implementing flexible work hours, telecommuting, and infection-prevention measures for employees.

Going forward, Sharp will continue to work towards business continuity management as responses to all forms of disasters and pandemics.

Governance: Compliance

Governance: Compliance

Fiscal 2019 Objectives	Fiscal 2019 Achievements	Self-Evaluation
■ 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 ■ Proceeded with global compliance measures for the handling of personal information	★★
Priority Objectives for Fiscal 2020	■ Proceeded with compliance risk reduction measures worldwide	

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

System to Promote Compliance

Sharp defines compliance as "observing social codes of conduct and company regulations, including laws and 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 President'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.

In the event a compliance-related risk is actualized, Sharp will implement an emergency response 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). A total of 19,576 employees took part in this training in fiscal 2019.

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 Crystal Hotline also accepts 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.

In fiscal 2019, the compliance hotline received 56 reports and requests for consultation. For each of these, the relevant departments investigated the facts of the matter and issued as necessary corrective action orders. If the people who made the reports or requested the consultation have provided a means of contacting them, they are informed of the results. No serious legal or compliance-related violations were reported in fiscal 2019. Also, the competition law hotline received no reports or requests for consultations in fiscal 2019.

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.

Similar reporting and consultation services have been set up at Sharp's major overseas bases. In fiscal 2019 there were 67 reports and consultation requests received. Action to swiftly address these issues is being taken.

* Only the compliance hotline is available for use by employees of business partners.

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.

In March 2015, Sharp instituted the Rules for Prohibition of Bribery, which govern both executives and employees, with a view to preventing corrupt practices such as bribery. The rules prohibit facilitation payments, a form of 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.

Moreover, in order to ascertain the risk of bribery and corruption among overseas affiliates and institute a more effective checking system, in fiscal 2019 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.

Additionally, 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. No violations were reported in fiscal 2019.

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 2019, 19 cases of contributions were reviewed.

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 at each business site for employees who handle personal information as part of their job duties.

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, consignment, 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 and signing agreements required for proper handling of personal data.

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.

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 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).

In fiscal 2019, Sharp held training for a total of 150 employees who, for the purpose of legitimate transaction, need to contact with competitors. The training covered key points of competition laws related to actual business transactions. Such efforts maintain the effectiveness of Sharp's compliance program.

No violations were reported in fiscal 2019.

Governance: Compliance

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

In order to fulfill its corporate social responsibilities to customers and all stakeholders in the provision of correct information useful for selecting products and services, 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. The following preventative measures are undertaken.

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 and Sharp Fair Representation Council)

(3) An expert external advisor is appointed to provide objective guidance and advice on representation-related problems and matters for consultation

(4) Operations are carried out in line with the Manufacturing Labeling Standards*3

Also, Fair Expression Guidelines, which follow the same approach as used in Japan have been stipulated for overseas markets and are used in conjunction with local laws to determine what is appropriate.

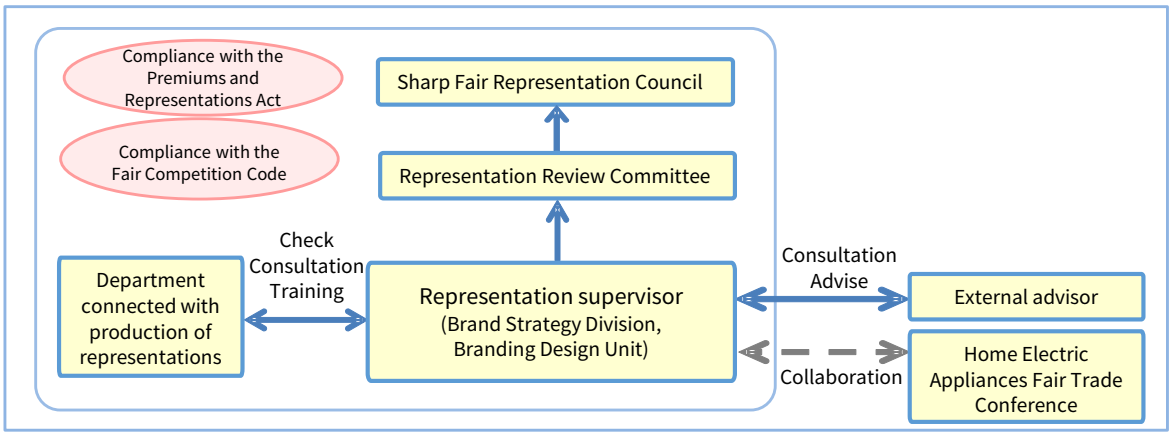
*1 Act on Securing Quality, Efficacy, and Safety of Products Including Pharmaceuticals and Medical Devices

*2 See page 101

*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

Fostering Awareness via Upskilling Support for Relevant Personnel

■ Representation Review Framework



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 2019, there were no violations of the Act against Unjustifiable Premiums and Misleading Representations by the Sharp Group.

Governance: Compliance

Ensuring Representations Keep Up with Social Changes

Sharp strives to create appropriate representations that keep up with current events and laws.

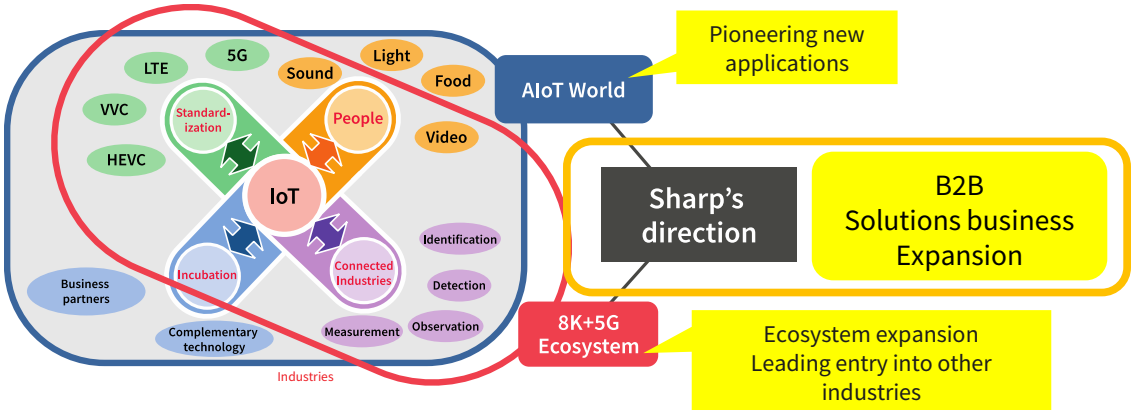
In fiscal 2019, Sharp held in-house training focusing on matters such as preventing infringements on Olympic merchandising rights and abiding by the Pharmaceutical and Medical Device Act in light of the Covid-19 pandemic. The training included examples of government crackdowns, distribution of documents on important reminders for the entire company, and instructions on what to check for before issuing representations.

Governance: Innovation Management

Corporate R&D Initiative

R&D Initiative and the Development System

As "One SHARP" business innovation focused on the realization of an "8K+5G Ecosystem" and "AIoT* World" continues, the Corporate Research and Development Business Unit is pursuing a mission to develop pioneering, groundbreaking, proprietary technology that impacts society and thus creates new ecosystems and new businesses. 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. By expanding B2B and the solution business through its 8K+5G Ecosystem and AIoT World, we are leading the way in pioneering new applications and entering other industries.



Priority initiatives

* AIoT is a word coined by Sharp, combining the words AI (artificial intelligence) and IoT (Internet of things). "AIoT" is registered trademark of Sharp Corporation.

Notable Initiatives

Sharp has achieved some world-first verification tests in various fields as part of efforts to disseminate its 8K+5G Ecosystem solutions. For example, towards realizing 8K broadcasts utilizing 5G technology, the company has carried out a multi-angle live broadcast of an international basketball game and has used 8K-camera-equipped drones to transmit images that aid in horse breeding. Other examples involved making social infrastructure building/maintenance more effective and labor efficient and realizing remote inspections. New applications use 8K to help achieve high-precision, highly detailed measurements in remote inspections in which triple-lens cameras inspect construction site reinforcements and AI image processing is used to analyze underground pipes. In addition, through 5G research and development, Sharp has obtained more than 6,000 telecommunications standard-essential patents in at least 50 countries that it is licensing out.

Sharp is working towards realization of its AIoT World through the commercialization of a beacon powered by a dye-sensitized solar cell certified as having the world's highest power generation efficiency and that requires no battery replacement. We are also expanding into other industries with our unique and advanced cold-retention material, which holds promise for more and more applications in fields such as gourmet food, sports, and logistics.

Under open incubation activities, Sharp has launched "monozukuripro.net," an online matching service for startups. By bringing together promising startups and established manufacturers possessing advanced technologies and know-how, Sharp aims to accelerate collaboration between companies and thus 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 2019 Objectives	Fiscal 2019 Achievements	Self-Evaluation
■ Continue to maintain ISO 27001 certification ■ After holding training that simulated targeted email attacks and fraudulent emails, held individual preventative training for employees who had inadvertently opened the malicious emails sent during training	■ Maintained ISO 27001 certification (renewed July 28, 2019) ■ After holding training for employees aimed at tackling targeted email attacks and fraudulent emails, held individual preventative training for employees who had inadvertently opened the malicious emails sent during training	★★
Priority Objectives for Fiscal 2020	■ 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	

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 users' complaints • Administration and operation of a web site to sell digital books • Administration and operation of an affiliated web site • Customer satisfaction service in photovoltaic generation system and energy related businesses • Implementation of in-company information management
Certification Number	IS 635826
Certifying Body	BSI Group Japan K.K.
Initial Certification Date	June 30, 2015

Related Information: > Global Basic Policy on Information Security

Information Security Measures

In Japan, online sessions on information security are provided annually to all employees. In 2019, the Emotet malware emails that have been attacking computers around the world were received by Sharp employees. In response, Sharp used actual cases to promptly share details throughout the company about Emotet and its distinct features, along with how to deal with these malicious emails. Sharp also developed and introduced its own training system to tackle these targeted email attacks and held training twice for all employees in fiscal 2019.
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 also implements information security self-checks, and seeks to maintain and improve its level of information security.

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.

In the past, it was obvious which cutting-edge technologies could be applied for military purposes. But today, with the advance of technology, there is an increasing number of cases of consumer-use technologies and products being diverted for use in a military or weaponry context. Manufacturers are required to pay the utmost attention when exporting products and components and transferring technologies. In addition, with intensifying technology conflicts among countries, now more than ever 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 to observing the Foreign Exchange Act, Sharp also strictly complies with rules on the re-export of products from the US, a country that is stepping up execution of technology transfer control.

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.

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.)

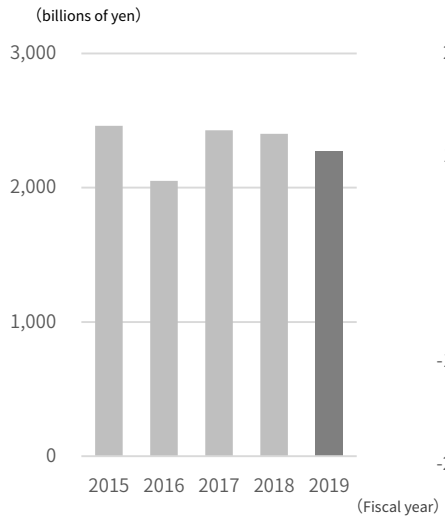
◇ Capital Stock : 5 billion yen (as of March 31, 2020)

◇ Main Sales : 2,271,248 million yen (consolidated)
1,348,738 million yen (unconsolidated)
(Fiscal 2019 Financial Results)

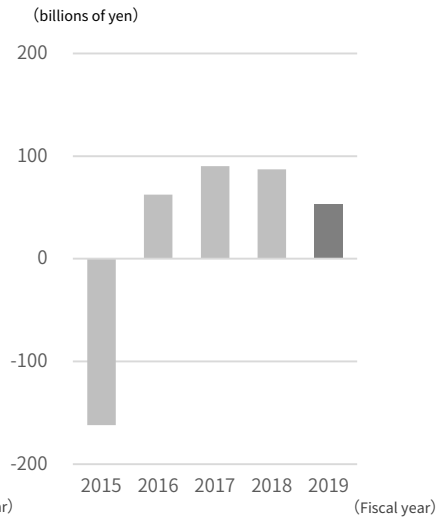
◇ Employees : Consolidated: 52,876 （as of March 31, 2020）
・Japan : 18,573 (Sharp Corporation 10,862/ other Consolidated 7,711）
・Overseas: 34,303 (Consolidated)

Main Data

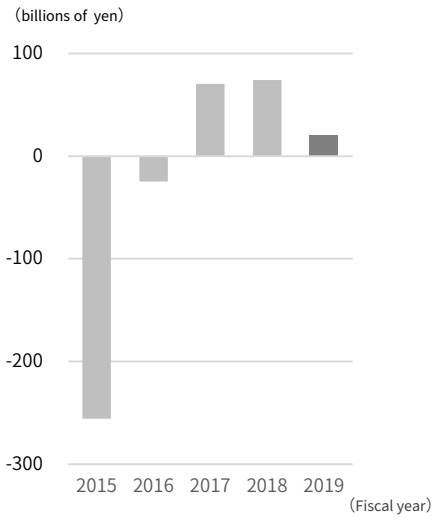
Main Sales



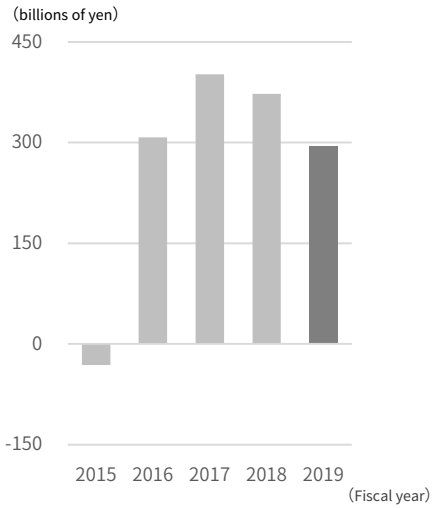
Operating Profit (Loss)



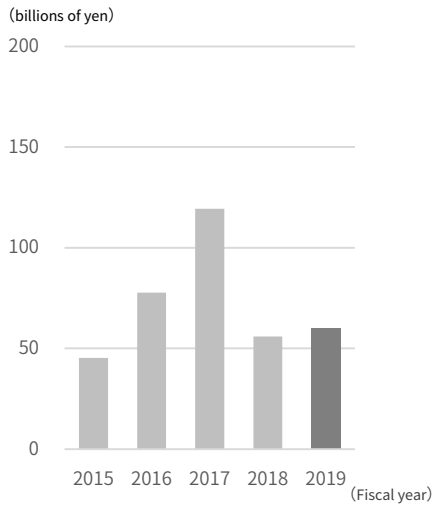
Profit Attributable to Owners of Parent (Loss)



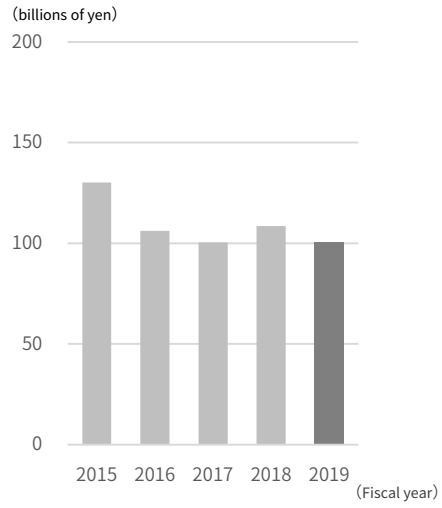
Net Assets

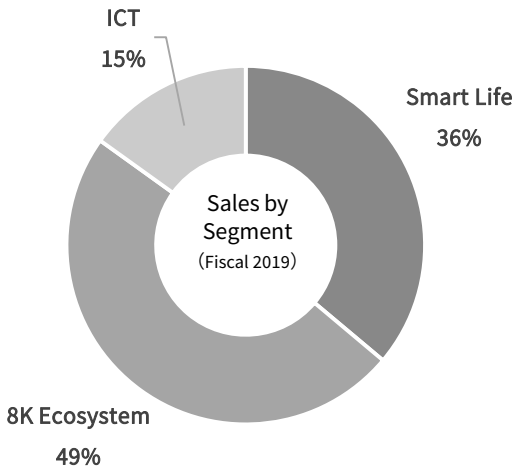


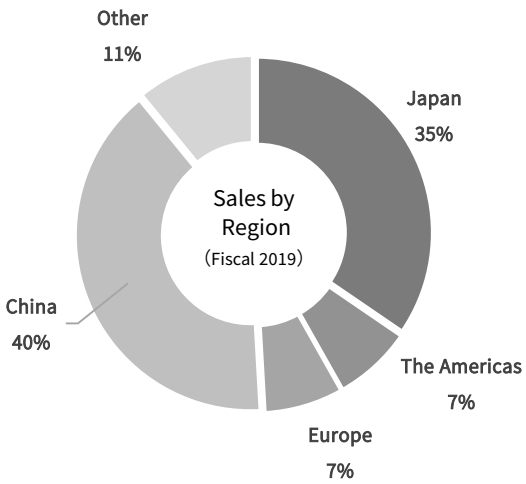
Capital Investment



R & D Expenditures







Related Information: > Financial Data

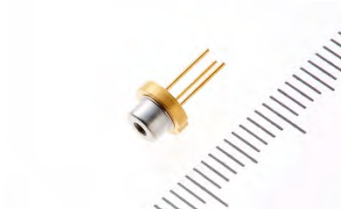
Main Products and Services

Smart Life Group

Plasmacluster Air Conditioner

Camera modules and products that use them

Industrial Solar Power System



Green Laser Diode

8K Ecosystem Group

8K LCD TV

Digital full-color MFP

Outdoor signage (smart bus stop)

ICT Group

5G smartphone

AIoT platform

dynabook

SHARP

Be Original.

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Published on October 2020