

Murata Manufacturing Co., Ltd.

ESG Meeting 2024 Part 1

March 1, 2024

Event Summary

[Company Name]	Murata Manufacturing Co., Ltd.	
[Company ID]	6981-QCODE	
[Event Language]	JPN	
[Event Type]	Investor and Analyst Meeting	
[Event Name]	ESG Briefing 2024 Part 1	
[Date]	March 1, 2024	
[Time]	15:00 – 15:52 (Total: 52 minutes, Presentation: 29 minutes, Q&A: 23 minutes)	
[Venue]	Daiwa Conference Hall and Webcast	
[Number of Speakers]	3	
	Norio Nakajima	President, Representative Director
	Masanori Minamide	Executive Vice President (Board Member), General Manager, Corporate Unit
	Takanori Toi	Vice President, Corporate Unit, ESG-HR Group
[Questioner Names]	Daiki Takayama	Goldman Sachs
	Shoji Sato	Morgan Stanley MUFG Securities
	Hiroki Sawashima	Sumitomo Mitsui Trust Asset Management
	Hao Xin	JPMorgan Securities

Presentation

Moderator: Now it's time to begin the ESG Briefing 2024 Part 1 of Murata Manufacturing Co., Ltd.

Thank you very much for taking time out of your busy schedules to join us today. The purpose of this briefing is to provide ESG information to Murata Manufacturing's shareholders, investors and securities analysts. In the first part, Murata Manufacturing will explain the progress of its ESG-related initiatives.

Let me begin by introducing the attendees of the first part of the briefing: Norio Nakajima, President, Representative Director; Masanori Minamide, Executive Vice President (Board Member), General Manager, Corporate Unit; and Takanori Toi, Vice President, Corporate Unit, ESG-HR Group. These three persons are attending the briefing.

After an explanation by President Nakajima, we will have a question-and-answer period starting at around 3:25 PM. The first part will end at approximately 3:50 PM.

Let me now turn the floor over to Mr. Nakajima, our president, for his explanation.

Regarding the Aftermath of the Noto Peninsula Earthquake in 2024 as of March 1st



- After ensuring the safety of employees, production has resumed except at Wakura Murata Manufacturing and Anamizu Murata Manufacturing, which suffered severe damage.
- Regarding the prospect of upcoming restoration, the Company will post information on [our company website](#) as soon as the situation changes.

Name of Production Site	Status of Production and Estimated Schedule of Resumption of Production as of March 1st
Toyama Murata Manufacturing Co., Ltd.	Production resumed since Jan.9
Fukui Murata Manufacturing Co., Ltd.	Production resumed since Jan.6
Sabae Murata Manufacturing Co., Ltd.	Production resumed since Jan.6
Kanazawa Murata Manufacturing Co., Ltd.	Production resumed since Jan.9
Kanazu Murata Manufacturing Co., Ltd.	Production resumed since Jan.9
Asuwa Murata Manufacturing Co., Ltd.	Production resumed since Jan.9
Komatsu Murata Manufacturing Co., Ltd.	Production resumed since Jan. 9
Himi Murata Manufacturing Co., Ltd.	Production resumed since Feb.5
Hakui Murata Manufacturing Co., Ltd.	Production resumed since Jan. 11
Wakura Murata Manufacturing Co., Ltd.	Production expected to resume methodically from early March
Anamizu Murata Manufacturing Co., Ltd.	Production is expected to resume in mid-May or later.

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Nakajima: Thank you very much for attending today's Murata Manufacturing ESG briefing. I am Nakajima, President and Representative Director.

Now, let me move on to the explanation.

First, I would like to talk about the business establishments that were affected by the Noto Peninsula earthquake that occurred on January 1 this year.

As an update since the last Q3 results briefing, restoration has progressed at the Himi Murata Manufacturing, listed fourth from the bottom, and production has resumed as usual. The bottom two sites, Wakura Murata Manufacturing and Anamizu Murata Manufacturing, are undergoing restoration work, but the damage is so extensive that it will take some more time. For these sites, we are using alternative production at other plants.

Regarding Business Continuity Management (BCM) in the Event of Disaster

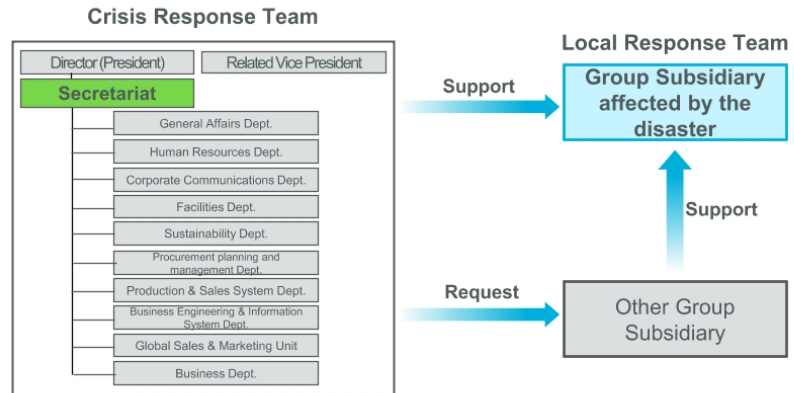


- The Company has set BCM as one of priority issue (materiality). We have established Business Continuity Plans (BCPs) at domestic and overseas business sites, and conduct periodic drills and carry out other measures in order to prepare for a disaster.
- In the event of a disaster, we will promptly establish a crisis response team based on BCPs and provide support to affected sites in cooperation with the other group subsidiary.

Basic BCM policy

1. Ensure the safety of employees and others, and then work toward preventing secondary disasters.
2. Do everything possible to resume production and keep supplying products to markets.
3. Support regional recovery as member of the local community.
4. Thoroughly implement required advance measures after taking costs and benefits into consideration, in order to minimize asset loss during a disaster and to resume production more quickly.
5. Revise the Business Continuity Plan (BCP) regularly and as the business environment changes, in order to continuously improve business continuity organizations.
6. Establish business continuity organizations with all employees working together under the proactive leadership of management.

Disaster support system



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The earthquake occurred on January 1, and in accordance with our BCM policy, we set up a crisis response team on the morning of January 2. This allowed us to exchange information, including confirmation of the safety of our employees, so we were able to respond relatively quickly to the situation, including necessary supplies, and support was provided from the head office, group companies, and other offices.

We also received warm messages of sympathy and support, including supplies, from our stakeholders. I would like to take this opportunity to thank you. Thank you very much.

Key Messages

- Progress has been made in the continuous cycle of social and economic value by practicing 3-layer portfolio management.
- Among social value targets, more progress than planned has been achieved in "Environment." We are accelerating initiatives including "Diversity and ES".
- Corporate governance is functioning in a sound manner in the management of the Company, and there are ongoing discussions for further enhancement.

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So, here are the 3 Key Messages I want to tell you today.

Progress has been made in the continuous cycle of social and economic value. In addition, among social value targets, more progress than planned has been achieved in "Environment," and the "Diversity and ES" target is in a state of accelerated action. Also, the corporate governance is functioning soundly, and discussions are underway to further enhance it.

After this first part, we will have a panel discussion with our Outside Directors in the second part. Our ESG issues cover a wide range of topics, but today I would like to talk only about the management policies and goals.

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Continuous Cycle of Social and Economic Value

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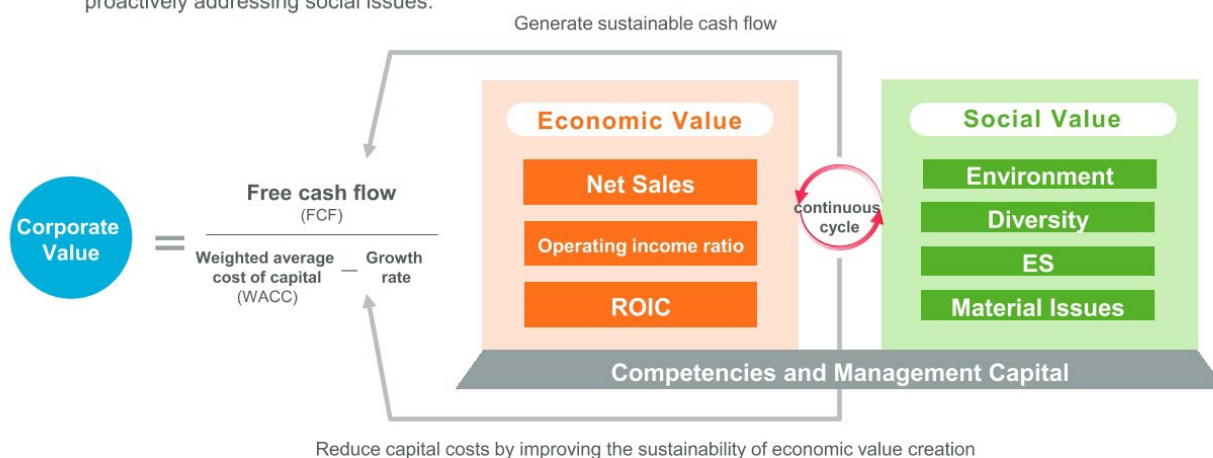
First, regarding the Continuous Cycle of Social and Economic Value.

Vision for Increasing Murata's Corporate Value

muRata
INNOVATOR IN ELECTRONICS



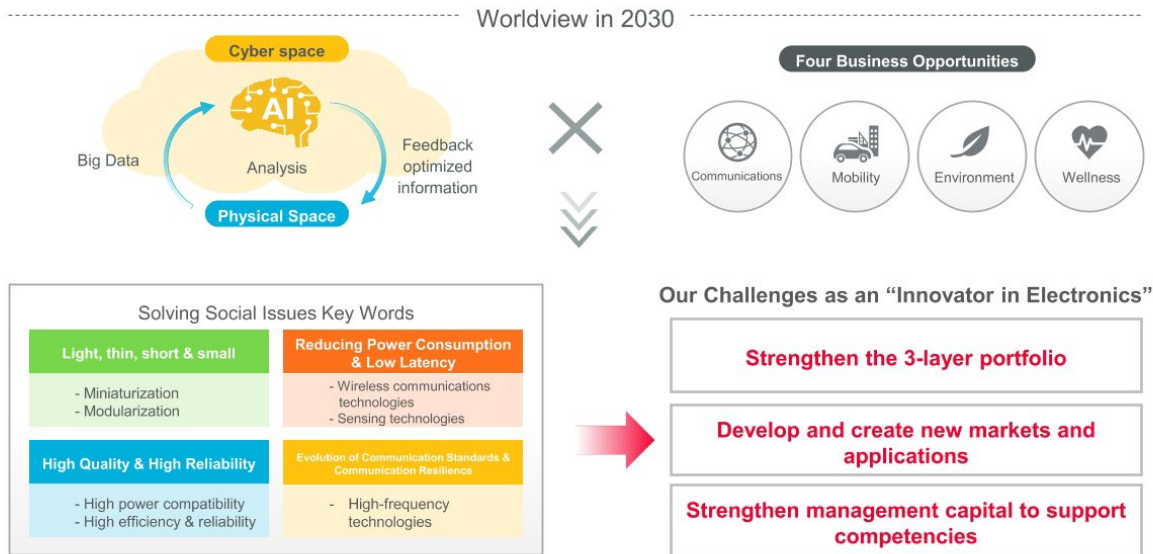
- Produce a continuous cycle of social and economic value by co-creating value with stakeholders.
- Realize a sustainable society and increased corporate value through long-term and sustainable profit generation by proactively addressing social issues.



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We are working to reduce the cost of capital by somehow linking the resolution of social issues to competitive advantage and cash flow generation, and by creating economic value in a sustainable manner. The figure shows our efforts to maximize corporate value through these initiatives.



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In addition, as we have been saying for some time, the world view of the electronics industry as an initiative for 2030 or 2040 is that cyberspace and physical space will be linked by AI.

In this context, we have set 4 keywords for solving social issues. By putting into practice these 4 keywords: "Light, thin, short & small," "Reducing Power Consumption & Low Latency", "High Quality & High Reliability," and "Evolution of Communication Standards & Communication Resilience," we will strengthen our 3-layer portfolio.

Key Issues of the 3-Layer Portfolio



- To produce a continuous cycle of social and economic value, we are working to solve issues faced at each layer based on perspective to solving social issues and striving to take our 3-layer portfolio management to a higher level.

	Sales classification	Issues	Direction taken
Layer 1	Capacitors Inductors/EMI filters	<ul style="list-style-type: none"> Expand and reinforce production capacity to respond to stronger demand Maintain and improve our competitive advantage, such as technological strengths Improve business efficiency to further bolster our business foundation 	<ul style="list-style-type: none"> Expand and reinforce production capacity Strengthen cutting-edge technologies Improve business efficiency
Layer 2	High frequency devices and communications modules Battery and power supply Functional devices	<ul style="list-style-type: none"> Develop technologies that differentiate us from our competitors Completely standardize processes and materials, promote mass customization Strengthen financial position of businesses with low profitability 	<ul style="list-style-type: none"> Strengthen differentiated technologies Improve profitability and establish a healthy portfolio
Layer 3	Others	<ul style="list-style-type: none"> "Creation of new business models" from a long-term perspective Build up successful cases with the aim of becoming business mainstays in 2030 and beyond 	<ul style="list-style-type: none"> Search for fields where we can leverage our strengths Implement mechanisms for creating ideas Showcasing initiatives

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We have divided our portfolio into a 3-layer portfolio for each business model. We are working to enhance the sophistication of our 3-layer portfolio management, taking into account the perspective of solving social issues.

Layer 1 – Strengthen cutting-edge technologies



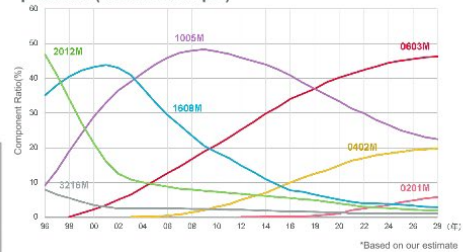
Pursuit of miniaturization technology

- With the development of the electronics industry, the need for compact products increases.
- By strengthening cutting-edge technologies that generate added value of miniaturization + α, we strive to maintain and improve our competitive advantage, as well as supporting innovations in the electronics industry.

(Major Product Releases)

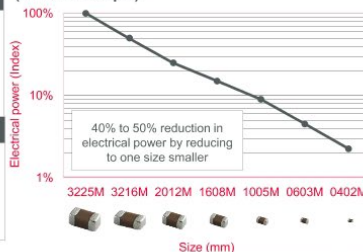
- World's Smallest High-Q 100V MLCC for Consumer Electronics & Industrial Equipment(2/20/2024)
- World's First 1 μF Capacitance 100 V MLCC in a 1608M Size Commercialized (11/21/2023)

Market expansion of compact products (MLCCs example)

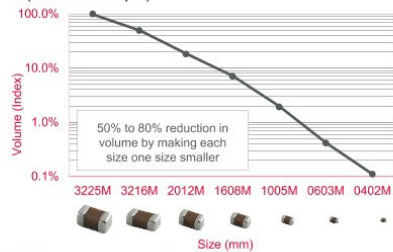


Social value that we provide
<ul style="list-style-type: none"> • Reducing materials used in manufacturing and packaging • Reducing the energy used in manufacturing and transportation • Helping to improve convenience for varied lifestyles with compact electronic devices
Economic value that we create
<ul style="list-style-type: none"> • Strengthening the competitive advantage of products with our environmental response • Reducing the costs of materials and energy • Improving production efficiency and a better product mix

Reducing power used in manufacturing (MLCCs example)



Reducing materials used in manufacturing (MLCCs example)



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The first layer is about standard components, capacitors, and inductors.

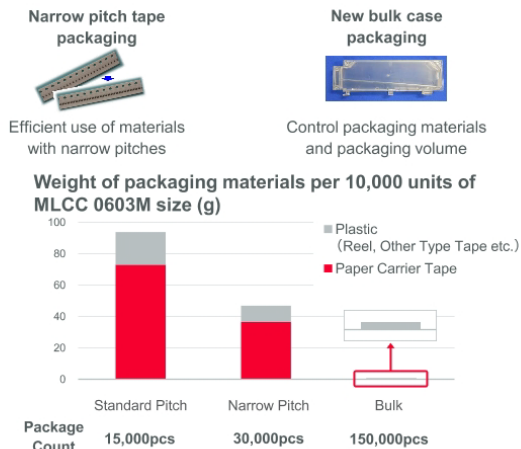
Cutting-edge technology here refers primarily to light and thin technology. We believe that these have supported and will continue to support innovation in the electronics industry. The graph shows how a 1-size reduction in the size of the MLCC can reduce power consumption and materials used. In this way, we believe that light, thin, short and small can directly contribute to a decarbonized society.

Layer 1 – Initiatives to Reduce environmental impact



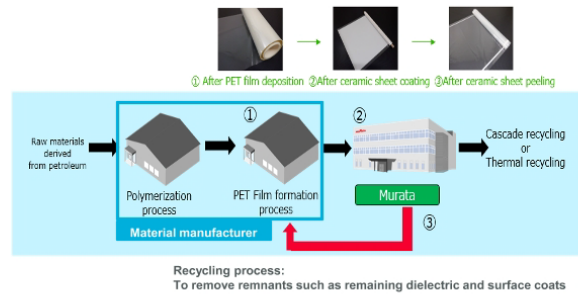
- Promote initiatives to reduce environmental impact in collaboration with stakeholders.
- Initiatives to use new packaging formats include standardization efforts through industry associations.

Use of new environmentally friendly packaging formats



Closed-loop Recycling of PET Film Used in MLCCs

- Created the electronic component manufacturing industry's first closed-loop recycling system
- This system makes the long-term recycling of PET material possible, reducing our environmental impact.



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As a direct effort to reduce environmental impact, the first step is to change packaging materials and forms of packaging. This is a move to reduce waste generated by customers.

The first one is that the weight of packaging material per each piece can be dramatically reduced by continuing the conventional tape and reel format with a narrow pitch. In addition, it is becoming possible to take this a step further by using bulk cases instead of tape and reel.

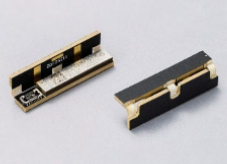
In addition, horizontal recycling of PET film, which is the heaviest waste generated in the MLCC manufacturing process, is now technically feasible. This kind of movement would be quite limited if Murata Manufacturing were to take action on its own. So, we would like to promote standardization efforts through industry associations such as JEITA, and we would like to proceed while obtaining the understanding of our suppliers, partners, customers, and mounting manufacturers.

Layer 2 – Strengthen differentiated technologies




- By 2030, increasing communications traffic will be a social issue as communications increasingly become the social infrastructure. The use of ultra-high frequency bands such as millimeter waves, 7 to 24 GHz, and THz waves is expected as one of the solutions.
- Strengthen differentiation technologies to realize a "world where everything is connected" and promote market-out activities.

mmWave 5G



Antenna array integrated module for mmWave(AiM)
This product makes it possible to emit radio waves in two directions with a single RFIC* by forming an L-shaped multilayer resin substrates and placing an antennae on each of two boards facing different directions.

Contributes to reducing the number of components in electronic devices and manufacturing costs.



5GMF is an organization that aims to promote the social implementation of 5G (including local 5G) and contribute to developing new use cases and solving social issues.

Create business opportunities by promoting the wider use of millimeter waves through industry associations.

6G(7~24GHz , THz)

Participation in international communication standardization projects

- As a member of projects, including ITU-R¹ and 3GPP², we contribute to formulating new communication standards and the practical application of wireless communication.
- By encouraging collaboration with external organizations and companies, we are improving material R&D and production processes over the medium to long term, with an eye to the evolution of communication network systems and next-generation communication technology trends.

Notes:
1. International Telecommunication Union, Radiocommunication Sector
2. The 3rd Generation Partnership Project

Launch of "SONAE Project"

- In-house project activities that promote study and exploration, research and development, and commercialization of technologies required for future societies in 2030 and beyond.

Next generation communication 6G

Optics & Semiconductor

Environment

Bioelectronics

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This is with respect to the second layer of application-specific product lines.

Telecommunications is becoming a social infrastructure, and the increase in telecommunications traffic is likely to become a social issue.

As a solution to this situation, the use of higher frequency millimeter waves and terahertz waves, mainly 6G, are expected to be utilized, which will lead to a world where everything will be connected to the network.

For millimeter wave, we have adopted our Multilayer resin substrates, which is configured as an L-shaped module, as shown in the photo here, and since the signal has very strong linearity at high frequencies, only 1 module is needed instead of the two that would have been needed with a flat module. This will enable a reduction in the number of components in electronic devices, thereby contributing to lower manufacturing costs.

In addition, in the trend toward higher frequencies, 5G, including local 5G, has not been spreading well, and we have joined the 5GMF forum to promote the spread of this millimeter wave and to create business opportunities through it.

Furthermore, the practical application of 6G will be in place by 2027 or 2030. We are also participating in standardization organizations such as ITU-R and 3GPP to discuss technical possibilities and to create a situation where we can take action as soon as possible after a decision is made.

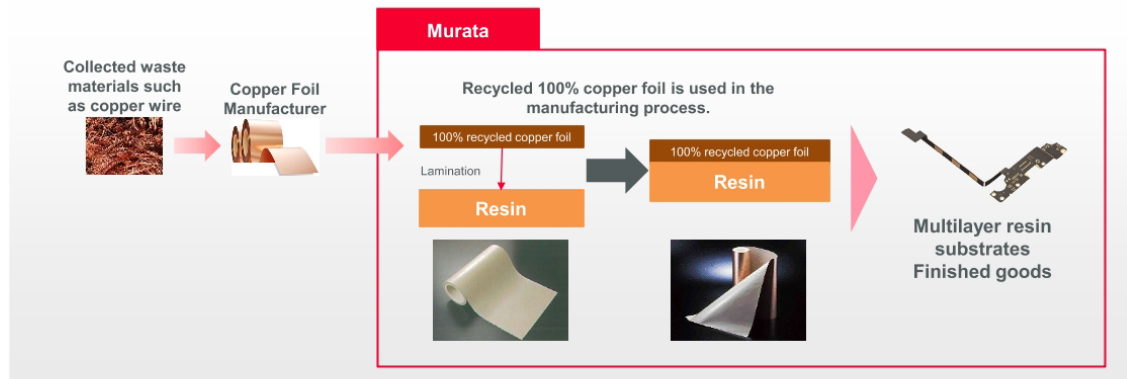
In addition, we have launched the "SONAE Project" in anticipation of the electronics industry in 2030 and beyond, and as part of this project, we are taking on challenges in the fields of next-generation communications (6G), environmental business, optical/semiconductor, and bioelectronics.

Layer 2 – Enhance product competitive advantage by utilizing recycled materials



- Inner coating copper foil material used in multilayer resin substrates has been certified as conforming to ISO14021 that it is an environmentally friendly 100% recycled product, based on the verification by a third party.
- Through collaboration with suppliers, we will work on the advance establishment of supply chains to realize sustainable use of materials, making it leading to the competitive advantage of our products.

Initiatives to Utilize Recycled Materials for Multilayer resin substrates



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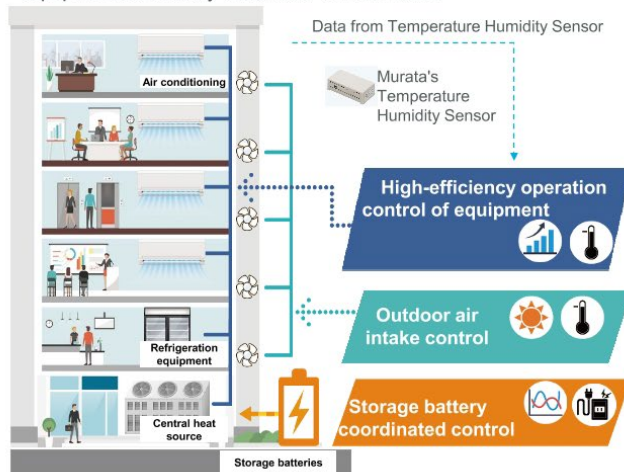
In addition, for Multilayer resin substrates, we have received certification of conformance to ISO14021 based on verification of "100% recycled" in the interior copper foil material.

This kind of utilization requires cooperation with copper foil manufacturers and other suppliers. We believe that we need to strengthen our supply network and supply chain.

Layer 3 – Showcasing initiatives: Energy-Saving Initiatives



Started the installation outside the Company in collaboration with our partner MUTRON, inc. that installed an energy-saving system that utilizes building space data, air conditioning equipment efficiency data, and climate data.



Deployment of this system in internal company

- The system has been installed at the Head Office, Tokyo Branch, and Kanazu Murata Manufacturing, achieving energy savings of around 20% at each site.



Deployment of this system outside Murata

- The system was installed in Moriama City's new city hall building in August 2023, in cooperation with MUTRON, inc., our collaboration partner.



Moriama City New Government
Office Building (Shiga Prefecture)

Introduction example of our products

Storage battery units : 4 units

Temperature Humidity Sensor :
100 units

Energy-saving software

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Also, this shows the third layer of business, which is centered on sensing networks, etc.

In the third layer of business, one of the key initiatives is to have the customer see and confirm what has been performed. In this sense, we are working to showcase or showroom our offices within our company.

The first will be an energy-saving system. This system has been introduced at the head office in Nagaokakyo City, Kyoto Prefecture, the Tokyo branch office in Shibuya, Tokyo, and other offices.

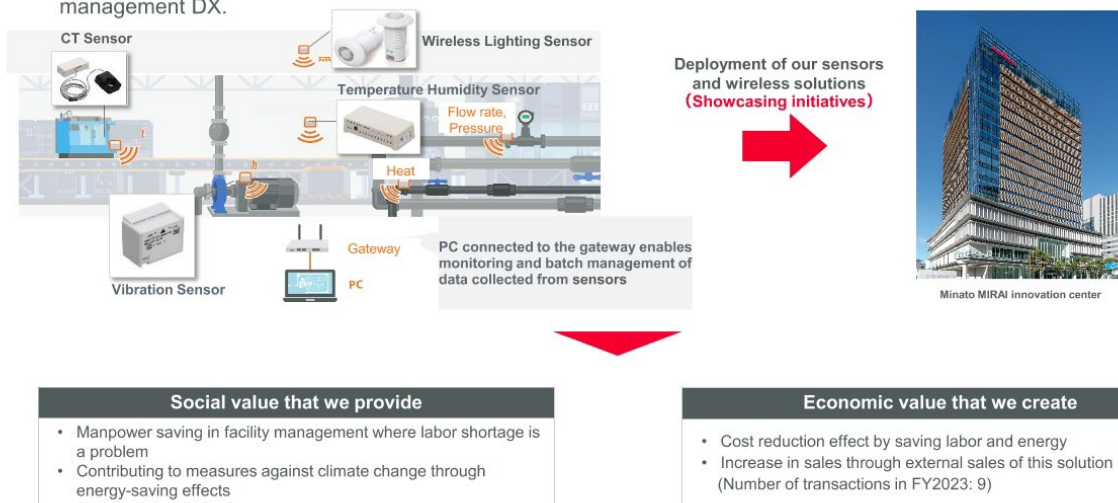
This is a control system that attempts to save energy based on such data as building space data, air conditioning equipment data, climate data including weather forecasts, and human flow data. At our headquarters, we have been running this system for more than three years now, and we have been able to achieve energy savings of around 20%.

Based on this data, we are working to expand the system to other companies. For example, last August we completed the installation of the system in the new town hall of Moriama City in Shiga Prefecture.

Layer 3 – Showcasing initiatives: Smart Building



- Minato MIRAI Innovation Center deploys the Company's products for smart building initiatives.
- Promote businesses in Layers 2 and 3 by "showcasing" in-house use cases such as energy conservation and facility management DX.



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Similarly, our commercial products, such as sensors and network modules, are being used to realize smart buildings, and are being put to practical use at our Minato MIRAI Innovation Center in Yokohama City, as well as at other business sites. Our customers are also adopting these products.

Through these activities, we have been focusing on market-in business up to the second layer, but as I have mentioned in the Company's policy for the next fiscal year, we are strengthening our efforts to create a market out of the market.

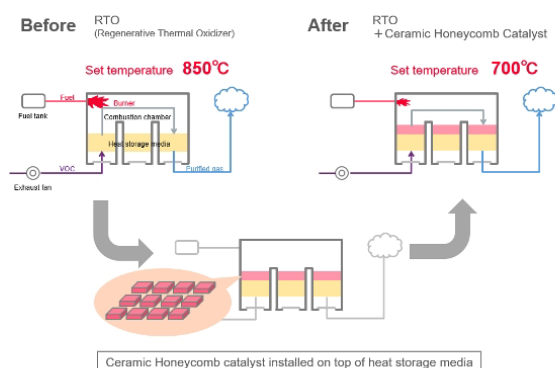
Layer 3 – Addressing Social Issues through our products: Ceramic Catalyst Material for Reducing GHG Emissions



- Developed the world's first heat-resistant ceramic catalyst material for exhaust gas treatment by applying the material design technology of ceramic capacitors.
- The use of a catalyst using this material enables the set temperature to be lowered by 100 to 150°C, while maintaining the decomposition performance of exhaust gas treatment.
- It reduces GHG emissions of fuel used in exhaust gas treatment by up to 53.0%* by reducing fossil fuel consumption.

* Average fuel consumption over a period of time is compared using the Company's standards.

Installation image



Impact of Solving Social Issues

GHG reduction of 1.5 million tons per year by installing this product in 5,000 units of thermal storage exhaust gas treatment equipment

* Estimate based on 30% reduction in fuel (LNG) consumption

Deployment of this product

- Five plants in the group have installed the system. A GHG reduction rate of 38.2% has been achieved at Wuxi Murata Electronics Co., Ltd. (China).
- Mass production has already started. Making proposals to paint manufacturers, chemical and packaging manufacturers, etc.



Wuxi Murata Electronics Co., Ltd.

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Also, in an effort to take a direct approach to solving social issues, we have developed and commercialized heat-resistant ceramic catalyst materials for exhaust gas treatment.

They can lower the set temperature of the process by 100°C to 150°C while maintaining the decomposition performance of the flue gas treatment. For example, it has been proven that reducing fossil fuel consumption can reduce GHG emissions by more than 50%. We are also developing such a catalyst in our plant.

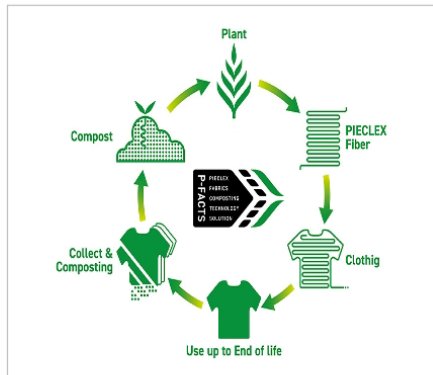
Layer 3 – Environmental Infrastructure: “P-FACTS”



PIECLEX

UTILIZE YOUR ENERGY

- Led by PIECLEX Co., Ltd., a highly transparent circulation infrastructure “P-FACTS” was established in cooperation/co-creation with partner companies, local governments, welfare facilities, educational institutions and others to collect apparel and textile products using “Electric Fiber” PIECLEX, a material made from plant-based polylactic acid, and handle processes up to composting for use in forestry and agriculture.



Collaboration and co-creation partners (partial list)



PIECLEX Products with P-FACTS



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Then, I would like to talk about PIECLEX, an "electric fiber" made from plant-based polylactic acid as a circulatory infrastructure.

This was originally done with PIECLEX, which has provided value in deodorizing or antibacterial effects on clothing. In addition, based on the fact that polylactic acid is plant-based, we believe that it can be used as compost in forestry and agriculture. This is an effort to increase the scale of this cycle by having various stakeholders participate in it.

Some of our co-creation partners are listed here. We are now working to scale up by gradually increasing the number of partners, such as partner companies, local governments, welfare facilities, and educational institutions.

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Progress toward Social Value Goals and Company-wide ESG initiatives

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I would now like to explain our progress toward Social Value Goals and our ESG initiatives.

Progress toward Social Value Goals

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Environment			FY2021	FY2022	FY2024 (Target)	FY2030 (Target)	Long-term Target
	GHG emissions reduction rate vs. fiscal 2019	Scopes 1 + 2	12.7%	16.4%	20%	46%	Carbon neutral
	Renewable energy implementation rate		21.3%	23.7%	25%	50%	100% (2050)
			FY2021	FY2022	FY2024 (Target)	FY2030 (Target)	FY2050 (Target)
	Use of sustainable resources (%) ¹		Approx. 15% ³	Currently being tabulated	1% improvement over FY2021 results	25%	100%
Diversity	Resource recycling (%) ²		36%	Currently being tabulated	5% improvement over FY2021 results	50%	100%
	Percentage of overseas indirect employees* with experience working at other sites		3%	5.3%	7%	10%	
ES			FY2021	FY2023	2024 (Target)	FY2030 (Target)	
	Positive employee engagement response (%)		68%	66%	70% or higher	76% or higher	

1. Resources at low risk of depletion, which Murata can use continually into the future by taking steps such as building recycling schemes. (Potentially depletable resources: Ag, Ni, etc.).

2. Percentage of Murata's waste and useful outputs (emissions) recycled as resource.

3. The aggregation results may change since items whose purchase records were denoted in other than weight were converted into weight while interviewing suppliers, in surveying the amount of resources procured.

* Applies to overseas local staff, excluding those transferred from Japan to overseas

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As an update from last time, we have been able to calculate the FY2021 items for Use of sustainable resources rate and Resource recycling rate, so they are listed here. We have also added the results of the FY2023 survey regarding the percentage of Positive employee engagement response.

Response to Climate Change – State of Our Initiatives



- **Targets for FY2024 are expected to be achieved in FY2023, one year ahead of schedule**, as a result that we stepped up our efforts to combat climate change.

- Considering bringing forward the medium- to long-term targets to accelerate the efforts.

GHG Emissions Reduction Rates and Renewable Energy Implementation Rates - Results and Targets

		FY2021	FY2022	FY2024 (Target)	FY2030 (Target)	Long-term target
Greenhouse gas emissions reduction rate (vs. FY2019)	Scope1 + Scope2	12.7%	16.4%	20%	46%	Carbon neutrality
	Scope3	2.6%	5.9%	-	27.5%	—
Renewable energy implementation rate		21.3%	23.7%	25%	50%	100% (2050)

Overview of Our Initiatives

Scope 1 and 2			Scope 3
Promoting renewable energy <ul style="list-style-type: none"> Onsite Offsite PPA Purchasing power from renewable energy 			Promoting energy savings <ul style="list-style-type: none"> Introduction of energy-saving systems Initiatives to save energy at manufacturing sites Production of energy-saving equipment
New challenges <ul style="list-style-type: none"> Use of hydrogen <p>etc.</p>			<ul style="list-style-type: none"> Collaboration with suppliers Reduction of environmental impact in logistics Refinement of Scope 3 calculations <p>etc.</p>

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I would like to discuss Climate Change measures.

For Scope 1 and 2, we expect to achieve the FY2024 targets one year ahead of schedule in FY2023.

One of the reasons behind this is that, although energy consumption has dropped a little due to lower capacity utilization, the purchase of renewable energy power has progressed rapidly, and off-site PPA contracts have also progressed rapidly. As I will introduce later, the use of on-site energy conservation and renewable energy has progressed. One of the reasons for the progress may be the establishment of an internal carbon pricing system or a system to promote sustainability investment within the business management system.

Onsite Initiatives – Deployment of Renewable Energy System



A system that combines solar panels, storage batteries and control software has been deployed internally. Preparing for external deployment for renewable energy control software “efinnos”.

Deployment of this system in internal company

- Plan to expand to 5 plants in the first half of FY2023. Three of them aim to achieve 100% renewable energy by combining with the purchase of renewable energy electricity
- Kanazu Murata Manufacturing has built it as a showroom and is considering deployment to companies and local governments

Deployment “efinnos” outside Murata

- “efinnos” is planned for deployment at several companies from FY2024 onward
- Aim for reductions in Scope 3 as well by making proposals to suppliers

Sites using 100% renewable energy

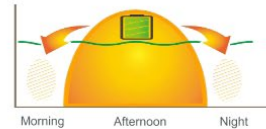


Main sites using solar power



efinnos

System capable of improving renewable energy ratio by power generation and power consumption prediction



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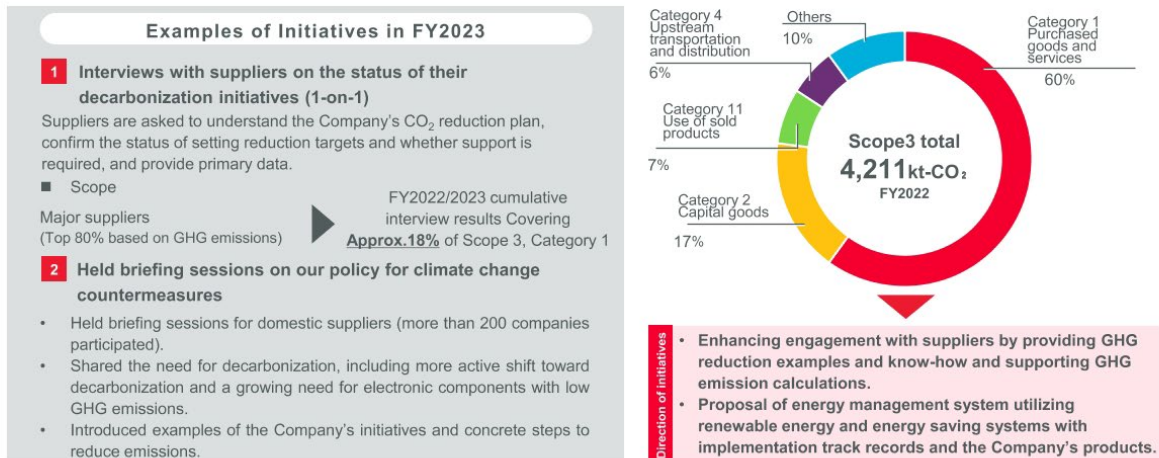
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As an onsite case study, for example, we proceeded with the rollout at five plants by H1 of FY2023. Three of these plants, Kanazu Murata Manufacturing, Ise Murata Manufacturing, and Sendai Murata Manufacturing, have already achieved 100% renewable energy. This has also served as a showcase and spurred the introduction of other companies.

Measures Aimed at Reducing Scope 3 Emissions



- Scope 3 accounts for about 80% of Murata's total GHG emissions, with Category 1 accounting for the largest share.
- The cooperation of suppliers is essential in order to refine the calculation of emissions and promote reduction initiatives.
- We aim to strengthen our supply chain as well as achieving medium- to long-term reduction targets, by not only making requests to suppliers but also providing support.



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Regarding Scope 3, about 80% of Murata's GHG emissions are Scope 3. Therefore, we cannot ignore the approach to Scope 3, and as an example of our efforts in FY2023, we have started interviews with our major suppliers that account for about 80% our GHG emissions, and we have asked them to provide primary data.

We also hold briefings on our climate change initiatives. After these briefings, we are working to strengthen our engagement with suppliers by providing GHG reduction examples, know-how, support for GHG emissions calculations, and other activities. We are also proposing the energy-saving and renewable energy systems that we have already introduced.

Use of Sustainable Resources – State of Our Initiatives



Use of sustainable resources and Resource recycling - Results and Targets

	FY2021	FY2022	FY2024(Target)	FY2030(Target)	FY2050(Target)
Use of sustainable resources (%)	Approx. 15%	Currently being tabulated	1% improvement over FY2021 results	25%	100%
Resource recycling (%)	36%	Currently being tabulated	5% improvement over FY2021 results	50%	100%

Company-wide issues

- Continued to survey the amount of our procured resources and their recycling ratio with suppliers
- Deployment of implement initiatives in internal company to serve as leading examples

Overview of Our Initiatives

	Key point	Current initiatives
Use of sustainable resources	<p>-Direction- In order to achieve sustainable resource availability for the future, We aim to cease the utilization of virgin materials from 24 resources with high depletion risks, such as Ni and Ag, or transition to alternative resources.</p> <p>-Issues- Measures to stabilize the quality and procurement of raw materials for recycling and to deal with increased costs to promote the production of products using recycled materials.</p>	<ul style="list-style-type: none"> • Horizontal recycling of PET film used in manufacturing processes • Horizontal recycling of Solder scraps • Utilization of recycled materials in products that comply with ISO14021 etc.
Resource recycling	<p>-Direction- We are working on resource recycling to use all waste generated during manufacturing processes as resources for Murata or other companies by repeatedly recycling discharges (waste + valuable material) as resources.</p> <p>-Issues- Initiatives to the processing of plastics, which account for a high proportion of both procurement and disposal.</p>	<ul style="list-style-type: none"> • Conversion of waste plastic into asphalt material • Chemical recycling of waste plastic etc.

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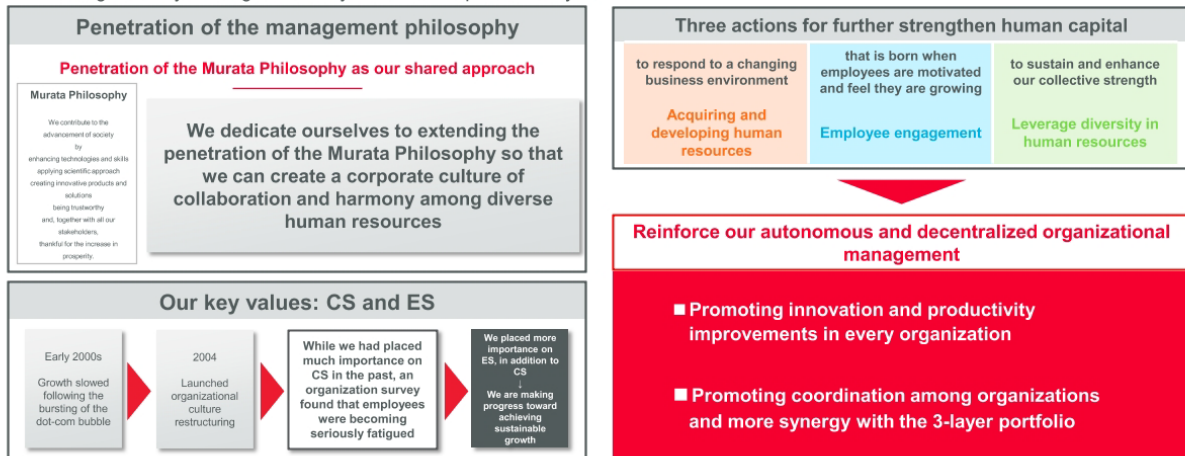
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Use of sustainable resources rate and Resource recycling rate are described here. We are promoting the horizontal recycling of PET film generated in the manufacturing process and the utilization of recycled materials in our products. We are rapidly developing these in-house practices horizontally.

Fundamental Approach to Murata's Human Capital



- Underlying Murata's human capital is the penetration of and practicing its philosophy globally. While emphasizing the sense of unity of the organization, we aim to foster a culture of mutually recognizing differences and to become a company where business and people grow together.
- Strengthening 3-layer portfolio management requires strengthening of human capital and organizational reforms in response to changes in the environment, such as changes in markets, customers, and diversification of business models. We promote human capital management by running a PDCA cycle with three pillars as key issues.



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The following section discusses Human Capital.

The foundation of our human capital is the penetration and practice of our company creed, which we are developing globally. We believe that strengthening human capital and organizational reforms are essential to enhance 3-layer portfolio management.

The 3 pillars for strengthening human capital are "Acquiring and developing human resources," "Employee engagement," and "Leverage diversity in human resources." We believe that by achieving these goals, we will be able to manage an autonomous decentralized organization in the Murata style.



Innovation by leveraging diversity

To realize a surge in growth going forward, we have to engage in spirited debates with people of different backgrounds.

Promotion of global job rotation

Percentage of overseas indirect employees with experience working at other sites

* Applies to overseas local staff, excluding those transferred from Japan to overseas



Background

In order to realize autonomous decentralized management, we aim to strengthen human resources at overseas through rotation and promote global cooperation to expand production overseas and strengthen field capabilities.

Issues

- Elevating the quality of experience through overseas assignments
- Creating a comfortable working environment for expats

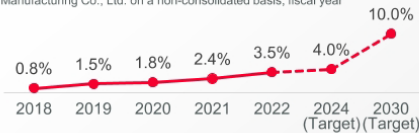
Actions

- Implement rotations based on medium- to long-term talent development plans
- Provide diverse international secondment schemes
- Enhanced pre-secondment learning including language study

Promotion women's participation

Percentage of women in management positions

(Murata Manufacturing Co., Ltd. on a non-consolidated basis, fiscal year)



Issues

- Promote understanding of diverse leadership and work styles
- Support and foster workplace culture for participation in childcare, regardless of gender
- Strengthen the recruitment of women in career-track technical positions

Actions

- Promote awareness-raising activities on the theme of women's participation by the management
- Expand a support system that encourages male employees to take part in childcare leave
- Set the target of at least 10% of women in the hiring of new graduates for career-track technical positions, which we have been achieving since 2017

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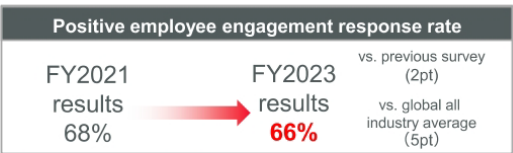
One of the key priorities in our annual policy for FY2023 and FY2024 is to leverage diversity to create innovation. By doing so, we will realize a surge in growth.

For example, we have set two numerical targets: Percentage of overseas indirect employees with experience working at other sites, which we are using to promote global rotation; and increasing Percentage of women in management positions in Japan and promoting the advancement of women. We believe that we are making progress as expected.

Overview of Employee Engagement survey results in FY2023

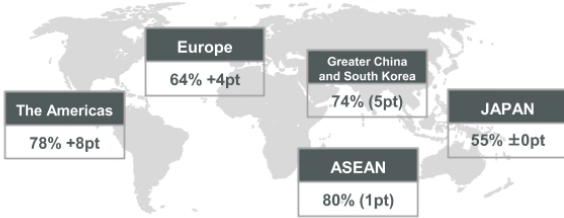


Overview of Murata Global Survey 2023

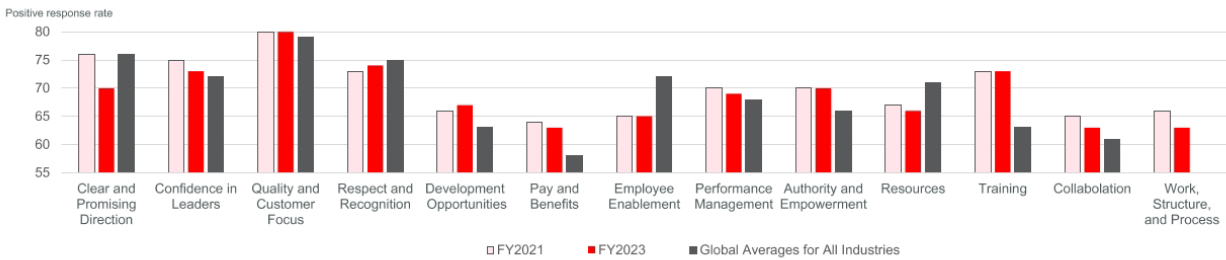


*Ultimate response rate in FY2023 : 96%

*The number on the right indicates a change from the previous survey.



Changes in Survey Results by Category (Murata Global)



*No comparison with the global all industry average is shown for the "Work, Structure, and Process" category, since it includes questions for which no benchmarking data is available.
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This shows the engagement results. We conducted the Global Survey 2023. The results of the survey on employee engagement are described.

Unfortunately, the situation worsened by 2 percentage points from FY2021 to FY2023. We are currently in the process of implementing measures based on these results, which are broken down by attribute and by country.

Issues and countermeasures identified through engagement survey



- The decline in the Strategy and Direction score pushed down the overall score. In the face of major changes in employee values and work styles and the business environment, it is necessary to promote and share the contents of our strategy and strengthen detailed and careful communication with those in the field.
- On the other hand, the "Action from Previous Survey" score rose. Awareness for the actions steadily improved, and autonomous actions in each organization progressed.

【Activities aimed at improving engagement】

1 Held meetings to share examples of initiatives globally

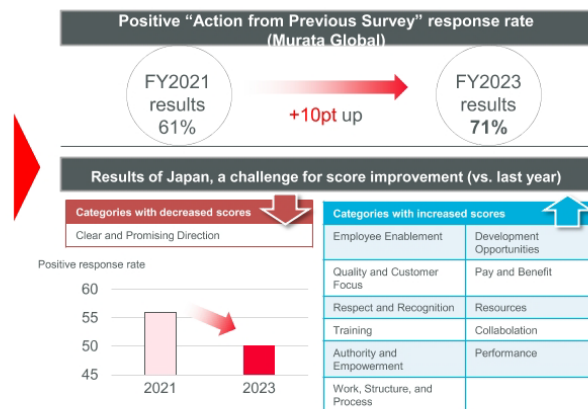
Good practices at each site and organization in Japan and overseas were shared throughout the Company. More than 1,400 people watched in real time. Video data was also distributed.

- Examples introduced -

- Activating QC circle activities through increased engagement
- Enhancing career support based on employee attributes
- Establishment of an engagement award system at each site

2 Site visits by top management

Chairman Murata and President Nakajima visited sites in Japan and overseas to have a dialogue with employees in the field. They visited more than 20 business sites annually.



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In terms of the results that we are seeing from this engagement survey, we are seeing significant improvements in many areas from FY2021 to FY2023. On the other hand, however, there is a deterioration in the category of strategy and direction.

One of the reasons for this is that the capacity utilization rate has deteriorated considerably. Our vision and policy have not been well communicated to the front lines. I think we need more activities to make everyone realize how what is done in the field is reflected in the policies and how it contributes to the vision. I believe that we need to create more opportunities for this kind of internal communication.

Strengthen Human Resources Portfolio: Continuously Develop Candidates for Next Generation of Executives



- Defined human resource requirements required of global leaders and designed selective education programs. Achieved consistent leadership talent development.
- In addition to the top management's active involvement, we promote personnel exchanges between programs and experience working at other overseas sites as a growth opportunity.



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In order to continuously develop the next generation of executive candidates, we first established the Middle Leadership Program (MLP) as a training program for domestic members, and this year marks the eighth year of the program. We have also been promoting a training program for potential management candidates for our overseas members, and the Global Leadership Program(GLP), is now in its 10th year.

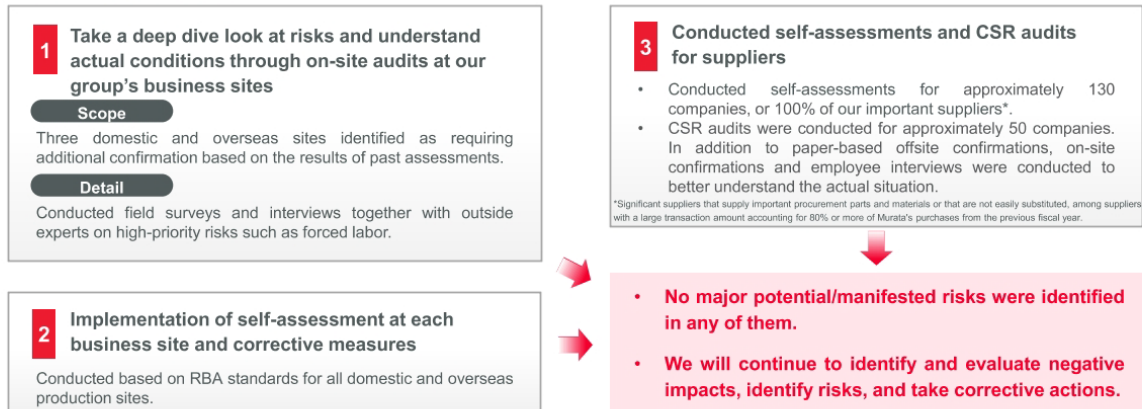
In addition, we have established Make 2030 as a training program for mid-career leaders, in which management is also actively involved to develop members who can take global leadership roles.

Respect for Human Rights – State of Our Initiatives



- Promote human rights due diligence throughout the company, and establish “human rights and labor management systems” at each business site. Site-specific risks are identified each year and a PDCA cycle is run for improvement.
- Conducted CSR audits in addition to self-assessments for important suppliers. For any risk that has materialized, in addition to requesting suppliers to take improvement actions, we also provide support for improvement as necessary.

Main Initiatives in FY2023



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Regarding human rights, we are promoting human rights due diligence, as well as identifying risks specific to our business sites, which we do every year, and implementing the PDCA cycle.

Our main activities in FY2023 will include on-site audits of business sites, in-depth risk identification and risk management, self-assessment and correction at each business site, and self-assessment and CSR audits of suppliers.

So far, no major potential or apparent risks such as forced labor or child labor have been identified. We will continue to identify and assess negative impacts, identify risks, and develop corrective actions.

03

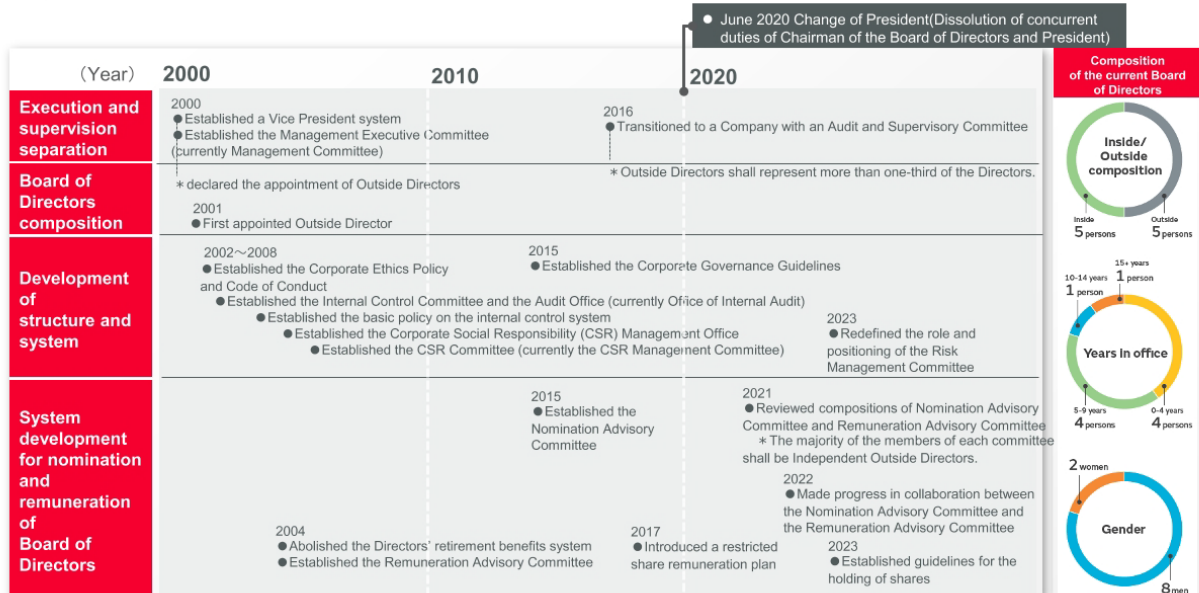
Our corporate governance

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Finally, I would like to explain our corporate governance.

History of Initiatives to Strengthen Corporate Governance



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Since 2000, we have introduced an executive officer system to strengthen governance by separating the functions of execution and supervision.

One of the most recent changes was the June 2020 change in the President, which eliminated the dual role of chairman of the Board of Directors and President, who is responsible for the execution of the Company's business. In addition, the Risk Management Committee, originally under the umbrella of the CSR Management Committee, was repositioned as an organization directly under the President, emphasizing its importance. Then, we have been working to strengthen cooperation between the Nominating Advisory Committee and the Remuneration Advisory Committee, although I myself am not a member of either committee.

Initiatives to improve the effectiveness of the Board of Directors and both Advisory Committees



- In order to enhance governance, we are working to improve the effectiveness of the Board of Directors and both Advisory Committees, while separating execution from supervision and developing mechanisms and systems.

Board of Directors

Features

- An atmosphere that enables Directors to speak out freely and openly
- Composition of outside Directors who can play an appropriate role in ensuring the reasonableness and appropriateness of decision-making and the supervisory function

Key points of FY2023

- Proactive reform in pursuit of broader and more substantive discussions, starting with the evaluation of effectiveness result
- Discussions about how the Board of Directors that demonstrates Murata's unique qualities

Nomination and Remuneration Advisory Committee

Features

- Highly objective, transparent, and effective management of meetings, taking into account the external environment through the appointment of external advisors
- A highly independent committee, a majority of which consist of outside Directors, without including Representative Director and President in its membership

Key points of FY2023

- Improved transparency in the appointment and dismissal process for the nomination of Representative Directors
- Introduction of clear quantitative indicators for remuneration systems to improve transparency
- Held joint meetings of the Nomination and Remuneration Advisory Committee to conduct a multi-faceted evaluation of Representative Director and President

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This will be the last slide, and after this we will have a question-and-answer session. After that, as I mentioned earlier, we will have a panel session of Outside Directors. In the session, I hope you can confirm our efforts to strengthen corporate governance and what kind of discussions are being held at the Board of Directors meetings and various committees.

That is all the explanation from me. Thank you for your attention.

Question & Answer

Moderator [M]: That concludes the first part of the presentation, and we will now move to the question-and-answer session.

Takayama [Q]: I am Takayama of Goldman Sachs. I have two major questions.

In terms of the virtuous circle between social value and economic value, please let me confirm whether or not there has been a change in how important your company's initiatives and social value initiatives are to customers, for example, whether or not they are willing to buy your products because of these initiatives or whether your company is becoming more competitive.

In the case of your company, historically light, thin, short, and small, technological evolution and product changes themselves have led to energy conservation and other benefits. Customers may be more interested in technology and products, and as a result, the social value of the products is increasing. On the other hand, are there customers who buy your products because they increase social value? Are there any customers who will buy your products because they will increase in social value?

Nakajima [A]: Thank you.

Perhaps the simple answer is that it would allow us to control prices or increase market share, but we have not yet reached that point. We are always asked to confirm these demands and our sense of direction, especially by Western customers. Conversely, this is a situation where that is the first hurdle in the supplier selection process.

In addition, there are some items that will inevitably increase costs, so we believe that we are now in a situation where we can negotiate prices with a little more transparency.

Takayama [Q]: Thank you very much.

Also, the second big thing, on slide 26, you presented very interesting results of the engagement survey. Especially in the areas where scores are declining, it was mentioned that communication and strategy are not being communicated well within the Company. However, I wonder if the stock market might be similar: the first layer is doing very well, but what happens from the second layer onward?

I think you seem to understand the strategy and other aspects of what makes your company's growth above the industry average when you think about the future after a slight downturn in performance in a cycle, and I wonder if it is difficult to communicate this without the numbers. If your company feels the same way, I would appreciate it if you could share what you talk about and what you are trying to do to increase engagement in the Company in an encouraging way.

Nakajima [A]: We actually have discussions at each workplace and conduct surveys to see what is not being conveyed. In our case, by all means, we are still manufacturing 65% domestically, and in terms of headcount, there are far more people onsite than offsite.

For example, what I am saying to the members in the field is not yet 100% clear, such as using many katakana (foreign) words, and I need to explain it more clearly. I mentioned earlier that there is a lack of internal communication, and I still think that concrete action is needed to address this.

As Mr. Takayama just mentioned, there is an inevitably high degree of dependence on the first layer and the fact that the profit structure of the second layer is still unstable, but I think I can explain the situation to some extent to a high degree of satisfaction. I think there are many aspects of the situation that I need to reflect on.

Sato [Q]: My name is Sato from Morgan Stanley MUFG Securities. I have two questions.

The first point is that I know you had a lot of trouble during the Noto Peninsula earthquake, and I think you have already made a plan based on your reflections, but would you please explain what measures were insufficient and what items were sufficient?

Nakajima [A]: In terms of our internal operations, as I mentioned earlier, I believe that we had been able to respond quickly to communications networks, for example, by installing satellite phones as a result of our experience in the past earthquakes.

On the other hand, in terms of customers, to be honest, some products were only made in Anamizu, and those were for automobiles. What I am instructing the business divisions and factories to do now is to make sure that the multiple lines are thoroughly implemented. Therefore, as I am sure our customers understand, we must make the certification of multiple factories mandatory to some extent. I think it will be essential to certify those multiple factories at some distance from each other, rather than at nearby factories.

Sato [Q]: Thank you very much.

The second point is about catalytic materials for heat-resistant ceramics, which were released yesterday. I understand that this is already being utilized mainly in the Company's internal offices, but what do you think about the timing of when external sales will be properly generated, or when they will be linked to profits?

Nakajima [A]: I think we are already technically ready. There is a honeycomb assembly in the back. And when you coat this catalyst, the efficiency is increased and the temperature is very high, so the hurdle to introduce it is not very high. It is difficult to explain this kind of thing logically, and there are many things that cannot be conveyed sensibly without seeing the demonstration.

It may be a time-consuming process to get more and more customers to come to our offices and install these products, but I believe that showcase or showrooms are becoming more and more important in almost the same way in the business that we call the third layer.

Sato [Q]: Thank you very much.

Regarding the second and third layers, I think the materials themselves are the result of the first layer of material development, ceramic base material development, and product development, but I also think it is necessary to further develop the first layer of materials and to dig deeper into areas of ceramic expertise. What kind of discussions are you having within the Company?

Nakajima [A]: Since we are involved in materials and equipment, it may seem that we are going downstream more and more, but our discussions within our company are that we need to expand upstream. We are also discussing the issues you have just advised us to discuss. I think this very catalyst is similar to that.

But we need to show quantitatively what the effects of different business models are to be persuasive. I think it is a different form of such business.

Sawashima [Q]: My name is Sawashima of Sumitomo Mitsui Trust Asset Management. Let me ask two questions as well.

The first one, on page 19 of the document, regarding the status of climate change initiatives. You said earlier that progress is being made a year ahead of schedule. One of the reasons for this is that the production volume has dropped, but I would like to get your comments on how much this resolution, or rather the degree of certainty, has changed in order to significantly reduce the production volume for the future toward 2030.

Nakajima [A]: The current mid-term policy 2024 includes a strategic investment framework, and we have been very proactive in procuring from outside sources, contracting off-site PPAs, and introducing on-site energy conservation and renewable energy, which has resulted in a very accelerated schedule compared to what we expected.

At the current pace, the RE100 commitment will be achieved by 2050, but we believe that 100% renewable energy can be achieved much earlier. We would like to examine the situation a little more closely and clearly indicate whether it will be in 2030 or 2035.

Sawashima [Q]: Thank you. If possible, I would like to see the 2030 goal achieved earlier than that.

My second question is about page 25, the summary of the results of the employee engagement survey, and page 26 as well, and thank you for disclosing it in quite a bit of detail. We feel that the details are becoming clearer and clearer.

You explained earlier that the drop in the affirmative response rate for strategy and direction was a pretty big factor, and if you look at the graph on the bottom of page 25, you can see that leadership is down, as is compensation and benefits, and performance management, resources, collaboration, and business processes are also down compared to last time.

Then, looking by region in the upper right-hand corner, the Chinese and Korean areas, which were probably quite high, have dropped 5 points. Then ASEAN, which was the highest, is also down a bit. Japan, which has the largest number of employees and is the center of production, had a plus-minus of zero. You commented earlier that we will deepen communication with our employees, especially those on the production floor, and deepen their understanding of our strategy. If you have any additional comments on other issues that you think have arisen over the past two years, please explain them in addition to the above.

Toi [A]: Well, I would like to give a few answers.

As you say, thank you for taking a good look. Greater China and Korea, in fact, individually, Korea is not falling, and Greater China is falling at this time. I suppose that the issue of capacity utilization has quite a large impact there. I believe that this has been quite effective in terms of remuneration, so I do not think the analysis itself is too wrong.

However, as a response, we have recently been increasing the number of opportunities for the President and other executives to give lectures, or talks, to the Board members, and we are now conducting a large number of such lectures to clearly convey the actual situation of our company. Contained The COVID-19 pandemic has also accelerated activities . This is also done domestically.

Also, although this is mainly in Japan, it is becoming very important to have conversations with division heads, so we hold workshops for all division heads twice a year, not just once, but several times a year, to deepen these conversations.

These things are gradually having an effect. Engagement score itself is down, and Strategy and Direction score is down, but on the other hand, the numbers for visible and behavioral aspects of the activities are all up, even though they are not linked to the final results, I understand that it is very important to continue such activities steadily.

Xin [Q]: My name is Xin from JPMorgan Securities. I would like to ask two questions, mainly regarding the third layer of business.

The third layer, the creation of new business models through so-called showcasing, is relatively easy to understand in terms of social value, but what do you imagine the economic value to be for your company? Also, I would like to know how you manage profitability and other KPIs within the Company when creating new business models like this. This is the first point.

Nakajima [A]: The third tier of business models are in various stages of development, but I believe that many of them have reached the level of social implementation. In the process of creating a business, implementing it in society, and then scaling it up to become a business, I believe that many of these initiatives are currently in the process of being tested or accumulating data through social implementation.

But new projects are difficult to start from here. In order to increase the scale, for example, in the case introduced today, we are introducing more and more sensing networks for preventive maintenance in factories and smart factories, and we are increasingly using local 5G as the communication network that handles such data. For example, if we do not show that local 5G can do something that Wi-Fi® cannot do, or that it can move this amount of data quickly and easily, it will inevitably be assumed that Wi-Fi® is sufficient.

I think the fiscal year FY2024 is the right time for us to promote such things by having more and more customers visit our factories and offices. One of our sales jobs is to bring customers to our facilities, and we are trying to develop activities to showcase and showroom our facilities. Gradually, this is becoming more widespread, and the number of cases where it has been introduced is increasing. Therefore, we would like to use this fiscal year 2024 period to further clarify that it is possible to achieve scale by doing this.

Xin [Q]: Thank you very much.

Second, as your company continues to create the third layer of its business model, I believe that collaboration among organizations and sharing of know-how, will become very important. What is the current system of management and administration there? Also, I am a little concerned that on page 25, on the far right side of the engagement results, the score for the cooperation section is not that high and is even dropping. I would like to know how you plan to manage the creation of this third layer in the future.

Nakajima [A]: As for the organization, what was originally a small unit created by the corporate R&D department or each business division was consolidated two years ago and is now under my direct control.

In order to raise the scale a bit more, we are considering whether it should really be done at Murata Manufacturing, for example. In this context, as was mentioned in your earlier question, we need to build a system that allows us to scrutinize and evaluate businesses properly. We have not actually experienced this before, as more and more businesses are recurring income businesses. The style of business evaluation for such items is currently under consideration.

In terms of low Collaboration score, on the production site, there may be opinions that more cooperation can be established, including, for example, the flow of products into and out of the factory, and standardization of production. We would like to work on this in the future so that we can incorporate such opinions.

Moderator [M]: This concludes the first part of the briefing.

[END]

This Q&A contains forward-looking statements concerning Murata Manufacturing Co., Ltd. and its group companies' projections, plans, policies, strategies, schedules, and decisions. These forward-looking statements are not historical facts; rather, they represent the assumptions of the Murata Group (the "Group") based on information currently available and certain assumptions we deem as reasonable. Actual results may differ materially from expectations due to various risks and uncertainties. Readers are therefore requested not to rely on these forward-looking statements as the sole basis for evaluating the Group. The Company has no obligation to revise any of the forward-looking statements as a result of new information, future events or otherwise.

Risks and uncertainties that may affect actual results include, but are not limited to, the following: (1) economic conditions of the Company's business environment, and trends, supply-demand balance, and price fluctuations in the markets for electronic devices and components; (2) price fluctuations and insufficient supply of raw materials; (3) exchange rate fluctuations; (4) the Group's ability to provide a stable supply of new products that are compatible with the rapid technical innovation of the electronic components market and to continue to design and develop products and services that satisfy customers; (5) changes in the market value of the Group's financial assets; (6) drastic legal, political, and social changes in the Group's business environment; and (7) other uncertainties and contingencies.

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