

**KIOXIA**

# **Sustainability Report 2021**



**KIOXIA Holdings Corporation**

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# Sustainability Reporting Policy

We report on sustainability issues that are a priority for KIOXIA Group\* and our stakeholders.

In updating the Sustainability website of KIOXIA Holdings, we have taken into consideration and incorporated issues that are material for both the Group and our stakeholders.

In FY2020 these were the following:

1. Top-level commitment from the executive officer in charge of sustainability to engage in sustainability activities on behalf of KIOXIA Group.

Messages to Stakeholders

2. Reporting on sustainability material issues that have been identified

Sustainability Materiality

3. Group performance in the area of sustainability

Environment

Social

Governance

\* KIOXIA Group is a corporate group consisting of KIOXIA Holdings Corporation and its subsidiaries, including KIOXIA Corporation.

## Organizations covered in this report

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In principle, KIOXIA Group is covered in this report, but individual entities are referenced in cases where the information provided does not apply to the whole KIOXIA Group.

Note: “KIOXIA” in this report refers to KIOXIA Holdings Corporation and KIOXIA Corporation. “KIOXIA Group in Japan” refers to KIOXIA Holdings Corporation and its consolidated subsidiaries in Japan. “KIOXIA Group overseas” refers to consolidated subsidiaries overseas. Organizations which were combined within recent years may not be covered.

## Reporting period

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This report focuses on the results of activities in FY2020 (April 1, 2020 to March 31, 2021).

It also includes some details of activities initiated prior to FY2020 as well as more recent ones.

## Publication

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Current issue: November 2021 (next issue scheduled for October 2022; previous issue: September 2020)

## Reference Guidelines

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- GRI (Global Reporting Initiative)

This report contains standard disclosures from the GRI Sustainability Reporting Standard.

- SASB (Sustainability Accounting Standards Board)
- United Nations Global Compact [COP (Communication of Progress) Advanced level]
- ISO 26000

## Company information

### Company Outline of KIOXIA Holdings

<b>Address</b>	1-21 Shibaura 3-chome, Minato-ku, Tokyo
<b>President and CEO</b>	Nobuo Hayasaka
<b>Capital</b>	10 billion yen
<b>Shareholders</b>	<p>Toshiba Corporation (40.64%)            BCPE Pangea Cayman, L.P. (25.92%)            BCPE Pangea Cayman2, Ltd. (14.96%)            BCPE Pangea Cayman 1A, L.P. (9.37%)            BCPE Pangea Cayman 1B, L.P. (5.99%)            Hoya Corporation (3.13%)            Total 100.00%</p> <p>Note: Above shows the voting shareholding ratio as of August 27, 2020.</p> <p>The ratio of voting rights owned to the voting rights of all shareholders is rounded to two decimal places.</p> <p>However, the total number is rounded off to one decimal place.</p>
<b>Business</b>	Group strategy formulation and management oversight
<b>Employees</b>	Non-consolidated: approx. 120, Consolidated: approx. 13,600 (As of March 31, 2021)

## Management

### Directors

<b>Representative Director</b>	Nobuo Hayasaka
<b>Director</b>	Stacy J. Smith
<b>Director</b>	Yuji Sugimoto
<b>Director</b>	David Gross-Loh
<b>Director</b>	Hiroshi Suzuki
<b>Director</b>	Michael R. Splinter

### Statutory Auditors

<b>Statutory Auditors</b>	Isao Morita
<b>Statutory Auditors</b>	Koichi Hatano
<b>Statutory Auditors</b>	Masashi Suekane

## Executive Officers

<b>President and Chief Executive Officer</b>	Nobuo Hayasaka
<b>Executive Chairman</b>	Stacy J. Smith
<b>Vice Chairman</b>	Lorenzo A. Flores
<b>Executive Vice President and Executive Officer</b>	Naohisa Sano
<b>Executive Vice President and Executive Officer</b>	Tomoharu Watanabe
<b>Managing Executive Officer (Chief Financial Officer )</b>	Hideki Hanazawa
<b>Executive Officer (General Manager, Legal Affairs Division)</b>	Takahiro Asakura
<b>Executive Officer (General Manager, Human Resources and Administration Division)</b>	Kyota Okishiro
<b>Executive Officer (Chief Strategy Officer)</b>	Shinichi Hashimoto

## Financial Result

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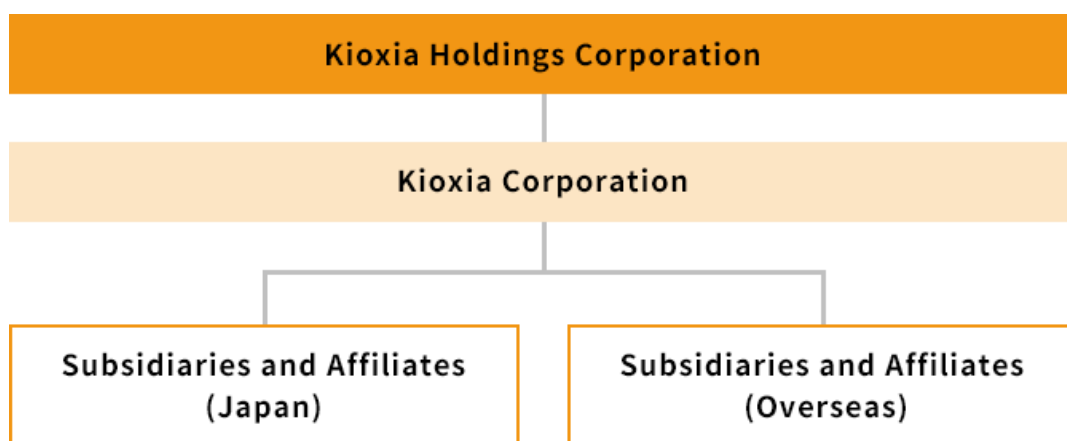
FY2020 ended March 31, 2021

<b>Sales</b>	1,178.5 billion yen
<b>Operating Income</b>	6.6 billion yen
<b>Net Income</b>	(24.5) billion yen

## Group Network

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Kioxia Group is the world leader in memory solutions, dedicated to the development, production and sale of flash memory and solid state drives (SSDs). Kioxia Group comprises Kioxia Holdings, its 19 subsidiaries (4 in Japan and 15 overseas) and 6 affiliated companies (4 in Japan and 2 overseas).



## **Kioxia Corporation**

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### **Kioxia Corporation**

Research, development, design, production and marketing of memory and SSD products

## **Subsidiaries and Affiliates (Japan)**

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### **Kioxia Iwate Corporation**

Production of flash memory products

### **Kioxia Systems Co., Ltd.**

Design and development of memory products, and customer support

### **Kioxia Etoile Corporation**

Cleaning and healthcare services for Yokkaichi Plant

## **Subsidiaries and Affiliates (Overseas)**

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### **Kioxia America Inc.**

Research, development and marketing of memory and SSD products

### **Kioxia Europe GmbH**

Sales and marketing of memory and SSD products

**Kioxia Asia, Limited**

Sales and marketing of memory and SSD products

**Kioxia Singapore Pte. Ltd.**

Sales and marketing of memory and SSD products

**Kioxia Taiwan Corporation**

Sales and marketing of memory and SSD products

**Kioxia Semiconductor Taiwan Corporation**

Management of subcontracted production

**Kioxia Korea Corporation**

Research and development of memory products, and marketing of memory and SSD products

**Kioxia (China) Co., Ltd.**

Sales and marketing of memory and SSD products

**Kioxia Israel Ltd.**

Software development for SSD products

**Kioxia Technology UK Ltd.**

SSD Product Development

**Solid State Storage Technology Corporation**

Design, development, manufacturing and marketing of SSD products



**History**

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<b>1987</b>	Invention of world's first NAND flash memory
<b>1991</b>	World's first mass production of NAND flash memory
<b>1992</b>	Yokkaichi Plant established
<b>2007</b>	World's first 3D flash memory technology announced
<b>2014</b>	World's first 15nm 128Gbit NAND flash memory
<b>2016</b>	Mass production of 48-layer BiCS FLASH™
<b>2017</b>	Toshiba Memory Corporation established Mass production of 64-layer BiCS FLASH™
<b>2018</b>	Mass production of 96-layer BiCS FLASH™
<b>Oct 1, 2019</b>	Changed company name to Kioxia Holdings Corporation

**Standards of Conduct for KIOXIA Group**

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Standards of Conduct for KIOXIA Group

# Mission & Vision

## Mission

**Uplifting the world with “memory”**

By evolving “memory,” we create uplifting experiences and change the world.

## Vision

With progressive memory technology at the core, we offer products, services, and systems that create choice and define the future.

### The origin of the name “KIOXIA”

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# KIOXIA

**KIOKU × AXIA**

On October 1st 2019, we made a fresh start as KIOXIA Holdings Corporation. The name KIOXIA is a combination of the Japanese word *kioku* meaning “memory” and the Greek word *axia* meaning “value.”

The concept of *kioku*, which underpins our mission and vision, goes beyond the notion of memory as mere data to more broadly encompass experiences, emotions and ideas.

# Messages to Stakeholders

## Message from the CEO

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**Uplifting the world with “memory,”  
KIOXIA Group continues to deliver value to  
society**

Nobuo Hayasaka  
President and CEO  
KIOXIA Holdings Corporation

Global issues such as climate change, finite natural resources, spread of infectious diseases and various forms of social inequality have been on the rise. If we want to pass on a sustainable world to future generations these and many other issues require transformational solutions.

Advanced technologies address some of these challenges today. Innovations in AI, IoT, and Big Data are expected to play a key role as we move forward. For these technologies Kioxia memory solutions are indispensable to building a sustainable future.

The COVID-19 pandemic has provided us with an opportunity to reassess the relationship between business and society, how we respond to this ‘new normal’, and the ways we behave as a company.

Our sustainable management strategy is one of our most important priorities. We recently have established a Sustainability Council as an extension of our existing CSR Promotion Committee. This new group is tasked with focusing on non-financial assets and establishing medium- to long-term strategic goals for our management team.

As we continue on our journey of a decarbonized society, Kioxia Group is implementing various initiatives to achieve our goal of using 100% renewable energy across Kioxia by FY2040.

Aligned with our mission to “uplift the world with memory,” we will work with our partners to transform and enrich the lives of people everywhere and contribute to build a more creative and inspiring world.

## Message from the Executive Officer in Charge of Sustainability

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**We are boosting the sustainability of KIOXIA Group operations in order to continue to be of value to society**

Tomoharu Watanabe

Executive Officer in Charge of Sustainability

Executive Vice President and Executive Officer

Kioxia Holdings Corporation

KIOXIA Group delivers semiconductor memory products that are essential for a wide range of electronic devices, such as smartphones and servers, which makes life for people all over the world more convenient as. Our technologies, innovations, and value-added products and services will continue to meet the constantly evolving needs of society and contribute to global sustainability.

There are many global challenges that need to be addressed, and society's expectations of global corporations like ours are increasing. Endorsing the UN's Sustainable Development Goals (SDGs), contributing to the reduction of greenhouse gas emissions as per the Paris Agreement, and aligning with the stipulations of the Task Force on Climate-Related Financial Disclosures (TCFD) established by the Financial Security Board and the Responsible Business Alliance (RBA) address some of these issues.

Our endorsement of the TCFD in June 2021, and RBA membership a month later in July further underscore our commitments. We are also implementing various initiatives to achieve our goal of using 100% renewable energy at all our business sites by FY2040.

We comply with all relevant laws, regulations and social norms, and will continue to aspire to be a Kioxia Group that is trusted by all our stakeholders, engaging deliberately in sustainability activities to create value for society through "memory".

# **KIOXIA Group's Sustainability**

**Sustainability Management**

**Sustainability Materiality**

**Major Sustainability Issues and Initiatives in the Value Chain**

**Stakeholder Engagement**

**KIOXIA Group Initiatives in Support of the SDGs**

# Sustainability Management

The KIOXIA Group promotes sustainability management aiming to “enrich people’s lives through products and services and to broaden society’s possibilities” based on our corporate mission of “Uplifting the world with memory.” Through communication and collaboration with a range of stakeholders including customers, suppliers, employees and their families, we aspire to gain an understanding of issues that affect them and build relationships with them founded on trust.

## Organization of Sustainability Management

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In order to ensure that sustainability management is integrated with our day-to-day corporate management, the KIOXIA Group has established a team responsible for CSR and sustainability within the Corporate Planning Division of the KIOXIA Holdings Corporation.

To strengthen and further advance our sustainability management, in May 2021 we created two new conferencing bodies. The Sustainability Committee, with the Executive Officer in charge of sustainability as chair, comprises the heads of each of the business and corporate divisions, who come together to discuss sustainability issues. The Sustainability Strategy Meeting, chaired by the CEO, is where executive officers deliberate and decide on the same issues.

In the first half of FY2021, the KIOXIA Group took proactive steps to grow over the medium- to long-term and to continue to provide value to society, conducting discussions of important issues as part of our management strategy and target setting. To further advance our efforts toward dealing with climate change and promoting supply chain CSR, as well as to clarify our stance on these issues, we decided to endorse the TCFD (Task Force on Climate-Related Financial Disclosures) and to join the RBA (Responsible Business Alliance).

We have set up task forces under these conferencing bodies to engage in important sustainability issues, to report on progress and to confirm our direction. To reflect society’s evolving concerns, we have formulated a human rights policy, revised our procurement policies, disclosed climate change-related information in accordance with the TCFD, and re-stated our determination to contribute to the environment by means of our products, as priority issues in the first half of FY2021.

## Management Structure of the KIOXIA Group's Sustainability



# Sustainability Materiality: Priority Areas for the Group's Medium- to Long-term Growth

## Basic Philosophy

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The KIOXIA Group will continue to create value for society through our memory technology, based on our mission of “uplifting the world with memory.” We will contribute to the development of a sustainable society by strengthening the foundations supporting the Group’s medium- to long-term business activities, and by responding to the demands of our stakeholders as a member of global society.

## Process of Setting Materiality

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Environmental issues such as climate change, energy and resource shortages due to industrialization, widening disparities of wealth, and the threat of new infectious diseases are just some of the growing challenges facing society. On the other hand, the development of digital technology continues to make people’s lives more convenient than ever. Technological innovation brought about by AI, IoT and the use of big data has changed social and industrial structures and is expected to rapidly generate needs that haven’t been seen before.

Taking these social changes into account, there are rising expectations of the role the Group should play in the sustainable development of society; we have therefore decided there is an urgent need to further enhance our sustainability management and clearly set out our policies.

We have established themes we see as particularly important for governing the sustainable development of the Group and of society, which we call Sustainability Materiality.

## Overview of Sustainability Materiality

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Sustainability Materiality comprises three domains.



## Creating Social Value

The KIOXIA Group will create social value in the medium- to long-term together with our partners by using memory technology to expand the possibilities of our current and future products and services based on our mission of “uplifting the world with memory.”

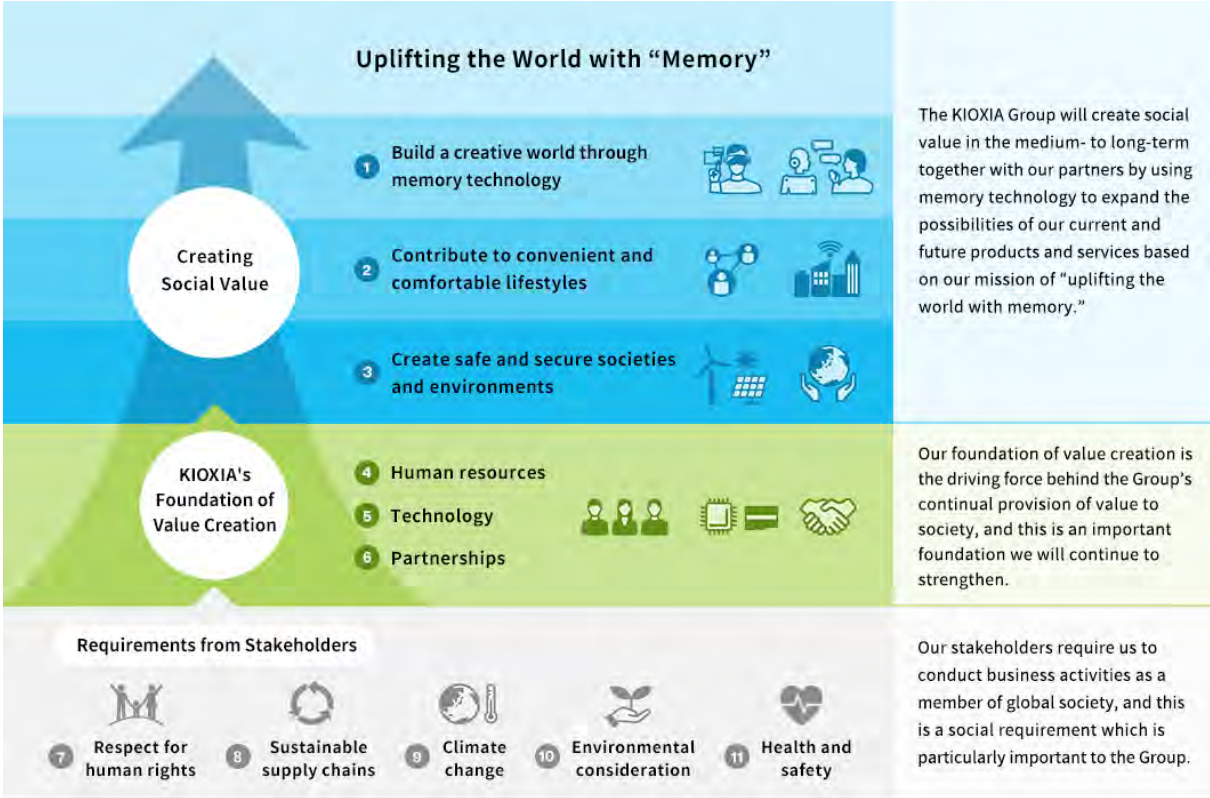
## Foundation of Value Creation

Our foundation of value creation is the driving force behind the Group’s continual provision of value to society, and this is an important foundation we will continue to strengthen.

## Requirements from Stakeholders

Our stakeholders require us to conduct business activities as a member of global society, and this is a social requirement which is particularly important to the Group.

## Concepts of Sustainability Materiality



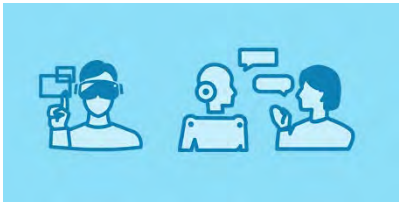
# Creating Social Value

## Basic Philosophy

By using memory technology, we expand the possibilities of our current and future products and services and work with our partners to create value for society.

- We use memory technology to create digital innovations for a data-driven society, and contribute to solving social and environmental challenges.
- In addition to providing people with safety, security, convenience and comfort, we will help to build a more creative world.

This comprises the following three elements:



**(1) Build a creative world through memory technology**

Through memory technology we support value creation by working with partners to provide people with diverse experiences and creative means of expression and communication.



**(2) Contribute to convenient and comfortable lifestyles**

By enhancing high-capacity, high-speed, low-power and high-reliability technologies, making people's lifestyles smarter, and reducing bit unit costs, we will contribute to creating a society in which more people can lead convenient and comfortable lives.



**(3) Create safe and secure societies and environments**

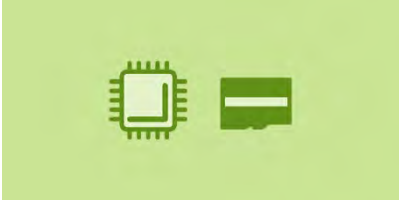
Based on digital technology developments, we will contribute to solving social and environmental issues through providing storage to allow people to live safely and securely.

# Foundation for Value Creation

This comprises the following three elements:



**(4) Human resources**  
We will recruit and train highly specialized human resources to develop advanced technologies, and diverse human resources to meet expanding and diversifying market requirements.



**(5) Technology**  
We will promote continuous technological investment and initiatives for future-oriented advanced development.



**(6) Partnerships**  
We will build partnerships with customers, suppliers and research institutions to create products and services that anticipate the needs of society.

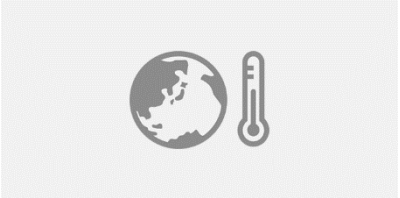
# Requirements from Stakeholders



**(7) Respect for human rights**  
We will comply with international human rights principles and promote fair and sound business activities.



**(8) Sustainable supply chains**  
We will promote sustainable business activities by addressing human rights, labor, safety, environmental and other business risks, including those of our suppliers.



**(9) Climate change**  
We will contribute to a decarbonized society by reducing greenhouse gas emissions and promoting the use of renewable energy in our business activities.



### **(10) Environmental consideration**

We will promote business activities in consideration of their environmental impact, focusing on areas such as waste reduction, chemical substance management and wastewater quality management, with the aim of enriching human life in harmony with the Earth.



### **(11) Health and safety**

We will strive to create safe and healthy workplaces, taking into account changes in society and behavioral patterns, with the aim of preventing occupational accidents, improving employees' health and increasing productivity through enhanced vitality.

## **Sustainability Materiality Identification Process**

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In the first half of 2021 we reviewed the CSR Materiality we set out in 2017 (respect for human rights, promotion of diversity, promotion of supply chain CSR, environmental management) from the perspective of trends in global society and requirements from stakeholders. Furthermore, we identified non-financial capital as a strength for the KIOXIA Group over the medium- to long-term and extracted elements of Sustainability Materiality, taking into account the society we want to realize together with our partners and the societal impact of our products, services and technological developments. To do this we listened to the opinions of outside experts at meetings of the Sustainability Committee that became the focus of lively discussions at Sustainability Strategy Meetings.

Looking ahead, we will set targets and build a framework around which we will further evolve our activities.

### Sustainability Management

# Major Sustainability Issues and Initiatives in the Value Chain

As the structure of our various business segments differs and their value chains and stakeholders vary, KIOXIA Group performs mapping and analyzes sustainability challenges and risks for each segment, doing our utmost to avoid and mitigate risks.

Value chain	Relevant stakeholders	Major sustainability issues	KIOXIA Group's Approach
Mining of raw materials	Local communities	<ul style="list-style-type: none"> <li>&lt;Sustainability issues concerning human rights and labor relations&gt;                             <ul style="list-style-type: none"> <li>Responsible Minerals Sourcing</li> <li>Respect for human rights</li> <li>Child labor, forced labor</li> <li>Occupational health and safety</li> </ul> </li> <li>&lt;Sustainability issues concerning environmental relations&gt;                             <ul style="list-style-type: none"> <li>Consideration for biodiversity</li> <li>Sustainable resources</li> </ul> </li> </ul>	<p><b>A</b></p> <p>Action on Responsible Minerals Sourcing</p>
Manufacture of components and materials	Suppliers Local communities	<ul style="list-style-type: none"> <li>&lt;Sustainability issues concerning human rights and labor relations&gt;                             <ul style="list-style-type: none"> <li>Respect for human rights</li> <li>Occupational health and safety</li> <li>Child labor, forced labor</li> </ul> </li> <li>&lt;Sustainability issues concerning environmental relations&gt;                             <ul style="list-style-type: none"> <li>Proper management of chemical substances</li> <li>Reducing greenhouse gas emissions</li> <li>Sustainable use of water resources</li> <li>Consideration for biodiversity</li> </ul> </li> <li>&lt;Other sustainability issues&gt;                             <ul style="list-style-type: none"> <li>Anti-corruption</li> </ul> </li> </ul>	<p><b>B</b></p> <p>Monitoring suppliers</p>
R&D, Product planning, Product design	Employees	<ul style="list-style-type: none"> <li>&lt;Sustainability issues concerning human rights and labor relations&gt;                             <ul style="list-style-type: none"> <li>Respect for human rights</li> <li>Occupational health and safety</li> <li>Labor management</li> <li>Diversity promotion</li> </ul> </li> <li>&lt;Other sustainability issues&gt;                             <ul style="list-style-type: none"> <li>Protection of intellectual property</li> <li>Product safety</li> <li>Information security management</li> </ul> </li> </ul>	<p><b>C</b></p> <p>Promoting the career development of female employees</p>
Product manufacture	Employees Resellers	<ul style="list-style-type: none"> <li>&lt;Sustainability issues concerning human rights and labor relations&gt;                             <ul style="list-style-type: none"> <li>Respect for human rights</li> <li>Occupational health and safety</li> <li>Labor management</li> <li>Diversity promotion</li> </ul> </li> <li>&lt;Sustainability issues concerning environmental relations&gt;                             <ul style="list-style-type: none"> <li>Proper management of chemical substances</li> <li>Efficient use of energy</li> <li>Sustainable use of water resources</li> <li>Reducing greenhouse gas emissions</li> </ul> </li> <li>&lt;Other sustainability issues&gt;                             <ul style="list-style-type: none"> <li>Protection of intellectual property</li> <li>Quality control</li> <li>Information security management</li> </ul> </li> </ul>	<p><b>C</b></p> <p>Promoting the career development of female employees</p> <p><b>D</b></p> <p>Reducing the environmental burden of Yokkaichi Plant</p>
Contract manufacturing	Resellers Customers	<ul style="list-style-type: none"> <li>&lt;Other sustainability issues&gt;                             <ul style="list-style-type: none"> <li>Antitrust and fair trade practices</li> <li>Protection of customer and personal information</li> <li>Export control</li> <li>Advertising expressions</li> <li>Providing information about product safety</li> </ul> </li> </ul>	
Sales	Resellers Customers	<ul style="list-style-type: none"> <li>&lt;Sustainability issues concerning human rights and labor relations&gt;                             <ul style="list-style-type: none"> <li>Occupational health and safety</li> </ul> </li> <li>&lt;Sustainability issues concerning environmental relations&gt;                             <ul style="list-style-type: none"> <li>Reducing greenhouse gas emissions</li> </ul> </li> </ul>	
Distribution	Resellers	<ul style="list-style-type: none"> <li>&lt;Sustainability issues concerning human rights and labor relations&gt;                             <ul style="list-style-type: none"> <li>Occupational health and safety</li> </ul> </li> <li>&lt;Sustainability issues concerning environmental relations&gt;                             <ul style="list-style-type: none"> <li>Reducing greenhouse gas emissions</li> </ul> </li> </ul>	
Use	Customers	<ul style="list-style-type: none"> <li>&lt;Sustainability issues concerning environmental relations&gt;                             <ul style="list-style-type: none"> <li>Reducing greenhouse gas emissions</li> </ul> </li> <li>&lt;Other sustainability issues&gt;                             <ul style="list-style-type: none"> <li>Response to product accidents</li> <li>Customer service and support</li> </ul> </li> </ul>	
Disposal	Customers	<ul style="list-style-type: none"> <li>&lt;Sustainability issues concerning environmental relations&gt;                             <ul style="list-style-type: none"> <li>The product 3Rs</li> <li>Reducing environmental impact when disposing products</li> </ul> </li> </ul>	

KIOXIA Group's Approach

A: Action on Responsible Minerals Sourcing

B: Monitoring suppliers

C: Promoting the career development of female employees







D: Reducing the environmental impact of Yokkaichi Plant



# Stakeholder Engagement

KIOXIA Group's business activities involve relationships with diverse stakeholders, as outlined below.

Here we clarify our relationships with our major stakeholders, the relationship between KIOXIA Group and each stakeholder, the points of dialogue, and examples of communication.

## Major Stakeholders

Stakeholders	Relationship with KIOXIA Group
Customers 	We sell a wide range of memory and SSD products around the world. These are mainly used in smartphones, laptop PCs, data centers, and data servers.
Shareholders /Investors 	<ul style="list-style-type: none"> <li>• Toshiba Corporation (40.64%)</li> <li>• BCPE Pangea Cayman, L.P. (25.92%)</li> <li>• BCPE Pangea Cayman2, Ltd. (14.96%)</li> <li>• BCPE Pangea Cayman 1A, L.P. (9.37%)</li> <li>• BCPE Pangea Cayman 1B, L.P. (5.99%)</li> <li>• Hoya Corporation (3.13%)</li> </ul> Total 100.00%  Note: Above shows the voting shareholding ratios as of August 27, 2020.
Suppliers 	We deal continuously with some 600 suppliers worldwide (as of March 31, 2021)
Employees 	About 13,600 people work in KIOXIA Group companies (as of March 31, 2021)
Local Communities 	In carrying out our business operations, we respect the cultures, history and customs of people in each country or region.
Governments /Public Bodies 	We observe the laws and regulations of the respective countries and regions in which we do business.

<p>NPOs/NGOs</p> 	<p>We cooperate with and draw on the strength of NPOs and NGOs in areas such as the environment, human rights and our contribution to society, and always endeavor to engage in constructive dialogue with them.</p>
<p>Global Environment</p> 	<p>We are tackling climate change and other environmental challenges so that the habitats of diverse life-forms, including our own descendants, can be maintained.</p>

## Customers



<p><b>Key responsibilities</b></p>	<ul style="list-style-type: none"> <li>• Providing safe, secure products and services that offer great value</li> <li>• Providing appropriate product information</li> <li>• Offering excellent customer relations and support</li> </ul>
<p><b>Major means of identifying stakeholders' views and requests</b></p>	<ul style="list-style-type: none"> <li>• Routine sales activities</li> <li>• Call center contact (phone, email, etc.)</li> </ul>
<p><b>Stakeholder point of contact</b></p>	<p>Corporate Sales &amp; Marketing Headquarters and each division</p>

## Communication Method and Case Study

### Education and Training of Employees on Dealing with Customers

We provide e-learning for employees aimed at improving customer satisfaction. In FY2020, we held e-learning sessions for KIOXIA Group employees in Japan under the theme of “The Enhancement of Customer Satisfaction.”

### Sharing and Reflecting on Customer Feedback

We receive comments and requests for products and services in our daily operations; these are shared among relevant personnel including top management and used to improve product quality and adjust our service offerings.



## Shareholders/Investors

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<b>Key responsibilities</b>	<ul style="list-style-type: none"> <li>• Disclosing information in a timely and appropriate manner</li> </ul>
<b>Major means of identifying stakeholders' views and requests</b>	<ul style="list-style-type: none"> <li>• Press releases</li> </ul>
<b>Stakeholder point of contact</b>	Legal Affairs Division, Corporate Planning Division, and Investor Relations Division

## Suppliers

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<b>Key responsibilities</b>	<ul style="list-style-type: none"> <li>• Selecting suppliers fairly and engaging in fair trading practices</li> <li>• Respecting human rights, promoting labor and environmental management in the supply chain</li> </ul>
<b>Major means of identifying stakeholders' views and requests</b>	<ul style="list-style-type: none"> <li>• Routine procurement activities</li> <li>• Partners' Day (to explain our procurement policies)</li> <li>• CSR survey, audit, guidance</li> <li>• Business Partner Hotline</li> </ul>
<b>Stakeholder point of contact</b>	Procurement Division

## Communication Method and Case Study

### Requesting Suppliers to Undertake CSR Management

We ask suppliers to undertake their own CSR management through regular events that we call Partners' Days, where we explain our procurement policies and daily procurement operations. We also conduct surveys of suppliers based on the RBA Code of Conduct to confirm the status of their compliance.

### Sustainable Supply Chain

# Employees



<b>Key responsibilities</b>	<ul style="list-style-type: none"> <li>• Respecting human rights</li> <li>• Maintaining appropriate employment and labor-management relations</li> <li>• Conducting fair assessment, treatment, and development of human resources</li> <li>• Respecting diversity</li> <li>• Supporting diverse working styles</li> <li>• Ensuring occupational health and safety</li> </ul>
<b>Major means of identifying stakeholders' views and requests</b>	<ul style="list-style-type: none"> <li>• Dialogue, information exchange meetings</li> <li>• Labor-Management Congress</li> <li>• Employee engagement survey</li> <li>• Risk hotline</li> </ul>
<b>Stakeholder point of contact</b>	Human Resources & Administration Division, Legal Division, and Corporate Planning Division

## Communication Method and Case Study

### Messages from Top Executives

In FY2020, KIOXIA's president and top-level executives shared videos with employees outlining our management vision and strategies; they were shown via video conferences and via our intranet at the beginning of each half semester.

The aim was to maintain and improve employee motivation by directly delivering emails in a timely manner to all employees in order to share accurate information about management decisions that affect the whole company.

### Promoting Employee-Management Dialogue

KIOXIA respects internationally recognized human rights to the fullest extent, including the International Bill of Human Rights (Universal Declaration of Human Rights and International Covenants on Human Rights) and the core labor standards specified by the International Labor Organization, and we support the basic principles of the United Nations Guiding Principles on

Business and Human Rights and the OECD Guidelines for Multinational Enterprises, and we work to ensure that our employees enjoy fundamental labor rights. The labor agreement concluded with the KIOXIA Labor Union stipulates that the Labor Union has three basic rights - the right to association, the right to collective bargaining, and the right to act collectively.

At the KIOXIA Labor-Management Congress held every six months, KIOXIA discusses its business policies with representatives of the Association of KIOXIA Unions in Japan.

Moreover KIOXIA and representatives of the Association of KIOXIA Union in Japan hold wage negotiation in every spring, consequently KIOXIA pays higher than legal minimum wage to employees.

KIOXIA Group companies overseas hold similar discussions with their labor unions or employee representatives in accordance with the laws and regulations of the countries and regions in which they operate.

### **Employee Engagement Survey and Disclosure of Results**

KIOXIA regularly conducts employee engagement surveys in order to solicit feedback from employees, and to periodically monitor the level of employees' understanding of, and agreement with, the company's policies.

We share the survey results with employees, and our president sends a message addressing and commenting on these; in this way we leverage the survey to create a more open corporate culture.

### Respect for Human Rights

### Talent Development

### Diversity Promotion

### Occupational Health and Safety

## **Local Communities**

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<b>Key responsibilities</b>	<ul style="list-style-type: none"> <li>• Stimulating local economies</li> <li>• Respecting different customs and cultures</li> <li>• Contributing to cultivating the scientists and engineers of the future</li> <li>• Engaging in social contribution activities in local communities</li> <li>• Preventing accidents and disasters at business sites</li> </ul>
<b>Major means of identifying stakeholders' views and requests</b>	<ul style="list-style-type: none"> <li>• Dialogue, information exchange meetings</li> <li>• Science classes, research scholarships</li> <li>• Factory visits</li> <li>• Holding summer festivals to promote communication with residents and to revitalize communities</li> <li>• Providing opportunities for community workshops to sell their products</li> <li>• Employee participation in community activities</li> </ul>
<b>Stakeholder point of contact</b>	Each business site

## Communication Method and Case Study

### Environmental Communication

We communicate with local communities about our environmental efforts by means of such initiatives as factory visits and by holding classes at elementary schools. We do this so that a wide range of stakeholders, such as the communities around Yokkaichi Plant—including schools, students, customers, and other companies—can learn about KIOXIA Group's activities.

### Supporting Local Community Development

KIOXIA Group sees it as our responsibility as a good corporate citizen and as a member of the local communities to not just leverage our business activities to address issues faced by those communities, but to engage in business activities that are rooted in the area, such as promoting local employment and trade with local companies.

KIOXIA Group offers internships to enable students to experience working and the enjoyment of manufacturing.

**Contributions to Society**

As a good corporate citizen, KIOXIA Group strives to build better relationships with the communities where we conduct our business.

At the eco-charity bazaar that our Yokkaichi Operations plant has been hosting since 2007, we recycle unwanted household goods and donate all profits from the bazaar to the Yokkaichi City Greening Fund.

In FY2020, we collected and donated approximately 29,000 contact lens cases through an activity promoting corneal transplants.

Yokkaichi Plant - CSR and Cooperation with the Local Community

**Governments/Public Bodies**



<b>Key responsibilities</b>	<ul style="list-style-type: none"> <li>• Complying with laws and regulations, and paying taxes</li> <li>• Supporting government policies that address social issues</li> </ul>
<b>Major means of identifying stakeholders' views and requests</b>	<ul style="list-style-type: none"> <li>• Dialogue and proposals via economic associations and industry bodies</li> </ul>
<b>Stakeholder point of contact</b>	Each business site and Corporate Planning Division

**Communication Method and Case Study**

**Job Creation and Tax Contribution**

KIOXIA Group is expanding its business around the world. The jobs we create help support local communities, especially production facilities that employ large numbers of local people.

By paying taxes in accordance with national laws and regulations, Group companies and their employees make an economic contribution to the countries and regions where they operate.

**Participation in Industry Associations**

KIOXIA actively participates in the activities of Keidanren (Japan Business Federation), the Japan Electronics and Information Technology Industries Association, and other industry organizations, to help address various social issues.

**NPO · NGO**

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<b>Key responsibilities</b>	<ul style="list-style-type: none"> <li>• Collaborating on and helping to solve global social issues</li> <li>• Collaborating on corporate citizenship</li> </ul>
<b>Major means of identifying stakeholders' views and requests</b>	<ul style="list-style-type: none"> <li>• Dialogue through collaboration</li> <li>• Exchange of views during stakeholder dialogue</li> </ul>
<b>Stakeholder point of contact</b>	Each business site and Corporate Planning Division

**Global Environment**

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<b>Key responsibilities</b>	<ul style="list-style-type: none"> <li>• Mitigating climate change</li> <li>• Reducing waste discharge</li> <li>• Reducing release of chemicals</li> <li>• Conserving biodiversity</li> </ul>
<b>Major means of identifying stakeholders' views and requests</b>	—
<b>Stakeholder point of contact</b>	Environment Planning Promotion Group

Yokkaichi Plant - Environmental Initiatives

## KIOXIA Group Initiatives in Support of the SDGs

The 2030 Agenda for Sustainable Development was unanimously adopted at the United Nations headquarters in New York in September 2015. The agenda calls for no one to be left behind and stipulates 17 Sustainable Development Goals (SDGs) as important guidelines aimed at driving the international community's realization of sustainable development and the elimination of poverty by 2030.



### Contribution to the Solving of Social Issues through Our Business

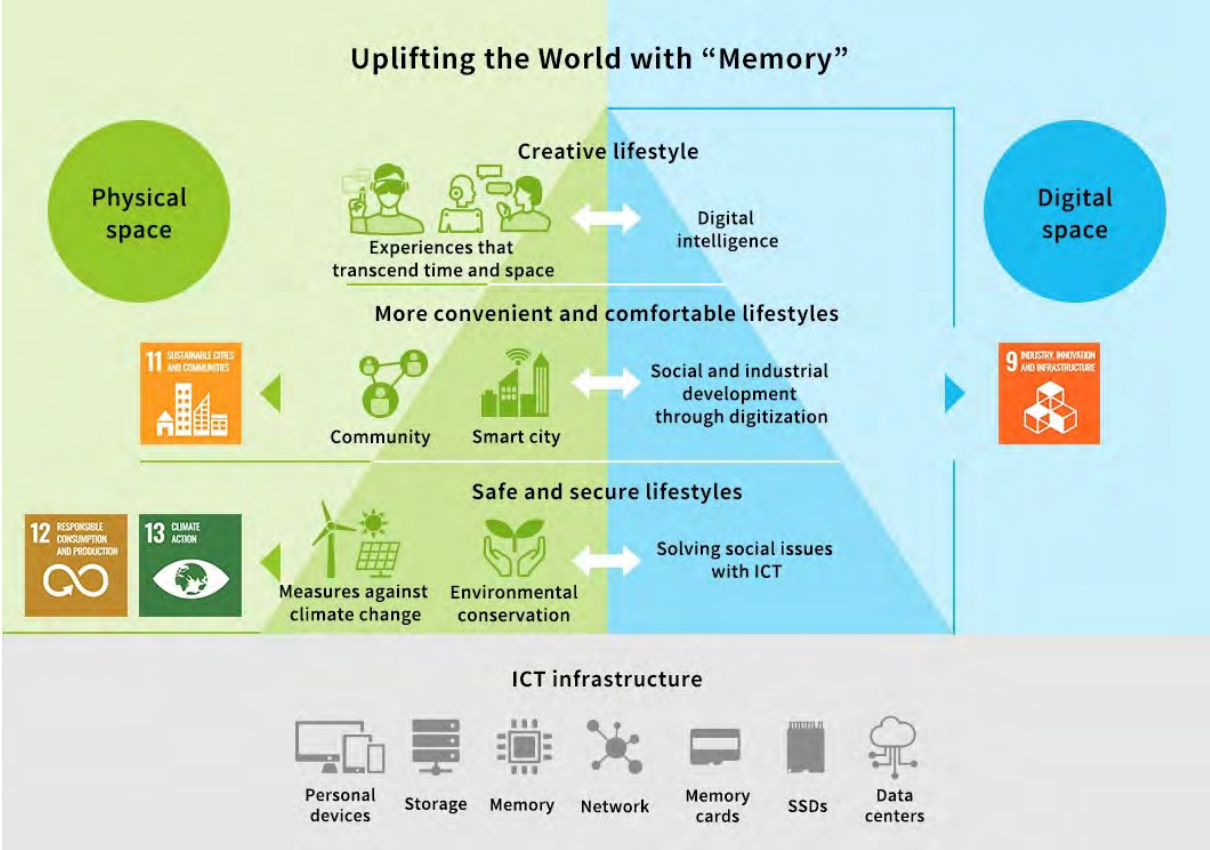
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Humanity is facing a variety of issues on a global scale including global environmental problems; climate change; the water crisis; an increasing population; shortages of energy, resources, and food caused by industrialization; and disparity of wealth. The 2030 Agenda for Sustainable Development was adopted at the United Nations Summit in September 2015. In order to address various social issues, companies are required to contribute to the development of a sustainable society by demonstrating creativity and innovation in order to create business opportunities from a long-term perspective.

In October 2019, the KIOXIA Group changed its name and began life as a new company. The name “KIOXIA” reflects our strong determination to change the world by storing “memories” (“kioku” in Japanese) created by society and using them to create new “value” (“axia” in Greek). Our mission is to uplift the world with “memory.”

The KIOXIA Group, which provides the value of “memory” to society through products such as flash memory and solid state drives (SSDs), will continue to develop a sustainable society by contributing to the SDGs through its business.

Based on a full understanding of its mission and its role as a global company, the KIOXIA Group contributes to achieving goals 9, 11, 12 and 13 of the SDGs through its main business. In addition to contributing via our existing business, we are investigating technology development in new business sectors with a focus on future social issues.



**KIOXIA Enriches People’s Lives by Uplifting the World with “Memory”**

The KIOXIA Group wants to achieve a world where many people can experience an “uplifting” human culture. However, to do so, we must first create the lifestyle infrastructure that allows people to acquire a minimum level of food, clothing and shelter and to live peaceful lives. The groundwork for this safe and secure lifestyle infrastructure cannot be laid unless global environmental problems are solved. The KIOXIA Group is helping to lay this groundwork by implementing measures against climate change and ensuring the effective use of resources in the course of its business activities. Furthermore, with our flash memory and SSD products, we are helping people achieve convenient and comfortable lifestyles where internet access is available anytime and anywhere. In addition, we believe that once such lifestyles have been achieved, we can provide people with more creative lifestyles through “memory.”



The KIOXIA Group has a history of leading the industry in the development of products such as NAND flash memory and 3D flash memory. Going forward, we will continue to change the world by remaining a leader in cutting-edge technology.

When we look at the environment surrounding us, in addition to the physical space in which people live, the advancement of technology has also provided digital space. As digital technology advances, it will lead to the realization of environmental conservation, smart cities, the ability to provide people with creative experiences that transcend time and space, and more. The KIOXIA Group supplies storage products that serve as the foundation for a digital society, and we continue to pursue further research and development. In addition, we aim to contribute to future society by undertaking digital technology research and development through a process of 'backcasting' from the perspective of various envisaged future social issues in the physical environment.

# The KIOXIA Group’s Contribution to the Solving of Social Issues through its Business

## Contribution to the Solving of Social Issues through our Business

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The KIOXIA Group’s mission is to uplift the world with “memory.” By pushing the boundaries of “memory”, we create uplifting experiences, add new value and change the world. With progressive memory technology at our core, we offer products, services and systems that create choice and define the future. Based on this mission and vision, we aim to launch a new era of memory with cutting-edge technology and continue evolving with the world.

Under this policy, we are pursuing activities in order to contribute to the achievement of the SDGs in the belief that our business itself will have a substantial impact on society.

## SDGs to which the KIOXIA Group Contributes through its Business

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The KIOXIA Group’s business activities can contribute to achievement of the SDGs in a wide variety of ways. The four SDGs that we are focusing on contributing to through our business are Goal 9 (Industry, Innovation and Infrastructure), Goal 11 (Sustainable Cities and Communities), Goal 12 (Responsible Consumption and Production), and Goal 13 (Climate Action).

To aid in the development of a sustainable society, the KIOXIA Group will contribute to the achievement of the SDGs through its business activities.

## The KIOXIA Group's SDG-Oriented Activities

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### Goal 9: Accelerating Innovation with Cutting-Edge Technology



#### Social Issues

In addition to recent globalization, the development of technologies such as AI and IoT is more promising than ever due to rapid technological innovation, and discontinuous innovations in various fields are bringing about changes in occupational structures and the way people live and work.

Additionally, these technological innovations promise to pave the way for solutions to various social issues (including global warming, energy, the concentration of populations in large cities, food and water-related issues, and medical and health-related issues).

#### Reference

[Build resilient infrastructure, promote sustainable industrialization and foster innovation](#)

#### Topics

[Technological Developments that Support Cutting-Edge Science](#)

[Technological Developments that Support the 5G Communications Era](#)

### KIOXIA's Contributions to a Solution

As a leader in flash memory, the KIOXIA Group has created various technologies that are the first of their kind in the world. With the expansion of AI and the dawn of the 5G high-speed wireless communications era, the amount of data being generated, stored and used has increased exponentially. The KIOXIA Group is focusing on developing state-of-the-art storage technology to respond to the rapidly increasing need for high-capacity, high-performance storage, and high-speed data processing systems. Furthermore, in addition to storage technology, we are pursuing new research and development that perceives future social issues as business opportunities.

## Goal 11: Contributing to the Development of Sustainable Cities



### Social Issues

Since 2007, more than half the world's population has been living in cities, and that share is projected to rise to approximately 60% by 2030. Under these circumstances, there is a need to create resilient cities that have a low environmental impact and allow people to safely maintain a high quality of life. In addition, the concentration of populations in urban areas has led to the depopulation of surrounding rural areas and led to lifestyle differences between the two. Furthermore, there is a need to create cities that can counteract threats such as new infectious diseases and respond to fresh changes in the social environment.

### Reference

Goal 11: Make cities inclusive, safe, resilient and sustainable

### Topics

Reducing the Cost of Every Bit of Data and Making Data More Widely Available

Leveling Up the World with Every Bit of Data

Giving Value to a New Way of Life with "Bits"

### KIOXIA's Contributions to a Solution

By supplying flash memory and SSD products, we have contributed to the widespread use of internet access devices, the development of data centers, and access to high-quality telecommunications. This has given rise to internet access that is available anytime and anywhere, changing the lifestyles of people all over the world. Today, flash memory and SSDs have become indispensable products in people's lives. By developing various cutting-edge technologies to lower the cost of these products while increasing their capacity and performance, the KIOXIA Group will help more people lead more convenient and comfortable lives.

## Goal 12: Sustainable Consumption and Production



### Social Issues

It is said that the world's population will reach 9.6 billion by 2050 (roughly a 30% increase), and that we will need three planets' worth of resources to maintain our current lifestyles. Companies are required to efficiently manage natural resources, produce products with low environmental impact, and reduce waste and chemical substance emissions. It is also important that information on sustainability efforts is regularly disclosed to all stakeholders.

### Reference

Goal 12: Ensure sustainable consumption and production patterns

### Topics

High-Efficiency Manufacturing

Waste Recycling (Calcium Fluoride)

### KIOXIA's Contributions to a Solution

KIOXIA has set targets for production efficiency, waste generation, and chemical substance emissions, and is working to achieve efficient production.

By obtaining information on the chemical substances used in production and those contained in products throughout the supply chain, we have managed to achieve greater use of substances with a low environmental impact. In addition, chemical substances used and/or generated during production are recycled, properly disposed of by contractors, or detoxified in our production plants. Furthermore, our plants' voluntary control standards are stricter than the corresponding legal regulations, and discharges into the air and rivers are monitored.

Our environmental activities are disclosed in our reports to the CDP and our Sustainability Reports, among others.

Environment

## Goal 13: Addressing Climate Change



### Social Issues

The global effects of climate change, such as abnormal weather and rising sea levels, are becoming more apparent. Climate change affects not only the weather, but a variety of areas including food, drinking water, ecosystems, and infrastructure. The Paris Agreement (COP21, 2015) established the long-term goal of limiting the increase in global average temperatures to well within 2°C, preferably to 1.5°C, compared to pre-industrial levels, and achieving net-zero greenhouse gas emissions in the second half of the 21st century.

Reference

[Take urgent action to combat climate change and its impacts](#)

### Topics

[Efforts Geared toward Introduction of Renewable Energy](#)

[PFC \(A Greenhouse Gas\) Reduction](#)

[Efforts to Increase Product Energy Efficiency](#)

### KIOXIA's Contributions to a Solution

KIOXIA is working to reduce and optimize the usage and emission of the greenhouse gases that cause climate change.

Specifically, we are engaging in energy conservation activities (active introduction of energy-saving equipment, changes and reductions in the number of processes, and improvements in energy efficiency), comprehensive installation of abatement equipment that breaks down greenhouse gases and emits them as gases with low global warming potential, and the development of high-energy-efficiency products.

Additionally, we are undertaking a series of efforts to introduce renewable energy into our business activities.

## Ripple Effect from 4 SDGs to 17

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The KIOXIA Group believes that all of the SDGs are interrelated and that its contribution to reaching these four goals will ripple out to help realize many related goals.

To aid in the development of a sustainable society, the KIOXIA Group will contribute to the achievement of the SDGs through its business activities.

## Future-Facing Efforts

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The KIOXIA Group's mission is to uplift the world with "memory." Based on this mission, we introduced a 'backcasting' framework to look to the future and examine the creation of opportunities and new technology that are not extensions of our conventional storage business. We are examining what kinds of technological developments and business opportunities the KIOXIA Group can conceive starting from the perspective of future social issues.

Discussion Aimed at Creating a Sustainable Society

Research and Technology Development

# SDG-Related Topics

## KIOXIA Group Businesses that Contribute to Society

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Here, we will introduce specific examples that show how the KIOXIA Group’s business has contributed to solving social issues and achieving the SDGs.

### KIOXIA Group Initiatives in Support of the SDGs

#### The KIOXIA Group’s Contribution to the Solving of Social Issues through its Business

## Reducing the Cost of Every Bit of Data and Making Data More Widely Available

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Urban areas where populations are concentrating need to enable lifestyles that are safe, highly convenient, and allow people to maintain a high quality of life. The spread of flash memory and SSDs has helped provide people with internet access that is available anytime and anywhere. For example, it has made it possible to access news updates via the internet using a tablet while on a train and communicate with people all over the world from the home or office using a PC or tablet. In addition, recording technologies such as image authentication and dashboard cameras have led to safer lifestyles. By manufacturing flash memories and SSDs at even lower cost and increasing their capacity and performance, the KIOXIA Group will help more people improve their lives.



# Leveling Up the World with Every Bit of Data



**9** INDUSTRY, INNOVATION AND INFRASTRUCTURE



**11** SUSTAINABLE CITIES AND COMMUNITIES



Worldwide concentration of population in cities has led to the depopulation of surrounding rural areas and the creation of lifestyle differences between the two. However, an internet-accessible environment allows people to obtain the same information with devices such as smartphones or tablets. The availability of internet access anytime and anywhere has led to an improved quality of life for people as well as increased opportunities for work and for children’s education.

# Giving Value to a New Way of Life with “Bits”



**9** INDUSTRY, INNOVATION AND INFRASTRUCTURE



**11** SUSTAINABLE CITIES AND COMMUNITIES



Due to the global spread of COVID-19, we have been forced to make major changes to our daily lives. As commercial activity and movement are being greatly restricted worldwide, online communication has become a means to connect people and things. An environment in which the internet is accessible anytime and anywhere also contributes to remote work, online classes at home, and other alternatives that help realize a new way of life.

# Technological Developments that Support Cutting-Edge Science

Treating various illnesses such as Alzheimer’s requires research on the human brain deploying state-of-the-art science. One of the ways to analyze the human brain is through neuron research. The neurons in the human brain are said to have a total capacity of 3 zettabytes, which means that state-of-the-art computing systems and storage technology that can conduct high-speed processing are essential when researching them.

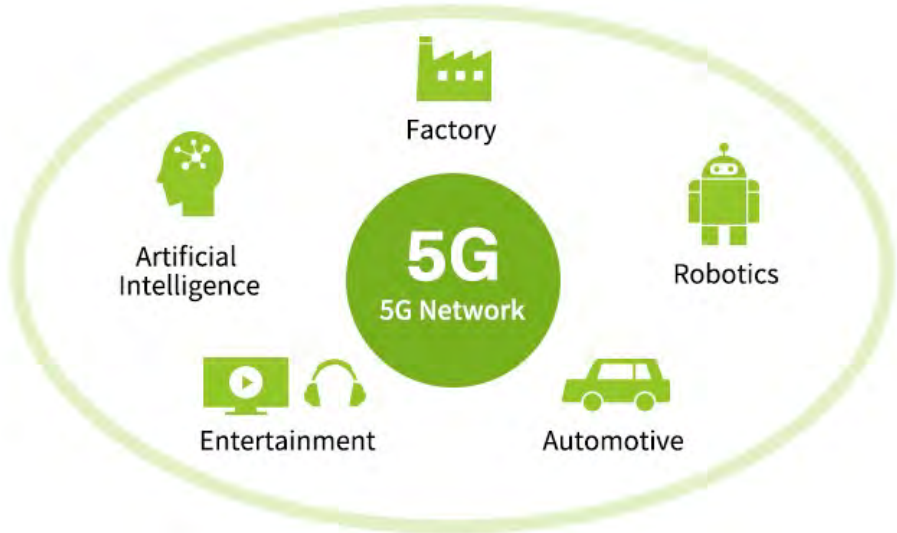


KIOXIA collaborated with the MIT Media Lab and NHK (Japan Broadcasting Corporation) to successfully develop technology that visualizes the neurons in a mouse’s brain in real-time with a high-resolution 8K display and a VR headset. By using our CM5 SSDs, which meet high-speed specifications, we were able to display an enormous amount of 3D image data (5 to 10 TB) in real-time.

We will continue to further advance the development of SSD technology to contribute to the development of cutting-edge science and medical technology.

## Challenging to the Brain with Data Storage

# Technological Developments that Support the 5G Communications Era



To support the 5G communications era, the KIOXIA Group is pursuing cutting-edge research and development in fields such as automobiles (self-driving vehicles), smart factories, robotics, and entertainment.

# High-Efficiency Manufacturing

At the Yokkaichi Plant in Mie prefecture, Japan, we collect over two billion pieces of data every day in real-time from production equipment and transport systems and conduct big data analysis using AI technology. By doing so, we analyze any failures and strive for increased productivity.



Smart factories that utilize these types of AI technology go further than simple automation with “smart” functions that lead to a sustainable society; these include reducing the amount of materials used in production by avoiding the production of defective products, reducing energy consumption by shortening turnaround times, and ensuring a stable supply of high-quality products.

Big data, which is our strength, is a goldmine of useful information and contains a lot of buried wisdom. However, it is not easy to find manually. Therefore, we will use new AI technology to understand the big picture while also unraveling the complex relationships between individual pieces of data. In addition to helping us understand the present, this technology also allows us to predict the future, leading to more efficient development and production.

These state-of-the-art AI technologies were created through internal and external open innovation.

In semiconductor manufacturing, which continues to advance in the form of highly integrated products, we will continue to utilize AI technology to maintain and improve high productivity.



Yokkaichi Plant



Transport equipment inside the clean room

# Waste Recycling (Calcium Fluoride)

At KIOXIA's Yokkaichi Plant, a large amount of hydrofluoric acid is used in wafer cleaning and etching processes, resulting in the generation of high-concentration hydrofluoric acid waste liquid and low-concentration hydrofluoric acid wastewater.



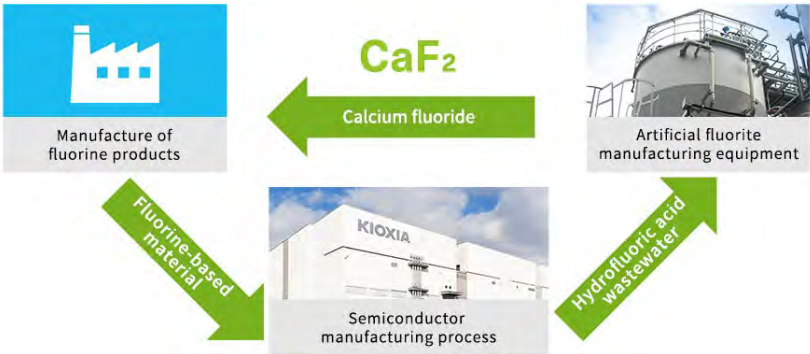
Fluorine in wastewater was traditionally removed using the coagulation-sedimentation method. This method was problematic in that it made recycling and reuse difficult due to the large amounts of impurities such as silica as well as the excessive moisture.

In 2013, we partnered with Organo Corporation and AGC Inc. to develop technology allowing high-concentration hydrofluoric acid waste liquid to be recycled as high-purity calcium fluoride (artificial fluorite). Using Organo Corporation's artificial fluorite production equipment, hydrofluoric acid waste liquid is treated with a crystallizer, extracted from the crystallizer as a slurry containing calcium fluoride crystals, dehydrated, and recycled as high-purity calcium fluoride (artificial fluorite). Manufacturers of fluorine-based products use hydrofluoric acid production equipment to purify it together with natural fluorite by causing it to react with sulfuric acid, and the hydrofluoric acid produced is then sold commercially or used as raw material for fluorine products. Gypsum generated as a by-product of hydrofluoric acid production is also sold commercially.

Through this kind of recycling, we have reduced the amount of sludge containing hydrofluoric acid by roughly 30%. In addition, manufacturers of fluorine-based products use the recycled calcium fluoride (artificial fluorite) to produce fluorine-based materials such as hydrofluoric acid. This recycling reduces the use of fluorite, which is an imported natural resource.

We received an award for this technology along with Organo Corporation and AGC Inc.

Award for Resource Recirculation Technologies and Systems (Japanese only)



## Efforts Geared toward Introduction of Renewable Energy

In 2020, under its new administration, Japan set a new course toward full-scale decarbonization.



Going forward, administrative bodies, NPOs and companies will all pursue more activities than ever before aimed at reaching the Japanese government's new goal of "reducing overall greenhouse gas emissions to zero by 2050." The KIOXIA Group has been pursuing cross-organizational energy conservation activities centered on its plants. Furthermore, we plan to reduce CO<sub>2</sub> emissions by introducing renewable energy group-wide.

As a long-term goal, we aim to use 100% renewable energy by 2040. To achieve this goal, we are pursuing collaboration with other companies and the government through industry groups and others. In addition, as the first step to achieving this long-term goal, we plan to introduce electricity derived from renewable energy at sites such as development and test centers, and take measures such as installing solar panels on plant premises.

In order to meet the expectations of the international community, we will accelerate efforts geared toward decarbonization by introducing renewable energy in line with regional and national government policies.



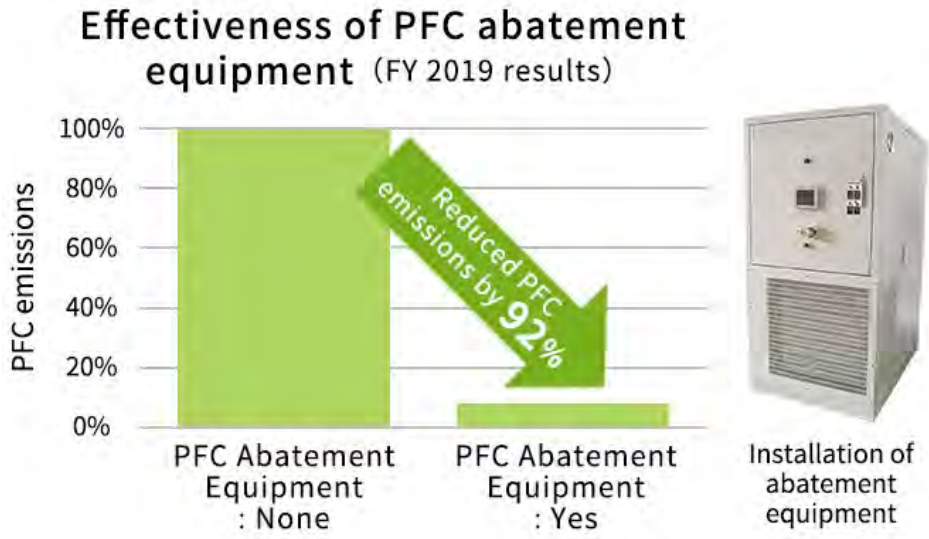
2020 Minister of the Environment Award for Climate Change Action. The Minister of the Environment grants this award to individuals and groups that have made remarkable achievements in their ongoing efforts to mitigate climate change and adapt to climate change. KIOXIA's Yokkaichi Plant received the award in November 2020 in the Mitigation field in the Promotion category.

[http://www.env.go.jp/earth/ondanka/min\\_action\\_award/](http://www.env.go.jp/earth/ondanka/min_action_award/) (Japanese only)

# PFC (A Greenhouse Gas) Reduction



In the semiconductor manufacturing process, PFC (a greenhouse gas) is used during the P-CVD (plasma CVD) process where thin films are formed on wafers, the metal-CVD process, and the plasma etching process, where wiring and contact holes are formed by nanofabrication technology. In order to reduce PFC gas emissions, KIOXIA has installed abatement equipment on 100% of relevant machinery; this breaks down PFC gases and emits them as gases with small global warming potential. We will continue to pursue achievement of the 100% usage of abatement equipment in the future. In addition, we are also working to reduce the amount of PFC gases used during the cleaning of reaction chambers by introducing high-efficiency equipment and optimizing cleaning time.



No.	Measure	Process	Target gas	Contribution to total reduction (%) FY 2019	Remarks
1	Installation of abatement equipment	P-CVD, DRY, Metal	CF <sub>4</sub> , C <sub>4</sub> F <sub>8</sub> , CHF <sub>3</sub> , SF <sub>6</sub> , NF <sub>3</sub> , CH <sub>2</sub> H <sub>2</sub> , CH <sub>3</sub> F, CH <sub>4</sub> , N <sub>2</sub> O	99.65%	Continue to install in new equipment
2	High efficiency cleaning of the reaction chamber	CVD/Metal	NF <sub>3</sub>	0.295%	Continue to install the feature in new equipment
3	Shorter cleaning time in the reaction chamber	CVD	NF <sub>3</sub>	0.058%	Completed FY2019

## Efforts to Increase Product Energy Efficiency

Through efforts to increase the power efficiency of the flash memory and SSDs that the KIOXIA Group supplies, we believe that we can contribute to achieving a low-carbon society by supplying products with high capacity and low power consumption.



In particular, we are working to reduce the amount of electricity and materials used per unit of memory during manufacturing, and to reduce the CO<sub>2</sub> levels emitted per amount of read/write work when products are used.

### Details of Products that Improve Power Efficiency and Reduce Standby Power Consumption

# Discussion Aimed at Creating a Sustainable Society

Our mission is to uplift the world with “memory.” This mission was established through discussion about what kind of company to create going forward, not only among management, but among employees as well.



Based on this mission, as part of its efforts to create businesses that are not extensions of conventional storage production technology, the KIOXIA Group launched an internal project focused on young employees from the perspective of future social issues, and began examining what kind of new business opportunities KIOXIA could conceive.



Internal discussion



# Sustainability Performance

## **Environment**

Environmental Management

Current Status of Environmental Impact and Environmental Targets and Outcomes

Climate Change and Energy Management

Water Risk Management

Environmental Protection System

Contributing to the Environment through Our Products

Environmental Evaluation by External Parties

Environmental Communication

Biodiversity Preservation

Acquisition of Environmental Certification

## **Social**

Respect for Human Rights

Talent Development

Diversity Promotion

Occupational Health and Safety

Sustainable Supply Chain

Quality Control

Supporting Local Community Development

## **Governance**

Corporate Governance

Risk and Compliance

# Environmental Management

KIOXIA Group considers environmental stewardship to be one of our primary responsibilities, and we comply with associated laws and regulations, developing products that limit our environmental impact and taking systematic and globally accredited steps to reduce our pollution and greenhouse gas emissions throughout our entire value chain.

## Environmental Policy

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KIOXIA Group has formulated the KIOXIA Group Environmental Policy, which expresses our basic philosophy about the environment and is shared with the entire Group.

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### KIOXIA Group's Environmental Policy

#### Mission

KIOXIA Group's Environmental Policy ensures we conduct business in a way that enhances and preserves the environment. Through purposeful, sustainable actions, we're prioritizing being responsible stewards of the environment to do our part in maintaining our planet's health for years to come.

#### Policy

In addition to complying with environmental laws and regulations in the regions in which it operates, KIOXIA Group considers environmental stewardship to be one of our primary responsibilities. We take actions to limit our environmental impact throughout our supply chain of memory, applied, and related software products that support information infrastructure. From taking systematic and globally accredited steps to reduce our pollution and greenhouse gas emissions from our manufacturing processes, to regularly auditing and reviewing our activities to constantly improve our environmental management system, KIOXIA Group takes deliberate action to ensure efficient and effective operations.

## Implementation

1. We strive to make sustainable memory, applied, and related software products by using high-capacity, miniaturized and power-saving technologies. We also perform ongoing environmental assessments of our products and manufacturing processes, as well as a targeted effort to reduce our overall raw material usage.
2. We are doing our part to help prevent global warming through initiatives that directly reduce greenhouse gas emissions. This includes the development of energy-saving technologies – especially within power systems and manufacturing machinery – productivity improvements, and introducing clean energies.
3. We purposefully take actions aligned with the “three Rs” – reduce, reuse, recycle. Specifically, we focus on developing resource-saving technologies and implementing productivity efficiencies, as well as limiting the use of water resources around our plant sites and returning water used in production to the environment after effective purification treatment.
4. We limit environmental risk in our operations by being conscious of the chemicals we use in production and developing technologies that reduce our use of certain chemicals. Through responsible handling and management of production-related chemicals, we also strive to prevent associated pollution.
5. We strive to reduce the impact of our business activities on biodiversity, and pursue activities that aim to preserve biodiversity in order to help conserve the environment.
6. We regularly disclose information and updates on our sustainability efforts – including new energy-saving technologies – through environmental advertising, exhibitions, media, and collaboration with various stakeholders including the local communities in which we operate.
7. We underscore the importance of environmental stewardship with our employees, who promise to keep sustainability top-of-mind in all business activities.

This Environmental Policy is core to KIOXIA Group’s operations – it is available internally to global employees of KIOXIA Group and externally to customers, media, and the general public. We are committed to pursuing corporate activities that are in line with this policy.

February 1st, 2020

Nobuo Hayasaka

President and Chief Executive Officer

KIOXIA Holdings Corporation

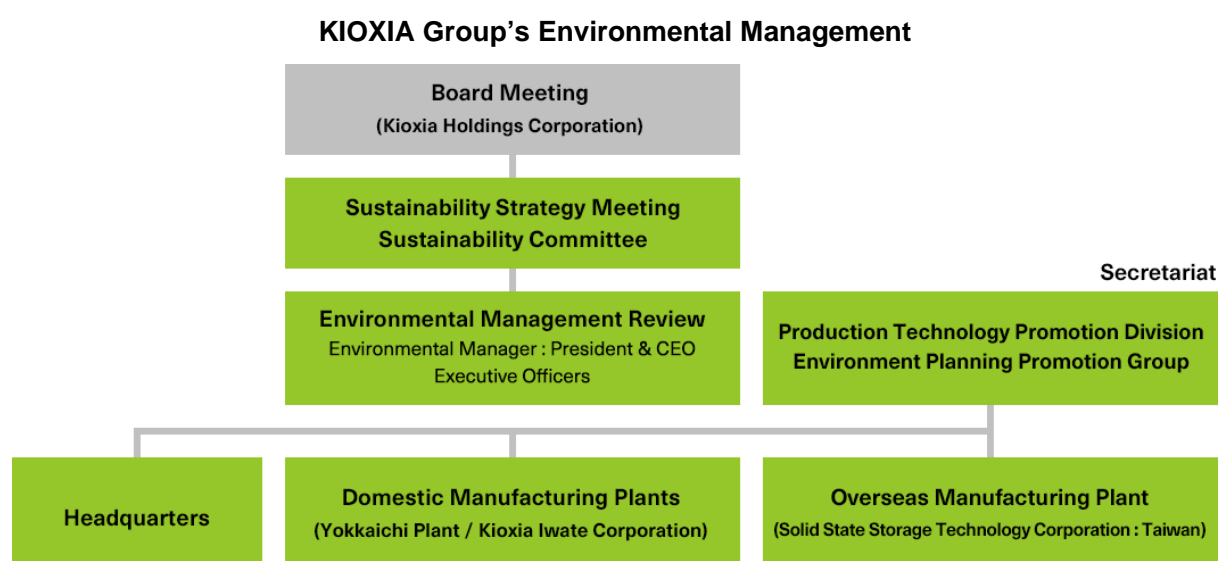
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Standards of Conduct for KIOXIA Group (Environment)

## Environmental Management Promotion

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KIOXIA Group has set up an Environmental Planning and Promotion Group within the Production Technology Promotion Division to promote environmental management. The Environmental Planning and Promotion Group plans and proposes strategies to address social issues and Company environmental measures and compiles environment-related data from workplaces and manufacturing bases within Japan and overseas. It also holds an environmental management review (chaired by the President & CEO with attendees including Executive Officers) every half-year, in addition to reviewing measures involving the environment. Since May 2021, the Board of Directors has discussed key issues flagged in reports from the Sustainability Committee or arising in Sustainability Strategy Meetings.



## Promoting the Environmental Management System

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KIOXIA Group has obtained ISO 14001:2015 certification at its Head Office, domestic manufacturing sites, and at Solid State Storage Technology Corporation, an overseas manufacturing subsidiary.

### Acquisition of Environmental Certification

## Environmental Education and Awareness-Raising

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KIOXIA Group in Japan provides environmental education to newly recruited graduates, mid-career hires, and others, as well as legal training based on environment-related laws and regulations. In addition, environmental education is provided each year to all employees (including temporary workers) and officers via e-learning.

# Current Status of Environmental Impact and Environmental Targets and Outcomes

## Current Status of Environmental Impact

The following tables outline the environmental impact (material balance) of the manufacturing activities at KIOXIA Group.

Although the environmental burden shows an increasing trend, as we are increasing production capacity in response to the growing demand for communications infrastructure, we continue to work on reducing this burden by means of various initiatives.

For details of the environmental impact of Yokkaichi Plant and its environmental activities, see the “Yokkaichi Plant Environmental Report.”

[Yokkaichi Plant Environmental Report 2020 \(PDF: 7.2MB\)](#)

### Input

	FY2018	FY2019	FY2020
<b>Chemicals<sup>1</sup> (tons)</b>	<b>47,661</b>	<b>47,147</b>	<b>56,418</b>
<b>- VOC<sup>2</sup> (tons)</b>	15,031	14,208	16,985
<b>- PRTR<sup>3</sup> (tons)</b>	6,220	5,946	7,214
<b>City water<sup>4</sup>(thousand m<sup>3</sup>)</b>	<b>78</b>	<b>30</b>	<b>59</b>
<b>Industrial water<sup>4</sup>(thousand m<sup>3</sup>)</b>	<b>19,463</b>	<b>19,766</b>	<b>22,764</b>

## Output

	FY2018	FY2019	FY2020
<b>Greenhouse gas (thousand tons)</b>	<b>2,065</b>	<b>2,186</b>	<b>2,365</b>
<b>Chemicals<sup>1</sup> (tons)</b>	<b>653</b>	<b>518</b>	<b>639</b>
<b>- VOC<sup>2</sup> (tons)</b>	623	479	599
<b>- PRTR<sup>3</sup> (tons)</b>	2	3	3
<b>Waste (tons)</b>	<b>80,203</b>	<b>81,211</b>	<b>93,914</b>
<b>- Recycled volume (tons)</b>	56,309	61,268	67,925
<b>Wastewater (thousand m<sup>3</sup>)</b>	<b>14,777</b>	<b>14,733</b>	<b>17,300</b>
<b>NOx (tons)</b>	<b>28.0</b>	<b>27.0</b>	<b>28.7</b>
<b>SOx (tons)</b>	<b>0</b>	<b>0</b>	<b>0</b>

<sup>1</sup> Chemicals targeted for reduction

<sup>2</sup> VOC (volatile organic compounds): Causative agents such as IPA and butyl acetate that generate photochemical smog.

<sup>3</sup> PRTR (pollutant release and transfer register): A system to ascertain, compile and disclose data on hazardous chemical substances (such as water-soluble zinc compounds, 2-aminoethanol, silver and its water-soluble compounds, etc.) discharged into the environment from any source or transported from work sites in waste.

<sup>4</sup> All fresh water

## Targets and Outcomes

KIOXIA Group promotes business activities that contribute to the sustainability of society by setting its own environmental targets and objectives. The following table summarizes the environmental targets of KIOXIA for FY2020 and their achievement status.

We again achieved all environmental targets in FY2020 thanks to our energy-saving activities promoted across the organization and our efforts to reduce the amounts of used and discarded chemical substances at our flash memory manufacturing plants. We are also actively engaging in social contribution activities with employee participation and biodiversity conservation activities, primarily at our manufacturing plants.

We adopted the “rate of change of environmental impacts per unit of GB (gigabyte) from FY2013 basis” as our target, excluding the reduction of CO<sub>2</sub> emissions from energy sources.

Accompanying our plans for production line expansion, the environmental impact of KIOXIA’s activities is expected to increase in FY2021 compared with the previous year, and our cross-functional environmental initiatives will continue.

Environmental targets and objectives		FY2020 Target	FY2020 Result	FY2020 Achievement Status
Development of products, the manufacturing of which has a reduced environmental impact	Reducing the environmental impact of production processes through miniaturization of devices	3 or more measures per year	<b>3 measures</b>	✓
Mitigation of global warming	Reduction of CO <sub>2</sub> emissions from energy sources	≥ 17,686 t-CO <sub>2</sub>	<b>20,103t-CO<sub>2</sub></b>	✓
	PFC emissions (Rate of change from FY2013)	≤ 68.9%	<b>63.9%</b>	✓
Promoting efficient use of resources	Total amount of waste generated minus amount of valuable waste (Rate of change from FY2013)	≤ 32.6%	<b>31.9%</b>	✓
	Total waste generated (Rate of change from FY2013)	≤ 23.0%	<b>22.4%</b>	✓



	Water intake (Rate of change from FY2013)	≤ 25.5%	<b>24.8%</b>	✓
Reduction of environmental risk	Emissions of chemical substances to air and water (total amount, rate of change from FY2013)	≤ 23.2%	<b>21.7%</b>	✓
Biodiversity conservation	Biodiversity conservation	Periodic monitoring of indicator species	<b>Periodic monitoring of indicator species</b>	✓
Promotion of environmental communication	Social communication	Charity eco bazaars, collection of recyclable waste, donations, etc.	<b>Held charity bazaars, collected recyclable garbage, made donations, etc.</b>	✓
	Community communication	Local communication	<b>Communicated with local people (e.g., meetings with local residents' associations)</b>	✓
Raising environmental awareness	Raising environmental awareness	Measures for raising awareness	<b>Held awareness-raising programs (e.g., monthly environmental events)</b>	✓

(✓: Achieved, x: Not achieved)

## Effective Use of Resources

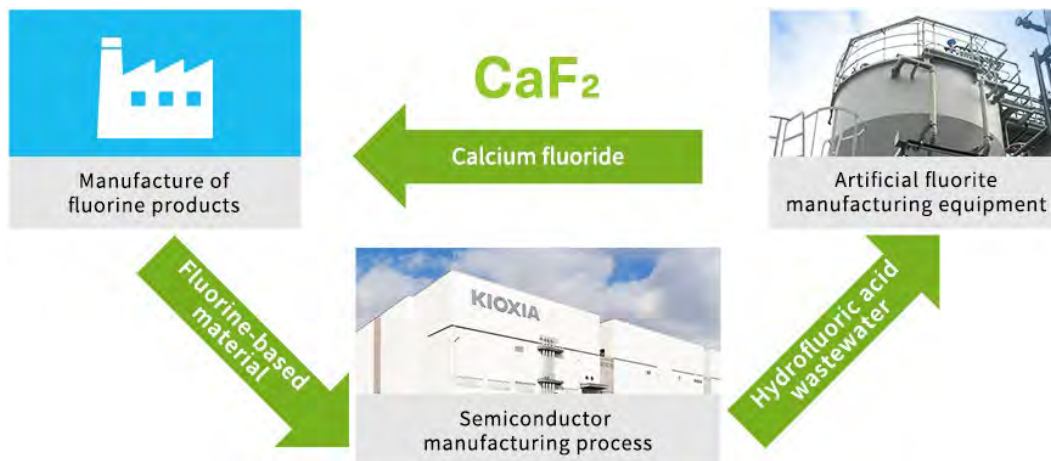
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Although the amount of waste generated is tending to increase as the scale of our factories expands, we are improving our manufacturing processes and taking other steps to promote reductions in the volume of chemicals and gas used.

We are also proactively engaged in recycling waste materials generated and expanding recovery of valuable resources.

### Collection and Reusing of Fluorite

By processing waste materials generated during the product manufacturing process, we collect resources and extract value from them, thereby reducing the amount of waste sent to landfill. We have reduced the amount of sludge containing hydrofluoric acid by about 30% by treating the hydrofluoric acid wastewater generated in the manufacturing process at an artificial fluorite manufacturing facility and recovering it in the form of calcium fluoride (artificial fluorite). The artificial fluorite recovered is used as an alternative to fluorite, an imported natural resource, and is a fluorinated material used by fluorinated product manufacturers. These efforts contribute to reducing the import volume of fluorite, which is a rare resource.



# Climate Change and Energy Management

## Climate change and energy management policies

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KIOXIA Group treats initiatives addressing climate change as one of our most important management issues and aims to reduce energy consumption and greenhouse gas emissions, both in terms of our business activities and our product lifecycles.

Regarding greenhouse gas emissions at our manufacturing sites, we have set the goal of reducing by 1% each year the previous year's total energy consumption (SCOPE 2: indirect emissions from business activities) based on a policy of reducing emissions through energy-saving activities in Japan in line with the Act on Rationalizing Energy Use (hereinafter, “the Energy-Saving Act”) ,and also installed abatement equipment in 100% of our targeted facilities for eliminating PFC gases with high greenhouse effect coefficients emitted during manufacturing.

Moreover, in FY2020 we formulated a long-term goal of ensuring that by FY2040, 100% of all energy we use will be from renewable sources.

In our product development, we endeavor to reduce indirect emissions of greenhouse gases by promoting the efficient use of energy, ascertaining the volume of greenhouse gases emitted by our suppliers, and taking steps to contribute to the reduction of those emissions.

## Endorsing the Recommendations of the Task Force on Climate-Related Financial Disclosures

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In June 2021, KIOXIA Group announced our endorsement of the recommendations released by the Task Force on Climate-Related Financial Disclosures (TCFD).<sup>1</sup> We believe that accurately ascertaining the climate-related impact of our business, disclosing information to stakeholders and deepening mutual understanding are indispensable for sustainable corporate growth, and we proactively disclose information in accordance with the TCFD recommendations.

<sup>1</sup> TCFD: A task force established by the Financial Stability Board which devises methods to disclose climate-related financial information; an initiative to promote the disclosure of information related to climate-related risks and opportunities.

**Governance**

At Sustainability Strategy Meetings chaired by the President and CEO, executive officers formulate our Company strategies and policies on climate change and check the level of achievement before submitting recommendations to the Board of Directors. The Sustainability Committee, chaired by the Executive Officer in charge of sustainability, discusses key themes and sets KPIs based on the strategies and policies formulated at the Sustainability Strategy Meetings. We also set up task forces reporting to these organizations to tackle important sustainability issues; they report on progress and confirm direction. In the first half of FY2021, analysis of climate-related risks and opportunities and scenario analysis were examined, based on the recommendations of the TCFD.

**Climate-Related Risks and Opportunities**

KIOXIA Group assesses, as shown in the table below, the risks and opportunities arising from the external environment likely to prevail in 2030 under the 2°C Scenario (2DS)<sup>2</sup> assumed by the International Energy Agency (IEA) and other organizations. We have identified transitional risks such as the introduction of a carbon tax, stricter energy conservation standards, reduced demand for products with high carbon content, and the increased cost of capital investment and research and development. In addition we are aware of physical risks such as climate change, extreme weather and water shortages. KIOXIA Group is proceeding to address these risks. In terms of opportunities, we envisage increased demand for low-carbon, low-power consumption products as society’s awareness of climate change heightens.

<sup>2</sup> The 2°C Scenario and 4°C Scenario are common terms for climate-related scenarios depicted by the IEA and other organizations. Each scenario includes specification of the economic measures needed to suppress rising temperatures and the envisaged environmental damage in the event such increases in temperature occur.

<b>Transitional Risks: Risks related to transition to low-carbon economy</b>		
<b>Attributes</b>	<b>Potential Financial Impact</b>	<b>Background/impact</b>
Government policies,	Increased cost of power resulting from introduction of a carbon tax.	Power consumption expected to grow until FY2030; carbon tax to have impact.

laws and regulations	Increased cost of materials and transportation resulting from a rise in fossil fuel costs.	Continued investment in clean room buildings; rising material costs to have impact.
	Increased cost of high-carbon intensive building materials during construction of new facilities.	Continued investment in clean room buildings.
	Costs incurred through installation of PFC gas <sup>3</sup> abatement equipment during construction of new buildings.	PFC gas abatement equipment installed during construction of new buildings, incurring initial investment.
	Costs incurred in connection with installation of renewable energy facilities (solar power generators, storage batteries, etc.).	Initial investment and operational costs incurred.
Technology	Increased R&D costs incurred as a result of our response to customer requirements, government regulations, etc.	Expected rise in R&D costs due to changes in customers' specifications.
	Unstable power grid due to expansion of renewable energy usage.	Supply of renewable energy influenced by nature. There will be impact on operations if stable, high-quality power supplies are not available, or if no capital investment is made in renewable energy power transmission or distribution networks.
Markets	Impact on GHG emission reduction requirements and on business due to increasing environmental awareness among customers.	Impact on business transactions due to increased customer demand for renewable energy.
Reputation	Reputational risk and fundraising risk if response to our stakeholders is insufficient.	Impact on KIOXIA's reputation, fundraising, sales, etc., if unable to support ESG to level required by stakeholders such as our customers and ESG investors.
<b>Physical risks: Risks related to physical changes related to climate change.</b>		
<b>Attributes</b>	<b>Potential Financial Impact</b>	<b>Background/impact</b>

Chronic	Increased air-conditioning costs due to rising temperatures.	Air-conditioning accounts for a significant proportion of KIOXIA's electricity usage.
	Operations halted due to inability to secure sufficient water supply, causing a decline in sales.	Operation halts possible in worst-case scenario.
Acute	Extreme weather conditions (flood damage), incurring suspension of operations and a decline in sales.	Potential suspension of operations due to flooding of facilities during typhoons, torrential rains, etc.

<b>Transitional opportunities: Opportunities related to transition to low-carbon economy</b>		
<b>Attributes</b>	<b>Potential Financial Impact</b>	<b>Background/impact</b>
Energy sources	Reduce GHG emissions and boost reputation by promoting effective renewable energy procurement.	Customer demand for renewable energy is increasing every year; this could be an opportunity to maintain and expand business.
	Obtain government support (subsidies, tax breaks, etc.) for introduction of renewable energy (building renewable energy facilities and acquiring renewable energy power certificates).	Enables proactive promotion of renewable energy usage.
Resource efficiency	Reduce costs by building efficient transportation systems and procuring materials with high resource efficiency.	Continued investment in normal procurement as well as for clean room buildings and equipment.
	Reduce costs through deployment of energy-saving production equipment.	Power consumption expected to grow until FY2030, with accompanying impact.
Products and services	Expand business opportunities by reducing power consumption and developing low-carbon products and services that help provide communications infrastructure.	Customer demand increasing for products incorporating energy-saving features.

Markets	Respond to requests to reduce GHG emissions; positive impact on our business operations of increasing environmental awareness among customers.	Customer demand rising for renewable energy procurement and energy-saving during manufacturing.
	Increased customer trust levels due to strengthened business continuity processes leading to stronger branding power and higher corporate value.	Impact of climate change on supply chain a serious concern for customers, and strengthening our business continuity provisions expected to improve their level of trust.
	Increased corporate value and fundraising capabilities arising from strengthened activities in line with ESG guidelines.	Ratio of ESG investment rising in Japan and overseas, with investors placing more emphasis on ESG.

<sup>3</sup> PFC gas: Alternative to CFC gas used in manufacture of semiconductors. PFC gas has high greenhouse effect coefficient.

## Scenario Analysis

KIOXIA Group carried out an impact analysis of the effects of climate change on our business for each stakeholder and each business using two scenarios: the IEA's stipulated 2°C Scenario and the 4°C Scenario<sup>2</sup>.

Under the 2°C Scenario, we believe there will be a significant impact from government provisions and strengthening of regulations, as well as changes in the preferences of customers and other stakeholders. For example, we have ascertained that there will be rising costs involved in the decarbonizing of manufacturing sites and the risk of an impact on sales due to the lack of low-carbon and low-power consumption support.

Under the 4°C Scenario, we project rising material costs and the emergence of physical risks to our Company bases. KIOXIA Group has aggressively employed energy-saving and reviewed renewable energy measures to address these risks and is moving forward with product development, anticipating such needs as low-carbon products.

## Strategies, Metrics and Targets

Our Environmental Policy formulated in 2020 stipulates that we will help to prevent global warming by reducing greenhouse gas emissions and reducing the impact of our products on the

environment. As mentioned earlier, with regard to energy consumption (SCOPE 2), we are promoting energy-saving activities with the stated goal of reducing the volume of emissions by 1% compared to the previous fiscal year. Moreover, we have set the long-term goal of using 100% renewable energy by FY2040.

(For details, please refer to Climate Change-related Targets and Results)

## CO<sub>2</sub> emissions from business operations (FY2020)

Greenhouse gases (SCOPE 1, 2, 3: CO<sub>2</sub> equivalent) emissions from KIOXIA's business operations in FY2020 are shown in the chart below.

(Hyphenated cells indicate "not applicable," and we have not calculated "use of sold products")

### SCOPE 1 (Direct emissions)

CO <sub>2</sub> Emissions in FY2020 (t-CO <sub>2</sub> )	Category Outlines
651,900	Direct greenhouse gas emissions from our own operations

### SCOPE 2 (Indirect emissions, electricity)

CO <sub>2</sub> Emissions in FY2020 (t-CO <sub>2</sub> )	Category Outlines
1,713,400	Emissions associated with purchased energy supplies

### SCOPE 3 (Indirect emissions through value chain, excluding those outlined in SCOPE 1, 2)

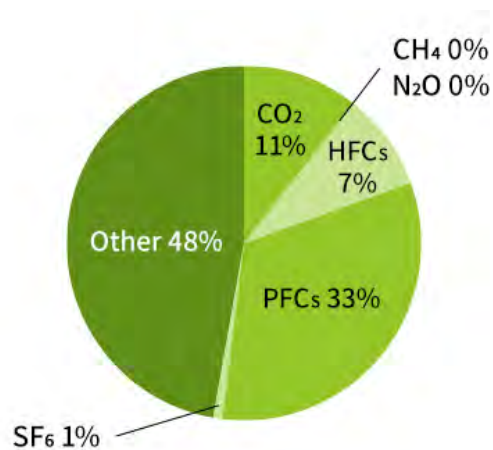
Category	CO <sub>2</sub> Emissions in FY2020 (t-CO <sub>2</sub> )	Category Outlines
1. Purchased goods	3,421,396	Emissions from activities up to the



and services		manufacturing of raw materials
2. Capital goods	930,391	Emissions from the construction and manufacturing of capital goods
3. Fuel- and energy-related activities not included in SCOPE 1 or 2	160,292	Upstream emissions of purchased fuels/electricity, etc.
4. Upstream transport and delivery	164	Emissions arising from the transportation of products and waste in Japan (excluding overseas transportation and suppliers' transportation)
5. Waste generated in operations	17,391	Emissions from the treatment of waste
6. Business travel	56	Emissions arising from employees' business travel
7. Employee commuting	14,341	Emissions arising from employees' commuting
8. Leased assets (upstream)	-	-
9. Downstream transportation and delivery	-	-
10. Processing of sold products	-	-
11. Use of sold products	-	-
12. End-of-life	-	-

treatment of sold products		
13. Downstream leased assets	-	-
14. Franchises	-	-
15. Investments	-	-
SCOPE 3 (Total)	4,544,031	

### Breakdown of emissions from SCOPE 1 (FY2020)

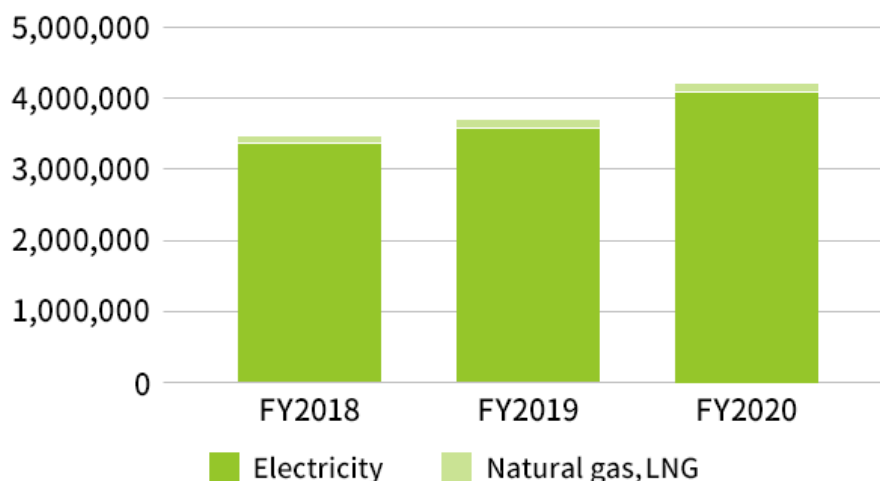


### Climate change and energy management policies

We plan and implement capital expenditure to secure the production capacity that will allow us to respond to the dramatic increase in the volumes of data circulating in everyday life. In so doing we risk increasing our energy consumption.

The graph below shows KIOXIA's energy consumption and greenhouse gas (SCOPE 1 + 2) emissions.

### Volume of Energy Used (MWh)



### SCOPE 1 + SCOPE 2 Emissions (t-CO<sub>2</sub>)



## Efforts to adapt to climate change

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KIOXIA is progressing with efforts to adapt to climate change in the course of our product development, the establishment of our supply chains, and the operation of our manufacturing sites.

### Product Development

In the storage market, the need for low-power consumption-type products is growing extremely rapidly, and we expect to expand our supply by further developing these products. KIOXIA regards the research and development of highly integrated technologies aimed at improving energy-saving performance as a priority management issue.

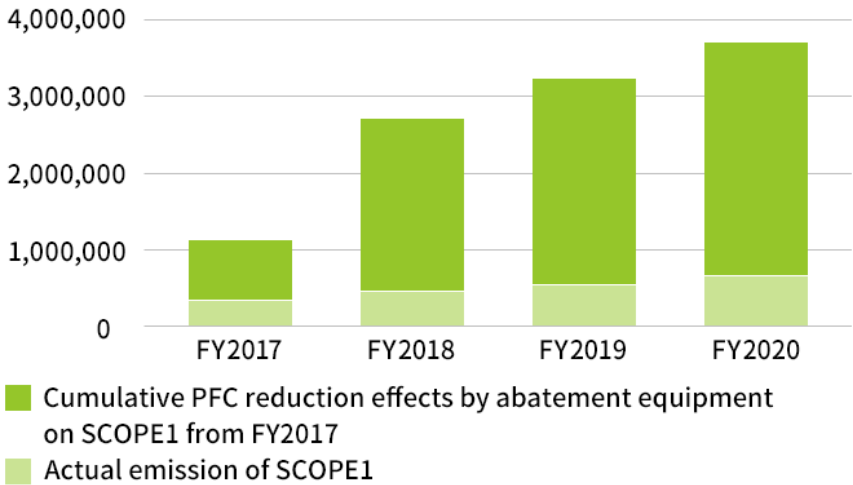
### Supply Chains

As climate change continues in the form of global warming, the risk to component manufacturers' production or distribution posed by disasters like flooding or large-scale typhoons is becoming more apparent every year. We have accordingly set up a Business Continuity Plan Committee whose job it is to anticipate a variety of climate change-related risks, and to implement measures to prevent them from materializing, or to respond promptly in the event they do arise.

### Operation of Manufacturing Sites

KIOXIA is proactive in the installation of abatement equipment to deal with PFC gases – greenhouse gases with high global warming potential. The installation of 96 items of PFC abatement equipment in FY2020 led to a reduction of 360,000 tons of CO<sub>2</sub> emissions. From FY2011, we install 100% of PFC abatement equipments on the target facilities and reduced 3,050,000 tons of CO<sub>2</sub> emissions from FY2017 to FY2020.

**The contribution effect of PFC abatement equipment on SCOPE 1 emission from FY2017 (t-CO<sub>2</sub>)**



KIOXIA manufacturing sites have the stated goal of reducing energy consumption by 1% compared to the previous year's total energy consumption (SCOPE 2), based on the aforementioned Energy Saving Act.

In FY2020 we achieved our goal of reducing energy use through various energy-saving activities, recording an actual reduction of 19,691 tons of CO<sub>2</sub> emissions per year against a target reduction

of at least 17,686 tons of CO<sub>2</sub> emissions. Last 10 years, the result of our energy conservation programs was approximately 180,000 tons of CO<sub>2</sub> emissions as a cumulative reduction.

We also set the goal of using 100% renewable energy by FY2040. To help achieve this target, we gather intelligence by such means as participating in industry groups and make proposals to the government. As an initial step toward attaining this goal, we plan to promote the introduction of electricity derived from renewable energy sources in our development and test centers, and further the installation of renewable energy facilities at our manufacturing sites.

## **Taking Part in External Initiatives Related to Climate Change**

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KIOXIA is involved in the addressing of energy and global warming issues as a member of the Environmental Working Group of the Japan Electronics and Information Technology Industries Association (JEITA), a group representing the electronic device industry.

Since FY2020 we have been a supporting member of the Japan Climate Leaders' Partnership (JCLP), a corporate group that aims to achieve a decarbonized society. We have collaborated in measures aimed at achieving the 1.5°C reduction target stipulated under the Paris Agreement, as well as in discussions about proposals to be made to the government. Moreover, in 2021, KIOXIA Holdings announced its endorsement of the Recommendations of the TCFD.

# Water Risk Management

## Water Risk Management Policy

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Water resource issues differ according to the region in terms of such things as the balance of supply and demand, the volume of water intake, and water quality. Taking advice from external experts, KIOXIA Group is analyzing water risks that have the potential to materialize up to the year 2040 in each area of our manufacturing operations; this is aimed at ascertaining the risks in terms of the supply-demand balance, natural disasters and other issues applicable to each region, and we are progressing with the implementation of all necessary countermeasures.

Moreover, when water intake occurs from rivers near our manufacturing operations in Japan, we have established voluntary standards that are stricter than those laid down in law, striving to reduce the environmental impact of our wastewater.

## Water Management Strategy

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At KIOXIA Group, we position initiatives and indices related to water as important management issues. Sustainability strategies and policies, including those related to water, are formulated at Sustainability Strategy Meetings, chaired by the President and CEO, with the degree of target achievement confirmed in each case, before a final review by the Board of Directors.

Sustainability strategies and policies formulated in Sustainability Strategy Meetings, including those related to water, are discussed and KPIs determined by the Sustainability Committee chaired by the Executive Officer in charge of sustainability.

The Environmental Management Review, which involves discussion primarily among Executive Officers, examines social and legislative trends, taking into consideration risks and opportunities related to the use of water, our medium-term environmental plan, the impact on business, and compliance with laws and regulations.

Moreover, as KIOXIA Group's operations involve the use of large quantities of water, when planning the new establishment of plants, issues for consideration by the Sustainability Strategy

Meeting include a Business Continuity Plan envisaging installation of equipment to promote reduction of water volume used and damage caused by flooding or typhoons.

## **Wastewater Monitoring System**

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### **1. Items specified by laws and regulations**

In each of its manufacturing operations, KIOXIA deploys automatic analyzers performing around-the-clock monitoring of wastewater and waste gases including nitrogen oxide (NO<sub>x</sub>), sulfur oxide (SO<sub>x</sub>), total nitrogen (T-N), total phosphorus (T-P), chemical oxygen demand (COD), suspended solids (SS), fluorine (F), and power of hydrogen (pH). Other items are monitored by sampling.

### **2. Analysis Center**

We analyze approximately 38,000 samples per year at our Analysis Center in Yokkaichi Plant.

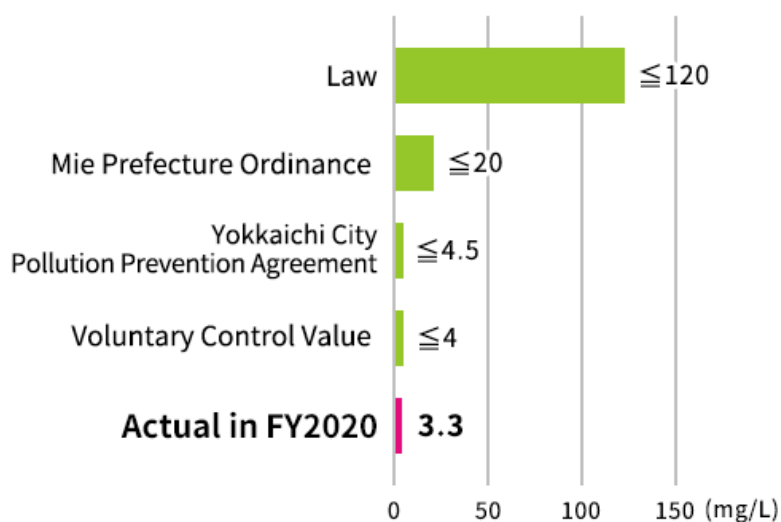
In FY2020, we were not subjected to any government fines or penalties in respect of wastewater.

## **Wastewater voluntary rules**

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We continuously manage the water and gas discharged by Yokkaichi Plant under our own voluntary guidelines to ensure compliance with the standards specified in all appropriate laws, regulations and agreements.

## Wastewater COD (Chemical Oxygen Demand) concentration control values (Yokkaichi Plant)



## Evaluating Water Risk

KIOXIA's manufacturing operations use large quantities of water, so we have commissioned outside experts to evaluate water-related risks from the perspective of current and future water supply and demand risks. The assessment of risks was carried out using tools such as the World Resources Institute's WRI Aqueduct and the World Wide Fund for Nature's Water Risk Filter.

The outcome of the assessment of our manufacturing operations was confirmation that they are not exposed to any water risk likely to have practical financial or strategic impact prior to the year 2040. This assessment was based on investigations into such matters as the water supply and demand risk (based on the status of seasonal changes, drought frequency, water storage capacity and water source protection), water disaster risk (such as flooding or landslide sediment damage), and regional vulnerability to water pollution that might endanger public health or ecosystems.

## Water-related Targets and Results

KIOXIA has set a target for the reduction of water intake per gigabyte (GB) per unit of capacity using FY2013 as the baseline, and we manage this using a PDCA cycle.



We set a target of 25.5% or lower for FY2020 and achieved this goal with an actual result of 24.8%.

Going forward, we will continue to promote activities aimed at achieving water intake reduction targets, by both reducing water consumption and by promoting recycling.

## **Water Recycling**

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In order to promote more effective use of resources, KIOXIA is developing initiatives to lower the amount of water received and discharged at its manufacturing plants. One example of this is the collection and reuse inside the plant of water used in the manufacturing process.

Water recycling at domestic manufacturing sites in FY2020 resulted in the collection and reuse of approximately 26 million m<sup>3</sup> of water (equivalent to about 53% of all water used), which contributed to effective use of water resources and reduced the environmental impact of public water utility companies.

# Environmental Protection System

## Environmental Protection System

To promote environmental preservation activities continually and efficiently, in each manufacturing site of KIOXIA Group we have established environmental preservation procedures overseen by a General Manager with clearly defined responsibilities and authority. An Environment Management Committee deliberates environmental preservation across the entire spectrum of environmental activities, including environmental management systems, policies, and objectives. We have further established a Compliance Committee to supervise and ensure full compliance with all relevant environmental laws and ordinances.

**Environmental Protection System Diagram**



# Introduction of environmental-related facilities

In order to prevent contamination by chemical substances and reduce contamination risk, KIOXIA Group has established Structural Design Guidelines to reduce the risk of chemical leaks at environmental facilities.

## Examples



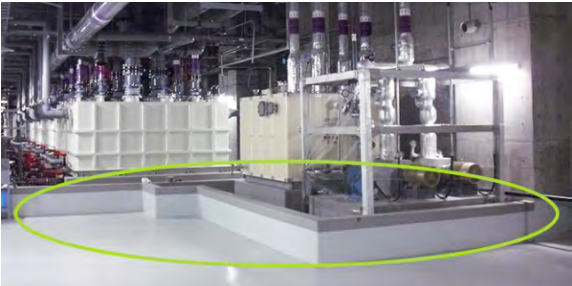
### Waste gas scrubber

Structures and specifications for stable processing



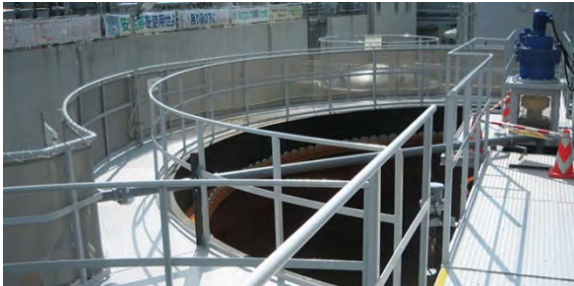
### Overhead piping

Reducing soil contamination risks



### Drainage dike

Preventing wastewater from discharging into underground or public water areas



### Wastewater treatment

Stable processing system and preventing outflow of wastewater



### Double joints in piping

Monitoring and preventing liquid leakages



Early detection of leaks from the bottom via notches in the foundation

### Six-sided inspection

Six-sided inspection finds abnormality easily at an early stage

# Status of water and air quality management

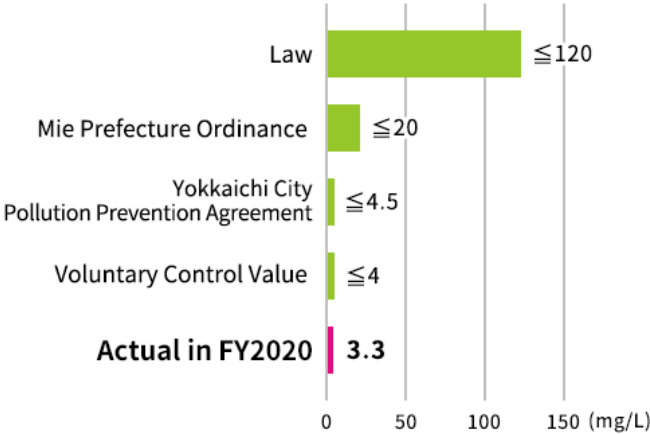
In order to ensure compliance with standards specified in laws, ordinances and agreements, KIOXIA Group has set voluntary management targets for water and air quality at its manufacturing sites, and manages these on a daily basis.

In FY2020, we were not subjected to any government fines or penalties in respect of environmental protection issues such as water or air quality. The table below shows the results for wastewater (COD, T-N, T-P) and exhaust gas (NOx, Soot and dust, SOx).

## Outcomes

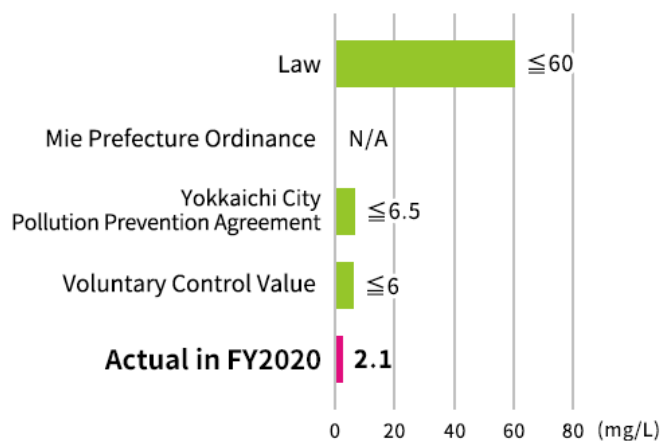
### Wastewater (Actual measured value are averages for FY2020)

#### COD (chemical oxygen demand)



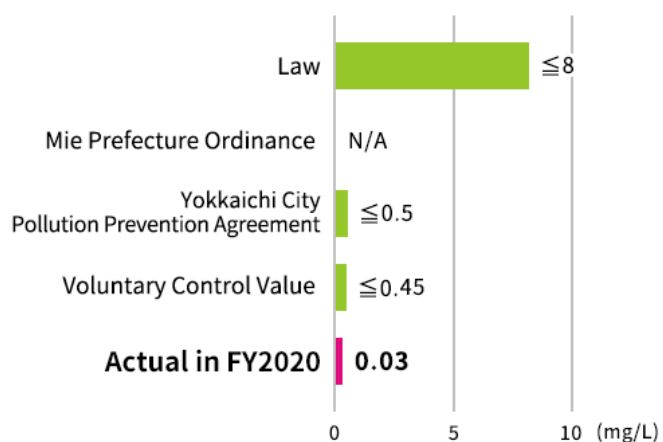
<b>Law</b>	≤ 120mg/L
<b>Mie Prefecture Ordinance</b>	≤ 20mg/L
<b>Yokkaichi City Pollution Prevention Agreement</b>	≤ 4.5mg/L
<b>Voluntary Control Value</b>	≤ 4mg/L
<b>Actual in FY2020</b>	<b>3.3mg/L</b>

### T-N (total nitrogen)



<b>Law</b>	≤ 60mg/L
<b>Mie Prefecture Ordinance</b>	N/A
<b>Yokkaichi City Pollution Prevention Agreement</b>	≤ 6.5mg/L
<b>Voluntary Control Value</b>	≤ 6mg/L
<b>Actual in FY2020</b>	<b>2.1mg/L</b>

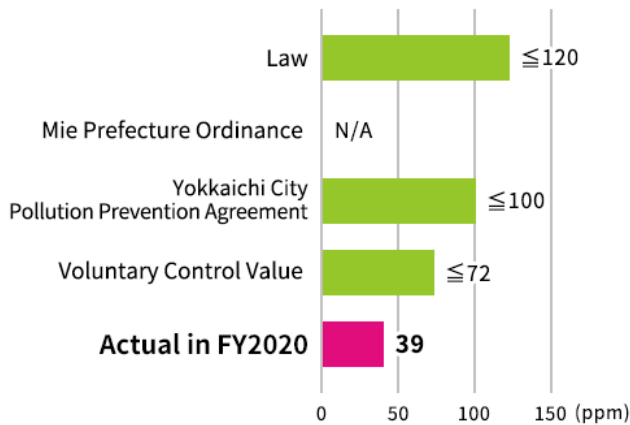
### T-P (total phosphorus)



<b>Law</b>	≤ 8mg/L
<b>Mie Prefecture Ordinance</b>	N/A
<b>Yokkaichi City Pollution Prevention Agreement</b>	≤ 0.5mg/L
<b>Voluntary Control Value</b>	≤ 0.45mg/L
<b>Actual in FY2020</b>	<b>0.03mg/L</b>

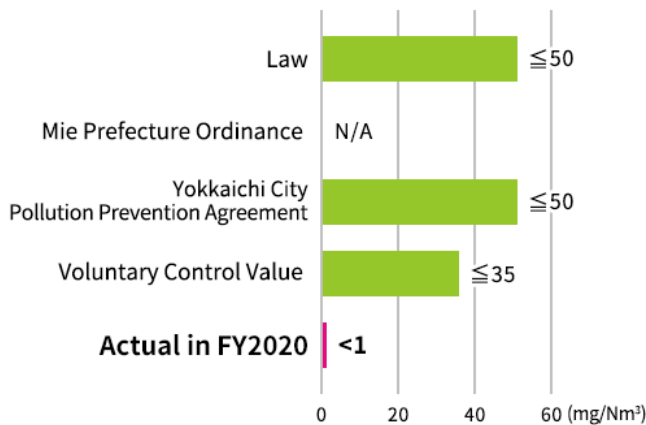
## Exhaust gas (Actual measured value are averages for FY2020)

### NOx (nitrogen oxides)



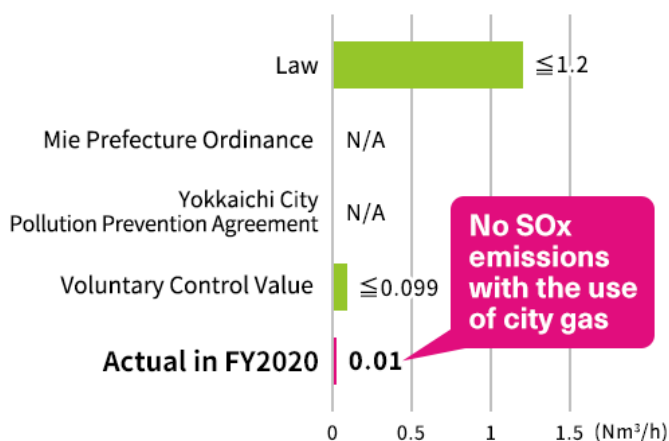
<b>Law</b>	≤ 120ppm
<b>Mie Prefecture Ordinance</b>	N/A
<b>Yokkaichi City Pollution Prevention Agreement</b>	≤ 100ppm
<b>Voluntary Control Value</b>	≤ 72ppm
<b>Actual in FY2020</b>	<b>39ppm</b>

### Soot and dust



<b>Law</b>	≤ 50mg/Nm <sup>3</sup>
<b>Mie Prefecture Ordinance</b>	N/A
<b>Yokkaichi City Pollution Prevention Agreement</b>	≤ 50mg/Nm <sup>3</sup>
<b>Voluntary Control Value</b>	≤ 35mg/Nm <sup>3</sup>
<b>Actual in FY2020</b>	<b>&lt; 1mg/Nm<sup>3</sup></b>

## SOx (sulfur oxides)



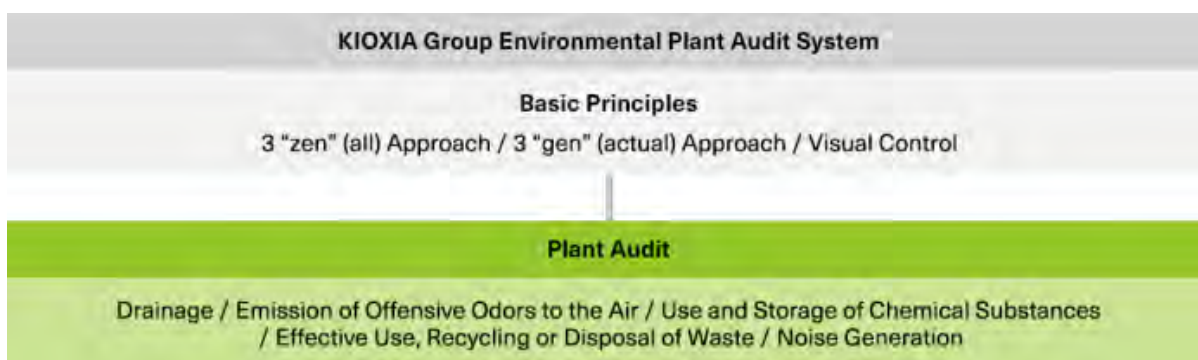
<b>Law</b>	≤ 1.2Nm <sup>3</sup> /h
<b>Mie Prefecture Ordinance</b>	N/A
<b>Yokkaichi City Pollution Prevention Agreement</b>	N/A
<b>Voluntary Control Value</b>	≤ 0.099Nm <sup>3</sup> /h
<b>Actual in FY2020</b>	< 0.01Nm <sup>3</sup> /h

## Environmental Plant Audit System

KIOXIA Group audit teams conduct annual environmental audits of its sites based on the following principles: three “Zen” approach (all aspects, all facilities, all staff), three “Gen” approach (actual place, actual product, actual reality), and visual control approach (look, visualize, show).

Through audits, we promote improvement in compliance with laws and regulations, measurement and management of controlled substances, and the 4S approach (sorting, straightening up, sanitation, sweeping). These audits target eight facilities, including the legally mandated wastewater treatment facilities.

### KIOXIA Group Environmental Plant Audit System Diagram



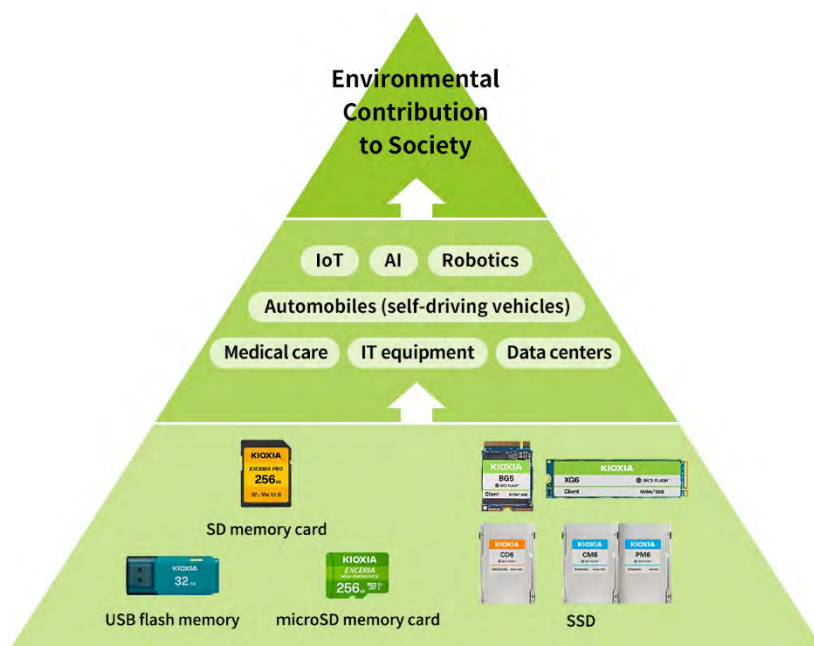
## Contributing to the Environment through Our Products

The semiconductor memories and solid-state drives (SSDs) that KIOXIA supplies are integrated into a wide range of products and used throughout the world. We believe we can contribute to the realization of a low-carbon society by supplying large-capacity products and low-power-consumption products, and we are engaged in a number of initiatives to this end.

Amid the recent acceleration in the use of AI and IoT, there is a growing need to increase the capacity and speed of flash memory and SSD products. By promoting increases in the capacity of flash memory through the development of integration technology, KIOXIA is working to reduce CO<sub>2</sub> emissions per capacity during the manufacturing and use of flash memory and SSDs. Specifically, we contribute to the reduction of CO<sub>2</sub> emissions by reducing the amount of electricity used per unit of capacity and materials used when manufacturing, and by lowering the power consumption of our products when in use.

We believe that KIOXIA flash memories and SSDs will play an important role in the area of 5G (fifth-generation) mobile communication systems, which are expected to become more widespread in the future. Since faster, higher-capacity devices will likely be necessary in the 5G world, we envisage that the high energy efficiency, large-capacity flash memory and low-latency SSDs we provide will contribute to society in various fields. Thus, we are supporting the provision of higher energy efficiency and increased capacity by developing advanced integration technology as our top priority.

**Examples of fields that KIOXIA products contribute to**





# Targets for Improving Energy Efficiency of Our Products

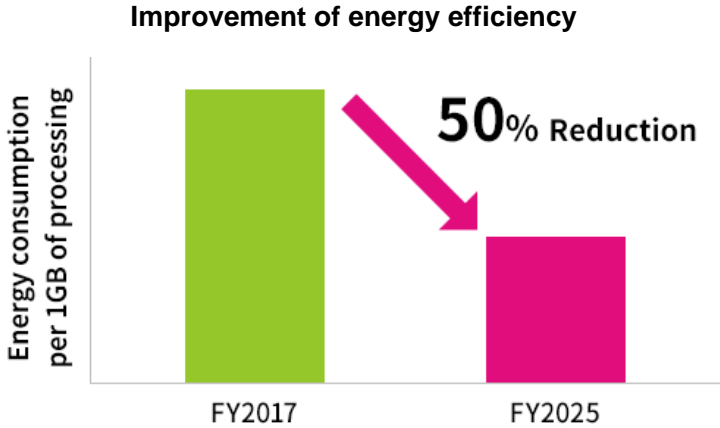
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The KIOXIA Group invented the world's first NAND flash memory in 1987. In 2007, the Group also announced its development of the world's first 3D flash memory technology.

The KIOXIA Group will utilize these advanced technologies to further improve the high energy efficiency of its products.

Specifically, we have set a high target of reducing the energy consumption per 1GB of processing by 50% by FY2025 from the FY2017 level.\*

\*In 2017, the memory business of Toshiba Corporation was made into a separate company and commenced operations as Toshiba Memory Corporation on April 1, 2017. The Company changed its name to KIOXIA Corporation in 2019.



## Product Case Studies: UFS Ver. 3.1 Embedded Flash Memory Devices Are Thinner with Improved Energy Efficiency

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KIOXIA has developed an embedded flash memory device (UFS product) that complies with Universal Flash Storage (UFS)<sup>1</sup> Version 3.1 and offers higher energy efficiency in a thin package and improved sequential read performance compared to previous generation products, and can be used for mobile applications such as high-end smartphones.

### UFS Ver. 3.1 embedded flash memory device (Image)



The UFS product comes in two different storage sizes, 256GB and 512GB, with respective heights of 0.8 mm and 1.0 mm, achieving the thin packaging required for mobile phone applications through optimized packaging design. Through this optimization, we were able to manufacture the 256GB product using about 30% less molding compound than the previous generation product. Moreover, by employing our 3D flash memory BiCS FLASH™ and a newly developed proprietary controller we have been able to improve the sequential read energy efficiency (energy consumption per 1GB of processing) by about 10% compared to our previous generation products.

Demand for UFS, an embedded flash memory, is also expected to grow in the future, as the need for higher performance and larger capacity is rising in a variety of applications that require small form factor and low power consumption, such as mobile devices.

<sup>1</sup> UFS (Universal Flash Storage): Standard for embedded flash storage stipulated by JEDEC. Because it uses a duplex serial interface, reading and writing can be performed simultaneously between the storage unit and the host device.

\* The description of this product is based on the amount of built-in flash memory, not on the amount of memory available for use. As a portion of the memory is used as a management area, please refer to the relevant specifications for details of the available memory space (user area).

\* The above company names, product names, and service names may be trademarks of their respective companies.

### Product Case Studies: KIOXIA PM6 Series Enterprise SSD

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KIOXIA has developed the KIOXIA PM6 series enterprise SSD for 24G SAS interface-compliant servers and storage systems.

The KIOXIA PM6 series comprises enterprise SSDs that use a 24G SAS interface with about twice the transfer capacity of the 12Gbps SAS used in the previous generation KIOXIA PM5 series. As an SAS-compliant enterprise SSD, it has achieved a sequential read performance of a maximum of 4,150 MB/s and an industry-leading capacity<sup>1</sup> of 30.72 TB<sup>2</sup>.

Moreover, for the 128KB sequential read, energy efficiency is about 93% better than the previous generation due to energy-saving through controller miniaturization and improved voltage control.

**KIOXIA PM6 series: Enterprise SSD with improved energy efficiency**



<sup>1</sup> As of June 16, 2020, in the category of enterprise SSDs: KIOXIA Corporation survey.

<sup>2</sup> Definition of capacity: KIOXIA defines a gigabyte (1GB) as 1,000,000,000 (10 to the power of 9) bytes, and a terabyte (1TB) as 1,000 gigabytes (GB). Some computer operating systems, however, report storage capacity using powers of 2 under a definition of 1GB = 1,073,741,824 (2 to the power of 30) bytes; therefore, they show a lower storage capacity figure for the same actual amount of storage. The available storage capacity varies based on file size, disk formatting, settings, software, operating system, and other factors. Actual formatted capacity may vary.

\* The above company names, product names, and service names may be trademarks of their respective companies.

**Related Links**

[SDGs Topics: Efforts to Increase Product Energy Efficiency](#)

## Environmental Evaluation by External Parties

Introducing KIOXIA's awards and evaluation by external parties.

### Yokkaichi Plant receives Minister of the Environment Award (FY2020)

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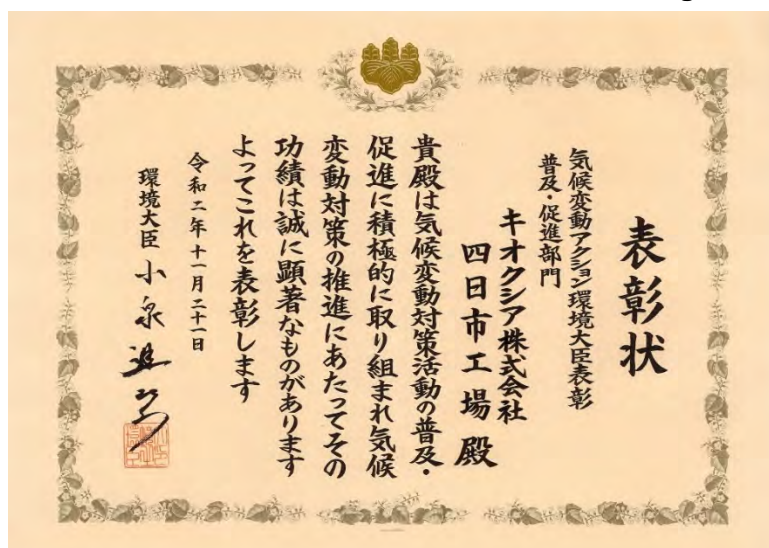
KIOXIA's Yokkaichi Plant received the "Climate Change Action: Minister of the Environment Award (in the dissemination and promotion category of the mitigation field)" in November 2020. This award is a part of the promotion of measures tackling climate change issues and it recognizes individuals or groups who have made remarkable achievements to prevent global warming. We were recognized for our cross-departmental energy-saving activities at our Yokkaichi Plant and also our activities to address climate change in close relationship with the local community.

We have organized an energy-saving promotion committee headed by the factory general manager, and each subcommittee across the plant made targets and implemented energy-saving measures every year. The energy-saving measures across the plant in FY2019 cut approximately 20,000 tons of CO<sub>2</sub>. We also focused on PFC gases, which have a high greenhouse effect coefficient, and we have installed 100% of abatement equipment. We managed to cut 90% or more of these gases.

We have also developed long-standing awareness-raising activities such as providing environmental education for children at neighboring elementary schools, posting energy-saving information within factory premises, and holding charity eco bazaars.

In the future, we will continue to promote energy-saving activities and implement community-based environmental preservation events.

## Minister of the Environment Award for Climate Change Action



## Results of disclosing environmental information to CDP (FY2020)

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In FY2020, KIOXIA responded to a survey from CDP (Carbon Disclosure Project), the world's largest environmental information evaluation organization, having done so last year as well. Our responses were evaluated as follows:

### CDP Climate Change

This evaluates a company's risks, opportunities, and responses regarding climate change. In FY2020, we were rated B (management level).

### CDP Water Security

This evaluates a company's efforts on water stewardship. In FY2020, we were rated B (management level).



About CDP: CDP is an international not-for-profit organization established in 2000 to tackle environmental issues, including climate change and water risks. It collects information from major companies around the world using questionnaires on the subject of management risks that

climate change and other environmental issues pose to companies, and it rates them on an 8-point scale from A to D- (A is the highest grade) based on the received responses. In 2020, it received responses from over 9,600 companies and provided information to over 500 institutional investors.

# Environmental Communication

At KIOXIA Corporation's Yokkaichi Plant, all employees, including resident suppliers, actively participate in various initiatives to contribute to society by improving the environment. In addition to raising employees' awareness of the environment and their local community, we are also conducting such activities as promoting the 3Rs (reduce, reuse and recycle) and implementing greening initiatives with the aim of making our contribution to society.

## Contributing to Society by Means of Resource Collection

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All employees, including resident suppliers, are actively involved in various activities to contribute to society.



### 1. Collecting calendars and notebooks (2007- )

We collect unwanted calendars and notebooks from within the plant over the New Year period and donate these to the Yokkaichi Social Welfare Council. As these can be useful for those wanting to jot down notes for communication, they are passed on for reuse in places such as homes for the elderly or nursing care facilities. (FY2020 achievement: 959 calendars, 336 notebooks)



### 2. Collecting plastic bottle caps (2008 - )

We collect plastic bottle caps, which are sold through NPOs to fund the donation of vaccines to children in developing countries. Since April 2015 we have helped support the implementation of polio vaccinations in developing countries through the NPOs Re-Lifestyle and Japan Committee, and Vaccines for the World's Children. (FY2020 achievement: approximately 650,000 caps, funding around 1,300 vaccinations))



### 3. Charity eco bazaar (2012 - )

Employees donate unwanted goods from their families for sale at an in-house bazaar, facilitating the effective re-use of unwanted items (“reduce, reuse”). All proceeds are donated to “Yokkaichi City Tree Planting Fund” and support the greening of Yokkaichi, (FY2019 achievement: donation of ¥38,800. FY2020 event cancelled due to COVID-19 pandemic)



### 4. Collecting discarded postcards (2014 - )

We collect discarded unused postcards and cooperate with “The World TERA KOYA Movement” (National Federation of UNESCO Association in Japan), which supports equal education opportunities in developing nations for all people regardless of age, religion, or sex. (FY2020 achievement: 311 postcards, equivalent to ¥15,878)



### 5. Collecting used postage stamps (2015 - )

We collect used postage stamps and donate them to the NPO Live with Friends on the Earth (LIFE). The money raised is used to support farming in India and Indonesia. (FY2020 achievement: 2,739 stamps)



### 6. Collecting down products (2015 - )

We collect used down products and donated the proceeds from their sale to the Mie Prefecture community chest’s “UMOJ PROJECT”. Donated funds are used to support community activities in Yokkaichi and Asahi. (FY2020 achievement: down jackets)



**7. Collecting disposable contact lens cases (2016 - )**

We cooperate with the “eyecity eco project” run by HOYA CORPORATION by collecting empty disposable contact lens cases. The money generated through recycling these is donated to the Japan Eye Bank Association. This activity helps to support the provision of corneal transplants. (FY2020 achievement: donated 29,075 lens cases)



**8. Collecting aluminum cans (2016 - )**

Employees bring aluminum cans from home and donate them to Asake Works, a facility supporting independent lifestyles for people with disabilities, and proceeds are used to help them live independent lives in the community.

(FY2020 achievement: 3,103 cans, equivalent to ¥4,034)



**9. Collecting old books (2018 - )**

We collect books that are no longer being read and through Shinrai Shihon Zaidan’s “Arigatobon” project support the activities of the Wacca non-profit organization, which provides lifestyle and career support for children and young people. (July 2021 achievement: donated approximately ¥1,600)



**10. Collecting masks (2020, one-off activity)**

Employees collected unused face masks from their homes and donated them to the Yokkaichi social welfare council through the Next Step foundation with the objective of having them re-used for social welfare facilities and other purposes. (Achievement: approximately 2,600 masks)





### **11. Food drives (2021 - )**

Employees brought leftover food from home and donated it to people in need through the Yokkaichi Social Welfare Council. The donations were made to people living on welfare or to those unable to live on the income they earned. (June 2021 achievement: 736 items donated)

In the future, we will continue to promote environmental activities that contribute to society, and encourage a sense of belonging among employees, as well as strive to further improve their environmental awareness.



### **12. Wheelchairs (2021, one-off activity)**

Wheelchairs used at the Yokkaichi Plant are refurbished and donated to the Yokkaichi Social Welfare Council. They are used in such places as COVID-19 vaccination sites.

# Biodiversity Preservation

## Planting flowers

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In Yokkaichi Plant, we are running a FloWA\* project, whereby we fill the factory area with flowers to increase environmental awareness among the employees, and to create a more attractive and relaxing environment.

\*The 'WA' in FloWA incorporates numerous meanings derived from the Japanese character wa, which can denote a circle of friends, sharing, harmony, or laughter.



**Transplantation event (November 2019)**

## Owl protection project

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Aware of the impact of our business activities on biodiversity, KIOXIA is engaging in a range of biodiversity conservation activities in order to reduce that impact and to enhance our contribution to society.

In March 2018 our Yokkaichi Operations signed a “Mie Biodiversity Partnership Agreement,” forming an industry, government, and university partnership that aims to promote the owl protection project being undertaken by the Natural Study Group of Yokkaichi-Nishi High School in Mie Prefecture. Under this partnership, we will collaborate with others in the region to support the partnership’s activities; these aim to help bequeath the region’s rich natural environment to future generations by providing equipment used to observe owls in their natural habitat.

As part of this activity, we have installed items such as solar power generation systems, cameras, and solar panels, all designed by volunteer employees, to monitor the bird boxes set up by Yokkaichi-Nishi High School students in Mie Prefecture's Forest Park. This has enabled successful observation for three consecutive years since 2019 of owls nesting, raising offspring, and having them leave their bird box nest. Discussions between representatives of Mie Prefecture, Yokkaichi-Nishi High School, and our Yokkaichi Plant related to this activity were conducted and efforts made to further improve the observation environment.



**Solar battery panels powering the on-site equipment**



**Installing observation equipment inside and outside the bird boxes**



**Adjusting the observation equipment**



**Baby owls inside the bird box (May 2021)**



**A baby owl about to leave the bird box nest (May 2021)**

**Achievements and future plans**

Year	Main accomplishments and future plans
2018	<ul style="list-style-type: none"> <li>• Concluded Mie Biodiversity Partnership Agreement</li> <li>• Decided observation equipment specifications</li> <li>• Yokkaichi Plant employees installed and adjusted observation equipment</li> <li>• Started promoting the project internally and outside of the Company</li> </ul>
2019	<ul style="list-style-type: none"> <li>• Tripartite meeting reviewing FY2018 activities and formulating action plan for FY2019</li> <li>• Boosted observation equipment (added solar panels and batteries, updated cameras and HDD recorder)</li> </ul>
2020	<ul style="list-style-type: none"> <li>• Tripartite meeting reviewing FY2019 activities and formulating action plan for FY2020</li> <li>• Improved observation equipment (swapped out the HDD, switched power source inverter, dealt with communication irregularities by switching router)</li> </ul>
2021	<ul style="list-style-type: none"> <li>• Extended the agreement</li> <li>• Tripartite meeting reviewing FY2020 activities and formulating action plan for FY2021</li> </ul>

# Acquisition of Environmental Certification

In March 2018, KIOXIA’s domestic sites (HQ and manufacturing sites) obtained ISO 14001:2015 certification, an international standard for integrated environmental management encompassing all business processes. We underwent a renewal audit in February 2021, and successfully retained the certification.

In addition, Solid State Storage Technology Corporation (SSSTC) which joined KIOXIA Group from FY2020, has also obtained ISO 14001:2015 certification as shown in the chart below. All our manufacturing sites are now covered by ISO 14001:2015 certification.

KIOXIA will continue to actively promote the development of energy-efficient products that address the need for exponentially increasing volumes of data. We will also continue with communication activities at our state-of-the-art factories, as well as with communication about the environment that takes regional characteristics into account, and with our biodiversity conservation activities.

## Acquisition of ISO 14001 certification

Scope of certification	Certified body	Registration date	Certificate expiry date	Approval certificate No.
Kioxia Corporation Head Office	Bureau Veritas Japan Co., Ltd.	March 11, 2021	March 27, 2024	4616607
Yokkaichi Plant				
Kioxia Iwate Corporation				
Solid State Storage Technology Corporation	DNV.GL (Currently DNV)	June 24, 2020	June 26, 2022	1250-1998-AE-RGC-RvA

## Acquisition of Sony Green Partner

MC Name/FC Name	Expiry Date	Factory Code
Kioxia Corporation Yokkaichi Plant	March 31, 2024	FC007421
Kioxia Iwate Corporation	March 31, 2024	FC015073

## Respect for Human Rights

KIOXIA group upholds respects human rights as stipulated in our Standards of Conduct. We take up respect for human rights so that we can become an enterprise trusted by society, contribute to the formation of a sustainable society.

### Policy Governing Respect for Human Rights

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KIOXIA Group positions business activities respecting human rights as one of our most important issues and in August 2021 we formulated the KIOXIA Human Rights Policy following passage of a resolution by the Board of Directors.

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#### KIOXIA Human Rights Policy

<Preamble>

Guided by its mission of uplifting the world with memory, KIOXIA Group is committed to contributing to the development of industry and society with cutting-edge products such as flash memory and SSDs. With the growing interest in “corporate social responsibility,” we also recognize that corporate activities based on respect for human rights are a prerequisite for the sustainable development of companies and society.

KIOXIA Group considers human rights to be unfringeable basic rights and we believe it is most important to realize a society where the human rights of all people are respected. The rapid changes in society, economic change, and advances in technology impact continuously on our business environment. We are always aware of the risk of infringing human rights directly or indirectly through our business activities. Therefore, in addition to observing applicable laws and social norms as a matter of course, we will fulfill our responsibilities with regard to respecting human rights as our moral duty and thereby create the values for our employees, stakeholders, and the society as a whole.

<Scope>

This policy is applied to all directors and employees (including part-time employees). And by means of the KIOXIA Group Procurement Policy, we also require our suppliers to observe applicable laws and social norms, as well as to respect KIOXIA Human Rights Policy.

#### <Respect for Human Rights>

KIOXIA Group observes human rights-related laws in the countries and regions in which we operate. In addition, we respect the International Bill of Human Rights (the Universal Declaration of Human Rights and International Covenants on Human Rights), the ILO Core Labor Standards, the U.N.'s Guiding Principles on Business and Human Rights and the OECD Guidelines for Multinational Enterprises. As an RBA (Responsible Business Alliance) member, we also act in accordance with the RBA Code of Conduct.

#### <Responsibility for Respecting Human Rights>

KIOXIA Group responds appropriately if we find that our business activities are having an adverse impact on human rights. In addition, we require our suppliers to implement improvement measures if we observe any negative impact on human rights arising from their activities.

KIOXIA Group has assigned our Executive Officer in charge of Human Resources as Human Rights Promotion Officer, responsible for implementing our human rights policy and ensuring these are followed.

#### <Education>

KIOXIA Group educates its directors and employees (including part-time employees) about our human rights policy in order to ensure they respect human rights in all areas of business activity.

#### <Human Rights Due Diligence>

KIOXIA Group will work to identify and assess any risk or negative impact associated with the KIOXIA Group, and will then seek to prevent or lessen such risk or impact.

#### <Relief>

If KIOXIA Group establishes that we have directly or indirectly had a negative impact on human rights, we will take appropriate steps to address the situation. We will set up an anonymous reporting facility and ensure there are no negative consequences for those who report such incidents or support our investigations.



#### <Dialogue>

KIOXIA Group will engage in dialogue with relevant stakeholders regarding its response to any potential or actual cases of human rights being infringed.

#### <Information disclosure>

KIOXIA Group provides details of our human rights policy initiatives on our website or by means of reports.

#### <Observation of Applicable Laws>

KIOXIA Group observes human rights-related laws in the countries and regions in which we operate. If there is any conflict between such local laws and internationally recognized human rights, we always endeavor to respect the latter.

(We formulated the KIOXIA Human Rights Policy following passage of a resolution by the Board of Directors of KIOXIA Holdings Corporation on 27 August 2021.)

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## **Framework Governing Promotion of Respect for Human Rights**

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As part of the promotion framework, the Executive Officer in charge of personnel is stipulated as the person responsible for human rights enlightenment and we have appointed a staff member who is responsible for this within the Human Resources and General Affairs Department of KIOXIA Corporation. The staff member regularly attends internal and external lectures to ascertain the latest social trends.

## Assessment and Monitoring of Human Rights Risks

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KIOXIA Group has created a risk map based on ISO26000 guidance on social responsibility covering the company's entire value chain aimed at identifying any human rights issues arising as a result of our business activities.

Moreover, in accordance with the RBA\* Code of Conduct, we encourage our employees and suppliers through such means as CSR surveys and responsible mineral procurement guidelines to work together to promote respect for human rights.

The Standards of Conduct for KIOXIA Group ban the use of child labor and forced labor and in order to help prevent this, we rigorously confirm by means of family registers and other sources that all those employed are at least 15 years of age.

Furthermore, to ensure respect for the human rights of all people affected by our business activities, we will establish a system to identify and assess the scope of any negative impacts or risks related to human rights. We are planning improvement measures and are providing education (human rights due diligence) based on the United Nations Guiding Principles on Business and Human Rights.

\*RBA is a corporate alliance that promotes social responsibility within global supply chains.

### Sustainability Materiality

### Major Sustainability Issues and Initiatives in the Value Chain

### Standards of Conduct for KIOXIA Group 1. Human Rights

## Education and Awareness-Raising of the Need to Respect Human Rights

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KIOXIA Group provides training on human rights and harassment issues to all employees once a year and as part of our staff onboarding process when hiring (for new graduates and mid-career hires) as part of our Basic Training and Development program.

Moreover, we request our suppliers to make every effort to respect human rights in accordance with the standards of the KIOXIA Group Supply Chain Code of Conduct and the RBA Code of Conduct.

## **Establishment of Whistleblower System and Consulting Service**

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### **Harassment consultation counter Whistleblowing System for Employees**

KIOXIA Group has set up a “Harassment Hotline” to address any reports of harassment—including power harassment and sexual harassment—from employees and others, and to prevent this from occurring or protect them from it. We ensure whistleblowers are not treated in a disadvantageous manner as a result of them having submitted their allegations.

### **Business Partner Hotline**

KIOXIA Group has established a Business Partner Hotline to assist our business partners, such as suppliers, to report to us any violations or suspected violations of laws and regulations, Standards of Conduct for KIOXIA Group, the KIOXIA Group Procurement Policy, business agreements, corporate ethics, and other applicable rules, standards and norms established by KIOXIA Group in connection with procurement and other business transactions, and to help KIOXIA Group rectify the situation.

We will investigate and confirm the facts and in principle notify the results of our investigation to the whistleblower. The personal details of the person who made the allegation will not be disclosed to anyone outside the Business Partner Hotline Secretariat without their consent. Moreover, we will ensure there is no unfair treatment of the whistleblower or their company arising from their allegation.

[Business Partner Hotline \(PDF: 138KB\)](#)

# Talent Development

KIOXIA Group is working to encourage diverse employees to make use of their individual capabilities; we have accordingly established fair evaluation systems, seeking to develop and deploy our human resources to their fullest extent.

## Policy on Fair Evaluation and Talent Development

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For KIOXIA Group to thrive in the face of global competition, we need energetic, creative people. We will strengthen our training processes to develop talent so that each of our employees can exercise his or her abilities to the fullest.

## Training System for Talent Development

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### Training Programs

KIOXIA Group has various training systems that help create a common ground of understanding among employees, and programs based on the requirements of each career level. Furthermore, we provide tools to support self-development, encouraging employees to voluntarily acquire fresh knowledge and skills.

### Main Training Programs

Training Category	Outline
<b>Basic Training and Development*</b>	A program designed to familiarize employees with the KIOXIA Group Standards of Conduct and values that form a shared basis for all members of the KIOXIA Group, covering such areas as compliance and CSR education. The KIOXIA Group Standards of Conduct are available in Japanese, English, traditional Chinese, simplified Chinese, and Korean.

<p><b>Global Training and Development</b></p>	<p>A program that seeks to develop globally minded people who can not only perform their jobs within the scope of their own countries or regions, but also at a global level, by accepting cross-cultural differences and communicating with a wide range of stakeholders.</p>
<p><b>Training and Development based on Levels of Responsibility</b></p>	<p>A program that seeks to improve the basic knowledge, skills, and management capabilities required for employees assigned to new positions (leader, manager, etc.). This program also includes training aimed at continuously improving the leadership capabilities of managers, as well as education aimed at imparting at an early stage the knowledge and skills required to conduct global business.</p>
<p><b>Job-Specific Training and Development</b></p>	<p>This program aims to equip employees with the knowledge and skills they require based on their job function and career status.</p>
<p><b>Managerial Training</b></p>	<p>A program for the select group of individuals who are candidates for managerial or leadership positions.</p>
<p><b>Self-Development Support</b></p>	<p>Offers about 130 e-learning courses to encourage employees' voluntary acquisition of knowledge and skills; these include managerial skills (covering organizations, strategies and marketing, goal management and personnel evaluation, CSR and compliance, labor affairs, mental health, customer satisfaction and sales, careers, business skills and education), computer skills, and languages.</p>

**Common Training Courses (FY2020)**

	<b>Selective/Mandatory</b>	<b>Self-Development</b>
<b>No. of programs</b>	13	169
<b>Total no. of attendees</b>	98,649	846
<b>Total attendance time (hours)</b>	116,452	2,839

\*Basic Training and Development: as one aspect of basic training and development at KIOXIA Group, compliance training covering the KIOXIA Group Standards of Conduct was given to Group employees in Japan throughout FY2020 with an attendance rate of 100%.

**Company-wide Standardized Training**



\*Includes self-development outside working hours, such as language study

## Technical Training

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To develop the next generation of talent to create the technological innovations, KIOXIA Group provides training to new employees who will be responsible for development. We provide basic training programs covering electrical engineering, electronics, and semiconductors, as well as manufacturing, statistics, AI, and machine learning, to enhance their technical background.

Moreover, on-the-job training and a variety of education programs within each division are provided under a mentor in each workplace, with detailed instructions provided to each individual in accordance with their career status. Furthermore, each workplace provides a variety of technical core training for engineers responsible for development, allowing them to acquire knowledge and skills in the field of cutting-edge technologies as they learn about their work.

### Nurturing Technologies and Expertise

KIOXIA Group newly established the job title of “Fellow” in 2019 in order to nurture the company’s specialist knowledge and expertise in the field of advanced technologies. Currently, there are four fellows in KIOXIA Group active in a wide variety of fields: device process basic research, computer systems, simulations, and cutting-edge memory development. They are all committed to the development of semiconductor technologies and nurturing expertise to the next generation through activities at forums such as academic societies and industry groups.

#### Fellow Interviews

## Using Fully Fledged Career Development Systems

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KIOXIA Group supports the career development of each employee in an effort to maximize their current and future job performance. The Career Design System, for example, provides each employee with an annual opportunity to discuss and share their views on their own long-term career development as well as on midterm skill acquisition goals, the improvement of these, and ways to showcase such skills with their superiors. The Performance Management System gives each employee a semi-annual opportunity to review and discuss with their superiors their job performance over the previous six months as well as their job objectives for the following six months.

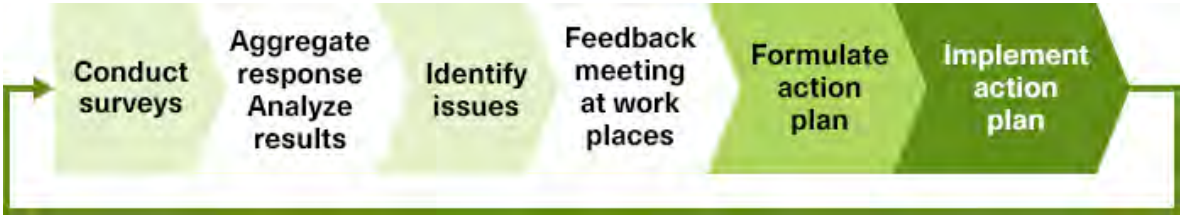
# Employee Engagement Survey

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KIOXIA Group regularly conducts surveys aimed at soliciting the opinions of employees. Each department is given feedback on the results, which are also closely examined by Executive Officers, including the President and the head of every department, and are used as a basis for the discussion of measures to enhance engagement.

In FY2020, we conducted an anonymous survey targeting about 11,500 employees, and received responses from approximately 94% of them.

**Employee engagement survey execution cycle (annual)**





## Diversity Promotion

KIOXIA Group firmly believes the maximization of the capabilities and strengths of diverse employees is critical for innovation, corporate growth, and the creation of new value for society. As such, the promotion of diversity is a priority within the Group.

### Diversity Promotion Policy and Management Structure

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KIOXIA Group fosters a culture that enables a diverse range of employees to play active roles irrespective of race, religion, gender, nationality, disability, age, or sexual orientation.

We have assigned responsibility for the promotion of diversity to KIOXIA Holdings' Human Resources & Administration Division, which seeks to advance diversity within the entire Group.

### Promoting the Career Development of Female Employees

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KIOXIA Group is promoting ways to allow female employees to succeed at work.

In FY2020, the Diversity Promotion Committee made progress with discussions regarding the career development of female employees. The “Child-Raising System/Procedural Handbook” and “Preparing to Balance Work and Nursing Care Handbook” were disseminated among KIOXIA Group employees; these were aimed at making the processes that are in place to enable a balance between work and family time easier for them to understand and follow.

[KIOXIA's Action Plan Based on the Advancement of Measures to Support Raising Next-Generation Children Act and the Promotion of Female Participation and Career Advancement in the Workplace Act \(PDF: 122KB\)](#)  
[Participation and Career Counseling in the Summer School for Girls in Junior and Senior High Schools](#)

**Covers of the two handbooks, “Preparing to Balance Work and Nursing Care Handbook” and “Child-Raising System/Procedural Handbook” Handbooks supporting a balance between work and family time.**



## **Recruitment and Career Advancement of Non-Japanese Employees**

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As part of our diversity promotion program, we are increasing the recruitment of non-Japanese employees.

## **Career Advancement for Seniors**

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From FY2019 we raised our retirement age from 60 to 65 with the aim of enabling employees, regardless of their age, to continue to utilize the knowledge and experience they have spent many years cultivating.

## **Employment of People with Disabilities**

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As of June 2020, the percentage of KIOXIA Group employees with disabilities was 1.53%.\*

\* The percentage of employees with disabilities includes those in KIOXIA Group and our special subsidiary KIOXIA Etoile Corporation.

### **Activity Example: Sign Language Club**

KIOXIA Group provides employees with monthly sign language lessons at the KIOXIA Sign Language Club. At the club, employees with impaired hearing serve as instructors, teaching sign language to facilitate smooth communication and providing information to promote understanding of those with hearing disabilities.

We have introduced a tool that displays conversation details in text form as a measure to counter difficulties experienced by those with hearing disabilities amid the spread of teleworking, the increased use of teleconferencing, and the widespread use of masks.

At our special subsidiary KIOXIA Etoile Corporation, we strive to create a comfortable workplace by understanding the needs of employees with disabilities by frequently reaching out and initiating daily communication with them, and through the installation of suggestion boxes where people can submit their opinions.

## **Education on Diversity**

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In FY2020, we conducted diversity training for leaders as a part of our education programs; these were tailored to their positions and levels of experience. We also conducted “Cross-Cultural Communication Training” at the Yokohama Technology Campus covering how to communicate with people from different cultures and with different ways of thinking.

## **Promoting Work-Life Balance**

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KIOXIA Group constantly strives to enhance our employees' work-life balance. At KIOXIA Group companies, each employee is encouraged to undertake different working styles and deploy methods that help increase their productivity.

### **Consideration and Reduction of Working Hours**

We comply with the local laws of the countries and regions in which we operate with regard to working hours, and in Japan we monitor time spent at work and encourage staff to take annual leave. We also have a company doctor who interviews those who work long hours.

In KIOXIA Group in FY2020, the average annual total working hours per employee was 2,010, and the average annual total of non-scheduled working hours per employee was 407.\*

KIOXIA Group is making the transition to a style of work that does not depend on overtime. The purpose is to better utilize our diverse workforce and to promote a better work-life balance. In FY2020 we carried out a survey about working from home, centered on trials of head office staff

working from home. Taking the results of the survey into account, we are now considering providing infrastructure that is not bound by time or place to support these new working styles.

\*Excludes managers and supervisors

**Key systems and measures regulating working hours in FY2020, KIOXIA Group**

System / measure	Overview
Flexible Work System	Flextime system
Long Leave System	Employees can take a maximum of 20 days of accumulated leave for clear and meaningful objectives, such as self-development, community activities, nursing, and also for treatment of non-work-related injuries and illnesses, and other conditions, including infertility.
Annual paid vacation	To promote employee rejuvenation, KIOXIA Group is encouraging employees to make use of all their annual paid vacation.
Making working hours more visible	KIOXIA Group has introduced systems including a “Work Record Display” system to increase the transparency of hours worked by each employee.
Addressing long working hours at workplaces	We implement measures in various divisions and business sites to address the problem of long working hours, and publish case studies on our intranet site to spread good practice among departments (e.g., having employees declare their target leaving time, in principle forbidding employees from coming to work on Sundays, banning late-night overtime, setting “focus hours,” and banning meetings outside normal working hours).

**Activity Example: Using the System to Make Working Hours Visible**

In order to effectively monitor the working conditions of our employees, KIOXIA Group has started using a “Work Record Display” system to provide better visibility of working hours to employees and their managers.

The Work Record Display system draws employees' attention to overtime hours on a weekly basis.

**Supporting employees in their balancing of work with childcare and nursing care**

KIOXIA Group helps employees to balance their work and personal lives. We have implemented various measures in excess of our legal obligations, and continue to make them more adaptable and flexible. Under our Hourly-Unit Annual Leave system, when taking leave in excess of one hour, employees can take leave on a quarter-hourly basis instead of hourly.

**The Key Systems Supporting Employees' Work and Childcare (KIOXIA)**

**Childbirth and Child-rearing**

System	As required by law	KIOXIA provisions
Childcare leave	Period: <u>Up to 1 year old</u> except when certain requirements are met Number of times: <u>Up to once</u> per child	Period: <u>Until the end of the month in which the child turns 3 years old</u> Number of times: <u>Up to three times per child</u>
Paternity leave	No provision	Up to 5 paid days holiday consecutively or separately, within 6 weeks of the birth
Short-time shifts	Target: Employees raising <u>children under the age of 3</u>	Target: Employees raising <u>children who have not yet completed elementary school</u>  <ol style="list-style-type: none"> <li>1. No limits on the number of times employees can apply</li> <li>2. Possible to combine with flextime system</li> <li>3. Can be set in 15-minute units</li> </ol>
Hourly leave system	No provision	Leave is available in 1-hour units. If more than one hour is taken at a time, however, employees may take leave in 15-minute units thereafter.

**Family care**

System	As required by law	KIOXIA provisions
Family care leave	Up to <u>93 days</u> in total per person requiring nursing care	Up to <u>365 days</u> in total per person requiring nursing care
Hourly leave system	No provision	Leave is available in 1-hour units. If more than one hour is taken at a time, however, employees may take leave in 15-minute units thereafter.

**Returning to work**

System	KIOXIA system
Allowance for raising the next generation	To be provided in respect of each eligible child (children being taken care of by a spouse working for another company are also eligible for the allowance).
Welfare system “Teatime”	For child-rearing, nursing care, etc., points will be worth 1.2 to 1.5 times their normal value.
Mutual understanding program	The program offers the opportunity for employees to discuss future career plans and any necessary arrangements with their manager and HR personnel before taking a leave of absence or after resuming work, thus helping to reduce any concerns of employees who take such leave.
Reemployment system (return to work system)	We have established a system to reemploy those who had to resign for any of the following reasons: <ol style="list-style-type: none"> <li>1. In order to accompany a spouse who was transferred by his/her company to a different location (within 5 years)</li> <li>2. In order to provide nursing care for those requiring it (within 3 years)</li> <li>3. Childbirth, childcare, or raising children (within 3 years)</li> </ol>

## Benefits

### Corporate Pension Plan

To help support employees after their retirement, we offer a Corporate Pension Plan – a defined-benefit scheme. This complements their state pension provided under Japan's welfare pension insurance scheme. We also introduced a defined contribution pension scheme aimed at broadening employees' post-retirement options.

### Teatime, a selective welfare system

KIOXIA Group offers a selective welfare system called “Teatime” which allows employees to make choices according to their needs and receive benefits from a wide range of welfare programs. The system also covers support for childcare and nursing care, including the cost of day-care centers, child-rearing, education, and nursing care.

### Key data regarding the promotion of the career development of female employees, KIOXIA

Item	Actual
Gender balance of employees <sup>1</sup>	Male 91.0% Female 9.0%
Percentage of managers who are female <sup>1</sup>	3.5%
Percentage of officers who are female <sup>1</sup>	0%
Percentage of recruits who are female <sup>2</sup>	Administrative 25.0% Technical 14.4%
Average length of service <sup>1</sup>	All 17.5 years (Male 18.0 years, Female 12.9 years)
Turnover rate <sup>3</sup>	All 1.3% (Male 1.3%, Female 1.5%)
Number of paid leave days taken	18.3 days

<sup>1</sup> As of April 1, 2020

<sup>2</sup> New graduate employees as of April 1, 2020

<sup>3</sup> Only those leaving for personal reasons



## Occupational Health and Safety

It is important for each and every employee to maintain and strengthen his or her mental and physical health in order to shine and flourish professionally. This in turn is only possible in a safe and comfortable work environment. KIOXIA Group therefore supports employees' occupational health and safety (OHS)<sup>1</sup>.

<sup>1</sup> In this section, “occupational health and safety” is abbreviated to “OHS.”

### OHS Policy

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KIOXIA Group's OHS Policy in Japan was formulated in April 2017 following the declaration by senior management of its commitment to OHS, with the goal of having all employees embrace the same commitment.

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#### **KIOXIA Corporation<sup>2</sup> Fiscal 2021 Basic Policy for Safety and Health**

With the aim of being a corporation trusted by society and based on the management philosophy of respect for people, creation of rich value, and contribution to the lives and cultures of people around the world, the Company provides products, services, and mechanisms for enabling each person to realize a new future with memory technology at the core.

In its entire business activities, each and every worker<sup>3</sup> will continue to devote oneself to “building a safe and delightful workplace environment and maintaining and promoting a healthy body and mind,” striving to enhance and improve occupational safety and health performance.

1. The Company hereby declares that safety and health is the most important issue in its management. Under the leadership of Top Management, the Company will establish a safety and health management structure for the implementation of an effective occupational health and safety management system in accordance with management strategy, as well as decide on and provide the necessary resources to form a health and safety culture
2. The Company is committed to comply with laws and regulations and other requirements.

3. To provide a safe and healthy workplace in an ongoing manner by controlling risks and opportunities related to occupational safety and health and preventing labor-related injuries and illnesses, the Company will perform the following matters by setting goals and creating action plans:
  - 1) Identification and reduction of potential risks for new work processes (installation, tasks, introduction of materials, etc.)
  - 2) Potential risks in associated work and actions performed between each work step (in accordance with the actual safety management situation at each site)
  - 3) Re-evaluation of risk for risk level III or above and reduction of new potential risk
  - 4) 4) Continued promotion of effective and focused measures with respect to the risk of infectious diseases
  - 5) 5) Improvement of occupational safety and health awareness and evaluation of recognition, maintenance, and effectiveness of competence
4. Strive to “cultivate a healthy culture” by ascertaining the state of health management with the aim of practicing “health-focused operations”, identifying issues, and promoting measures that maintain and improve the physical and mental health of employees and improve health literacy
5. In its entire business activities, the Company will appropriately consult workers and their representatives about safety and health initiatives, assisting them in participating in these initiatives.
6. Valuing needs and expectations of stakeholders in mutual communication with them, the Company will contribute to the enhancement of the level of social safety and health management.

April 1, 2021

Nobuo Hayasaka, President and Chief Executive Officer,  
KIOXIA Corporation

## KIOXIA Group's OHS Policy in Japan (FY2021)



<sup>2</sup> The scope of this policy is the KIOXIA domestic group.

<sup>3</sup> Across its entire range of business activities, “each and every worker” includes all those involved in KIOXIA’s business in various different roles, including contract employees, subcontractors, suppliers and business partners.

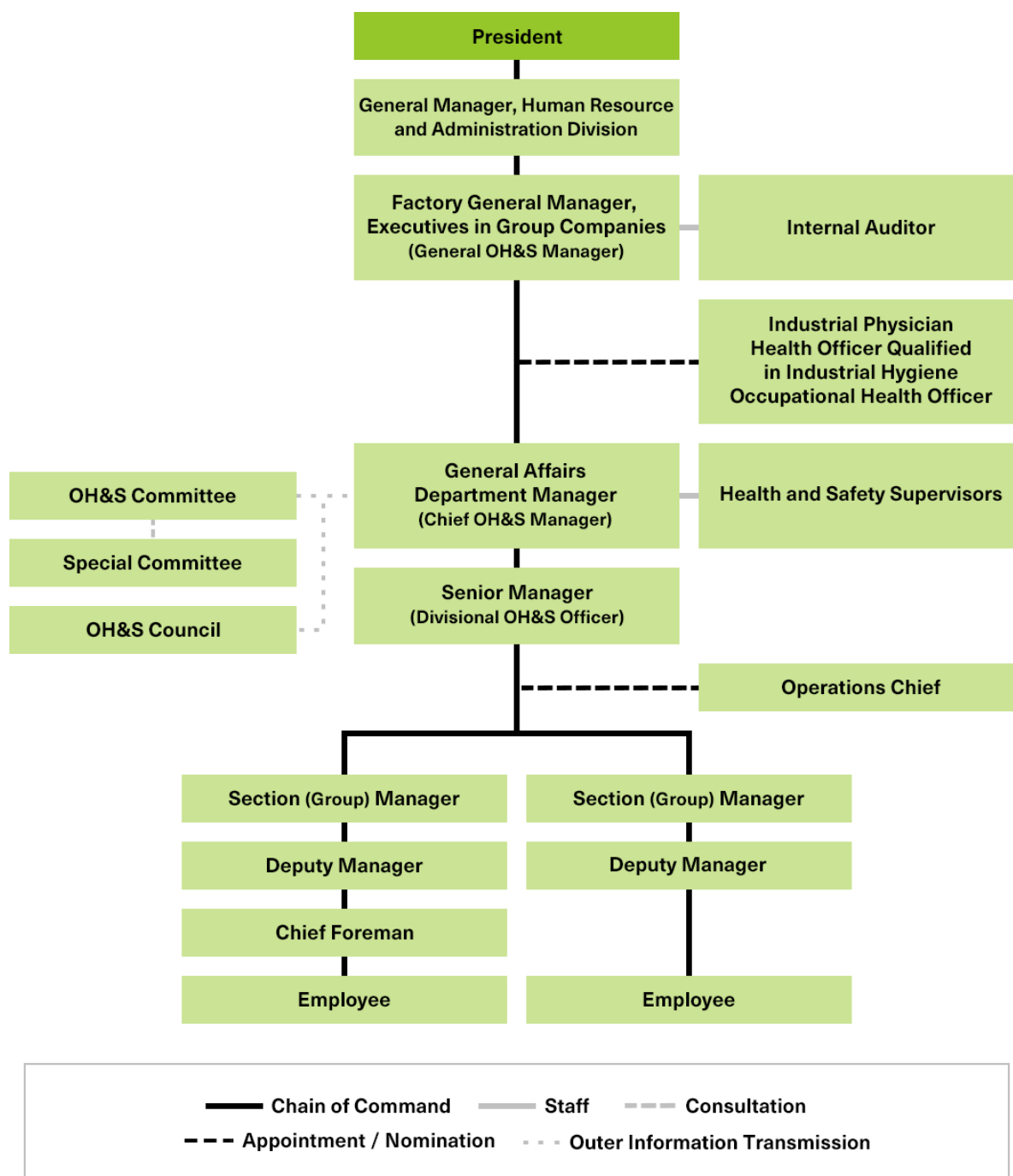
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## Promotion of OHS

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KIOXIA Group in Japan places health and safety supervisors within the Human Resources and Administration Division of each group company to support OHS activities among employees. Periodical reports on the health and safety of employees are also made to the President and Executive Officer in charge of human resources.

## KIOXIA Group's Japan OHS Management Structure



## OHS Management System

KIOXIA Group acquired occupational health and safety management systems certification (ISO 45001:2018) in January 2021. This system enables us to identify and assess organizational health and safety issues, raise the profile of these, and make continuous improvements in order to reduce the risk of non-compliance with relevant legislation.

KIOXIA Group also strives to improve our safety management procedures through the consistent efforts of our member organizations and individual employees in their daily activities.

These efforts include the creation of small workplace groups undertaking a variety of activities on an ongoing basis; these encompass workplace improvement programs, education and training to increase risk awareness among employees, and monitoring to ensure that appropriate practices are being followed.

KIOXIA Group will further improve our safety management processes through a combination of initiatives based on employee networks and the ISO 45001-based management system.

**Acquisition of ISO 45001:2018 certification**

Name of company	Certified body	Certificate expiry date	Approval certificate No.
Kioxia Corporation	JACO: Japan Audit and Certification Organization for Environment and Quality	March 28, 2022	WC18J0004
Solid State Storage Technology Corporation	DNV.GL (Currently DNV)	November 23, 2021	183447-2015-ASA-RGC-RvA

**Health and Safety-Related Initiatives (FY2020)**

Category	Details
Health and Safety	<ul style="list-style-type: none"> <li>• Planning and implementation of promotional plan based on OHS Policy</li> <li>• Health and safety awards</li> <li>• Business site OHS committees, workplace OHS meetings</li> <li>• Internal audits and external certifications</li> <li>• Periodical reports to the president</li> </ul>

<b>Safety only</b>	<ul style="list-style-type: none"> <li>• Risk assessment to identify sources of danger and steps that can be taken to mitigate those risks</li> <li>• Safety reviews when installing or modifying equipment</li> <li>• Operation of specialist internal safety committees</li> <li>• Sharing of information and holding discussions with labor unions and on-site subcontractors</li> </ul>
<b>Health only</b>	<ul style="list-style-type: none"> <li>• Thorough implementation of health measures in full compliance with relevant legislation</li> <li>• Promotion of measures to prevent health problems caused by passive smoking</li> <li>• Measures to combat brain, heart and lifestyle-related diseases</li> <li>• Measures to improve mental health</li> <li>• Health management for those posted overseas or on business trips</li> <li>• Promotion of activities to support workplace engagement<sup>4</sup> and workplace energization</li> <li>• Measures to prevent the spread of diseases</li> </ul>

<sup>4</sup> Workplace engagement: having a positive and fulfilling attitude toward work.

## OHS Awareness Raising and Education

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### OHS Education

KIOXIA Group in Japan endeavors to enhance our employees' OHS understanding and skills. On top of the education required by the Industrial Safety and Health Act, we implement education programs for employees who are newly appointed to OHS-related posts, as well as for mid-career OHS employees. We also run practical training programs devised by each operational site.

## Key OHS Training Results (FY2020)

Type of Training	No. of Eligible Employees	No. of Participants
Training related to job promotion (OHS)	139	139
Mental health training	14,058	14,058
Post-recruitment training (OHS, road safety, etc.)	2,072	2,072
Various types of training based on Industrial Safety and Health Act (for workplace managers, health supervisors, covering the use of industrial robots, safety equipment, etc.)	1,347	1,347
Competence improvement training (OHS promotion committee members, risk assessors, internal auditors, etc.)	182	182

Each work site also conducts its own training in addition to the activities listed here.

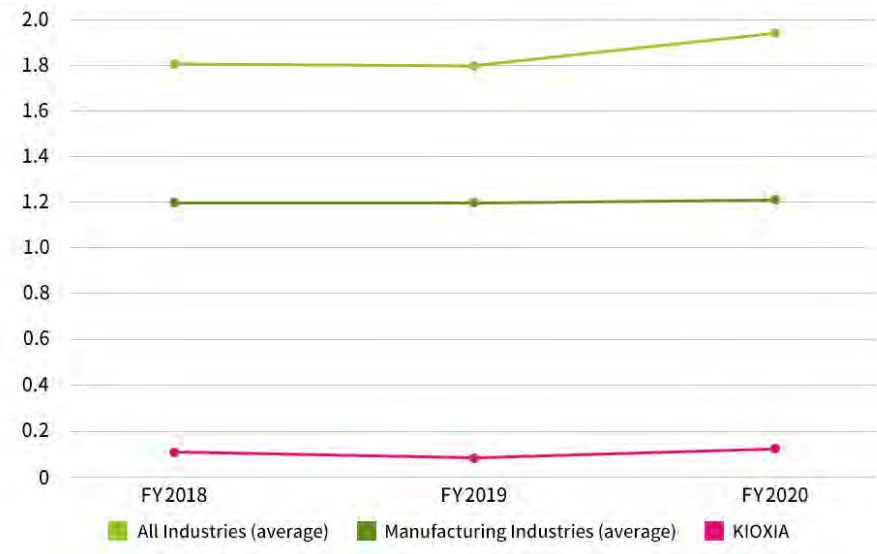
## Workplace Accidents

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KIOXIA Group in Japan will continue to implement further measures to prevent workplace accidents. In particular, we will prioritize the reduction of hazardous risks that could lead to illness or serious injury and conduct risk assessments of all workplaces and tasks. Leveraging the results of this risk assessment, we will identify current and potential risks, review work methods, and systematically take any necessary measures to reduce and eliminate such risks.

Furthermore, the Group will improve facilities and provide comprehensive OHS training for all employees.

**Frequency of Injuries Resulting in Lost Working Time<sup>5</sup> at KIOXIA Group in Japan**



	FY2018	FY2019	FY2020
<b>All Industries (average)</b>	1.83	1.80	1.95
<b>Manufacturing Industries (average)</b>	1.20	1.20	1.21
<b>KIOXIA</b>	0.12	0.07	0.13

<sup>5</sup> Frequency at business sites of KIOXIA Group in Japan (manufacturing, non-manufacturing, R&D).

Frequency = number of casualties due to work-related accidents / total actual working hours x 1 million.

Figures for all industries collated from respective fiscal year issues of the Ministry of Health, Labor and Welfare’s “Survey of Industrial Accidents.”



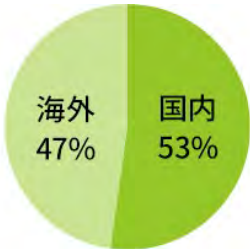
# Sustainable Supply Chain

Stakeholder interest in the management of risk in the supply chain is growing year by year. KIOXIA Group works together with suppliers to manage its supply chain responsibly, giving due consideration to such issues as the human rights of workers, working environments, occupational health and safety, and reducing the impact of our activities on the environment; not only in terms of our own company, but across all companies in our supply chains.

## KIOXIA Group's Supply Chain

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### Procurement Ratio by Region (FY2020)



KIOXIA Group procures a variety of raw materials and resources from suppliers in many different countries and regions. In FY2020, we had relationships with more than 600 suppliers, and overseas suppliers accounted for 47% of our total procurement.

## KIOXIA Group Procurement Policy

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KIOXIA Group strives to promote sustainable procurement activities by means of complying with procurement-related laws and regulations and the social norms of each country or region and building sound relationships with suppliers based on mutual understanding and trust.

We require our major suppliers to agree to and implement the KIOXIA Group Procurement Policy, and we call for responsible business practices throughout our supply chains. In response to changes in the social environment and our business conditions, we revised the KIOXIA Group Procurement Policy and published a new KIOXIA Group Supply Chain Code of Conduct in August 2021.

Furthermore, we have formulated KIOXIA Group Green Procurement Guidelines applicable to environmental management, and the KIOXIA Group Responsible Minerals Sourcing Policy governing the sourcing of minerals, and have made all relevant suppliers aware of these.

[KIOXIA Group Procurement Policy \(PDF: 102KB\)](#)

[KIOXIA Group Supply Chain Code of Conduct \(PDF: 287KB\)](#)

[KIOXIA Group Responsible Minerals Sourcing Policy \(PDF: 80KB\)](#)

[Standards of Conduct for KIOXIA Group 3. Procurement](#)

## **Promotion of Supply Chain Management**

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KIOXIA Group has set up a dedicated planning organization within the procurement department at KIOXIA's Head Office. It promotes fair dealings with all our suppliers as well as CSR management across our supply chain.

The organization coordinates with various business divisions and related divisions such as the CSR Sustainability Promotion group and the Environment group.

## **Participation in Industry Groups and Initiatives**

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KIOXIA Group joined the Responsible Business Alliance (RBA) in July 2021 to fulfill our social responsibilities in such areas as human rights, labor practices, occupational health and safety, the environment, and ethics in our global supply chains. We carry out business responsibly in accordance with the RBA code of conduct (progressing with our own CSR activities and requiring that our suppliers do the same).

### **RBA**

In addition, KIOXIA Group promotes the responsible procurement of minerals, participating in the Responsible Minerals Initiative (RMI), and the Responsible Mineral Procurement Study Group of the Japan Electronics and Information Technology Industries Association.

# Assessment and Monitoring of Suppliers

## New Supplier Assessment

When commencing business with a new supplier, among other things we first confirm whether the supplier’s environmental management processes, process management, legal compliance, and management status meet KIOXIA Group transaction standards before we actually start conducting business with them.

## Monitoring

Prior to continuing our business with an existing supplier, we use references such as the current scale of the business with them, but we also ask the supplier to conduct a CSR survey using the self-assessment format provided by the RBA (RBA-SAQ).<sup>1</sup> This method not only enables us to confirm the status of the supplier’s CSR activities, but also facilitates rigorous management of our supply chain. Suppliers judged by the RBA-SAQ to be high risk are required to implement corrective measures such as undergoing an RBA third-party audit. In addition, we check the management status of suppliers’ manufacturing sites through quality audits conducted as needed, and require improvements and provide support for initiatives as necessary.

<sup>1</sup> SAQ: Self-Assessment Questionnaire. This incorporates questions about labor practices, occupational health and safety measures, the environment, ethics, and management processes. We use two types of SAQ: Corporate, which covers companies in their entirety; and Facility, focusing on individual factories.

## Supply Chain Monitoring (FY2020, KIOXIA Group, Cumulative Numbers)

	No. of surveyed companies	Low risk (No. of responses)	Medium risk (No. of responses)	High risk (No. of responses)
RBA-SAQ (Corporate)	48	44	4	None
RBA-SAQ (Facility)	45	232	None	None
CSR surveys* <sup>2</sup> (Others)	6	6	None	None

<sup>2</sup> CSR surveys aside from the RBA online survey (including surveys addressing topics other than RBA standards, such as Sedex/SA8000)

## **Responsible Minerals Sourcing**

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Since enactment of Section 1502 of the U.S. Dodd-Frank Wall Street Reform and Consumer Protection Act (the Dodd-Frank Act) in January 2013, KIOXIA Group, given its role in the supply chain of companies listed on U.S. stock exchanges, has investigated refineries in its own supply chain to confirm that tin, tantalum, tungsten, and gold (commonly known as 3TG) are not being used as a source of funds for anti-social forces in the Democratic Republic of the Congo or neighboring countries.

From March 2021, KIOXIA Group has been advancing the procurement of minerals based on the KIOXIA Group Responsible Minerals Procurement Policy. This stipulates that KIOXIA will not use as raw materials 3TG or cobalt obtained from the Democratic Republic of Congo and neighboring areas, or from other conflict- or high-risk areas where inhumane acts such as human trafficking, slavery, forced labor, child labor, abuse, or war crimes are suspected.

[KIOXIA Group Responsible Minerals Sourcing Policy \(PDF: 80KB\)](#)

### **KIOXIA Group's Promotion of Minerals Sourcing**

The Responsible Minerals Sourcing Working Group, incorporating members from relevant corporate divisions such as the head office procurement, technology and IT divisions, rigorously promotes activities and shares information on behalf of the KIOXIA Group in accordance with the KIOXIA Group Responsible Minerals Sourcing Policy.

### **Minerals Sourcing Survey**

KIOXIA Group requires suppliers to conduct responsible sourcing of minerals, and we survey these suppliers regarding their use of minerals, as well as the details of their mineral smelters. In FY2020, for the 77 suppliers where there may have been a risk that 3TG minerals were being used, we requested them to conduct a survey using the Conflict Minerals Reporting Template produced by the RMI. We also require our suppliers to source minerals via smelters conformant to the Responsible Minerals Assurance Process and refiners certified under the Responsible Materials Initiative and 100% procured from refineries that are either RMAP-certified or are currently under audit.<sup>3</sup>

Furthermore, following requests from our stakeholders, we added cobalt to the list of minerals surveyed from 2021, and commenced refinery surveys at 17 suppliers using the RMI's Cobalt Reporting Template.

<sup>3</sup> Includes one refinery currently undergoing RMI audit

**Minerals Procurement Monitoring (FY2020, KIOXIA Group, Cumulative numbers)**

	No. of surveyed companies	No. of responses	Requests for corrective measures <sup>4</sup>	Corrective measures completed	Suspension of business, etc.
<b>CMRT surveys (3TG)</b>	77	150	6	6	None
<b>CRT surveys (cobalt)</b>	17	23	3	1	None

<sup>4</sup> Request to suppliers to take corrective measures if they are procuring minerals from non-RMAP refineries

**Green Procurement**

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The KIOXIA Group aims for the realization of a sustainable society, as formulated in KIOXIA Group's Environmental Policy.

In support of this aim, we have formed a Green Procurement Working Group centered on our Environment, Quality Control and Procurement divisions. We have also formulated Green Procurement Guidelines aimed at ensuring compliance with the laws and regulations of each country and region and at reflecting customers' requests and other requests, and we periodically update these. The guidelines are based on our philosophy of reducing the environmental burden caused by materials procurement; they summarize our requirements governing the handling of hazardous chemical substances and are shared with our suppliers.

We also conduct a thorough assessment of the environmental impact of chemical substances in our components and products from the design and development stage and avoid wherever

possible the use in our production processes of substances whose sourcing places a large burden on the environment, thereby striving to reduce our environmental footprint.

Through these initiatives, we will continue to collaborate with our suppliers and strive to manage chemical substances appropriately and to contribute to the realization of a better global environment.

**Green Procurement Monitoring (FY2020, KIOXIA Group, cumulative numbers)**

	No. of surveyed companies (written, etc.)	No. of responses	No. of requests for corrective measures	No. of corrective measures completed	Suspension of business, etc.
<b>Green procurement (RoHS/Reach)</b>	20 <sup>5</sup>	20	0	0	None
<b>Green procurement (Others)</b>	124 <sup>6</sup>	124	0	0	None

<sup>5</sup> Survey of suppliers in conjunction with mandatory registration of Reach/SVHC in the European Chemicals Agency database SCIP

<sup>6</sup> Survey of and alert for suppliers regarding VOC regulations in China

**Response to Supply Chain Risk**

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KIOXIA Group demands that our business partners and suppliers make improvements or otherwise respond appropriately in the event of them being found to have violated our stipulated standards for suppliers, or if there is a CSR risk identified in the supplier or supply chain, or if there is a new law or regulation requiring a response, or if there is some other reason. We will provide corrective guidance or support for such suppliers, but in cases where corrective measures are judged to be difficult, we will suspend business.

In FY2020, there were no cases of suspension of business with suppliers due to CSR risks.

## **Securing Supply from the Supply Chain in the Business Continuity Plan**

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KIOXIA Group strives to engage multiple suppliers and to work closely with them to avoid interruptions to business in the event of emergencies such as earthquakes, other natural disasters, accidents, or pandemics.

Risk Management as Specified in the Business Continuity Plan

## Quality Control

KIOXIA Group considers that our most important mission is to provide our customers with safe and reliable products, and as such we are always striving to improve quality. In addition, we make sure to disclose product safety, security response, and quality information to customers.

### KIOXIA Group Comprehensive Quality Assurance Policy

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#### Quality Control Policy

In accordance with the basic commitment of KIOXIA to enrich the lives of people and broaden their opportunities by continuing to develop advanced memory technology and services, our policy is to provide products of high quality that are safe and constantly refined in line with customer requirements by means of creative techniques and the continuous pursuit of value.

1. We comply with all relevant laws and provide quality and reliable products that match customer requirements.
2. We perform quality manufacturing in a mass production environment from the design & development stage and work to improve product security, to consider the environment, and to maintain high technical standards.
3. We aim for consistent improvement by pursuing root causes and continually improving our quality management systems.

[KIOXIA's Quality Guidelines \(1.6MB\)](#)

#### Standards of Conduct during Quality Assurance

1. We engage in quality assurance from the customers' point of view.
2. We observe relevant laws and contracts and respect the rights of customers and third parties.
3. We deploy quality control systems aimed at achieving 100% quality.
4. We ensure that all of our departments and employees follow our quality control policies.
5. We aim for constant improvement by investigating the root causes of process failures and conduct through risk analysis in order to prevent any re-occurrence.



6. We collect, analyze and appropriately disclose information with the aim of preventing quality issues.

### **Standard of Conduct regarding Product Safety and Product Security**

1. We observe both Japanese and overseas laws and regulations governing product safety and product security.
2. We collect, and proactively disclose, a wide range of information about any product issues.
3. We immediately report any product issues to the authorities concerned in accordance with relevant laws and regulations.
4. We promptly inform customers when the need to recall and repair products arises.
5. We appropriately urge caution and display warnings when deemed necessary in order to help people use our products in a safe manner.
6. If an accident should occur, we carry out a thorough analysis of the causes and take necessary measures to prevent it from recurring. We also strive to prevent accidents by predicting risk at the design stage.
7. We strive to eliminate vulnerabilities from products prior to shipment.
8. We collect a wide range of information on product vulnerabilities in order to reduce risk.
9. We implement product security measures on a broad scale in cooperation with the relevant organizations.

### **Structure Promoting Quality Control**

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KIOXIA Group has implemented a structure aimed at strengthening our quality-control activities. Led by our CEO, a quality control meeting is held twice a year in which our Quality Executive, Vice Presidents, Technology Executives, General Managers, and Senior Managers participate and where they discuss and decide on key issues of quality policy. The participants also evaluate the appropriateness and validity of quality management and risk measures. We communicate decisions made during these meetings to business divisions and ensure that they are actioned.

## Structure of Promoting Quality Control



## Structure of Response to Product Issues

Information on issues involving KIOXIA products in the market is collated by the KIOXIA CEO, who is also the Chief Quality Executive Officer, or Quality Executive, through what we call CPL<sup>1</sup> Incident Response Liaison. We then take necessary action after consultation with our QS<sup>2</sup> Risk Committee.

No serious quality incidents occurred in FY2020.

<sup>1</sup> CPL is an abbreviation combining CL (contractual liability) and PL (product liability).

<sup>2</sup> Quality and Safety.

## Structure of our Response to Product Issues



## **Improving the Quality Management System (QMS)**

KIOXIA Group has obtained ISO9001 certification, the basis of all quality management systems, and ISO/TS16949, a more advanced certification. Rather than merely assessing whether our products meet the requirements of these standards, we also endeavor to improve their overall effectiveness. We evaluate our products annually based on the eight QMS principles and other guidelines.

## **Improving Design Quality**

In order to enhance our ability to ensure product quality at the design stage, KIOXIA Group conducts Failure Mode and Effects Analysis (FMEA) in order to prevent defects from reaching upstream.

The aim of this activity is to enhance quality by anticipating failures or defects, called failure modes, targeting product design and processes in the later stages of development. We implement practical education to broaden the base of FMEA activities which is leading to better FMEA processes.

## **Disclosure of Information on Quality**

KIOXIA Group discloses quality information on its website.

### **Products: Reliability Information**

- Quality Guidelines
- Reliability Handbook
- Handling Precautions and Requests
- List of Abbreviations

### **Personal Products (Japanese)**

- Customer Support

# Supporting Local Community Development

## Basic Philosophy

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KIOXIA Group regards coexistence with local communities as our responsibility as a “good corporate citizen.” Aiming to contribute to a better society through “memory” technology, while engaging in dialogue with local communities, governments and public bodies, NPOs/NGOs, and academic organizations, we leverage our technologies, products, services, the expertise of our employees, and other means to address community issues. We focus in particular on energizing the local communities in which we conduct business, and fostering human resources in the science and engineering fields.

## Implementation Structure

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At KIOXIA Group, the Human Resources and Administration Division oversees community engagement activities for our business units. We partner with local communities and conduct community engagement activities wherever we operate. We also promote employee participation in social activities.

### Promotion of Local Recruitment and Businesses

KIOXIA Group engages in activities deeply rooted in local communities in order to help vitalize them, including recruiting locally and conducting business with local companies.

### Leave System to Enable Volunteer Activities

KIOXIA has introduced a long-term leave system to help employees take part in community engagement activities. They can use accumulated leave (maximum of 20 days) for such purposes.

## Main Activities (FY2019-FY2020)

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### Fostering Scientists and Engineers of the Future

KIOXIA Group sponsors opportunities for young people who will lead the future to develop an interest in science, technology, and manufacturing, as we believe in supporting those aspiring to

become outstanding Scientists and Engineers. In FY2019, our community science lectures and workshops were attended by some 2,000 people, mainly students from elementary school through to university.

**Yokkaichi Science Seminar for Children**

KIOXIA took part in the Yokkaichi Science Seminar for Children held at the Yokkaichi City Cultural Center in August 2019.

In the seminar entitled “First-Hand Science—Yokkaichi, a City of Monozukuri (the art, science and craft of making things),” we offered a presentation called “What is Memory?” for roughly 120 visitors. As well as introducing the Yokkaichi Plant and semiconductor memories, we held a quiz about human memory. The excitement mounted as children enthusiastically answered the quiz questions. Among the attractions, the trying on of a cleanroom suit was especially popular. Children enjoyed this one-of-a-kind experience.



**A scene from the Yokkaichi Science Seminar for Children.**

Please click the link for more information about community engagement activities in the Yokkaichi Plant area.

[Yokkaichi Plant \(CSR and Cooperation with the Local Community\)](#)

**Participation and Career Counseling in the Summer School for Girls in Junior and Senior High Schools**

As part of our efforts to promote women’s active participation in the workplace, KIOXIA has taken part since 2018 in the Summer School for Girls in Junior and Senior High Schools (*Natsugaku*)<sup>1</sup>, one of Japan’s largest events promoting science and engineering careers. Under the concept of “The World is Filled with Memory,” we gave a presentation about how flash memory is used in many ways in our daily lives. Participants rated the session highly, with comments including: “Memory is amazing! Fun!” and “I want to learn more about how flash memory works.”

We also set up a booth where junior and senior high school students could discuss careers with female engineers, a rare chance for them. Having listened to the concerns of many of the girls about choosing a career in science, our female engineers gave them advice based on actual experience. We will continue to give students the chance to experience the joy of science, engineering, and manufacturing, supporting the development of future scientists and engineers.



**An engineer counsels a high school student about career development**

<sup>1</sup> Summer School for Girls in Junior and Senior High Schools (Natsugaku) is an event that motivates girls to pursue science and engineering careers. It has been supported by the Natsugaku executive committee (2018), the National Women’s Education Center (from 2018), and the NPO STEM Career Path Project for Girls (2019).

**Donations through Charity Runs: KIOXIA Europe**

KIOXIA Europe was privileged to set up two private charity runs, where employees ran in an event combining community engagement activities and health promotion. During the COVID-19 lockdown, we encouraged exercise in the fresh air. Thirty-five employees took part, running a total distance of 5,776 km from their homes.

KIOXIA Europe made donations based on the distance completed to two local NGOs: Aktion Lichtblicke e.V., which supports vulnerable children and teenagers, and Kinderhospiz Regenbogenland, which runs a hospice for young people with limited life expectancy due to serious illness or disability.



**Marty Broere, Senior Manager Strategy & Innovation, before handing over the check of the donation.**

**Donations for International Women’s Day: KIOXIA America**

KIOXIA America held various events for International Women’s Day (IWD) under the initiative of LeadHERs, an affinity group in the organization, with the goal of uplifting women. In March 2021, LeadHERs established the KIOXIA America IWD Fund through Bright Funds, which donated funds to six organizations focusing on accelerating women’s progress in both education and the workforce.

LeadHERs also coordinated a company-wide clothing drive in Irvine and San Jose in California, and in Atlanta, Georgia, and many employees supported this event. The clothing donations were distributed to several organizations in the local community that help women find careers and become economically independent.



**KIOXIA America’s LeadHERs clothing drive.**

**Charity events in SSSTC 1st Anniversary: Solid State Storage Technology Corporation (Taiwan)**

Solid State Storage Technology Corporation (SSSTC) held a very successful charity fair in the 2020 Christmas season. SSSTC joined hands with six NPOs supporting the local community, including Children Are Us Foundation and Shelter Factory.

Charlie Tseng (SSSTC Chairman & CEO) and some 900 employees took part in this activity by donating books and buying food and crafts made at social welfare facilities. All the donations were distributed to the NPOs to support socially vulnerable groups such as children and the disabled.



**SSSTC 1st Anniversary & Christmas Charity Fair**

## **Academic Collaboration**

KIOXIA Group proactively promotes personnel exchanges through open innovation such as joint efforts between industry and academia, with the aim of contributing to the academic development of science and engineering, as well as fostering young scientists.

There are three frameworks in Japan: Encouraging Research, to support a wide range of research themes; Joint Research, to gain a deep understanding of technology while solving business issues; and Comprehensive Collaboration, covering human resource development and research (together with Waseda University and the University of Electro-Communications).

We are also forging links with multiple universities overseas.

## **KIOXIA Research Grants**

Since FY2018, KIOXIA has run KIOXIA Research Grants, a public grant and incentive program aimed at furthering academic development in the science and engineering fields. In FY2019, we collaborated with 17 universities in Japan in a number of areas, including information systems, the environment, and medical care, as well as semiconductors. In FY2020 we selected 21 research themes, including the field of social systems, and awarded grants for outstanding research in three areas that produced particularly excellent results.

## **Joint Research**

In joint research that KIOXIA conducted with the Synthetic Neurobiology Group from the Massachusetts Institute of Technology, a case study of the use of SSD (a high-speed, high-capacity storage device) attracted particular attention.

### Challenging the Brain with Data Storage

## **Comprehensive Collaboration**

### Collaborative Activities Agreement with Waseda University

KIOXIA concluded a collaborative activities agreement in 2018 with Waseda Research Institute for Science and Engineering to promote cutting-edge R&D in the memory technologies needed to support an advanced information society, as well as to foster young scientists. We have created joint research themes that can lead to innovative core technologies through feasibility studies and research, and we provide budding scientists with research grants and incentives.





**Signing ceremony for the collaborative activities agreement.**

**Dr. Atsushi Ishiyama, Senior Executive Vice President for Research at Waseda University (left), and Dr. Nobuo Hayasaka, Chief Technology Officer of KIOXIA Corporation**

**(titles as of time of ceremony).**

**Collaborative Agreement with the University of Electro-Communications**

Aiming to accelerate open innovation in fields including AI, KIOXIA concluded a collaborative agreement with the University of Electro-Communications in 2019. The collaboration extends across a variety of fields including “image processing, production control, and behavioral analysis technologies,” “next-generation information and communication technologies,” and “nanotechnology,” and is aimed at promoting R&D on AI-based production technology and semiconductor memory, as well as to fostering young scientists through personnel exchanges.



**Signing ceremony for the collaborative agreement.**

**Dr. Nobuo Hayasaka, Executive Vice President of KIOXIA Corporation (left), and Dr. Takashi Fukuda, President of The University of Electro-Communications**

**(titles as of time of ceremony).**

**Creating Opportunities for Academic Interaction**

In FY2020 KIOXIA took part in ‘the d.lab’ Systems Design Lab at the University of Tokyo and the Advanced Programming Consortium (AIC) at the Keio University Global Research Institute.

The d.lab was established to connect system design ideas in fields such as IoT, AI, 5G, autonomous driving and control, and healthcare with advanced semiconductor technologies, materials, and manufacturing equipment. We are co-sponsors of this goal.

At the AIC we held a series of workshops based on our mission of “Uplifting the World with Memory,” and on the final day of the event we co-hosted an ‘Ideathon’.<sup>2</sup> In this project, we focused on how AI can enrich our lives and how we can reflect our ideas in society. Participating students proposed an exchange application to be used with VR on a virtual campus or a virtual

library, etc. The judges asked, “How do you create an exciting mechanism?” and “What if you added time and weather condition functions?”

We provided a place for experience and interaction to solve problems and create new value through AI amid the challenges of the COVID-19 pandemic and idea design.

<sup>2</sup> Ideathon: Event where groups compete to come up with ideas based on a theme and then produce results.

# Corporate Governance

KIOXIA Group is reinforcing our governance system in order to add corporate value.

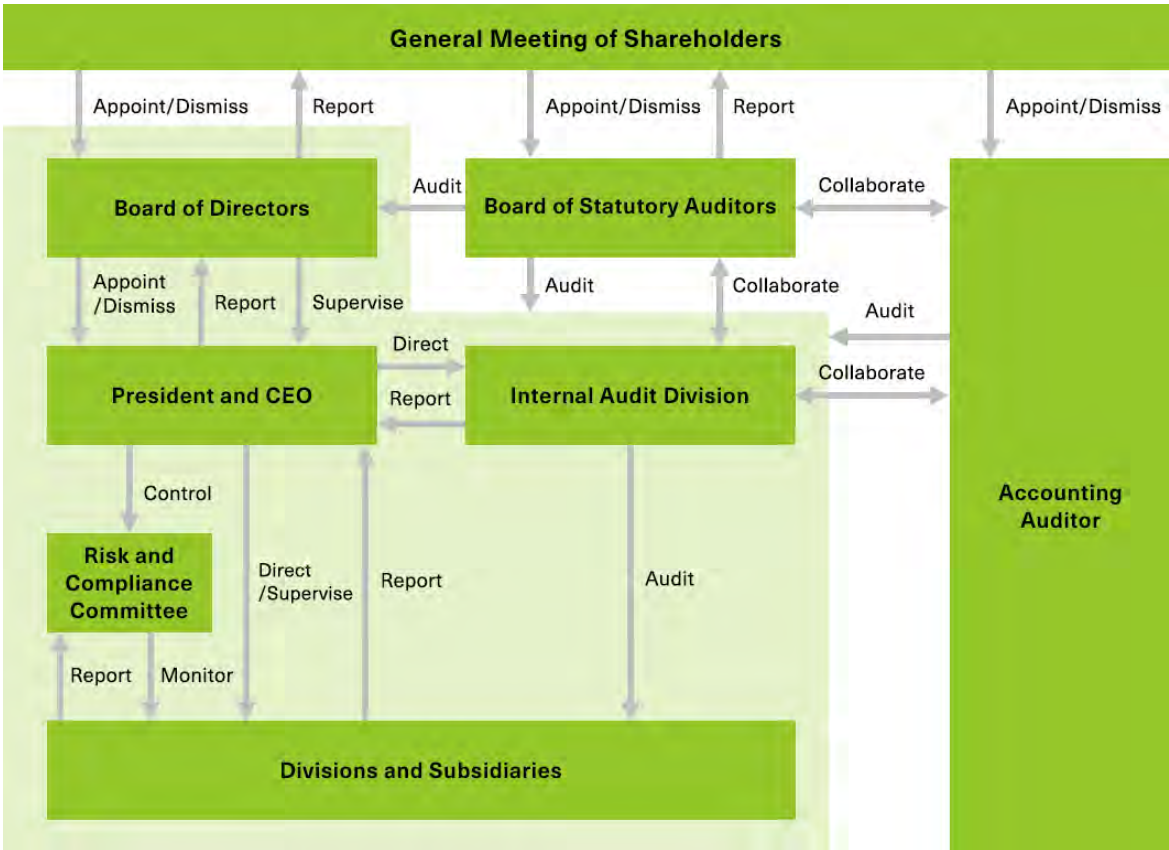
## Policy and Structure of Corporate Governance (As of March 2020)

KIOXIA Holdings is a company with Board of Statutory Auditors. We have developed a group governance structure in which the performance by directors of their duties is audited by our statutory auditors. We have appointed three statutory auditors.

The core of the KIOXIA Group governance is our Board of Directors, consisting of seven persons, including the CEO.

As KIOXIA Holding's Chief Executive Officer, the CEO is responsible to shareholders when making decisions on important company matters. The CEO also steers KIOXIA Group's business by broadly and optimally managing the resources of KIOXIA Holdings and its group companies and maximizing their synergies.

**Corporate Governance Structure (As of March 2020)**



# Risk and Compliance

KIOXIA Group enforces global compliance with relevant laws and regulations, internal rules, and social and ethical norms, and carries out risk and compliance activities.

## Policy and Structure of Risk and Compliance

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At KIOXIA Group, we strive to ensure thorough compliance with all relevant laws and regulations on the basis of fair and honest competition.

KIOXIA has established a system whereby our Risk and Compliance Committee has complete authority and responsibility with regard to issues of risk and compliance. We classify risks into categories including compliance-related risks, finance/accounting-related risks, and business risks, and have established committees and review groups for each category to enable agile management of these. Each committee and review group reports on activities and status to the Risk and Compliance Committee on a timely basis.

### Risk and Compliance Committee Structure



## Whistleblower System

In order to create an open work environment and reduce risk, in addition to encouraging day-to-day communication within each workplace, KIOXIA Group operates a whistleblower system. All employees are informed about this system through internal websites, emails and other means. The system is designed to protect the anonymity of whistleblowers and ensure that they are not treated disadvantageously. The number of reports received and consultations undertaken through the whistleblower system in FY2020 was 105. Of the reports received, those referencing inappropriate situations or concerns about inappropriate situations were reported to the relevant division so that instructions for improvement could be provided or alerts issued. In cases involving consultations and questions about the duties of the informants themselves, we gave advice on

how to deal with each situation. For reports other than those that were anonymously submitted, in principle we explained the status of our responses to the informants. Except in cases where consent has been obtained from the employee, the names or contact details of the informants are never disclosed.

**Business Partner Hotline**

KIOXIA Group has established a Business Partner Hotline to assist our business partners, such as suppliers, to report to us any violations or suspected violations of laws and regulations, Standards of Conduct for Kioxia Group, the KIOXIA Group Procurement Policy, business agreements, corporate ethics, and other applicable rules, standards and norms established by KIOXIA Group in connection with procurement and other business transactions, and to help KIOXIA Group rectify the situation.

We will investigate and confirm the facts and in principle notify the results of our investigation to the whistleblower. The personal details of the person who made the allegation will not be disclosed to anyone outside the Business Partner Hotline Secretariat without their consent. Moreover, we will ensure there is no unfair treatment of the whistleblower or their company arising from their allegation.

[Business Partner Hotline \(PDF: 138KB\)](#)

**Risk and Compliance Training**

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KIOXIA Group provides training for directors and employees to raise their awareness of the need for legal compliance.

**Compliance with Anti-trust Law & Anti-Bribery Measures**

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KIOXIA Group enforces compliance with anti-trust laws and is strengthening measures to tackle bribery globally.

## **Anti-trust and Anti-bribery Efforts**

In the light of recent global regulatory trends, KIOXIA Group has been making rigorous efforts to prevent cartelization and bribery. In FY2020 specifically, these efforts involved KIOXIA Group companies worldwide performing self-audits to verify their observance of internal anti-trust and anti-bribery guidelines. Through these audits, KIOXIA Group aims to identify compliance levels at the companies concerned and to provide thorough compliance education.

KIOXIA Group promotes rigorous compliance with business-related laws and regulations by providing education, making effective use of relevant databases, and performing periodic self-audits.

We make improvements aimed at mitigating any risks identified by those third parties in order to continue to enhance our compliance structure.

Furthermore, KIOXIA Group is taking steps to raise compliance awareness among our staff based on our own Standards of Conduct. KIOXIA Group companies in Japan provided their directors and employees with e-learning training on sales-related risks from December 2020 to February 2021, to raise the standard of sales-related legal risk management.

## **Political Contributions**

Standards of Conduct for KIOXIA Group stipulate that KIOXIA Group shall not provide inappropriate benefits or favors to any politician or political organization.

As part of its contribution to society, and when deemed to be necessary, KIOXIA Group does make transparent donations to political parties, in order to encourage the adoption of policies that will support our business and aid the healthy development of parliamentary democracy.

Where we make donations to political parties, procedures in accordance with internal rules are followed and, in the case of donations made in Japan, we ensure we are compliant with Japan's Political Funds Control Law.

## **Donations and Provision of Funds**

While the KIOXIA Group forbids the incurring of inappropriate expenses, we do stipulate that appropriate donations may be made to appropriate organizations. We therefore donate to various organizations, taking into consideration factors such as the contribution made by the organization to society, its causes, and the community aspects of its activities.

## **Continuing to Sever Relationships with Antisocial Groups**

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All KIOXIA Group companies in Japan have taken various measures to ensure that all links with antisocial groups are severed.

More specifically, we have developed and implemented “Basic Public Relations Management Rules” and appointed public relations management officers for each department. When conducting transactions with a new customer, the public relations management officers of that department confirm that the customer has no relations with any antisocial groups. If during those background checks the need arises for further investigation, our Human Resources and Administration Division will verify whether there is any evidence of a relationship between the customer and any antisocial groups.

We also periodically conduct surveys on customers that we already have business relations with. Transaction contracts normally include a clause regarding the exclusion of organized crime syndicates, which enables a contract to be cancelled without notice when a business partner is identified as being part of an antisocial group.

We also continuously ensure that employees understand the importance of excluding antisocial groups from the business activities they conduct.

## **Information Security Management**

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### **Information Security Policy**

KIOXIA Group regards as important assets information such as personal data, customer information, management information, and technical and production information handled during the course of business activities. We accordingly adopt policies aimed at ensuring that all corporate information is managed in a confidential manner and that it is not disclosed, leaked, or used inappropriately. These include a fundamental policy whose stated aim is “to manage and protect such information assets properly, with top priority on compliance.” The policy is stipulated in the “Information Security” chapter of the Standards of Conduct for KIOXIA Group and managerial and employee awareness of this is encouraged.

In response to regulatory changes and changes in the social environment, KIOXIA Group revises those policies on an ongoing basis so as to rigorously manage its information security.

#### Standards of Conduct for KIOXIA Group 17. Information Security

##### Privacy Policy

### **Structure of Information Security Management**

Addressing information security as a management priority, KIOXIA Group has established, under the supervision of the Chief Information Security Officer, an information security management structure under which the head of each organization, such as the head of each business site, as well as the president of each group company, is responsible for information security.

The Information Security Committee deliberates matters that are deemed key in ensuring information security throughout the company. The Chief Information Security Officer formulates and enacts measures to ensure that internal rules related to information security are enforced in a problem-free, effective and definitive manner.

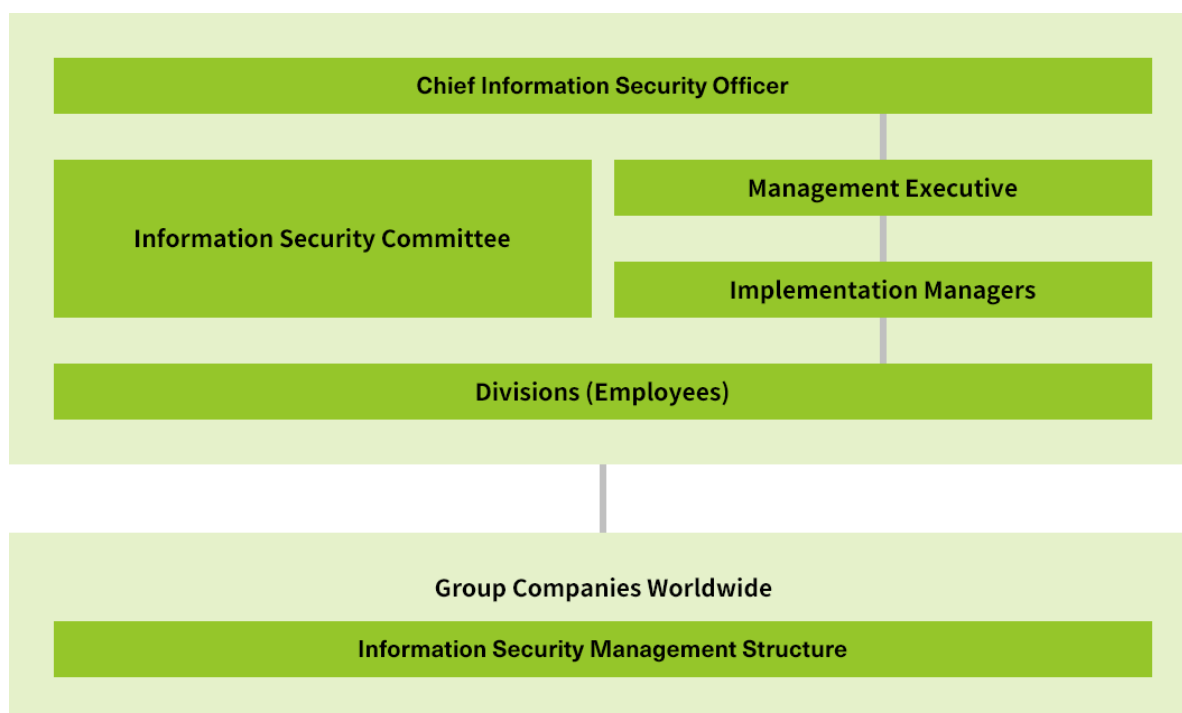
The Information Security Management Executive appoints the Information Security Implementation Managers, and is responsible for operation of the information security management system.

The Information Security Management Executive also provides guidance and assistance to all group companies under its control to ensure that they implement information security at a level equivalent to that of the KIOXIA Group.

KIOXIA Group has also established a similar management structure for the protection of personal data, and has a department external to the Secretariat (the Internal Audit Division) that conducts audits.



## Information Security Management Structure



## Information Security Measures

KIOXIA Group implements information security measures from four perspectives (see table below). The Cyber Security Center and the IT & Business Transformation Division incorporate these measures into regulations and guidelines and make them fully known to all KIOXIA Group companies through notices and briefings.

### Implementation of Information Security Measures from Four Perspectives

Category	Description
(1) Organizational measures: Establish organizational structure and rules	<ul style="list-style-type: none"> <li>• Periodic reviews of information security-related regulations</li> <li>• Development and maintenance of information security management structure</li> <li>• Performing of audits, etc.</li> </ul>
(2) Human and legal measures: Ensure adherence to rules	<ul style="list-style-type: none"> <li>• Regulation of information protection duties and disciplinary measures in the case of any breach of rules of employment</li> <li>• Provision of periodic employee education and training</li> <li>• Contractor information security evaluation and conclusion of confidentiality agreements, etc.</li> </ul>

<p>(3) Physical measures: Support implementation of rules in terms of physical security</p>	<ul style="list-style-type: none"> <li>• Carry-in/carry-out control of information devices</li> <li>• Facility access control, room/facility entry control</li> <li>• Securing of highly important information, etc.</li> </ul>
<p>(4) Technical measures: Support implementation of rules in terms of technology</p>	<ul style="list-style-type: none"> <li>• Virus protection and hard disk encryption of personal computers</li> <li>• Checking for any vulnerabilities in servers accessible to the public and enhancing protection</li> <li>• Detection (installation of sensors), monitoring, and controlling unauthorized access from the outside and of information leakage</li> <li>• Strengthening manufacturing security measures, etc.</li> </ul>

To protect against cyber-attacks, which are becoming more sophisticated every year, and with changes in working styles, including working from home due to COVID-19, we have enhanced our network monitoring and in-house systems to be able to accurately detect and quickly cope with attacks from outside as well as information leaks from inside. For attacks via e-mail, we have strengthened processes in order to block suspicious e-mails and trained all employees in the handling of targeted e-mail attacks to help prevent virus infections.

### **Education, Inspection and Audit of Information Security Management**

KIOXIA Group considers the autonomous implementation of the PDCA (Plan-Do-Check-Act) cycle by each division to be vital for ensuring the company's information security. With this in mind, every division conducts an annual self-audit of its compliance with internal rules, for the purpose of formulating their own improvement plan.

All domestic and overseas Group companies also conduct annual self-audits to improve the level of information security at each of them.

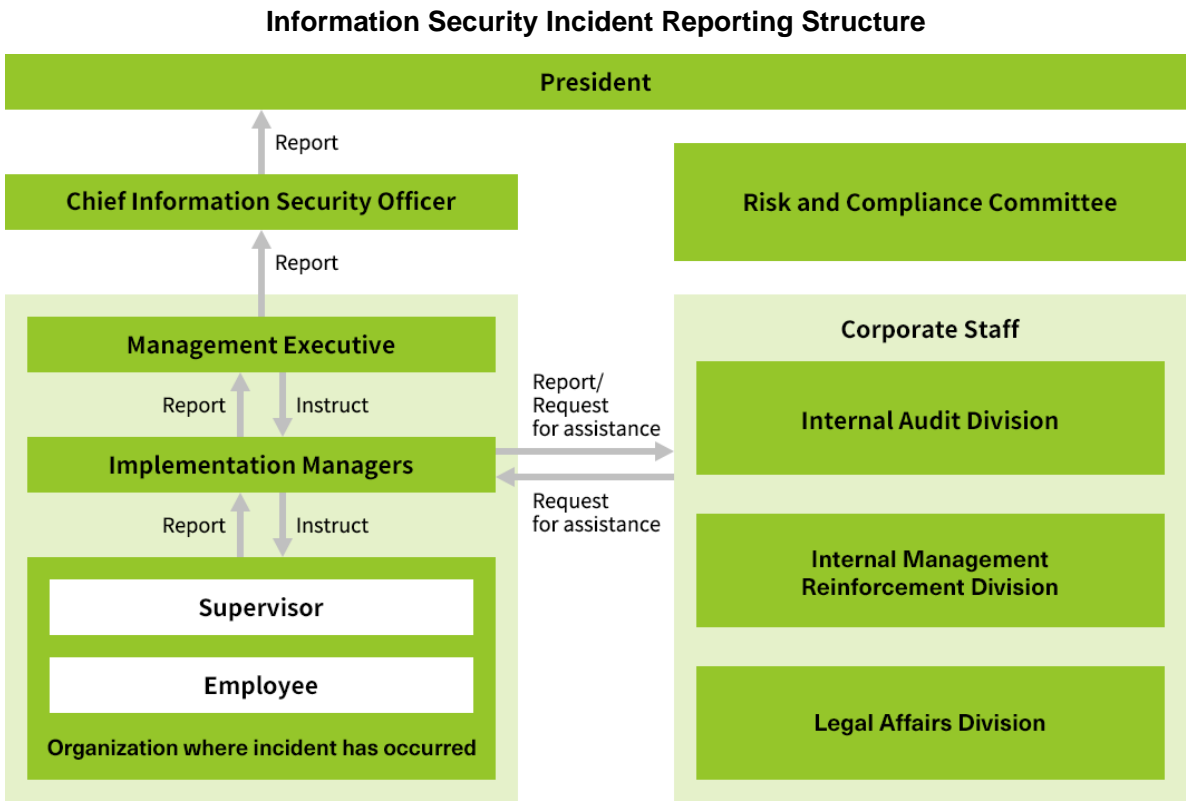
Moreover, KIOXIA Group conducts annual training for all officers, as well as for permanent and temporary employees, in order to ensure strict compliance with in-house regulations.

Other programs include introductory training for new graduate employees, and training for the employees of subcontractor companies.

**Response to Incidents such as Leakage of Confidential Information**

In the event an information security incident occurs, such as the leakage of confidential information, KIOXIA Group responds promptly in accordance with its information security incident reporting structure.

When an employee becomes aware of the occurrence or potential occurrence of an incident involving the leakage of corporate information, the employee promptly reports it to the Implementation Manager. Upon receipt of the employee’s report, the Implementation Manager draws up a list of all necessary measures, such as an investigation into the cause and consideration of actions to prevent recurrence. In the case of the occurrence or potential occurrence of a serious leakage of confidential information that may entail a violation of laws or ordinances, KIOXIA Group implements measures in accordance with the applicable laws or ordinances, such as disclosure, following discussion among the relevant corporate staff divisions.



**Status of Incidents such as Leakage of Confidential Information**

In FY2020, there were no incidents of sensitive information held by KIOXIA Group companies being leaked, nor were there any complaints from relevant external individuals or regulatory bodies concerning personal data. We will continue to work to prevent information security incidents and to be fully prepared for any situation.

## Measures on Rational Tax Reporting

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KIOXIA Group has bases in countries around the world and operates globally. We comply with the laws and regulations in each of those countries and regions, we take into account other guidelines issued by international organizations and we properly report and pay taxes attributable to activities generating income. In addition, we conduct our business activities under an appropriate tax structure tied to business objectives and refrain completely from transactions aimed at tax avoidance.

KIOXIA Group's policy regarding taxation is to ensure transparency in our business activities, striving to maintain good relations with the tax authorities in each country or region while demonstrating sincerity and maintaining high ethical standards.

## Risk Management through Business Continuity Plan (BCP)

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KIOXIA Group identifies, analyzes and assesses business risks and strengthens risk management across all areas of its business in order to prevent interruptions to operations in times of emergency, such as earthquakes or other natural disasters, accidents, or pandemics. The Group has stipulated BCP management regulations and implemented measures to ensure the safety of employees and their families as well as to ensure disaster readiness at our business sites and factories. We conduct practical training and prepare for emergencies so that we can continue or quickly resume delivering products and services in the event of damage or loss. We have established BCP promotional structures at KIOXIA Group manufacturing, sales, and technical bases as well as at administrative bases, and implement a PDCA cycle as part of these efforts.

# GRI Content Index

This material references the GRI Standards: Core option.

## General Disclosures

GRI Content Index	Disclosure	Location in CSR report	
GRI 102 :  General Disclosures 2016	<b>1. Organizational profile</b>		
	102-1	Name of the organization	<u>Company information</u>
	102-2	Activities, brands, products, and services	<u>Company information</u>
	102-3	Location of headquarters	<u>Company information</u>
	102-4	Location of operations	<u>Company information</u>
	102-5	Ownership and legal form	<u>Company information</u>
	102-6	Markets served	<u>Company information</u> <u>Stakeholder Engagement</u>
	102-7	Scale of the organization	<u>Company information</u>
	102-8	Information on employees and other workers	<u>Company information</u> <u>Diversity Promotion</u>
	102-9	Supply chain	<u>Major sustainability issues and initiatives in the value chain</u> <u>Sustainable Supply Chain</u>
	102-10	Significant changes to the organization and its supply chain	<u>Major sustainability issues and initiatives in the value chain</u> <u>Sustainable Supply Chain</u>
	102-11	Precautionary Principle or approach	<u>Risk and Compliance</u> <u>Environmental Management</u>
	102-12	External initiatives	<u>Messages to Stakeholders</u> <u>Sustainability Management</u> <u>Environmental Management</u>
	102-13	Membership of associations	<u>Sustainability Management</u> <u>Sustainable Supply Chain</u>
<b>2. Strategy</b>			

	102-14	Statement from senior decision-maker	<a href="#">Message from the Management</a> <a href="#">Messages to Stakeholders</a>
	102-15	Key impacts, risks, and opportunities	<a href="#">Sustainability Materiality</a> <a href="#">Climate Change and Energy Management</a> <a href="#">Risk and Compliance</a>
<b>3. Ethics and integrity</b>			
	102-16	Values, principles, standards, and norms of behavior	<a href="#">Mission &amp; Vision</a> <a href="#">Standards of Conduct for KIOXIA Group</a>
	102-17	Mechanisms for advice and concerns about ethics	<a href="#">Risk and Compliance</a> <a href="#">Respect for Human Rights</a>
<b>4. Governance</b>			
	102-18	Governance structure	<a href="#">Sustainability Management</a> <a href="#">Corporate Governance</a>
	102-19	Delegating authority	<a href="#">Sustainability Management</a>
	102-20	Executive-level responsibility for economic, environmental, and social topics	<a href="#">Sustainability Management</a>
	102-21	Consulting stakeholders on economic, environmental, and social topics	<a href="#">Sustainability Management</a> <a href="#">Stakeholder Engagement</a>
	102-22	Composition of the highest governance body and its committees	<a href="#">Corporate Governance</a>
	102-23	Chair of the highest governance body	—
	102-24	Nominating and selecting the highest governance body	—
	102-25	Conflicts of interest	<a href="#">Standards of Conduct for KIOXIA Group</a>
	102-26	Role of highest governance body in setting purpose, values, and strategy	<a href="#">Corporate Governance</a>
	102-27	Collective knowledge of highest governance body	<a href="#">Sustainability Management</a> <a href="#">Corporate Governance</a>

	102-28	Evaluating the highest governance body's performance	—
	102-29	Identifying and managing economic, environmental, and social impacts	<u>Sustainability Management</u> <u>Corporate Governance</u>
	102-30	Effectiveness of risk management processes	<u>Corporate Governance</u> <u>Risk and Compliance</u>
	102-31	Review of economic, environmental, and social topics	<u>Corporate Governance</u> <u>Sustainability Management</u>
	102-32	Highest governance body's role in sustainability reporting	<u>Corporate Governance</u> <u>Sustainability Management</u> <u>Environmental Management</u>
	102-33	Communicating critical concerns	<u>Sustainability Management</u> <u>Corporate Governance</u> <u>Risk and Compliance</u>
	102-34	Nature and total number of critical concerns	<u>Risk and Compliance</u>
	102-35	Remuneration policies	—
	102-36	Process for determining remuneration	—
	102-37	Stakeholders' involvement in remuneration	—
	102-38	Annual total compensation ratio	—
	102-39	Percentage increase in annual total compensation ratio	—
<b>5. Stakeholder engagement</b>			
	102-40	List of stakeholder groups	<u>Stakeholder Engagement</u>
	102-41	Collective bargaining agreements	<u>Stakeholder Engagement</u>
	102-42	Identifying and selecting stakeholders	<u>Stakeholder Engagement</u>
	102-43	Approach to stakeholder engagement	<u>Stakeholder Engagement</u>

	102-44	Key topics and concerns raised	<u>Sustainability Materiality</u> <u>Stakeholder Engagement</u>
<b>6. Reporting practice</b>			
	102-45	Entities included in the consolidated financial statements	<u>Company information</u>
	102-46	Defining report content and topic Boundaries	<u>Sustainability Reporting Policy</u>
	102-47	List of material topics	<u>Sustainability Materiality</u>
	102-48	Restatements of information	N/A
	102-49	Changes in reporting	N/A
	102-50	Reporting period	<u>Sustainability Reporting Policy</u>
	102-51	Date of most recent report	<u>Sustainability Reporting Policy</u>
	102-52	Reporting cycle	<u>Sustainability Reporting Policy</u>
	102-53	Contact point for questions regarding the report	<u>Company information</u>
	102-54	Claims of reporting in accordance with the GRI Standards	<u>Sustainability Reporting Policy</u>
	102-55	GRI content index	<u>GRI Content Index</u> <u>SASB Content Index</u>
	102-56	External assurance	<u>Third-party Verification</u>
GRI 103 : Management Approach 2016	103-1	Explanation of the material topic and its Boundary	<u>Messages to Stakeholders</u> <u>Sustainability Materiality</u>
	103-2	The management approach and its components	<u>Sustainability Materiality</u>
	103-3	Evaluation of the management approach	<u>Sustainability Management</u>



## Material topics

### Economic

GRI Content Index	Disclosure	Location in CSR report	
Material topics	<b>GRI 201 : Economic Performance 2016</b>		
	201-1	Direct economic value generated and distributed	—
	201-2	Financial implications and other risks and opportunities due to climate change	<u>Climate Change and Energy Management</u>
	201-3	Defined benefit plan obligations and other retirement plans	<u>Diversity Promotion</u>
	201-4	Financial assistance received from government	—
	<b>GRI 202 : Market Presence 2016</b>		
	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	—
	202-2	Proportion of senior management hired from the local community	—
	<b>GRI 203 : Indirect Economic Impacts 2016</b>		
	203-1	Infrastructure investments and services supported	<u>Supporting Local Community Development</u>
	203-2	Significant indirect economic impacts	—
	<b>GRI 204 : Procurement Practices 2016</b>		
	204-1	Proportion of spending on local suppliers	<u>Sustainable Supply Chain</u>
	<b>GRI 205 : Anti-corruption 2016</b>		
	205-1	Operations assessed for risks related to corruption	<u>Risk and Compliance</u>

	205-2	Communication and training about anti-corruption policies and procedures	<u>Risk and Compliance</u>
	205-3	Confirmed incidents of corruption and actions taken	<u>Risk and Compliance</u>
<b>GRI 206 : Anti-competitive Behavior 2016</b>			
	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	<u>Risk and Compliance</u>

### Environmental

GRI Content Index	Disclosure	Location in CSR report	
Material topics	<b>GRI 301 : Materials 2016</b>		
	301-1	Materials used by weight or volume	—
	301-2	Recycled input materials used	<u>Water Risk Management</u> <u>Current Status of Environmental Impact and Environmental Targets and Outcomes</u>
	301-3	Reclaimed products and their packaging materials	—
	<b>GRI 302 : Energy 2016</b>		
	302-1	Energy consumption within the organization	<u>Climate Change and Energy Management</u>
	302-2	Energy consumption outside of the organization	<u>Climate Change and Energy Management</u>
	302-3	Energy intensity	<u>Climate Change and Energy Management</u>
	302-4	Reduction of energy consumption	<u>Climate Change and Energy Management</u>
	302-5	Reductions in energy requirements of products and services	<u>Contributing to the Environment through Our Products</u>
	<b>GRI 303 : Water 2016</b>		

	303-1	Water withdrawal by source	<u>Current Status of Environmental Impact and Environmental Targets and Outcomes</u>
	303-2	Water sources significantly affected by withdrawal of water	<u>Water Risk Management</u>
	303-3	Water recycled and reused	<u>Current Status of Environmental Impact and Environmental Targets and Outcomes</u> <u>Water Risk Management</u>
<b>GRI 304 : Biodiversity 2016</b>			
	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	<u>Biodiversity Preservation</u>
	304-2	Significant impacts of activities, products, and services on biodiversity	—
	304-3	Habitats protected or restored	<u>Biodiversity Preservation</u>
	304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	—
<b>GRI 305 : Emissions 2016</b>			
	305-1	Direct (Scope 1) GHG emissions	<u>Current Status of Environmental Impact and Environmental Targets and Outcomes</u>
	305-2	Energy indirect (Scope 2) GHG emissions	<u>Current Status of Environmental Impact and Environmental Targets and Outcomes</u>
	305-3	Other indirect (Scope 3) GHG emissions	<u>Current Status of Environmental Impact and Environmental Targets and Outcomes</u>

	305-4	GHG emissions intensity	<u>Current Status of Environmental Impact and Environmental Targets and Outcomes</u>
	305-5	Reduction of GHG emissions	<u>Current Status of Environmental Impact and Environmental Targets and Outcomes</u>
	305-6	Emissions of ozone-depleting substances (ODS)	—
	305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	<u>Current Status of Environmental Impact and Environmental Targets and Outcomes</u>
<b>GRI 306 : Effluents and Waste 2016</b>			
	306-1	Water discharge by quality and destination	<u>Current Status of Environmental Impact and Environmental Targets and Outcomes</u> <u>Water Risk Management</u>
	306-2	Waste by type and disposal method	<u>Current Status of Environmental Impact and Environmental Targets and Outcomes</u>
	306-3	Significant spills	<u>Environmental Protection System</u>
	306-4	Transport of hazardous waste	—
	306-5	Water bodies affected by water discharges and/or runoff	<u>Water Risk Management</u>
<b>GRI 307 : Environmental Compliance 2016</b>			
	307-1	Non-compliance with environmental laws and regulations	<u>Environmental Protection System</u>
<b>GRI 308 : Supplier Environmental Assessment 2016</b>			
	308-1	New suppliers that were screened using environmental criteria	<u>Sustainable Supply Chain</u>

	308-2	Negative environmental impacts in the supply chain and actions taken	<u>Sustainable Supply Chain</u>
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## Social

GRI Content Index	Disclosure	Location in CSR report	
Material topics	<b>GRI 401 : Employment 2016</b>		
	401-1	New employee hires and employee turnover	<u>Diversity Promotion</u>
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	—
	401-3	Parental leave	<u>Diversity Promotion</u>
	<b>GRI 402 : Labor/Management Relations 2016</b>		
	402-1	Minimum notice periods regarding operational changes	—
	<b>GRI 403 : Occupational Health and Safety 2016</b>		
	403-1	Workers representation in formal joint management–worker health and safety committees	<u>Occupational Health and Safety</u>
	403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	<u>Occupational Health and Safety</u>
	403-3	Workers with high incidence or high risk of diseases related to their occupation	<u>Occupational Health and Safety</u>
	403-4	Health and safety topics covered in formal agreements with trade unions	<u>Occupational Health and Safety</u>

<b>GRI 404 : Training and Education 2016</b>		
404-1	Average hours of training per year per employee	<u>Talent Development</u>
404-2	Programs for upgrading employee skills and transition assistance programs	<u>Talent Development</u>
404-3	Percentage of employees receiving regular performance and career development reviews	<u>Talent Development</u>
<b>GRI 405 : Diversity and Equal Opportunity 2016</b>		
405-1	Diversity of governance bodies and employees	<u>Management</u> <u>Diversity Promotion</u>
405-2	Ratio of basic salary and remuneration of women to men	—
<b>GRI 406 : Non-discrimination 2016</b>		
406-1	Incidents of discrimination and corrective actions taken	<u>Risk and Compliance</u> <u>Respect for Human Rights</u>
<b>GRI 407 : Freedom of Association and Collective</b>		
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	<u>Stakeholder Engagement</u> <u>Sustainable Supply Chain</u>
<b>GRI 408 : Child Labor 2016</b>		
408-1	Operations and suppliers at significant risk for incidents of child labor	<u>Respect for Human Rights</u> <u>Sustainable Supply Chain</u>
<b>GRI 409 : Forced or Compulsory Labor 2016</b>		
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	<u>Respect for Human Rights</u> <u>Sustainable Supply Chain</u>

<b>GRI 410 : Security Practices 2016</b>		
410-1	Security personnel trained in human rights policies or procedures	<u>Respect for Human Rights</u>
<b>GRI 411 : Rights of Indigenous Peoples 2016</b>		
411-1	Incidents of violations involving rights of indigenous peoples	N/A
<b>GRI 412 : Human Rights Assessment 2016</b>		
412-1	Operations that have been subject to human rights reviews or impact assessments	<u>Sustainability Materiality</u> <u>Respect for Human Rights</u>
412-2	Employee training on human rights policies or procedures	<u>Respect for Human Rights</u>
412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	N/A
<b>GRI 413 : Local Communities 2016</b>		
413-1	Operations with local community engagement, impact assessments, and development programs	<u>Supporting Local Community</u> <u>Development</u>
413-2	Operations with significant actual and potential negative impacts on local communities	N/A
<b>GRI 414 : Supplier Social Assessment 2016</b>		
414-1	New suppliers that were screened using social criteria	<u>Sustainable Supply Chain</u>
414-2	Negative social impacts in the supply chain and actions taken	<u>Sustainable Supply Chain</u>

<b>GRI 415 : Public Policy 2016</b>		
415-1	Political contributions	<u>Risk and Compliance</u>
<b>GRI 416 : Customer Health and Safety 2016</b>		
416-1	Assessment of the health and safety impacts of product and service categories	<u>Quality Control</u>
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	<u>Quality Control</u>
<b>GRI 417 : Marketing and Labeling 2016</b>		
417-1	Requirements for product and service information and labeling	<u>Current Status of Environmental Impact and Environmental Targets and Outcomes Contributing to the Environment through Our Products</u>
417-2	Incidents of non-compliance concerning product and service information and labeling	—
417-3	Incidents of non-compliance concerning marketing communications	—
<b>GRI 418 : Customer Privacy 2016</b>		
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	N/A
<b>GRI 419 : Socioeconomic Compliance 2016</b>		
419-1	Non-compliance with laws and regulations in the social and economic area	N/A



# SASB Content Index

## Greenhouse Gas Emissions

<b>Accounting Metric</b>	(1) Gross global Scope1 emissions and (2) amount of total emissions from perfluorinated compounds
<b>Code</b>	TC-SC-110a.1
<b>KIOXIA Metric/Qualitative Disclosure</b>	(1) Scope1 (Direct emissions) :651,900tCO <sub>2</sub> -e (2) 576,400tCO <sub>2</sub> -e
<b>Location</b>	<u>CO<sub>2</sub> emissions from business operations (FY2020)</u>
<b>Accounting Metric</b>	Discussion of long-term and short-term strategy or plan to manage Scope1 emissions, emissions reduction targets, and an analysis of performance against those targets
<b>Code</b>	TC-SC-110a.2
<b>KIOXIA Metric/Qualitative Disclosure</b>	<p>KIOXIA Group's manufacturing sites implement energy-saving measures aimed at reducing energy consumption and aim every year to reduce by 1% the previous year's total energy consumption (SCOPE2), based on Japan's Energy Saving Act.</p> <p>In FY2020 we achieved our goal of reducing energy use by the equivalent of at least 17,686 tons of CO<sub>2</sub> emissions, recording an actual reduction of 19,691 tons of CO<sub>2</sub> emissions. Last 10 years, the result of our energy conservation programs was approximately 180,000 tons of CO<sub>2</sub> emissions as a cumulative reduction.</p> <p>In FY2020, we set goals regarding the use of renewable energies, aiming to use 100% renewable energy by FY2040.</p> <p>To help achieve this target, we source intelligence through such means as participating in industry groups and making proposals to the government.</p> <p>In addition, as the initial step toward attaining this goal, we plan to promote the introduction of electricity derived from renewable energy sources in our development and test centers, and progress the installation of renewable energy facilities at our manufacturing sites.</p>
<b>Location</b>	<u>Climate Change-related Targets and Results</u>

**Energy Management in Manufacturing**

<b>Accounting Metric</b>	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable
<b>Code</b>	TC-SC-130a.1
<b>KIOXIA Metric/Qualitative Disclosure</b>	Energy Consumption (1) 4,226,794MWh (2) 96.7% (3) 0.003%
<b>Location</b>	<u>CO<sub>2</sub> emissions from business operations (FY2020)</u>

**Water Management**

<b>Accounting Metric</b>	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress
<b>Code</b>	TC-SC-140a.1
<b>KIOXIA Metric/Qualitative Disclosure</b>	<p>(1) 22,764 thousand m<sup>3</sup> (Industrial water)                  (2) 5,523 m<sup>3</sup></p> <p>KIOXIA has commissioned outside experts to evaluate water-related risks from the perspective of water supply and demand risks.</p> <p>The outcome of the assessment of our manufacturing operations was confirmation that these are not exposed to any water risk likely to have any practical financial or strategic impact prior to the year 2040.</p> <p>This assessment was based on investigations into such matters as the water supply and demand risk (based on the status of seasonal changes, drought frequency, water storage capacity and water source protection), water disaster risk (such as flooding or landslide sediment damage) and regional vulnerability to water pollution that might endanger public health or ecosystems.</p>
<b>Location</b>	<u>Current Status of Environmental Impact</u>

## Waste Management

<b>Accounting Metric</b>	Amount of hazardous waste from manufacturing, percentage recycled
<b>Code</b>	TC-SC-150a.1
<b>KIOXIA Metric/Qualitative Disclosure</b>	Result of hazardous wastes amount (1) Wastes generated amount: 10,750tons (2) Recycled rate: 88% The above hazardous wastes are aggregated as “specially-controlled industrial wastes” under the Waste Management and Public Cleansing Act in Japan.
<b>Location</b>	<u>Current Status of Environmental Impact</u>

## Employee Health & Safety

<b>Accounting Metric</b>	Description of efforts to assess, monitor, and reduce exposure of employees to human health hazards
<b>Code</b>	TC-SC-320a.1
<b>KIOXIA Metric/Qualitative Disclosure</b>	KIOXIA Group acquired occupational health and safety management systems certification (ISO 45001:2018) in 2021.
<b>Location</b>	<u>Occupational Health and Safety</u>
<b>Accounting Metric</b>	Total amount of monetary losses as a result of legal proceedings associated with employee health and safety violations
<b>Code</b>	TC-SC-320a.2
<b>KIOXIA Metric/Qualitative Disclosure</b>	None.

<b>Location</b>	-
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## Recruiting & Managing a Global & Skilled Workforce

<b>Accounting Metric</b>	Percentage of employees that are (1) foreign nationals and (2) located offshore
<b>Code</b>	TC-SC-330a.1
<b>KIOXIA Metric/Qualitative Disclosure</b>	<p>KIOXIA Group does not disclose the percentage of foreign nationals. We fosters a culture that enables a diverse range of employees to play active roles irrespective of race, religion, gender, nationality, disability, age or sexual orientation. KIOXIA Group seeks to advance diversity as an effort of the entire group.</p> <p>To implement this, we have assigned the Executive Officer in charge of personnel as the promotion personnel and KIOXIA Holdings' Human Resources &amp; Administration Division as the promotion organization.</p>
<b>Location</b>	<u>Diversity Promotion Policy and Management Structure</u>
<b>Accounting Metric</b>	Percentage of employee engagement
<b>Code</b>	TC-SI-330a.2
<b>KIOXIA Metric/Qualitative Disclosure</b>	<p>KIOXIA Group regularly conducts surveys aimed at soliciting the opinions of employees.</p> <p>Each department is given feedback on the results, which are also closely examined by Executive Officers, including the President and the head of every department, and used as a basis for the discussion of measures to enhance engagement.</p> <p>In FY2020, we conducted an anonymous survey targeting about 11,500 employees, and received responses from approximately 94% of them.</p>
<b>Location</b>	<u>Employee Engagement Survey</u>

**Product Lifecycle Management**

<b>Accounting Metric</b>	Percentage of products by revenue that contain IEC 62474 declarable substances
<b>Code</b>	TC-SC-410a.1
<b>KIOXIA Metric/Qualitative Disclosure</b>	KIOXIA Group does not disclose the percentage defined by this metric.
<b>Location</b>	None.
<b>Accounting Metric</b>	Processor energy efficiency at a system-level for: (1) servers, (2) desktops, and (3) laptops
<b>Code</b>	TC-SC-410a.2
<b>KIOXIA Metric/Qualitative Disclosure</b>	Not applicable.
<b>Location</b>	-

**Materials Sourcing**

<b>Accounting Metric</b>	Description of the management of risks associated with the use of critical materials
<b>Code</b>	TC-SC-440a.1
<b>KIOXIA Metric/Qualitative</b>	KIOXIA Group has been advancing the procurement of minerals based on the KIOXIA Group Responsible Minerals Procurement Policy.

<b>Disclosure</b>	This stipulates that KIOXIA will not use as raw materials tin, tantalum, tungsten and gold or cobalt obtained from the Democratic Republic of Congo and neighboring areas, or from other conflict- or high-risk areas where inhumane acts such as human trafficking, slavery, forced labor, child labor, abuse, or war crimes are suspected.
<b>Location</b>	<u>KIOXIA Group Responsible Minerals Sourcing Policy</u>

### Intellectual Property Protection & Competitive Behavior

<b>Accounting Metric</b>	Total amount of monetary losses as a result of legal proceedings associated with anticompetitive behavior regulations
<b>Code</b>	TC-SC-520a.1
<b>KIOXIA Metric/Qualitative Disclosure</b>	None.
<b>Location</b>	-

# Third-party Verification

In order to improve the reliability of the environmental performance data, KIOXIA Group requested Japan Audit and Certification Organization for Environment and Quality to provide third-party verification, and the details are as follows.

1. Scope of the verification:

GHG (greenhouse gas) emissions generated in five sites of KIOXIA in Japan

(Scopes 1, 2 and 3)

2. Scope period:

FY2019 (April 1, 2019 to March 31, 2020)

3. Verified greenhouse gas emissions:

Scope1: 549 ktCO<sub>2</sub>e, Scope2: 1,637 ktCO<sub>2</sub>e, Scope3: 18 ktCO<sub>2</sub>e.



[Third-party assurance report by Japan Audit Certification Organization for Environment and Quality \(PDF: 378KB\)](#)

# KIOXIA

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