

# Murata

## value report

### 2021



Dear readers

## The purpose of publishing Murata value report

Murata value report is published with the purpose of sharing Murata's value creation story with shareholders, investors and other stakeholders, thereby co-creating value through constructive dialogues with stakeholders and creating value through resonance with employees.

## Contents of the report

In this report, Murata shares its most important values, where Murata wants to be and the value creation story to achieve that goal, initiatives for sustainable growth, as well as the messages from the management.

## Changes from last year

In accordance with the establishment of the long-term vision "Vision 2030," the process of value creation was significantly reviewed and updated. It is structured so that Murata's activities to achieve long-term value creation can be easily understood.

## Participation by the management

This report is considered a tool to communicate with stakeholders to co-create value, and the President and other management members actively participated in its creation. The creation of this report is supervised by the director in charge of IR, Masanori Minamide.

## Use of this report within the company

This report is available in Japanese, English and Chinese and is shared with all employees. The report is also used as a training material to enhance understanding of Murata's value creation story.

### Editorial policy

Murata published its Environmental Report in 2002, and has been disseminating the company's information since 2010 in the Murata Report, a brochure that combines its Company Guide, CSR Report (Corporate Social Responsibility Report) and Annual Report (Financial Data). With stakeholder dialogue being an important consideration, Murata decided to publish the "Murata value report" from 2018 to better convey Murata's activities to improve corporate value over the medium to long term. In addition to the growth strategies to realize the future envisioned by Murata, CSR (Corporate Social Responsibilities) activities that the company has been continuously implementing are described in this report. We created and edited this report by summarizing the main points with the aim of communicating Murata's activities in a concise manner. Detailed financial data and information on CSR activities that cannot be included in this report, as well as environmental data from each business site, are posted on the Murata website. Please refer to the tool map to obtain the required information.

### Term of this report

Between April 1, 2020 and March 31, 2021

\* Some activities taking place on or before March 31, 2020, or on or after April 1, 2021, are covered in the report as well.

### Organizations reported on

Murata Manufacturing Group (Murata Manufacturing Co., Ltd. and 90 subsidiaries inside and outside of Japan)

### Reference guidelines

ISO26000, The International Integrated Reporting Council (IIRC) "The International Integrated Reporting Framework," Ministry of Economy, Trade and Industry "Guidance for Collaborative Value Creation"

### Future forecasts, projections and plans

In addition to past and current performance, this report contains future forecasts, predictions, plans, and other information. Such forecasts, predictions, and plans are assumptions or judgments based on information available at the time of publication, and hence include uncertainties. Accordingly, the results of future operating activities and future phenomena may differ from forecasts, predictions, and plans in this report.

\* In this report, "Murata" refers to the Murata Manufacturing Group as a whole, and "Murata Manufacturing Co., Ltd." to Murata Manufacturing as a standalone company.

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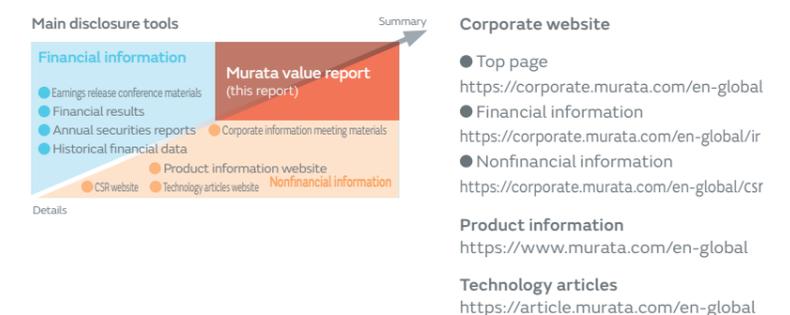
## Status of incorporation into ESG indices

The company has been incorporated into multiple indices as a company proactively engaged in ESG. We will continue our proactive initiatives and information disclosure going forward.



## Tool map

Murata disseminates a variety of information using various tools to communicate with its stakeholders. In addition to the information contained in this report, a variety of information on Murata's products and CSR activities can be found on our website. We will continue to proactively disclose information to allow our stakeholders to better understand Murata.





## What Murata creates



Founder  
Akira Murata

### Murata Philosophy

**We contribute to the advancement of society by enhancing technologies and skills applying scientific approach creating innovative products and solutions being trustworthy and, together with all our stakeholders, thankful for the increase in prosperity.**

### Murata Philosophy - The joy and pride of contributing to society

In 1954, ten years after the foundation of the company, founder Akira Murata decided that the company needed a clear direction in order to survive, grow and evolve amid crisis and established the basic management philosophy as the behavior guidelines for employees.

The Murata Philosophy reflects the company's mission to contribute to cultural development, its attitude to pursue innovative manufacturing and the underpinning significance of scientific management, as well as Akira's management ideology that he gained through his work experience, which includes importance of trust and gratitude.

At Murata, all employee share and cherish the passion embodied in the Murata Philosophy and engage in day-to-day business.

### The origin of the foundation – taking on the challenge of innovative manufacturing

Akira Murata suggested to his father, who was making and selling insulators, that they should expand their customer base. His father was usually calm but became furious and opposed. "Getting more orders means stealing customers from others. They will be in trouble and we will have to cut our prices. Never do it." He said. His angry face was stuck in Akira's mind and he was not able to forget it.

The Murata Philosophy states, "creating innovative products and solutions." It implies that the company not only competes on price but also carries out business through unique innovation. That's the management ideology that Akira developed from his father and his own experience.



Production of titanium-dioxide ceramic capacitors



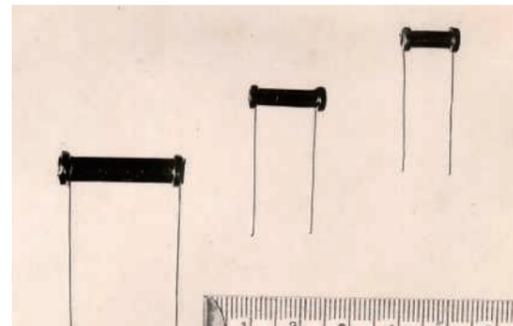
The head office and plant in Hinooka, Yamashina, Higashiyama-ku, Kyoto City. (May 1952)

### Management by complete scientific approach

When the company was founded (around 1944), it was a common practice to give a quote based on intuition. However, founder Akira Murata gathered necessary information to provide quotes by generating reports in which employees were asked to fill in the product name, process, time required and the volume created. He stood next to them, looking at his watch and measuring the time one by one. Because it was so unusual at that time and no other competitor was doing it, employees were not happy. He weighed products with a small scale, checked how many products would fit in a case, how deep the case should be, and how much it would cost to produce.

The Murata Philosophy also states, "applying scientific approach." This means that in order to create innovative products, it is necessary to analyze scientifically, calculate thoroughly without omission, identify each problem and investigate the cause and operate the business scientifically. These are principles Akira learned from the challenges he experienced while working on special ceramics and practical application of titanium-dioxide ceramic capacitors.

"Applying scientific approach" also means systematizing the business. At Murata, technology development, human resources, accounting and medium- to long-term management plans are all managed on the same platform, and regardless of the department or product, everything is managed based on the same principles.



Titanium-dioxide ceramic capacitors

### The Murata Philosophy and the pioneering spirit "Innovator in Electronics" that have been inherited

Founder Akira Murata stated in 1961, "Gratitude and the pioneering spirit have enabled Murata to overcome all kinds of hardship, and that has been the foundation of its rapid growth." He also told employees, "To innovate is to pioneer. We must always proactively drive things forward with a pioneering spirit. And in doing so, we must implement the Murata Philosophy, the basic principles of the company. The meaning of the company's existence lies in realization of the Murata Philosophy." He emphasized the importance of the Murata Philosophy and the pioneering spirit.

The Murata Philosophy and the pioneering spirit have been inherited from the founder. In 1994, the 50th anniversary of the company's foundation, the second president Yasutaka Murata employed the slogan "Innovator in Electronics" reflecting the company's aim to become a leading innovator in the electronics industry. The Murata Philosophy and the slogan have been the foundation of where we are today and enable us to bring passion to achieve our vision.

Today, in accordance with changes in the world, changes in social values for the company's social responsibilities, and changes in the influence Murata has on society in line with business growth, the company is expected more than ever to operate business in harmony with society. In order to realize a sustainable society, the company is required to contribute to resolving various social issues including environmental issues, human rights and health. Murata is committed to tackling these issues through the business and contributing to the realization of a sustainable society.

The Murata Philosophy and the pioneering spirit "Innovator in Electronics" embodies the company's aim to not only become the leading innovator but also work toward a better environment and society, creating values through the innovative development of electronics. The company has contributed to cultural development through the provision of innovative products to the telecommunication market and the automotive market under the Murata Philosophy and the slogan. We will continue to operate business from a broader perspective in view of changes in society and contribute to cultural development through management based on unique innovation and a scientific approach.

# What Murata creates

## Murata's value creation driven by the inherited pioneering spirit

**Contributed to creating market for automatic thermostat.**  
**PTC thermistors "POSISTOR"**

PTC thermistors used for current-limiting elements is the semiconductor ceramics that Murata Technology Research Laboratory Co. (at that time) succeeded in productizing for the first time in the world. Back then, there were neither competitors nor a market. After consideration, the company filed a patent application for a thermostat with heating function, temperature sensor and power controller. The company started selling the product under the name "POSISTOR" in 1959. Since then, the use of POSISTOR has been extended. It has been applied in electric footwarmers, electric rice-cookers, futon dryers as well as degaussing circuits of color CRT TV, creating new markets. It was selected as one of the "Ten Biggest Inventions" in 1962 by *The Nikkan Kogyo Shimbun* newspaper.



PTC thermistors "POSISTOR"

**The miniaturization of the product greatly contributed to the spread of mobile communication.**  
**Dielectric filters "GIGAFIL"**

The "GIGAFIL" dielectric filters were developed by combining microwave dielectric material and evaluation technology with filter design technology and was applied in car phones in Japan in 1979 and in the U.S. in 1982. It reduced the size of car phones, which used to be the size of a trunk, to one-eighth. Its miniaturizing technology greatly contributed to the spread of mobile communication.

By the 2000's, integration enabled further downsizing and weight saving. The know-how including basic technologies and production technologies gained in the process has been applied to the development of other high-frequency products and modules.



"GIGAFIL" dielectric filters

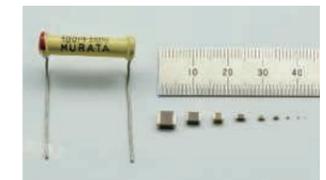
**Contributed to miniaturization and increased functionality of electronic components, supporting evolution of all kinds of electronics.**  
**Multilayer ceramic capacitors (MLCC)**

Multilayer ceramic capacitors (MLCC) enabled miniaturization and increased functionality of all kinds of electronics that are essential for daily life, including smartphones and automobiles. Specifically, by pursuing both miniaturization and increased capacity (increased functionality) of MLCC, the space required for MLCC as well as the number of MLCC required in electronic devices have been minimized, thereby contributing to the miniaturization of electronic devices. Miniaturization and weight reduction of smartphones were made possible by super small multilayer ceramic capacitors, and the portability of mobile phones was significantly improved since the time of release.

The growth of Murata from past to present has been driven by the development of MLCC which started around 1963, as per the instructions from Akira Murata, who came back from visiting the U.S. The demand for MLCC increased dramatically around

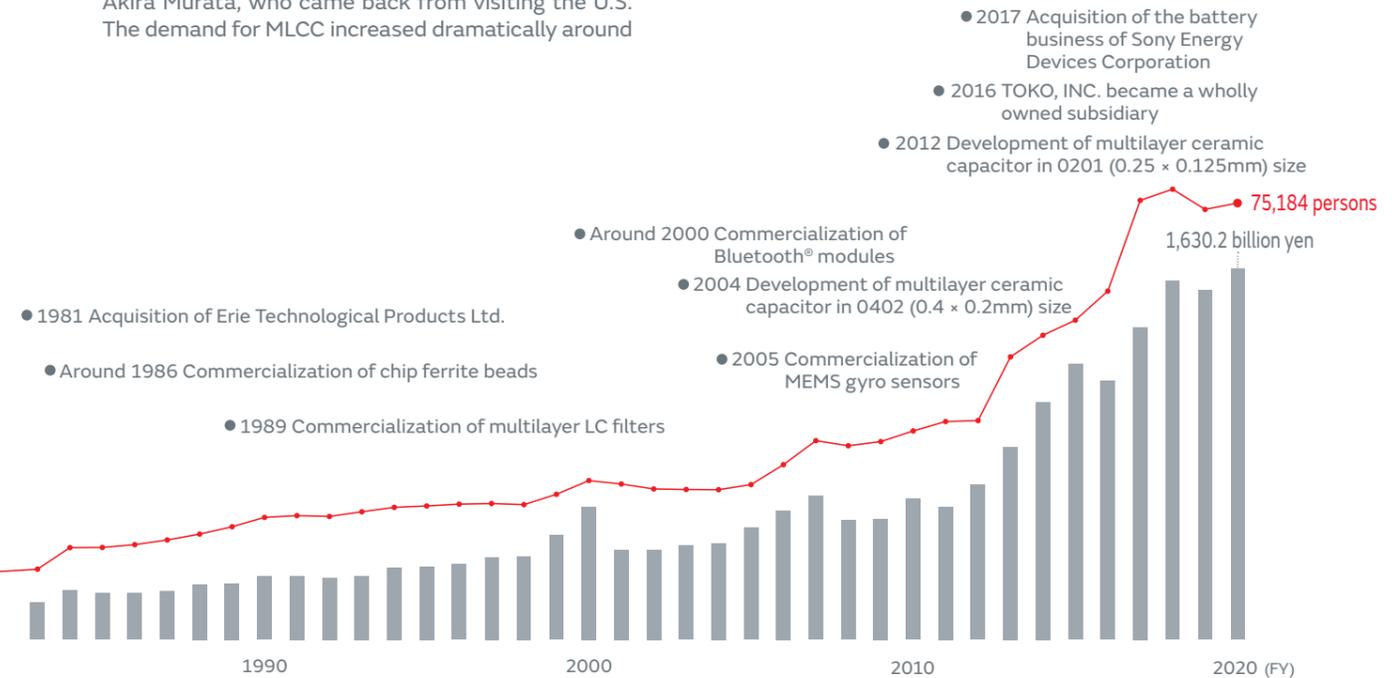
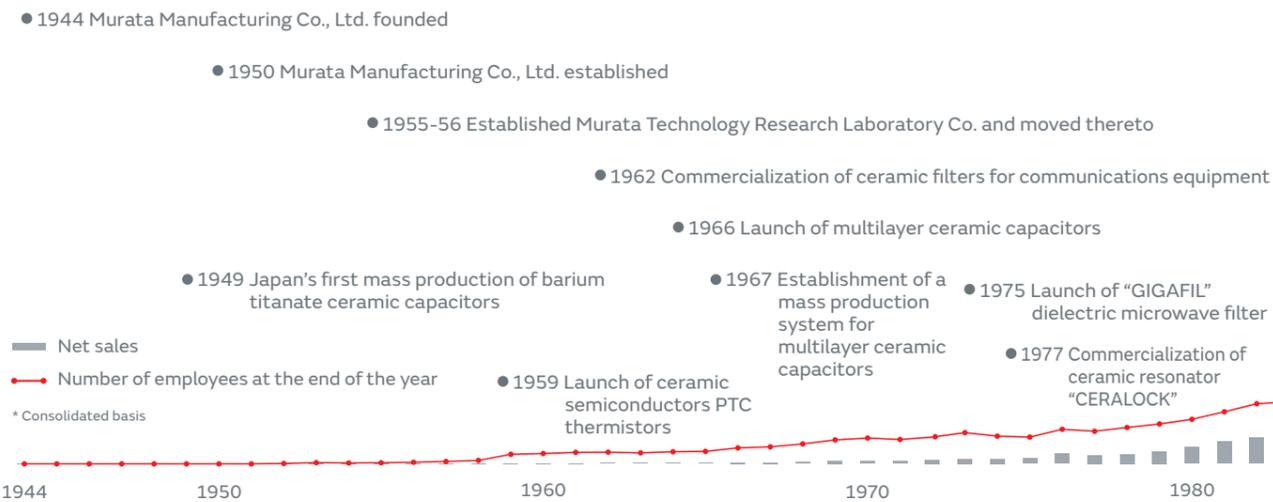
1970, since it was mounted on small portable radios and it has become the major product of Murata through in-house development of the materials and the production facilities, and innovation. Since then, the capacity of MLCC has been increased and the size has been reduced from 9.5 × 6.3mm, 0.68μF to "0201 (0.25 × 0.125mm)," which Murata achieved in 2012 for the first time in the world.

Murata has built an integrated system of manufacturing from raw materials of MLCC to finished products, as well as a global sales and supply system. Murata will continue to contribute to the electronics society by responding to the rapidly increasing demand.



Size comparison of a cylindrical capacitor at the time of the company foundation and multilayer ceramic capacitors

## History of Murata

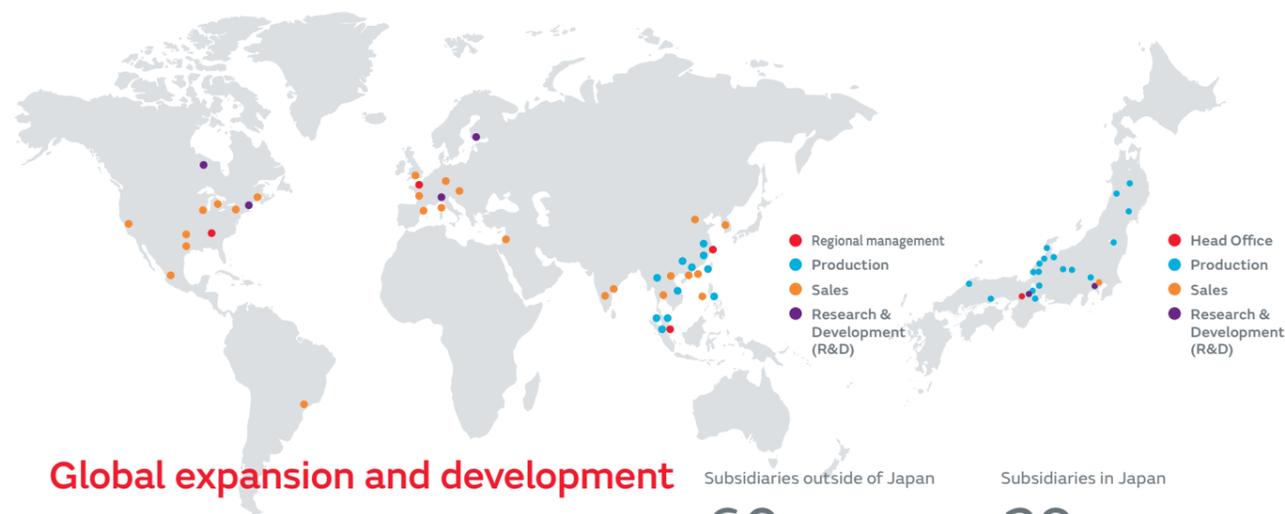


|  | 1940s   | 1950s  | 1960s   | 1970-1980s  | 1990-2000s                              | 2010s   | 2020s   |
|--|---|--|---|---|---|---|---|
| <b>Events</b>  | • The commencement of public radio broadcasting | • Popularization of black-and-white TVs<br>• Expansion of the telegraph and telephone market | • The commencement of color television broadcasting | • The personalization of information<br>• Advancement of portable devices | • Arrival of the age of the internet    | • Spread of social media and messaging applications | • Arrival of 5G era and advancement of communication technology<br>• Arrival of CASE and mobility society |
| <b>Electronics in need</b>   | • Superheterodyne radio                         | • Transistor radios  | • Color televisions                                 | • Car phones<br>• Stereo headphones<br>• CDs                              | • Mobile phones (miniaturized)<br>• PCs | • Smartphones<br>• Vehicle electrification          | • Wearable devices<br>• Electric vehicles, autonomous cars<br>• Drones, robots                            |
| <b>Murata's electronic components that contributed to the advancement of electronics</b> | • Temperature compensation-type capacitors      | • Ceramic filters  | • PTC thermistors "POSISTOR"                        | • "GIGAFIL"<br>• Chip ferrite beads (EMI suppression filters)             | • Bluetooth® modules<br>• SWITCHPLEXER  | • Multilayer ceramic capacitors<br>• SAW filters    | • MetroCirc<br>• MEMS inertial sensors<br>• Solid-state batteries   |

# Murata's business

## Expanding boundaries of electronics

Murata electronic components and modules contribute to enriching people's lives through their use in all sorts of electronic devices in everyday life, including televisions, PCs, and smartphones. Murata will also continue offering new value as an innovator in growing electronics fields such as communications, mobility, environment and wellness.



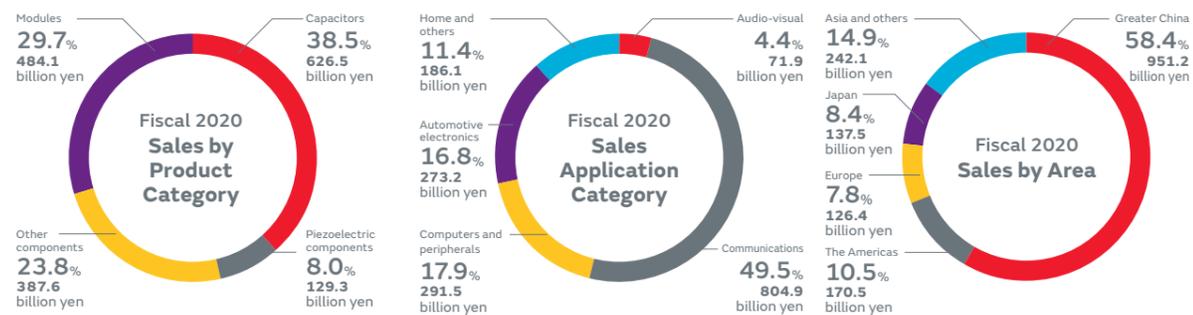
## Global expansion and development

Murata's ratio of sales outside of Japan to net sales exceeds 90%. Murata's strength lies in our network that enables us to offer high-quality products and excellent services in locations all around the world through global business expansion and development and in our ability to anticipate and elicit a wide range of our customers' needs by leveraging our network.



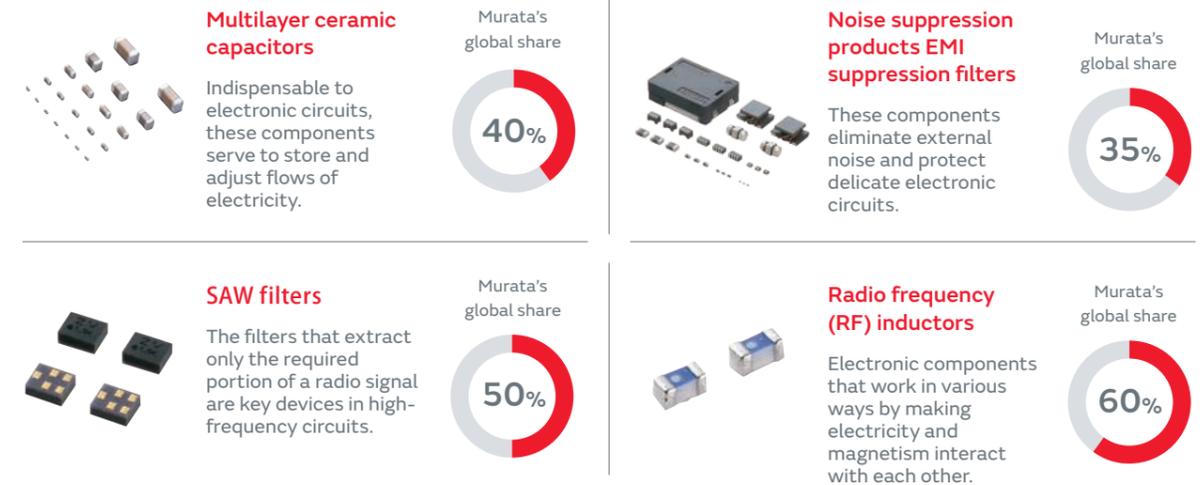
## A diverse range of products for a diverse range of applications

Murata holds a large market share in a wide range of products, from our mainstay capacitors to filters, inductors (coils), sensors, batteries, and other components, and modules comprised of these components. The market areas where our products are valued have expanded beyond our core markets, such as smartphones, PCs, AV equipment, and home appliances, and are now experiencing increasing demand from other areas such as mobility, environment, and wellness.



\* Sales by Area are sales of the company and its consolidated subsidiaries in the country or the region, classified based on the location of the customers.

## Murata products



\* The global market share of our main products is just our estimate. It may vary depending on the market and usage.

| Product name  | The number of products required |           |           |             |                    |            |
|---|---------------------------------|-----------|-----------|-------------|--------------------|------------|
|   | Smartphone                      | Laptop PC | Tablet PC | Automobile  | Digital television | Smartwatch |
| Multilayer ceramic capacitors (MLCCs)                   | 1,000                           | 800       | 600       | 5,000-8,000 | 600                | 200        |
| SAW filters   | 4-70                            | -         | 4-70      | -           | -                  | -          |
| EMI suppression filters (EMIFIL <sup>®</sup> )          | 60                              | 60        | 90        | 230         | 50                 | 30         |
| Inductors (coils)                                       | 300                             | 30-50     | 200       | 350         | 30                 | 30-50      |
| Multilayer LC filters (filters, couplers, baluns, etc.) | 2-20                            | 2-4       | 2-20      | 2-8         | 2                  | 3          |
| Connectivity modules                                    | 1                               | 1         | 1         | 1           | 1                  | 1          |

\* Our estimate. The above figures are the number required per unit and not the number of our products used.

## Solution business

We aim to build a solution business by utilizing the technologies and experience we have developed through research and development of components and modules and by combining software and communication networks with them.



**Worker safety monitoring system**  
"Visualize" worker safety during operation by using a sensor device that can be attached to the helmet



**Traffic counter system**  
Improve the infrastructure and enhance the effectiveness of outdoor advertising by making traffic volume "visible"



**Space visualization solution AIRSual**  
Ensure proper ventilation and avoidance of three C's (closed spaces, crowded places, close-contact settings) by visualizing spatial information such as CO<sub>2</sub> concentration

## Message from the President

We will pursue progress by taking a medium- to long-term perspective, gauging market trends, and seeking to further enhance our corporate value.

### We worked to provide a steady supply of products during the COVID-19 pandemic through numerous corporate-wide initiatives

I would first like to express my sincere gratitude to our shareholders, investors, and all other stakeholders for your continued support and take this opportunity to explain our future management as Murata's key representative.

Approximately one year has passed since I became President. Personally, I feel it is a great shame that people's movement around the world remains restricted due to the ongoing COVID-19 pandemic because it makes it difficult for me to meet and talk directly to our customers and stakeholders. Speaking with customers often enables us to glean ideas about new products and business, which greatly contributes to our business. I am very much looking forward to visiting stakeholders when the pandemic is finally under control.

While we did have to suspend operations at some production sites over the past year, this has fortunately not significantly impacted product supply. At Murata, members of our development teams typically visit sites to help launch the mass production of a new product. Since the majority of our development functions are located in Japan and roughly 65% of our production is carried out in Japan, we have been able to keep COVID-19 travel restrictions to a minimum and facilitate a smooth transition from development to mass production. That has enabled us to maintain a 30% or higher sales ratio for new products, the driver of Murata earnings.

Furthermore, we have made great progress on promoting the use of digital technologies in relation to our locations outside of Japan, which has helped us to establish systems to carry out various procedures remotely from Japan that used to require people moving around more widely, such as onsite meetings, production transfers, and equipment launches.

The thing I feared most as a manager over the past year was that production would stagnate

due to spreading infections, and we would not be able to fulfill our duty of providing customers with a stable supply of products. Every one of our departments moved swiftly to avoid such scenarios, and our employees took swift and insightful action based on their own individual perspectives and roles. I believe that our decision to implement extremely strict standards and thorough infection-prevention measures at all factories, as well as our efforts to ensure alternative production options and ways to recover swiftly from any temporary shutdown of operations, enabled us to ensure a stable supply for our customers. Throughout these initiatives, I felt that every one of our employees took full responsibility to ensure we could fulfill our mission for stable supply and superior quality control. Despite the difficult ongoing situation caused by the COVID-19 pandemic, I believe the past year has made us keenly aware of our company's strength and shown us how the autonomous and decentralized organizational management that I have been advocating since becoming President has started to take shape.

At the same time, the past year has highlighted other challenges. In particular, some module products ended up losing market share. One reason for that was the fact that the COVID-19 pandemic made it difficult to create new products by communicating directly with customers, which has always been our model and one of our key strengths. We also recognized that there were times that we weren't sufficiently adept at implementing remote solutions when problems occurred at our production or development sites – compared to our traditional method of discussing issues on site, thinking up solutions, and putting them into practice. I call this the “benefits of random conversation,” because I believe that new product ideas emerge not only through formal meetings, but also impromptu chats. During the pandemic, we developed a new form of communication that involves meaningful discussions with global customers and individual operational locations via online conferences from the Head Office. I feel we are now better at providing information and communicating via online settings.

However, I cannot say that communicating entirely through online conferences enables us to fully reap the benefits of spontaneous conversations. We have to consider how to create new communication channels that inspire innovation.

### Assessing the situation and preparing for future needs helped generate a record high performance

We generated record performance in fiscal 2020. This was partly due to the fact that shipments of Murata products increased even more than expected, underpinned by solid demand in the electronics market that fueled significantly higher sales of notebooks, tablets, and other stay-at-home products. Advances in the 5th generation of mobile communication systems (5G) and the electrification

of automobiles also helped boost sales and profits. Murata has always sought to firmly gauge technological innovation trends and focus on reading the situation and prepare for future needs from a medium- to long-term perspective. A commitment to this management style helped build strong corporate performance. At the same time, we believe this strong performance also results from the consistent sincere activities of every employee in the field, and I am extremely grateful to all our employees.

### Management that anticipates all circumstances in global markets

In fiscal 2020, the shadow that the COVID-19 pandemic was casting over the global market environment was further darkened by the so-called decoupling of the United States and China. In the smartphone business, one of our core fields, progress on 5G was slower than anticipated and the supply of products to some customers was restricted.

However, I feel that the United States and Chinese markets are recovering from the impact of COVID-19 faster than expected in fiscal 2021. We are also seeing 5G and the electrification of automobiles accelerate. On the other hand, we are concerned about the impact of semiconductor shortages on the supply chain, which is causing customers to secure electronic components by



President  
Norio Nakajima



increasing both advance purchases and inventory levels. As such, we believe this may lead to a decline in sales in the second half of the fiscal year.

With regards to developments in relations between the United States and China, it is difficult to envision immediate improvements, so we intend to consider various models and formulate frameworks that will enable us to respond to any situation.

### **We intend to steadily develop new products, technologies, and markets.**

Looking ahead to the likely trajectory of future technology innovation, as the evolution of automobiles continues to accelerate for example, the time required to bring a new product to market is getting shorter. In that sense, I believe that Murata must approach technology development with an even greater sense of urgency.

Having said that, as the development of autonomous vehicles progresses, the sensors and other equipment used in those vehicles will need to demonstrate an even higher level of performance. Technological breakthroughs are an essential part of this process, so we need to pursue development activities that do not focus on the short-term perspective, but instead focus on the type of technological innovation that will be required five to 10 years from now.

In terms of new product and new technology trends, we originally expected MetroCirc and other millimeter wave-related products for 5G to gain momentum in fiscal 2020, but this was hampered in the short term by the US-China decoupling and other factors. However, we believe these technologies will be fully utilized as millimeter wave technology becomes more widespread.

We expect demand for 5G to expand going forward as we start to see Public 5G used in public applications and Private or Local 5G used to build optimal communication networks in specific locations. Facilitating robust millimeter wave communication as part of that trend will require extremely high performing antennas and substrate modules, something we expect to greatly expand the playing field for our own products.

We also intend to develop the market for our solid-state batteries by leveraging their advantages over lithium-ion batteries, including their non-combustible, strongly heat-resistant, compact, and surface-mountable benefits. We expect that these significant features will help position our batteries for use in a wide range of wearable applications operating near the human body, such as smart watches, hearable (voice-enabled) devices, and VR

goggles. At this point in time, we haven't been able to achieve fully equivalent characteristics of lithium-ion batteries, but we intend to proceed with mass production for certain applications.

### **We will energize our business and create new business models.**

Let me now cover the progress of our Mid-term Direction 2021. In terms of the plan's numerical targets, while it would be a tough climb to achieve the net sales target. However, our earnings forecast announced on July 29, 2021 suggest that the plan's ratio of operating income to net sales and ROIC (before tax) will likely exceed that projection. A company's ability to supply products is becoming increasingly important in the face of recent supply-chain disruptions caused by coronavirus infections and difficulties procuring semiconductors and other parts. Our decision to expand capacity in advance enabled Murata to grasp new business opportunities related to strong component demand in this current environment. (▶ P.36 Mid-term Direction 2021 review)

In terms of capital expenditure, we prepared for the increase in component demand over the medium to long term by making upfront investments primarily in land and buildings and investing in the increased production of multilayer ceramic capacitors (MLCC). From the coming fiscal year onward, we will work to streamline MLCC production and strengthen frameworks for increasing production of other high-frequency products and electromagnetic interference (EMI) products, etc.

Regarding our decision to promote portfolio management based on feasibility assessment models, one of the important objectives of Mid-term Direction 2021, we are monitoring the areas in which we need to metabolize business faster.

While we recognize the important role that portfolio management plays in increasing profitability, we are also concerned that focusing solely on profitability could render us less prepared to support medium- to long-term growth. I believe Murata's balanced model is important here. As an engineer, I am confident in my ability to read technology trends, but deciding which business to fully commit to is not easy and requires careful assessment. Indeed, it took us several decades to move from the development stage to a truly profitable business even for our current top-earning MLCC and high-frequency products. For these reasons, I believe we should not select businesses based solely on short-term evaluations.

In addition to metabolizing current businesses, creating new businesses for future growth is another important element for corporate management. I believe the definition of Murata's customers will change significantly going forward. Currently, smartphone manufacturers are our main customers in the 5G field, but we believe, 5G will be used across a much broader range of applications and play an integral part in our communication infrastructure. As a vast range of products connect to the network, we could see categories of businesses and organizations with no previous communication links become our customers. We are currently conducting a thorough review of our customer definitions and gradually approaching new customers.

Mid-term Direction 2021 is also focusing on increasing productivity and ensuring a stable supply system. When we were formulating the current mid-term plan, our customers were being inconvenienced by the tight supply of MLCC and other products. Given that, we decided to expand our production capacity and promote the use of smart factories to help us achieve that without increasing staff numbers. I believe those moves have been successful from the point of view of expanding supply. Our annual production of MLCC currently stands at over one trillion units, and we are working to expand production capacity and further promote the use of smart factories. With production volumes increasing to such an extent, it is important to be able to anticipate demand. We are leveraging various types of data amassed over the years and simulation technologies to facilitate more accurate demand forecasting.

In addition to strengthening our production systems, we have also been focusing on organizational reforms. I personally advocated the importance of autonomous and decentralized organizations on many occasions via our internal social media and other channels. The autonomous decentralization that I am referring to has three important elements: autonomy, Collectiveness and Evolution (▶ P.34 Autonomous and decentralized management). Historically, Murata organizations tended to pursue thorough optimization at each individual operational location or division. While that is no doubt one of our key corporate strengths, I am aiming to encourage autonomous decentralization that strives to optimize the company. I want our employees to show a keen interest in what other members, departments, and factories are doing, to minimize the things they don't know, and then value their own decisions, actions, and skills based on that knowledge. We seek to create an even stronger organization and achieve further growth as a company by sharing the unique

features and strengths of each operational location and division across the whole company – influencing each other and advancing together.

Strengthening our underlying human resources base is another important challenge for the new era. We must fundamentally change the way of our human resources development as we enter an era in which the definition of our customers changes and the discontinuous technological innovation that is not necessarily an extension of current developments occurs.

In an autonomous and decentralized organization, it is important that each individual independently considers his/her own role, and makes and executes his/her own decisions. In the past, we tended to focus on providing education and training and developing management personnel based on a one-size-fits-all system. Going forward, we look to create an environment that nurtures employees with diverse career backgrounds and highly creative individuals by creating a new management training initiative. We strive to empower our employees to decide the type of career they want to develop and the person they want to be.

We launched our Minato MIRAI Innovation Center in Yokohama at the end of 2020 in order to help secure human resources capable of creating new business models as the third layer of the 3-layer portfolio, and to help establish a fresh competitive advantage by strengthening cooperation with external resources. I believe we will achieve great success as a major research and development base in East Japan.

### Sketching the future of the electronics industry, we will establish a new 3-layer portfolio

As far as our company's future is concerned, as a manager, I am always looking to lend perspective on the future of the electronics industry to our employees. We launched our internal Preparation Project, a very-long-term initiative in which we encourage the generation who will be responsible for the future to consider what the company should look 10 to 20 years from now. The Preparation Project discusses changes in lifestyles, desirable business models, and any issues we should be preparing for now based on those changes.

To encourage diverse innovation from a long-term perspective, Murata is implementing a 3-layer portfolio management and creating value focused on four key areas: communications, mobility, environment, and wellness (▶ P.31 Deepen core businesses and promote evolution of business models). The new 3-layer portfolio consists of layer

1: MLCC and other components, layer 2: devices and modules, and layer 3: solutions and other new fields. Right now, we enjoy overwhelming competitiveness in layer 1. However, we recognize that this might not always be the case. Going forward, we envision scenarios in which the commoditization of edge devices might spark greater commoditization of built-in electronic components. I think layer 1 and layer 2 will continue to serve as the pillars of our business for some time. That said, looking ahead to 2030 and beyond, we need to further strengthen these two layers and nurture layer 3 to help diversify our earnings sources.

Regarding the intended strategy for each layer, for layer 1, the aim is to increase business efficiency and ensure we capture business opportunities in a growing market and pursue lean business operations. Our strategy for layer 2 involves differentiating our technologies to earn a competitive advantage and strengthening the financial health of our battery and other businesses where improvements are currently lagging. For instance, the annual performance of module products is becoming increasingly volatile since there is no clearly differentiated technologies in the industry. We intend to expand that business by investing capital wisely to promote differentiation. Finally, our strategy for layer 3 involves fostering discontinuous core technologies and challenging ourselves to build new business models. That will require multiple attempts and involve some failures, but I am sure we will discover areas where we can demonstrate our strengths to the fullest degree.

### We will achieve sustainable growth by creating a continuous cycle of economic value and social value.

Throughout our history, we prized the Murata Philosophy and sought to develop a culture based on our Innovator in Electronics slogan. Looking ahead 10 years, Murata's business environment will likely be significantly different. If we are to continue proactively creating value as an Innovator in Electronics, we need to expand that scope of the value we provide from just "innovation for customers" to also include "innovation for solving social issues." We developed our Vision 2030 to depict where Murata wants to be and how we can uniquely contribute to achieving the sustainability of society and our enterprise (▶ P.29 Vision 2030).

Vision 2030 specifies that "Murata will innovate to create a continuous cycle of social and economic value and contribute to the enrichment of society" as a path to achieve our objectives. Our aim is to accomplish this and continue to be the best

choice for our customers and society as the Global No. 1 Component & Module Supplier. As part of that process, I believe it is important to enable diverse human resources to play an active role that leverages employees' unique qualities. Further, we must create innovation that inspires trust, mutual cooperation, and harmonization that transcends traditional team and divisional groupings. We seek to become our ideal company that has earned the respect of all our shareholders.

It goes without saying that ESG management initiatives are important for ensuring sustainable growth. It is imperative that we simultaneously secure steady profits and respond to society's demands. We are entering an era in which companies may be excluded from the market if they do not provide both social and economic value. For instance, we may reach a stage when we might not be able to sell MLCC packages unless they display a label saying, "this product uses 100% renewable energy." In other words, failing to take firm measures to respond to climate change and resource recycling initiatives would ultimately damage a company's economic value. On that, we are taking significant measures to address issues relating to the environment, society, and governance. We are already one of the first in the industry to become a RE100 member to combat climate change and are working to achieve carbon neutrality. Human rights violations in the supply chain are another critical issue, and we strive daily to reduce risks through assessments and other activities. Our Chairman of the Board, Tsuneo Murata, is leading the initiative to strengthen our governance systems. Our Outside Directors provide an extremely high level of knowledge in their respective specialist fields and

lend candid opinions from an institutional investor, analyst, or risk manager's perspective.

(▶ P.73 Key issues in relation to issues facing society)

(▶ P.61 Three-way discussion with Outside Directors)

Murata is working to accurately predict the technological and social changes we will likely witness in the next five to 10 years and preparing for those changes. We are determined to meet your expectations, so I hope you will continue to trust and support us in our drive to further enhance Murata's sustainable corporate value into the future.



## Message from the Executive in Charge of Accounting, Finance & Corporate Planning

Member of the Board of Directors and Executive Vice President  
Director of Accounting, Finance & Corporate Planning Group  
**Masanori Minamide**



### We intend to strengthen our management base and seek to achieve sustainable growth based on our business vision for 2030.

#### Practicing the Murata Philosophy and strengthening our business management system to secure future growth

My name is Masanori Minamide, and I was appointed Member of the Board of Directors and Executive Vice President after the resolution adopted at the General Meeting of Shareholders and the Board of Directors meeting held this past June. I am primarily in charge of corporate planning and finance. As such, I am responsible for business management, so I would like to explain the details of Murata's business management, mid-term business plan, and long-term vision.

Murata's long-standing commitment to building trusted relationships with stakeholders, customers, investors, partner companies, and local communities, coupled with an ongoing effort to foster an honest corporate culture, has spurred the company's growth to date.

One personal experience left a lasting impression during the IT bubble burst in the early 2000s. I oversaw investor relations at the time. Mobile phone and computer-related market were expanding rapidly

and the stock prices of related companies, including Murata, were hitting record highs. Murata was one of the first companies to mention that customers might be over ordering after conducting a detailed analysis of their order contents. At the time, the stock market called it the "Murata Shock," but I remember how positively investors evaluated Murata's sensitivity to changes in the market environment and swift dissemination of information as it became clear that the IT bubble had burst. To me, this is a clear example of Murata's commitment to "being trustworthy" as embodied in the Murata Philosophy.

A quick look back over Murata's history reveals another growth-contributing factor, namely the company's ability to make flexible capital investments at key turning points. For example, when the global economy was heading into a significant decline because of the Global Financial Crisis, Murata used its solid financial base to fund some bold investments, capture growth in the smartphone market, achieve a V-shaped recovery, and then significantly scale of its business.

Another thing that I am keenly aware of is that Murata's value creation model has been functioning

effectively for a long time, ensuring that each link in the value chain is firmly connected and continuing to provide competitive products that meet market needs in a timely manner. Furthermore, Murata's human resources, accounting, IT systems, and other business management frameworks have been built by applying a "scientific approach," another key Murata Philosophy commitment. That has enabled those systems to operate smoothly with Murata's value-creation model and support the company's management base. Murata's long-serving matrix management system and its business evaluation system, which takes into account capital costs, are good examples of this.

However, there is a growing need to change the business management system that has supported our growth as the scale of our business expands and the nature of our business changes. My job is to protect the inherent strengths of our existing business management system while establishing new frameworks that Murata will need to hit the next stage of its corporate development.

#### Kept the COVID-19 impact in check and achieved another record high performance

We predicted a decline in sales and profits for fiscal 2020 at the beginning of the fiscal year due to considerable concerns over the impact of the COVID-19 pandemic, but demand exceeded our initial expectations. We increased the production of notebooks, tablets, and game consoles, etc. on the back of increased telecommuting and stay-at-home requirements. In addition, demand for smartphone-related products proved relatively strong and the need for automotive-related products recovered significantly from the second half of the fiscal year onward. We were also able to implement flexible supply chain management, including switching production from overseas factories that had to temporarily suspend operations due to COVID-19 to alternative factories in Japan. These aspects all contributed to Murata's record high performance in fiscal 2020.

#### Aiming to further improve performance in fiscal 2021

Regarding the outlook for fiscal 2021, we expect demand for components to continue to grow with the adoption of 5G and the increased electrification of automobiles providing a strong tailwind. Indeed, the earnings forecasts we announced on July 29, 2021 suggest that fiscal 2021 results will likely outstrip fiscal 2020 and generate another record performance. Indeed, the earnings forecasts we announced on July 29, 2021 suggest that fiscal 2021

results will likely outstrip fiscal 2020 and generate another record performance.

Having said that, cities might once again be forced into lockdown depending on what happens with COVID-19. We are also closely monitoring and gathering information on developments in U.S.-China relationship as a geopolitical risk. We will need to diversify our production and materials procurement routes in our supply chain over the medium to long term, so we intend to review our investment plans and other strategies for the future.

I see the global semiconductor shortage as another risk factor. In addition to the expected decline in global automobile production, our module business is being affected by issues with materials procurement. Inventory adjustments in China's smartphone market are another volatile factor that could impact our business performance.

Regarding capital expenditure, we expect a total of approximately 170.0 billion yen in fiscal 2021, down 30.0 billion yen year on year. We completed the round of upfront investment from fiscal 2017 to fiscal 2020 to acquire the land and buildings to increase our production capacity. While that portion of expenditure will decline in fiscal 2021, we plan to continue our regular capital expenditure in production lines.

#### Continuously improving capital efficiency

As the person in charge of corporate planning, I report on the progress of our Mid-term Direction 2021. Regarding the portfolio management implementation, the first of three corporate-wide policies in the mid-term direction, we introduced a feasibility assessment model based on ROIC and operational growth potential and have been monitoring business plans by using hypothetical thinking. As a result, we decreased the smartphone business within our battery business, as well as our Wi-Fi® module business for smartphones. Additionally, to further differentiate our high frequency device business that includes filters and other products, we entered into an agreement with Resonant Inc. regarding the exclusive development of high-frequency filters for specific frequencies using XBAR® technology.

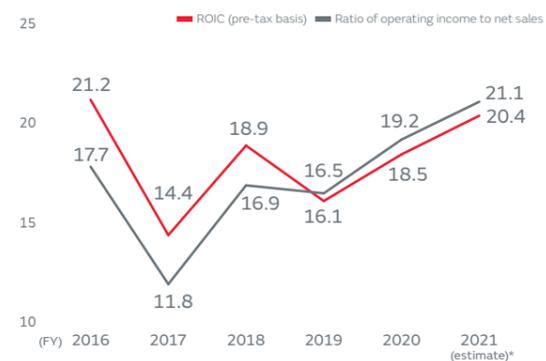
Regarding the second corporate-wide policy, the establishment of advanced supply system and exponential productivity enhancement, we have steadily pushed ahead with capital expenditure in the wake of expanding medium- to long-term product demand. We raised 150.0 billion yen in the corporate bond market, which we are using together with operating cash flow funds to promote this policy.

With respect to our third corporate-wide policy – harmony among people, organization, and society – we are developing ESG management after clarifying key materiality issues originating from social issues.

As to Mid-term Direction 2021 numerical targets, while net sales are not likely to meet the two trillion yen target due to the impact of U.S.-China trade friction and the COVID-19 pandemic, we do expect both the ratio of operating income to net sales and ROIC (pre-tax basis) to exceed the target based on our earnings forecast for fiscal 2021 announced on July 29, 2021.

Our analysis suggests that the typically more moderate swing between vigorous component demand and price reductions will create a more favorable environment for our 2021 business performance, which has led to a higher ratio of operating income to net sales, and ROIC. However, this also means that there is a risk that the ratio of operating income to net sales and other levels could fall if the business environment changes significantly. For that reason, we aim to create an earnings framework that is more resilient to changes in the immediate environment and continue to improve capital efficiency by enhancing productivity, optimizing fixed costs, and reviewing our business portfolio.

Ratio of operating income to net sales, ROIC (%)



Invested capital (Billion yen or times)



\*From earnings forecast announced on July 29, 2021

**Formulating our long-term Vision 2030 strategy**

To formulate our next mid-term business plan, we clarified Murata's long-term Vision 2030, which looks ahead over a 10-year horizon. In the past, our value

creation cycle has pivoted around strengths in the customer base, technology base, and monozukuri (manufacturing) base. Vision 2030 incorporates a sustainability perspective into this cycle. In other words, Vision 2030 takes into account scenarios in which Murata's value creation operates on a sustainable cycle that both contributes to social value and creates economic value through co-creation with stakeholders.

This cycle is supported by human capital, organizational capital, monozukuri capital, intellectual and technical capital, customer and business partner capital, and financial capital. Among those, we delineated organizational capital to include business management and solid corporate governance systems that are both underpinned by the Murata Philosophy. As I mentioned at the beginning, Murata developed its corporate structure and systems in line with the company's growth based on our commitment to applying a "scientific approach" to production sites and business management. That approach fueled Murata's current growth. We aim to further strengthen this business management system that firmly links our value chain by utilizing the organizational capital we have cultivated over our 77-year history. Further, our decision to characterize customers and business partners as capital illustrates our commitment to solving social issues over the long term by creating value for our customers, investors, suppliers, local communities, and other stakeholders.

As for our business model, we established three portfolio layers (layer 1: components, layer 2: devices and modules, layer 3: solutions business and other new fields) and are emphasizing the strengthening of each.

Our next generation of leaders participated in formulating the Vision 2030 together with our President and other senior managers. They played a central role in anticipating the business opportunities and assessing risks that might arise beyond 2030. We then mapped the action plans that would need to be incorporated into the next mid-term business plan to prepare for those potential scenarios. This approach is based on our belief that we need young people to develop long-term visions. This helps ensure that there is not a disconnect between generations and allows for sustainable growth.

**Establishing strategic investment allocations in Mid-term Direction 2024**

Our Mid-term Direction 2024 contains financial targets of 2 trillion yen for net sales and at least 20% for both the ratio of operating income to net sales and ROIC (pre-tax basis). At first glance, this might look as if we have simply reset the targets of Mid-term Direction 2021, but the anticipated social changes and associated business opportunities and risks are far greater than when we formulated that initial direction. Given that, we positioned the next three years as an extremely important period in terms of building a foundation for sustainable growth in 2030 and beyond. As the person in charge of managing our business plan, I intend to monitor each theme that we are striving to improve in Mid-term Direction 2024 and consistently convey progress to all our stakeholders (▶ P.37 Mid-term Direction 2024)

We also clarified our capital allocations in Mid-term Direction 2024. In addition to the usual capital expenditure allocation, we set a strategic investment quota against total planned operating cash flow through fiscal 2024. We project that our business opportunities will steadily expand as we approach 2030. We intend to firmly grasp those opportunities, sow the seeds that will lead to sustainable growth in the three years from 2022, and establish frameworks to prepare for upcoming risks and opportunities even more earnestly than we have in the past. More specifically, we will implement business alliances and M&A to clearly differentiate growth businesses in an increasingly competitive environment and invest in diversifying and fortifying our supply chain against geopolitical risks. We also intend to inject capital in the leading investments required to work on our key materiality issues, including response to climate change to achieve RE100 in 2050 and support the creation of new business opportunities.

In terms of shareholder returns, we aim to keep increasing dividends by achieving a dividend payout ratio to 30% and a dividend on equity (DOE) of 4% or more. We expect to buy back company shares after considering medium- to long-term funding needs, including the status of strategic investment allocations.

On the financial front, we intend to repay the corporate bonds and maintain a solid financial base in preparation for short-term funding needs and any sudden risks by holding a certain amount of cash on hand.

Mid-term Direction 2024 capital allocations



**Activities as the Executive in Charge of Accounting, Finance & Corporate Planning**

My job is to transform our management system into one that can readily respond to changes and ensure the sound and efficient functioning of the autonomous and decentralized organization that President Nakajima has set forth as the path for achieving organizational and internal management with a firm medium- to long-term focus.

Hypothetical thinking is the key to achieving this goal. Until now, we applied this model to the feasibility assessment in our portfolio management. I intend to incorporate methods of developing and monitoring plans based on hypotheses and assumptions that consider risk management

perspectives in our mid-term plans and financial year budgets for our business divisions. Further, if we are going to realize the continuous cycle of social value and economic value outlined in our Vision 2030, we need to enhance the mechanism for incorporating materiality into our business management processes. In addition to promoting corporate-wide initiatives to solve social issues, we intend to design systems that will increase social value from a long-term perspective.

I intend to press ahead with creating an organization that supports these changes by digitalizing our business management functions and developing and nurturing our human resources.

I feel that the role of the executive in charge of finance has been expanding in recent years due to rapidly changing times and increasingly diverse stakeholder expectations and interests. It is my duty to operate our value co-creation cycle and increase corporate value by enhancing the management transparency advocated by President Nakajima, promoting earnest dialogue with all our stakeholders, and using those findings to spur future growth. I thank you for your continues support.



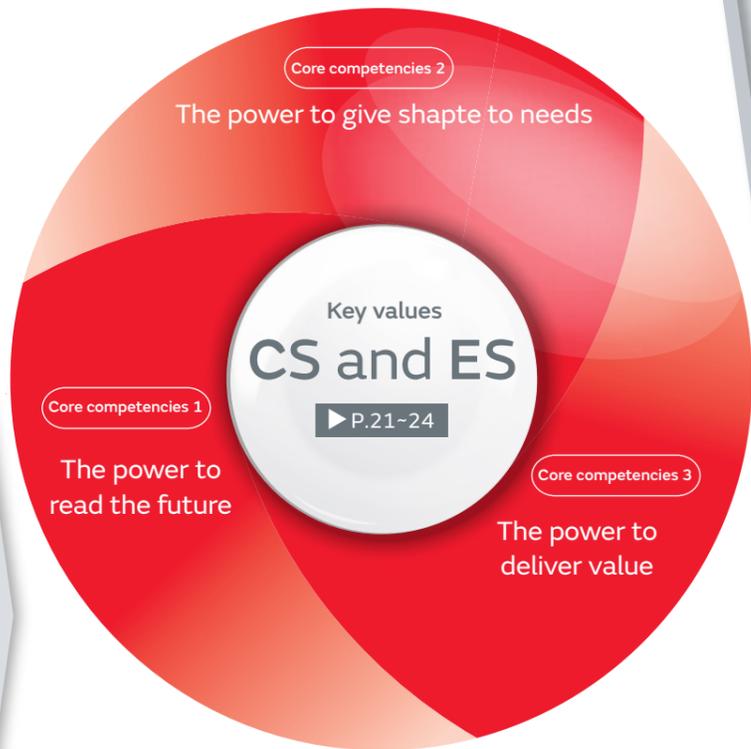
# Process of value creation

At Murata, employees around the world respond to the changing business environment, thinking and acting based on the Murata Philosophy as the shared guiding principles. Each and every employee feels rewarded and continues to grow through his or her work. They trust and cooperate with each other to demonstrate collective strength, thereby creating new innovation.

**Innovator in Electronics** —As a leading innovator in the electronics industry, Murata is committed to realizing and improving society through proactive value creation— ▶ P.3-6

- Expansion of the usage of electronics
- Transition to a sustainable society
- Advancement of digitalization
- Increasing geopolitical risks
- Changing population structure and balance of power
- Response to post-pandemic society

Recognizing the environment (opportunities and risks)



### Management capital Murata has cultivated through the implementation of the Murata Philosophy

- Human capital
- Intellectual and technological capital
- Organizational capital
- Customer and business partner capital
- Monozukuri capital
- Financial capital

▶ P.21-22

## Murata Philosophy

### Reinforcement of corporate governance system ▶ P.53-72

#### Growth strategies

**Deepen core businesses and promote evolution of business models** ▶ P.31-32

#### 3-layer portfolio

- 1 Standard-products business
- 2 Application-specific components business
- 3 Creation of new business models

#### Four business opportunities

- Communications
- Mobility
- Environment
- Wellness

**Execute four management transformations** ▶ P.33-35

- Management that creates a continuous cycle of social value and economic value
- Autonomous and decentralized organizational management
- Change-responsive management based on hypothetical thinking
- Digital transformation (DX)

#### Key issues (materiality) in relation to issues facing society

**Contribute to solving social issues through our business** ▶ P.33



**Initiatives on social issues through business activities overall** ▶ P.73-96



### Strengthen management foundations

### What Murata wants to be

Murata will innovate to create a continuous cycle of social and economic value and contribute to the enrichment of society

Murata provides the essentials  
Murata in everyday life

Murata enables the future  
Solving social issues

Murata evolves through innovation  
Practicing sustainable operations

**Global No. 1 Component & Module Supplier**  
▶ P.29-30

### Value creation with stakeholders

#### Economic value

- Net sales 2 trillion yen
- Payout ratio 30%
- Operating income ratio 20% or higher
- DOE 4% or higher
- ROIC (before tax) 20% or higher

#### Social value

- Amount of GHG emissions (vs fiscal 2019)
- Renewable energy implementation rate
- Rate of use of sustainable resources
- Sustainable resource usage rate
- Resource recycling rate
- Percentage of overseas indirect employees with experience working at other sites
- Positive employee engagement response rate

▶ P.38

# Murata's management capital

## Key values CS and ES (Customer Satisfaction and Employee Satisfaction)

Murata's mission is to "contribute to the advancement of society," and we believe that Murata exists for this purpose. In order to realize this mission through the efforts of all employees, the values of "CS and ES" are regarded as critical aspects in our management.

At Murata, CS means "to create and provide value that customers appreciate," and ES means "each and every employee feels rewarded and continues to grow through his or her work." We practice these values based on our desire to be a company that can realize them in our daily business.

## Management capital Source of value creation nurtured through the implementation of the Murata Philosophy

"Management capital" that has been developed through the implementation of the Murata Philosophy will continue to be the source of value creation in the future. Driven by "CS and ES," Murata will demonstrate its "core competencies" by utilizing such capital.

Murata will continue to create value as an Innovator in Electronics by reinforcing the capital, cherishing the spirit of the Murata Philosophy and further developing the core competencies.

| Murata's management capital  |  |  |
|--|--|--|
|  <p><b>Human capital</b></p>                            | <ul style="list-style-type: none"> <li>Global penetration of management philosophy</li> <li>Employees who sympathize with the Murata Philosophy and sincerely practice it</li> <li>Values that emphasize CS and ES</li> <li>An organizational culture that utilizes diverse individuals and helps their collaboration</li> </ul>   | <p>▶P.86 Respect for human rights and diversity</p>  |
|  <p><b>Organizational capital</b></p>                 | <ul style="list-style-type: none"> <li>Business management philosophy and management systems backed by scientific management</li> <li>Solid corporate governance that is trusted by stakeholders and enables us to grow together</li> </ul>  | <p>▶P.69 Risk management</p> <p>▶P.55 Corporate governance</p>   |
|  <p><b>Monozukuri capital</b></p>                     | <ul style="list-style-type: none"> <li>Production technology, management technology, and management systems that are highly integrated, from materials to final products</li> <li>A strong "Kaizen" mindset and management technology to promote improvement activities</li> <li>Quality control technology and systems that extends back to the origin</li> </ul>                           | <p>▶P.22 Monozukuri capital</p> <p>▶P.23 Murata's core competencies</p>  |
|  <p><b>Intellectual and technological capital</b></p> | <ul style="list-style-type: none"> <li>Unique platform technology, core technology, and intellectual property that Murata has built and expanded as an Innovator in Electronics</li> </ul>   | <p>▶P.22 Intellectual capital</p> <p>▶P.49 Technologies</p>  |
|  <p><b>Customer and business partner capital</b></p>  | <ul style="list-style-type: none"> <li>Customer and sales networks we have built by providing global No. 1 products</li> <li>Networks and teamwork among sites around the globe</li> <li>Global partner network in the supply chain</li> <li>Trust and credibility we have earned through our solid networks</li> </ul>  | <p>▶P.23 Murata's core competencies</p> <p>▶P.89 Coexistence with local communities</p> <p>▶P.93 Supply chain management</p>             |
|  <p><b>Financial capital</b></p>                      | <ul style="list-style-type: none"> <li>Financial base to support sustained growth and prepare for changes in the environment and various risks and opportunities</li> <li>An investment strategy that emphasizes ROIC (pre-tax basis) and aims to increase capital efficiency in the long term</li> <li>Credibility earned through dialogue with stakeholders and capital markets</li> </ul> | <p>▶P.15 Message from the Executive in Charge of Accounting, Finance &amp; Corporate Planning</p> <p>▶P.38 Capital allocation policy</p> |

## Intellectual capital Murata's intellectual property

As the electronic component market changes rapidly, timely acquisition and accumulation of intellectual property has a direct impact on the company's competitiveness. The importance of intellectual property is ever increasing for Murata in producing innovative products and solutions as a real Innovator in Electronics.

Murata actively invests in intellectual property for the business with high priority in the portfolio and other growing business.

In addition, Murata established "Basic Policy for Intellectual Property Activities" to encourage employees to engage in the intellectual property activities that would benefit the business beyond the organizational framework, and aims to raise awareness of intellectual property within the whole company through stratified/vocational training and an intellectual property forum.

## Organizational structure that supports intellectual property activities

In July 2021, Murata established the Intellectual Property Group that consists of the corporate IP Department and the IP Planning Department with the aim to encourage autonomous and decentralized intellectual property activities and to reinforce governance. The corporate IP Department works closely with each business division and the development department to draw up an intellectual property strategy and to build a strong intellectual property portfolio inside and outside of Japan. The IP Planning Department uses intellectual property information for decision making with regard to the selection and concentration in portfolio management, manages risks with intellectual properties and tackles the corporate-wide issues of intellectual property. The corporate IP Department and the IP Planning Department work closely on a day-to-day basis and are engaged in intellectual property activities to contribute to the business.

## Monozukuri capital Quality control at Murata

"Good devices come from good components, and good components come from good materials."  
 "If we practice scientific management, we can deliver quality, on time, with no mistakes."  
 Founder Akira Murata

Murata has created integrated manufacturing systems from materials to finished products, and since the company's founding we have uncompromisingly pursued quality that will gain the trust of every customer by utilizing science-based management oversight, starting from the origins of our processes and throughout the operation.

### Quality Policy

We build long-lasting partnerships with customers who appreciate and share our philosophy for contribution to the advancement of society (CS). We are inspired by our company objectives and enjoy our personal growth and contribution to society (ES). We strive to exceed our customers' expectations by:

- solving every problem through careful verification of all the facts until the root causes are identified and eliminated;
- effective quality management and the optimization of our business processes, people, materials, methods, and technologies; and
- our strong commitment to the continuous improvement of quality.

## Active patent application overseas and trends in the number of patents owned by Murata

In accordance with the increase in the ratio of sales outside of Japan to net sales, Murata actively promotes patent application overseas as part of investment in intellectual property. Taking into consideration of the characteristics of the technology, market trends and competitors' activities, Murata actively seeks to acquire intellectual property in the U.S., China, etc. With consideration for optimizing cost effectiveness, Murata is strategically moving forward with international applications, actively utilizing a Patent Cooperation Treaty (PCT).

In regard to the know-how that would give the company a competitive advantage, Murata scrutinizes it before application and keeps it completely confidential.

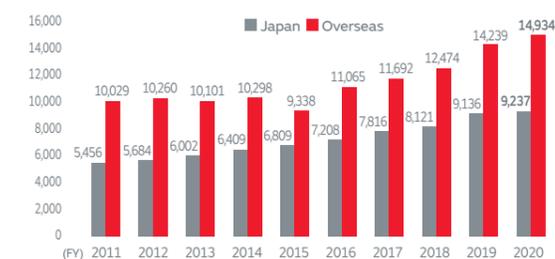
Number of international patent applications in 2020 published by World Intellectual Property Organization (WIPO)



Number of U.S. patents in 2020 publicly disclosed by Intellectual Property Owners Association (IPO)



Trends in the number of patents owned by Murata



Initiatives for intellectual property  
<https://corporate.murata.com/en-global/csr/governance/ip>

Our Quality Policy is the basis of our approach to providing superior quality that gains the trust and satisfaction of customers. In addition to addressing the quality of products and services, Murata continuously improves the quality of all processes and systems relating to design, procurement, production, human resources, goods, structures, and technologies, and strives to maintain optimal conditions in all facets of our operations.

## Quality Management System (M-QMS)

M-QMS is the company system including all activities concerning making products and services based on the Murata Philosophy and Quality Policy to guarantee Murata quality for customer satisfaction and social satisfaction.

We positioned "Upstream management," "Prevention," and "Continual improvement" as three principles. Everyone manages the quality of each process with the concept "Quality of Everything" for customer satisfaction and social satisfaction.



# Murata's core competencies

## Core competencies 1 The power to read the future

Since most of our sales are generated from products with high shares in global markets, we have opportunities to communicate with customers in a wide range of industries, which allows us to stay ahead of and anticipate customer needs. Using "marketing by everyone" as our motto, we leverage our global network to anticipate customer needs ahead of any other company, and each employee maximizes value offered to customers.

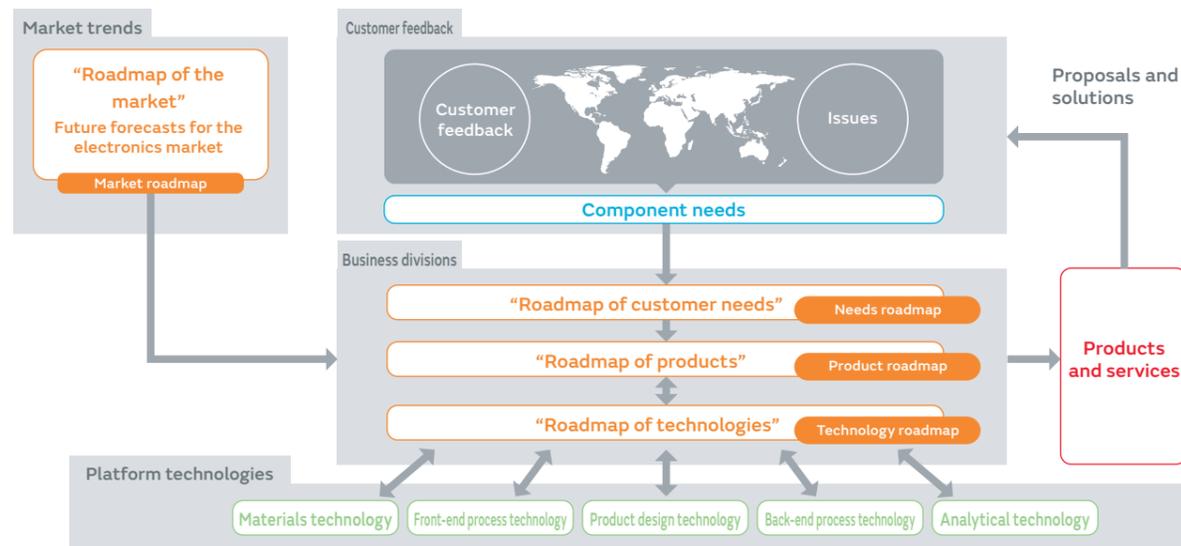
### Formulation of roadmaps leveraging marketing capabilities

New technologies such as IoT, automated driving, and AI in the 5G era will change not only individual electronic devices, but also transportation systems, cities, and society as a whole. We have strengthened our efforts to look to the future and provide optimal solutions to our customers by boosting cooperation among sales, marketing, development, and production in order to continue to provide value to our customers in this vastly changing business environment.

As one of those activities, we have formulated four roadmaps. The Sales & Marketing Unit evaluated general trends in the market and produced the Market Roadmap, and the sales and marketing departments in each area and the sales promotion department of the business

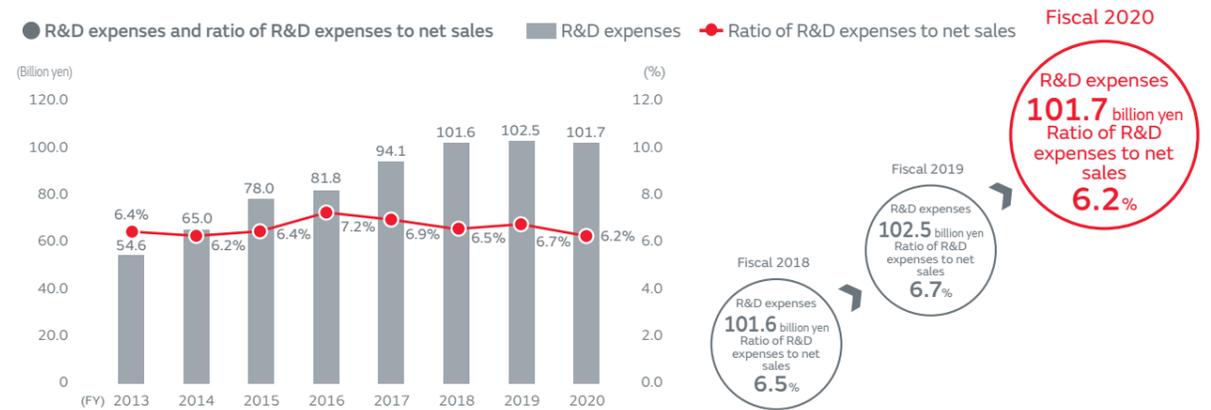
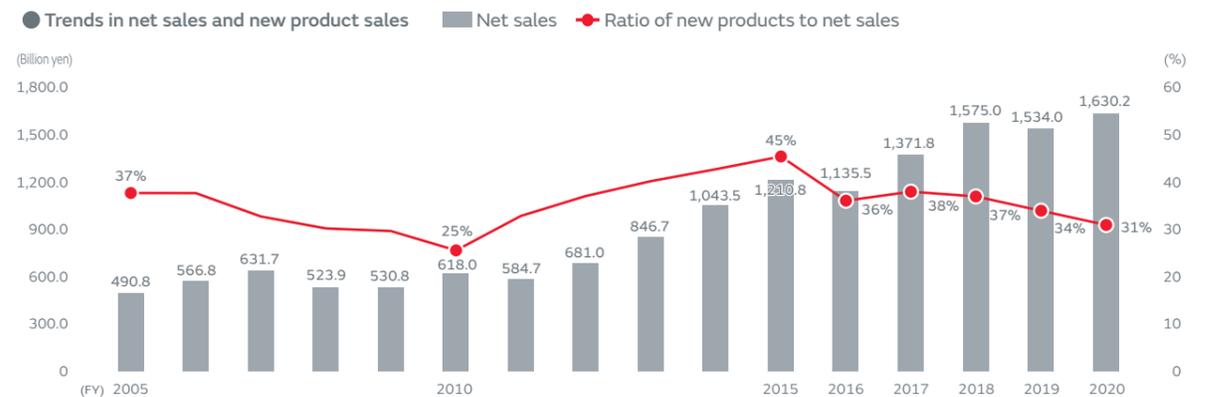
divisions integrated this Market Roadmap with customer needs over the medium to long term, thereby composing the Needs Roadmap. These are connected to the Product Roadmap and the Technology Roadmap by the development department.

Roadmaps are revised every year and reconnected to R&D and product development. Based on the roadmaps, product technologies that offer the highest level of technical services to customers play the role of finalizing the services as a product as they respond to customers on the frontline during the new product development phase and provide feedback on detailed needs to the development department.



## Core competencies 2 The power to give shape to needs

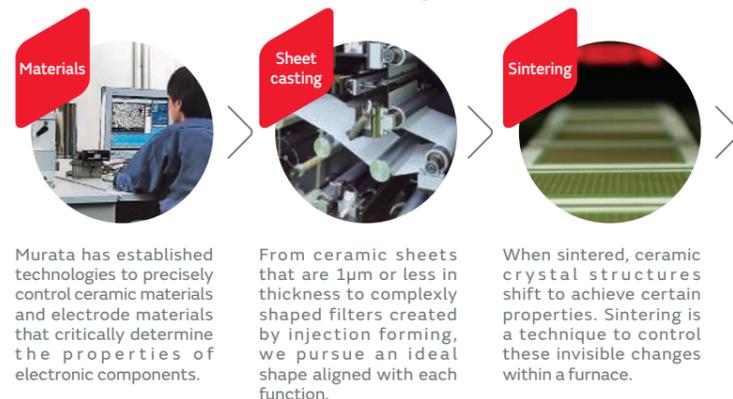
Murata has built an integrated system of manufacturing, from raw materials to finished products, and we have independently developed technologies in the application of materials and other such core areas of our operation, obtaining a level of expertise that many other companies have not been able to reach. Through continuous investment in innovation, we have sought to differentiate our products, and this has become one of major factors in Murata's strengths.



## Core competencies 3 The power to deliver value

Murata's technologies are directly aligned with our strategic markets and customers. Murata internally develops materials, processes, products and production technology. By vertically integrating our manufacturing operation and conducting global and decentralized production, we have optimized the value we can deliver to customers in a swift and timely manner, while leveraging the largest production capacity in the industry.

### Murata's monozukuri (manufacturing)



### TOPICS

#### The annual production of capacitors is about 1 trillion

Murata produces about 1 trillion capacitors per year as its main product. The total length of 1 trillion capacitors would be equivalent to about 15 laps of the Earth if each capacitor was 0.6mm in length.

Murata provides reliable and quality products and services utilizing the platform technologies including material, processing, designing, and production technologies that it has established as well as the global supply system.



# Stakeholder engagement

## Communication with stakeholders

Murata has a variety of stakeholders, including customers, employees, shareholders, investors, suppliers and members of local communities. Companies cannot operate without social trust. For that reason, we believe it is necessary to listen to the

opinions from stakeholders and strive to respond to their requests. We aim to co-create new value with stakeholders through close communication with them, thereby realizing the Murata Philosophy and sustainable growth.

|                                     | Relationship with stakeholders   | Means of communication  | Department(s) in charge  |
|-------------------------------------|--|---|--|
| <b>Customers</b>                    | At Murata, the values of "CS and ES"* are regarded as key values in our management. In order to realize them, Murata strives to understand customer needs through technology exchange meetings, etc. at an early stage of planning, development and designing phase of new products. By resolving customers' issues and responding to their needs through such activities, Murata endeavors to build long-term trusting relationships with customers.  | <ul style="list-style-type: none"> <li>• Daily business activities</li> <li>• Product exhibition and online seminar</li> <li>• Website</li> </ul>   | Sales department<br>Other departments in each business division  |
| <b>Employees</b>                    | At Murata, the values of "CS and ES"* are regarded as key values in our management. Murata aims to be a company where each and every employee achieves satisfaction and continues to grow through the performance of their work duties. To foster such company culture, we are committed to improving the work environment and take various measures. (p.86 Respect for human rights and diversity)  | <ul style="list-style-type: none"> <li>• Policy briefing session by the president</li> <li>• Employee survey</li> <li>• Employee training (job grade-specific training programs/philosophy education, etc.)</li> <li>• Discussion with executives</li> <li>• Internal portal site/newsletters</li> <li>• Whistle-blowing system and consultation hotlines</li> </ul>  | Personnel department<br>Sustainability department<br>Corporate communications department<br>Legal affairs department |
| <b>Shareholders and investors</b>   | Murata strives for timely, accurate and fair disclosure of information to shareholders and investors. Murata is also engaged in constructive dialogue with shareholders and investors with the aim of achieving sustainable growth and increasing the corporate value.   | <ul style="list-style-type: none"> <li>• Briefing session for securities analysts and investors (Information meetings, earnings release conference)</li> <li>• Meetings with securities analysts and investors in Japan and overseas</li> <li>• Shareholders' Meetings</li> <li>• Company website (IR)</li> </ul>   | IR department<br>General affairs department  |
| <b>Suppliers</b>                    | At Murata, we consider it important to build mutually trusting relationships with suppliers that enables us to thrive and prosper together. We work with suppliers to improve our unique technologies and management technologies, and build trusting relationships by treating them sincerely, with impartiality and fairness, while complying with laws and regulations and abiding by social ethics. We also conduct business activities with an emphasis on human rights and the environment. (p.93 Supply chain management) | <ul style="list-style-type: none"> <li>• Interaction with suppliers in daily procurement practice</li> <li>• Website exclusively for suppliers</li> <li>• Hotline for suppliers</li> <li>• On-site audit for suppliers</li> <li>• Questionnaire for suppliers</li> <li>• Initiatives with suppliers to improve quality</li> </ul>   | Procurement department<br>Quality control department<br>Manufacturing department                                     |
| <b>Members of local communities</b> | Murata aims to become a "presence in local communities that is a source of pride and joy to those communities" In order to achieve this, Murata has made efforts to build trusting relationships with the people of the region while gaining their understanding toward Murata's business and initiatives by continuously engaging in activities that lead to solutions to the problems of the region in which we conduct business. (p.89 Coexistence with local communities)  | <ul style="list-style-type: none"> <li>• Discussion and information exchange meeting with the local government, local communities, residents, and NPO in areas where our factories or offices are located</li> <li>• Factory tour</li> <li>• Participation/sponsorship for local events</li> <li>• Volunteer work of employees in the area</li> <li>• Providing visiting class on science, STEAM, career, etc.</li> </ul> | General affairs department<br>Affiliates   |

\* CS and ES: Please see p.21 Murata's management capital.

## Case study

**Dialogue with customers**

**Continuing to co-create value with customers by the appropriate communication means in accordance with changes in the environment**

Murata aims for the management that creates a virtuous cycle of social value and economic value to be trusted by customers and remain the company of choice. Murata utilizes the global network as its strength to provide value to customers from a perspective of QCDS\* and resolving social issues. To maximize the value provided to customers, it is essential to understand their needs by closely communicating with them. We have had less opportunities to communicate with customers in person due to the COVID-19 pandemic, however, we have actively used digital communication including online discussion and seminars to optimize customer

communications. We take appropriate measures in accordance with changes in the environment and realize sustainable growth of corporate value through communication with customers.



Online seminar

\* QCDS - Quality, Cost, Delivery (delivery date and availability) and Service (response and support)

**Communication with employees**

**Providing opportunities for "chatting and consulting" to create new value**

Murata aims for autonomous and decentralized organizational management. In order to achieve it, we believe it is necessary that the President's intentions are shared with and understood by employees. Murata introduced a new internal communication tool and delivers the messages from the President to employees all around the world. It engages employees in active two-way communication; they can ask questions, consult or make suggestions to the President.

Employees say they feel "closer to the president," "happy to be receiving answers from him directly," "the President gives tips for their actions and thoughts," and

"they can obtain management information in a timely manner." The revitalization of the organization has been the foundation for new value creation.



Internal communication tool "Chitchat with president"

**Communications with shareholders/investors**

**Co-creating value with shareholders and investors through active communications**

Murata conducts various IR activities so that shareholders and investors would understand the actual situation of the company and our management ideology. We provide analysts and institutional investors with over 600 communication opportunities including quarterly earnings release conferences, information meetings and individual meetings. We also communicate with individual investors through general meetings of shareholders, etc. We share valuable opinions received from them with the Board of Directors and Vice Presidents and reflect them in our management strategies and initiatives to

expand information disclosure. Murata also strives to sustainably increase corporate value through internal IR activities\* by the IR department to raise employee awareness for shareholders and investors.



Internal IR activities (conducted in FY2019)

\* Internal IR activities - Providing feedback to executives and employees based on opinions received through communication with institutional investors, etc.

## Medium- to long-term business environment (opportunities and risks)



### Expansion of the usage of electronics

- Continued growth of the telecommunication market, e.g., buildout of 5G infrastructure, spread of IoT, device diversification
- The definition of automobiles will change, along with the advance of automobile electrification and autonomous driving
- ▶ **Along with these changes, there will be big changes in industrial structure and the definition of customers**
- ▶ **We need to strengthen our intelligence function to respond to diversifying needs and produce continuous technical innovation**

### Increasing geopolitical risks

- U.S.-China decoupling is underway and becoming an important precondition in managing business
- The combination of global tides (e.g., responding to environment and human rights) with regional economic policies will lead to new regulations
- Remarkable growth by the competitors in Greater China; intensifying battle to take world initiatives
- ▶ **Monozukuri and supply chain will be undergoing drastic reform**

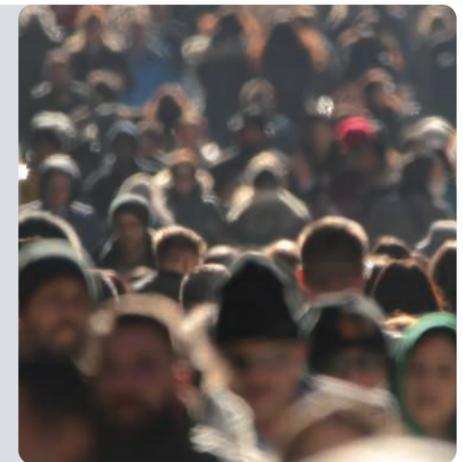


### Transition to a sustainable society

- A shared awareness worldwide of the transition to a sustainable society; growing stakeholder demands and expectations of enterprises
- Growing awareness of environmental measures, stronger environmental regulations
- Strong demand to increase both economic value and social value
- ▶ **The pursuit of sustainable operations will be the source of our competitive advantage in the future**

### Changing population structure and balance of power

- The population is declining in industrialized nations, but growing sharply in emerging countries. The world population structure is changing
- In particular, we expect India's economic growth to gain momentum and the systems of the international community to change
- Industrialized nations facing various problems relating to their population aging. People putting more value on health
- ▶ **Increasing importance of preparing for the very long term**



### Advancement of digitalization

- Increasing use of big data, 5G, local 5G, etc.; reform of business activities themselves, mainly involving monozukuri
- Diversification of means of communication with outside parties. Most points of contact are shifting to the digital space
- ▶ **Speed of digitalization is increasing at customers and competitors; if we fall behind, we will be less competitive**

### Response to post-pandemic society

- Merging of in-person and online in various settings
- Changes in values regarding work styles and workplaces
- Diversification and decentralization of business activities (procurement, production, logistics, etc.)
- ▶ **The pursuit of diversity in work styles and interfaces with the outside world will help increase work quality, productivity, and competitiveness**



## Vision 2030 (long-term direction):

In order to respond to a drastic change in the environment and to continuously increase the corporate value, Murata established Vision 2030 as

the long-term direction that gives detailed guidance as to the necessary preparations while inheriting the fundamental principles from Vision 2025.

### Innovator in Electronics

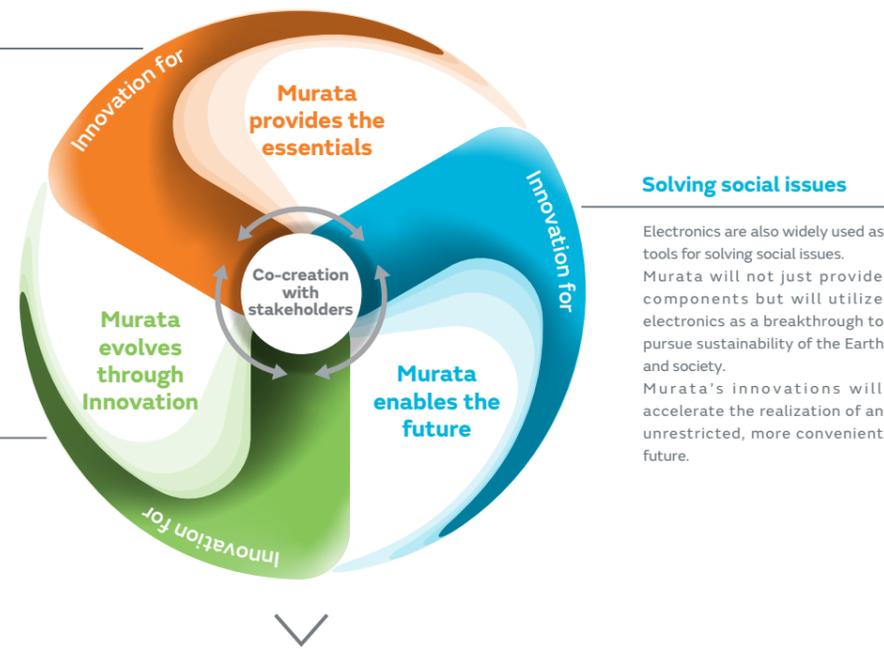
**Murata will innovate to create a virtuous cycle of social and economic value and contribute to the enrichment of society.**

#### Murata in everyday life

Murata's electronic components are used as an essential part of the social infrastructure for enriching people's basic needs. Murata will continue to respond to society's needs with constant innovation and promote the evolution of components. Murata's components are broadly and deeply rooted in society and support people's everyday lives.

#### Practicing sustainable operations

Murata will innovate to reduce the impact of our business operations on society and the environment. We are committed to realizing our business processes that are in harmony with society.



#### Solving social issues

Electronics are also widely used as tools for solving social issues. Murata will not just provide components but will utilize electronics as a breakthrough to pursue sustainability of the Earth and society. Murata's innovations will accelerate the realization of an unrestricted, more convenient future.

**Global No. 1 Component & Module Supplier**  
Murata will be the best choice for customers and society

## The value creation Murata aims for as an Innovator in Electronics

The expression "Innovator in Electronics" embodies Murata's desire to be "a leader in innovation for the electronics industry." By putting this idea into practice and by building solid, trusting relationships with our customers, Murata has established a global brand of capacitors and communications components.

On the other hand, as the scale of our business has grown and Murata has become a large enterprise, our impact on society is much greater than before. For Murata to proactively create value as a true Innovator in Electronics without being swallowed by the powerful tides of change going forward, it is important that we expand the scope of the value we provide from just "innovation for customers" to also include "innovation for solving social issues." In addition, there is already a shared awareness worldwide of a transition to a sustainable society. Vision 2030 depicts where Murata wants to be, that

is, how Murata can uniquely contribute to achieving the sustainability of society and our enterprise.

As a growth strategy to get where Murata wants to be, we will "deepen core businesses and promote evolution of business models" and "execute four management transformations." With these visions, Murata will ensure the coherence of the initiatives towards 2030 to get where Murata wants to be. And in achieving that, Murata aims to be "the best choice" for customers and society as well as the global No.1 component & module supplier.

## Bringing together diverse personnel from around the globe, we aim to be innovators as individuals and as an entire organization

Bringing together diverse personnel and enabling them to play an active role that takes advantage of their individuality is the key to responding flexibly to intense change and uncertainty and continually innovating. Murata honors differences such as race, nationality, religion, belief, disabilities, gender, age, place of origin, sexual orientation and respects the invisible diversity of our employees, including capabilities, knowledge, and experience. We will continue to foster a culture where all employees can use their varying experience to enhance their capabilities and demonstrate their strengths.

It is particularly important that diverse individuals help each other to improve, engage in dialogue with each other, and sympathize with the Murata Philosophy and Vision. By respecting the diversity of individuals and building trust, connections, and harmony across teams, departments, and sites, Murata can continue to be an innovator as an entire organization that solves its customers' needs and social issues.

## Vision 2030: A growth strategy to get a Murata vision

### Growth Strategy

①

#### Deepen core businesses and promote evolution of business models

##### 3-layer portfolio

- Standard-products business (EI)
- Application-specific components business (ASC)
- Creation of new business models

##### Business opportunities

- |                  |                                |
|------------------|--------------------------------|
| Core fields      | ● Communications<br>● Mobility |
| Challenge fields | ● Environment<br>● Wellness    |

### Growth strategies

②

#### Execute four management transformations

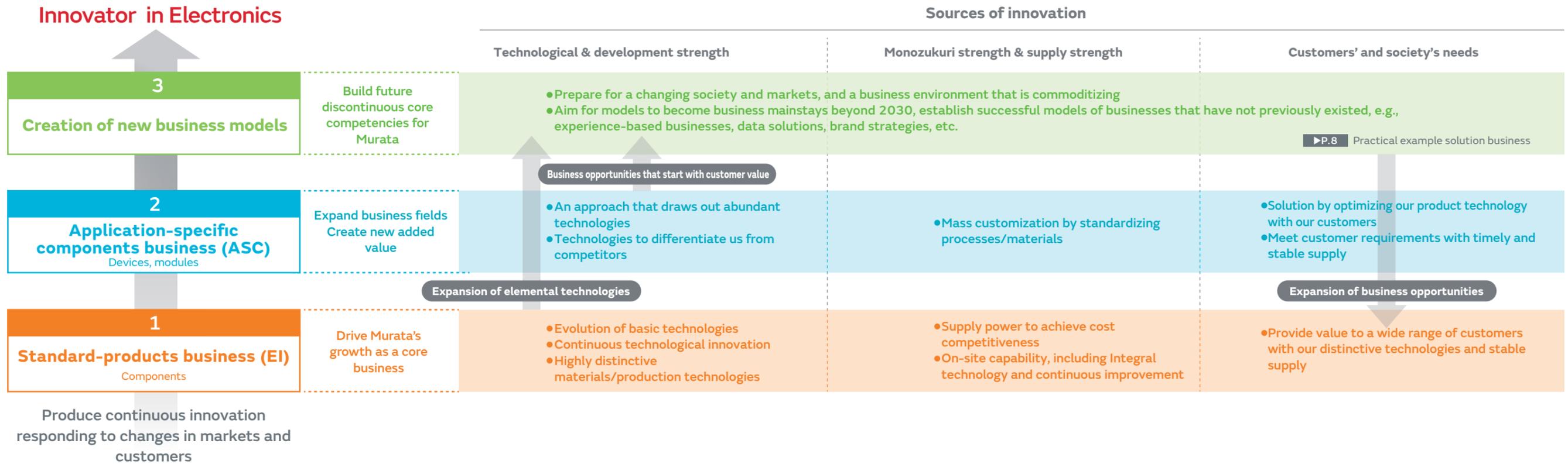
1. Management that creates a continuous cycle of social value and economic value
2. Autonomous and decentralized organizational management
3. Change-responsive management based on hypothetical thinking
4. Digital transformation (DX)

# Vision 2030 growth strategy ①: Deepen core businesses and promote evolution of business models

In order for Murata to continue to create value as an innovator in the drastically changing electronics industry, it is necessary to capture the global trends of technology and changes in society and reflect them in business management. In order to create various

innovations looking ahead to the future from a long-term perspective, Murata uses a three-layer portfolio in its business management and focuses on four key fields with business opportunities to create value.

## 3-layer portfolio



## Four business opportunities

**Core fields**

**Communications** All types of things will be connected and optimized by communications

As communications systems change to 5G and then to 6G, business opportunities will expand even further. We will correctly grasp the diversifying applications, changing customer structure and continue to offer value, taking an overwhelming lead with technological innovation that ensures we continue winning, even in an increasingly competitive environment.



**Mobility** Automobile industry entering an age of once-in-a-century revolution

We will redefine the market in a broader sense as "mobility." In addition to contributing to the evolution of the automobile (in-car) as the global No. 1 component manufacturer, we will aim to capture business opportunities in the broader sense of mobility (out-car). We will deepen our understanding of diversifying customer requirements in the mobility field and steadily produce results and build reputation.



**Challenge fields**

**Environment** Markets where promises have been made to become a sustainable society

Murata aims to create innovation bringing together our business and solutions to the energy issue and other environmental issues. We will take initiatives to respond to the environment to secure a competitive advantage as well as firmly catch hold of the growing opportunities, starting with the battery and power supply business, and take on the challenge of creating new businesses.



**Wellness** Pursuing new prosperity for an age when people's expected lifespan reaches 100 years

We will use Murata's technology and our know-how in the electronics field to help the development of the medical field and seek to provide value in terms of preventing sickness and promoting health. We will also produce innovations to achieve new kinds of prosperity including mental health and good interpersonal relations, thereby realizing a society where people can live a healthy and prosperous life.



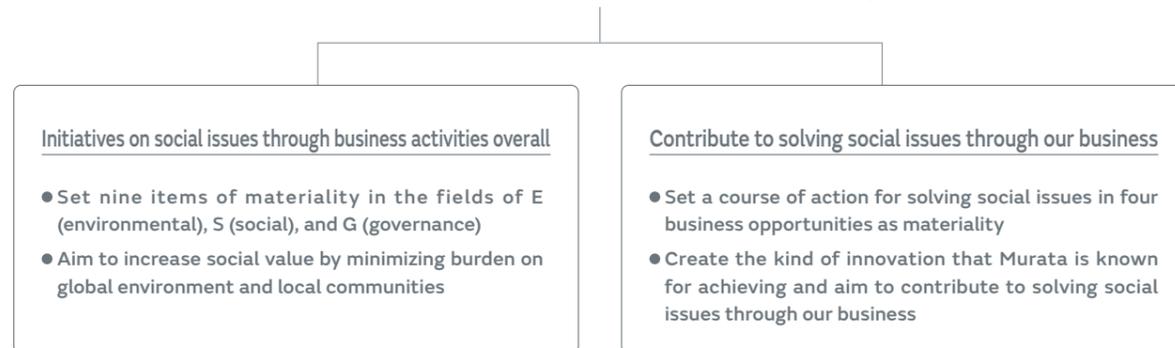
# Growth strategy ②: Execute four management transformations

## Management transformation 1: Management that creates a continuous cycle of social value and economic value

Murata strives to increase the value it provides to society (social value) while creating a continuous cycle of social value and economic value, and aims to be a company of choice, being trusted by stakeholders

as the global No.1 component manufacturer. In order to achieve this vision, we will set targets for key issues (materiality) originating with social issues and accelerate our efforts to solve them.

### Key issues (materiality) in relation to issues facing society



### Contribute to solving social issues through our business ▶P.31



### Initiatives on social issues through business activities overall ▶P.73



## Management transformation 2: Autonomous and decentralized organizational management

We hope to transform Murata's organizational management to be more autonomous and decentralized so that we can continue to practice the Murata Philosophy, provide value, and continue growing even as the environment changes drastically.

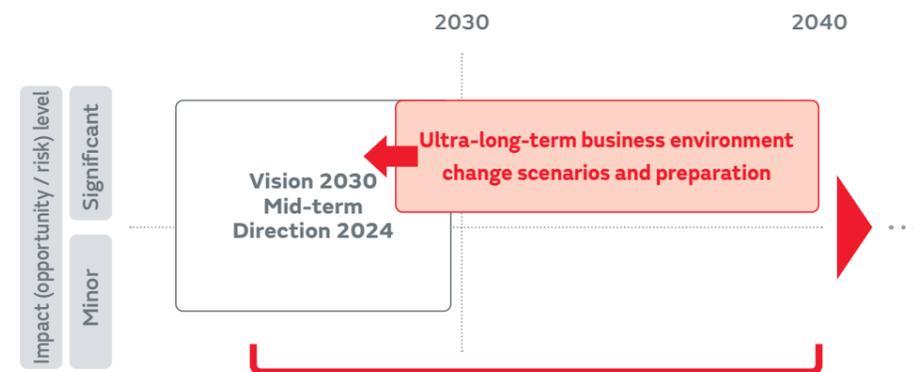
### [Three aspects of focus]



## Management transformation 3: Change-responsive management based on hypothetical thinking

At a time when the environment is changing drastically, we should not be passive, but rather prepare by hypothesizing what might happen in the future, then practice change-responsive business management, which flexibly corrects its course in

response to change. Each function and organization continually gathers information on future changes, discusses them, takes action, and monitors, raising their sensitivity to environmental changes and strengthening their ability to respond to them.



### Strengthen ability to respond to change based on hypothetical thinking

\* Hypothetical thinking: Consider a variety of hypotheses on changes that could occur in our uncertain business environment and change course flexibly in response to change

### Management transformation 4: Digital transformation (DX)

At Murata, we define digital transformation (DX) as an initiative that enables people and organizations (business processes) both inside and outside Murata to connect digitally and freely and make processes shorter, faster, and visible, thereby continually driving to dramatically increase customer value and competitiveness, and we will accelerate the initiatives for the transformation.

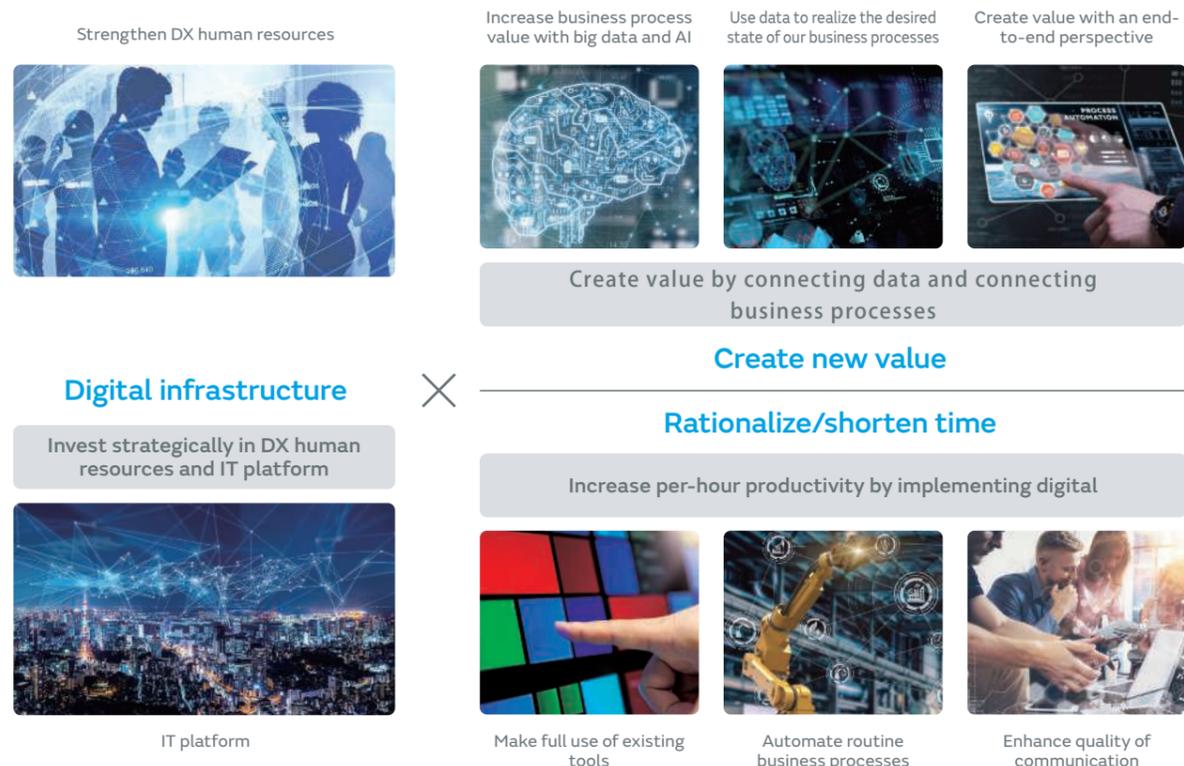
We will establish an organization that promotes the strategy for company-wide DX and works with the executing organization to realize our vision in the domains to strengthen and core fields, accelerating the overall digitalization.

|                       |  |
|-----------------------|--|
| Domains to strengthen | <ul style="list-style-type: none"> <li>● R&amp;D: Accelerate the development of elemental technologies and new technologies by utilizing AI and MI (Machine Intelligence)</li> <li>● ECM/SCM*: Transform monozukuri in a broad sense, including ECM/SCM, envisioning how monozukuri should be in ten years' time</li> <li>● Customer contact: Strengthen the connection with customers not just individually but from an end-to-end perspective, thereby co-creating value with them</li> <li>● Business management: Promote business portfolio management and enhance business management to improve the ability to respond to changes</li> </ul> |
| Core fields           | <ul style="list-style-type: none"> <li>● DX human resources/IT platform: Invest strategically to develop digital human resources and improve IT infrastructure as a foundation for DX</li> </ul>   |

\* ECM/SCM: Engineering Chain Management / Supply Chain Management

#### Murata DX policy

Increase per-hour productivity by continually investing in digital infrastructure and making full use of digital. Encourage use of data, connect business processes to each other, and create new value. Also contribute to Layer 3 portfolio domain. By executing and practicing these things, we will foster a corporate culture of ongoing transformation.



## Mid-term Direction 2021 review

In 2018, Murata established "Mid-term Direction 2021" as the policy for the next three years (from FY2019 to FY2021). With "Mid-term Direction 2021," we aimed to provide value to customers by rebuilding strong business foundations to support our growing business and by capturing broadening business

opportunities. We also aimed to be a company where each employee plays an important role, feel rewarded and grow through their work. We identified three group-wide issues to achieve continuous and sound growth, and strived to solve these issues.

### Management targets

|  | Target         | FY2019 results    | FY2020 results    | FY2021 forecast <sup>1</sup> |                                   |
|--|----------------|-------------------|-------------------|------------------------------|-----------------------------------|
| Net sales                              | 2 trillion yen | 1,530 billion yen | 1,630 billion yen | 1,730 billion yen            | Miss target by 270 billion yen    |
| Ratio of operating income to net sales | 17% or higher  | 16.5%             | 19.2%             | 21.1%                        | Exceeded by 4.1 percentage points |
| ROIC (pre-tax basis) <sup>2</sup>      | 20% or higher  | 16.1%             | 18.5%             | 20.4%                        | Exceeded by 0.4 percentage points |

<sup>1</sup>: From earnings forecast announced on July 29, 2021

<sup>2</sup>: ROIC [pre-tax basis]: Operating income / Invested capital (Property, plant and equipment + Inventories + Trade accounts receivable - Trade accounts payable)

### Mid-term Direction 2021 review

Although we saw a continuous increase in demand for components due to the advancement of automobile electrification and increase of new products for smartphones, we are expecting less-than-projected growth and will miss the sales target due to the production adjustment of electronics and stock adjustment of electronic components in FY2019. The ratio of operating income to net sales is expected to

achieve the target due to improved profitability of each product and improved product mix. ROIC (pre-tax basis) is also expected to achieve the target due to significant improvement of the ratio of operating income to net assets compared with the plan despite tepid sales compared with the plan and delay in the improvement of capital turnover in terms of large-scale investment.

### Towards Mid-term Direction 2024

There were changes in market conditions and difficulties caused by the COVID-19 pandemic, but we take it seriously that our sales growth will be less than planned. We will continue to focus on the ratio of operating income to net sales and ROIC (pre-tax

basis) in the next mid-term Direction. For that reason, we will strive to take portfolio management to a higher level and maximize synergies from M&As made previously and aim to increase our profitability and capital efficiency.

### Group-wide issues

| Group-wide issues  | Review of Mid-term 2021  | Ongoing issues connected to Mid-term 2024   |
|--|--|---|
| Practicing portfolio management  | <ul style="list-style-type: none"> <li>● By introducing a business feasibility model and continually improving it, we have allocated management resources from the perspective of Group-wide optimization.</li> <li>● We reconsidered our business portfolio (Battery, Connectivity Module business etc.)</li> </ul> | <ul style="list-style-type: none"> <li>● Evolution of portfolio management (realizing a three-layer portfolio)</li> <li>● Expand business with a new understanding of the market in a broader sense (automobile → mobility)</li> </ul>  |
| Dramatically increasing productivity and building a stable supply system | <ul style="list-style-type: none"> <li>● We have introduced a supply chain planning (SCP) system and started its operation.</li> <li>● At monozukuri sites, we have made a progress in various issues towards improvement of productivity and reduction of production loss.</li> </ul>                               | <ul style="list-style-type: none"> <li>● Increase productivity of monozukuri in a broad sense, including ECM and SCM, and enhance the ability to respond to change</li> <li>● Develop a concrete personnel strategy using results of employee surveys and execute it</li> </ul> |
| Harmonization between people, organizations, and society                 | <ul style="list-style-type: none"> <li>● We have identified key issues (materiality) and set KPIs for raising degree of contribution to solving social issues and built system for further promoting these.</li> <li>● We have conducted employee surveys to improve the organizational culture.</li> </ul>          | <ul style="list-style-type: none"> <li>● Strengthen initiatives to link contributions to solving social issues to business growth</li> </ul>  |

# Mid-term Direction 2024

Vision 2030, which was established as a long-term direction, sets out the necessary preparations in details as well as the direction the company aims for. And the first phase to achieve Vision 2030 is set forth in "Mid-term Direction 2024" (FY2022 to FY2024).

In this three-year period, in addition to solving the currently existing problems, we strive to capture the changes in the environment from a long-term perspective and perform backcasting to identify necessary preparations to get where we want to be.

## Basic policy



- Management transformation**
  - Management that creates a continuous cycle of social value and economic value
  - Autonomous and decentralized organizational management
  - Change-responsive management based on hypothetical thinking
  - Digital transformation (DX)
- Portfolio management (higher level)**
  - Practice portfolio management that uses a 3-layer structure and rejuvenate our technology and business
    - Layer 1: Components  
We will secure business opportunities in the growing market while working to increase business efficiency and achieve lean business operations
    - Layer 2: Devices/modules  
We will earn competitive advantage by establishing a healthy business portfolio and pursuing differentiation with technologies rooted in customer needs
    - Layer 3: New business models  
We will create value by combining the first and second layer and will develop businesses that are designed not just to sell components but are based on solutions wherein customers will recognize the high added value we offer
- Form a lean management base**
  - Enhance work quality and increase work productivity
  - Strengthen business operations during the ongoing COVID-19 pandemic and strengthen personnel and organizational capabilities for the post-pandemic period
  - Continue to strengthen quality foundation
- Preparation for 2030**
  - Work on issues to achieve the innovation that Murata aims for by combining the 3-layer portfolio with the four business opportunities
    - Strengthen monozukuri in wide meaning and promote its evolution
    - Strengthen the power to sell and power to support and promote their evolution
    - Strengthen the ability to respond to geopolitical and other management risks
    - Promote development of elemental technology that will be core technologies of the future
    - Practice open innovation to achieve co-creation of value

## Group-wide targets

| Economic value                          | Social value ①: "Environment"  | Social value ②: "Diversity"  |
|---|--|--|
| Net sales<br>2 trillion yen             | Amount of GHG emissions <sup>*1</sup><br>(vs fiscal 2019)<br>FY2024: 20% reduction<br>FY2030: 46% reduction                    | Renewable energy implementation rate<br>FY2024: 25%<br>FY2030: 50%<br>FY2050: 100%               |
| Operating income ratio<br>20% or higher | Sustainable resource usage rate <sup>*2</sup><br>FY2024: 1% <sup>*4</sup><br>FY2030: 25%<br>FY2050: 100%                       | Resource recycling rate <sup>*3</sup><br>FY2024: 5% <sup>*4</sup><br>FY2030: 50%<br>FY2050: 100% |
| ROIC (before tax)<br>20% or higher      | Percentage of overseas indirect employees <sup>*5</sup><br>with experience working at other sites<br>FY2024: 7%<br>FY2030: 10% | Positive employee engagement response rate<br>FY2024: 70% or higher<br>FY2030: 76% or higher     |

● We will continue to view the ratio of operating income to net asset and ROIC as key indicators. Murata aims for a sound management by "focusing on capital efficiency as well as productivity, and keeping ROIC at 20%."

● Murata is planning to invest strategically in environment, acquisition of technologies, risk measures and enhancement of IT infrastructure in advance to be prepared for the future in addition to capital investment for the expansion of production capacity. Considering these factors, we set targets to ensure a healthy growth.

**"Environment"**

● In order to tackle global environmental issues that are becoming more serious, Murata considers responses to climate change including decarbonization and use of sustainable resources as important issues to be addressed by all the business divisions and employees at Murata.

● Regarding climate change measures, Murata will contribute to the reduction of greenhouse gas emissions in manufacturing processes through business operations in line with the RE100 and SBT (Science Based Targets). In addition, we will promote the sustainable use of resources in our business while contributing to solving environmental issues through co-creation with collaborators.

**"Diversity"**

● Murata can remain an innovator by respecting the diversity of individuals and building trust, connections, and harmony across teams, departments, and sites. For that purpose, Murata will promote human resources with diverse experience at other global sites and global collaboration opportunities.

**"ES"**

● Murata emphasizes ES as an important value and aims to realize the organization culture where employees feel rewarded and grow through their work. In order to improve employee engagement, we consider it necessary for each organization to strive to continually improve the culture.

\*1: Total of Scope 1 and Scope 2  
 \*2: Sustainable resources: Resources with lower risk of depletion that can be used sustainably by building a recycling scheme, etc.  
 \*3: Resource recovery rate: Rate of Murata's output (emission) recycled as resources  
 \*4: Target at FY2024 indicates the improvement range from the current state  
 \*5: Overseas local staff excluding expats from Japan

## Capital allocation policy

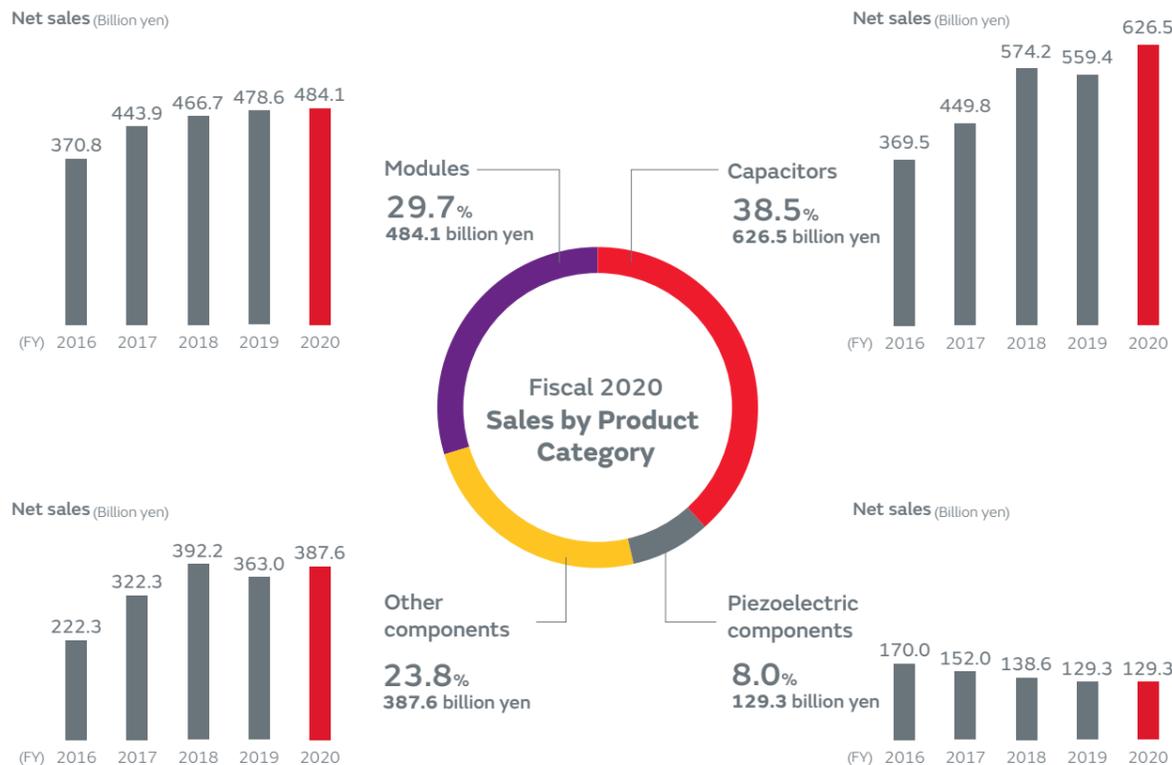
- Continue investing in main businesses (components, devices/modules) and steadily generate cash
- Treat long-term environmental investment, acquisition of technologies, risk countermeasures, IT infrastructure, etc., as strategic investments and actively pursue them
- Meet stakeholder expectations by maintaining a solid financial footing while using surplus funds to expand shareholder returns, including stock buybacks



\* From earnings forecast announced on July 29, 2021

# Strategies by product

## Sales breakdown by product and its trend



## Reclassification of disclosure segment and net sales classification

From FY2022, which is the first year covered in the “Mid-term Policy 2024,” Murata will disclose information based on its three-layer portfolio. By changing the disclosure segments, Murata will

improve the transparency of management, have more active communication with stakeholders, and promote autonomous and decentralized organizational management.

- FY2021

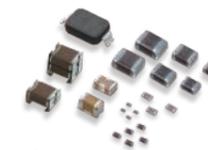
| Segments   | Net sales classification | Main products  |
|------------|--------------------------|--|
| Components | Capacitors               | Multilayer ceramic capacitors  |
|            | Piezoelectric components | SAW filters<br>Piezoelectric sensors<br>Resonators   |
|            | Other components         | Inductors<br>EMI suppression filters<br>Lithium-ion batteries<br>Connectors<br>Sensors<br>Thermistors                        |
| Modules    |                          | RF modules<br>Multilayer devices<br>Connectivity modules<br>Multilayer resin substrates<br>Power supply modules<br>Solutions |
| Others     |                          | Machinery manufacturing<br>Sales of software   |

FY2022 -

| Segments        | Net sales classification                          | Main products  |
|-----------------|---|--|
| Components      | Capacitors  | Multilayer ceramic capacitors  |
|                 | Inductors/EMI filters                             | Inductors<br>EMI suppression filters   |
| Devices/modules | High frequency devices and communications modules | SAW filters<br>RF modules<br>Multilayer ceramic devices<br>Connectors<br>Connectivity modules<br>Multilayer resin substrates |
|                 | Battery and power supply                          | Lithium-ion secondary batteries<br>Power supply modules  |
|                 | Functional devices                                | Piezoelectric sensors<br>Resonators<br>Sensors<br>Thermistors  |
| Others          |   | Solutions<br>Machinery manufacturing<br>Sales of software  |

# Capacitors

## Multilayer ceramic capacitors (New segment of net sales classification: Capacitors)



### Initiatives in the capacitor business

As demand for multilayer ceramic capacitors (MLCCs) continued to grow globally over a few years through fiscal 2018, Murata worked to expand production capacity, promoted miniaturization, reviewed product portfolios and increased supply volumes.

In fiscal 2020, Murata expected expansion of the 5G market and increased demand for automotive uses, however, the market stagnated because of the COVID-19 pandemic in the first half of the fiscal year. On the other hand, telecommuting and staying at home created new demand for MLCCs in certain markets. Murata has a global production and sales network for MLCCs, which enables it to be adopted by customers in various markets. Murata was able to continue production and sales activities and increase sales even in the rapidly changing environment.

Over the medium-term, we are expecting to see new demand for applications in communications infrastructure along with the spread of 5G, in addition to increased demand for compact large-capacity products for use in communications devices and highly reliable products for use in automobiles. We are allocating management resources to products that address such demand and developing new products, while also implementing initiatives to enhance productivity by promoting the use of smart factories.

In addition, we will enhance our range of capacitors to address the diverse needs of our customers, add non-ceramic products such as film capacitors, silicon capacitors to our portfolio, and offer new solutions with high reliability suitable for usage environments in the automotive and healthcare/medical markets.

### Multilayer ceramic capacitors for consumer

The multilayer ceramic capacitor (MLCCs) is an electronic component with external electrodes electrically and mechanically bonded to a substrate, attached to repeatedly stacked internal electrodes and ceramic dielectrics such as calcium zirconate and barium titanate. It is a highly reliable nonpolar capacitor with high withstanding voltage and insulation resistance, superior frequency characteristic and heat-resisting characteristics, durability, and long service life.

MLCCs are employed in mobile equipment and home appliances as well as IT devices and network infrastructure equipment, they can temporarily store and discharge electricity, absorb noise in signals, extract signals with certain frequencies, and block direct current and pass alternating current only.

MLCCs are also used for applications for which high reliability is required, including automotive, medical, and aerospace equipment. In particular, about 1,000 MLCCs are used in one high-end smartphone. Even low-end or midrange models use 300 to 600 MLCCs per unit.

Regarding MLCCs for consumer devices, as communications devices have more advanced functionality and batteries become bigger, the market demand has increased for smaller and high-capacity capacitors. In order to meet such demand, Murata has developed various products and they have become highly competitive capacitors. Recently, the main product size has shifted from 1005M (1.0 × 0.5mm) to 0603M (0.6 × 0.3mm), and for wearable devices and small modules, 0201M (0.25 × 0.125mm), the smallest size commercialized in 2014 has been increasingly adopted. Since market needs are expected to grow further for smaller components and high-density mounting, Murata will continue to improve its ceramic material pulverization and multilayer technology and propose new product design and easier-to-use solutions.

### Multilayer ceramic capacitors for automotive

MLCCs for automotive application are used in harsh environment, namely high temperature, high humidity and high power. For MLCCs used in automotive application, stricter regulations have been set in the areas of product material selection, design standards, product performance, and process management to achieve higher reliability and longer product life, even though materials and processes are generally the same as those in consumer MLCCs.

MLCCs have been increasingly used for hybrid cars and electric vehicles, as well as self-driving cars and their related equipment for ADAS and safety, including ECU, cameras and sensors, which boosts the productions. Moreover, components employed by many customers are becoming smaller and the main size is shifting to 1005M (1.0 × 0.5mm) from 1608M (1.6 × 0.8mm), and demand for 0603M (0.6 × 0.3mm) is increasing. Also, these satisfy requirements of temperature cycling tests and high-temperature and high-humidity load tests at 150°C, a step up from the previous guarantee of 125°C. Furthermore, more products meet requirements specific to in-vehicle applications regarding static electricity and surge tests (ISO7637-2). Recently, products that can be used in higher temperature environments are in demand.

To respond to tough market demands as stated above, Murata has developed more reliable

materials, ensured product design margins, and established strict inspection standards for the production process to realize highly reliable products suited to use environments. In 2017, Murata succeeded in commercialization of lead-type resin-coated MLCCs resistant to 200°C, and customers are considering adoption. Furthermore, various types of MLCCs according to the use environments have been commercialized, such as water-repellent products and MLCCs with metal terminals jointed.

Also in automotive MLCCs, Murata will continue to create new value for society by developing ceramic

materials and improving process and inspection technologies toward creating smaller, more highly reliable, and higher-performance components.

Moreover, there is a strong desire in the in-vehicle system market for the stable supply of Murata's highly reliable components, and to respond to such expectations as the market leader, we are making a maximum equipment investment at domestic and overseas plants. Murata will continue to deliver products with safety and security by identifying customers' product and supply needs as a continuously trusted company.

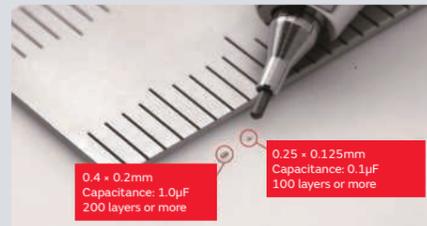
**TOPICS**

**Winning Excellence Awards at 2020 Nikkei Superior Products and Services Awards for "GRM02" and "GRM01" series, small, large-capacity multilayer ceramic capacitors**

Murata's series of 0402M(0.4 × 0.2mm), a maximum capacitance of 1.0μF, and 0201M(0.25 × 0.125mm), a maximum capacitance of 0.1μF, multilayer ceramic capacitors were selected for Excellence Awards at the 2020 Nikkei Superior Products and Services Awards.

The multilayer ceramic capacitors recognized by the aforementioned awards accomplish the respectively highest capacitance in the 0.4 × 0.2mm size and 0.25 × 0.125mm sizes based on Murata's proprietary thinning technology for ceramic elements and thin-layer sheet forming technology. These small, high-capacitance products promote the miniaturization of electronic circuitry and contribute to improvements in design freedom needed for enabling high-functioning electronic devices.

Murata will continue to increase development of high-temperature guaranteed products and their static capacitance, work on expanding its lineup in response to market needs, and contribute to the increasing miniaturization and higher functionality of electronic devices.



**Piezoelectric components**

**Surface acoustic wave (SAW) filters**

(New segment of net sales classification: High frequency devices and communications modules)



SAW filter is a filter that can pick out electric signals in a particular frequency band, using the surface acoustic wave that propagates along the surface of the piezoelectric substrate. Ensuring smooth wireless communication between devices requires high-functioning filters that can let through electric signals in a particular frequency band without loss, while eliminating noises of unnecessary frequency bands. There are many types of filters, but the SAW filters that Murata produces can achieve high attenuation, low insertion loss, and small size, so they are most suited for use for smartphones.

Nowadays with the spread of IoT devices other than smartphones, the wireless communications function is added to various applications. The required frequency bands vary for Cellular, Wi-Fi®, Bluetooth®, GPS, etc., and demand for filters has been increasing along with the increased popularity of smartphones. In addition, due to the introduction of 5G, the combinations of frequency bands are becoming more complex and the use of frequency bands below 6 GHz is increasing. These only lead to greater demands for higher frequency and smaller filters with superior composite performance. Murata strives to expand the business with SAW filters by responding to such demands in a timely manner.

Murata has led the industry for a long time with an R&D structure that can create unique technologies, production capability to accommodate demand from many customers, quality control that ensures the supply of reliable products and distribution channels that seamlessly support the entire world. At present, Murata holds the largest production capacity in the industry, and has secured a global share of 50% of the SAW filter market for communications applications.

In order to respond to the new market needs and realize customer satisfaction, Murata will accelerate efforts to create composite products that are compact and with superior features by utilizing proprietary I.H.P. technologies, TC-SAW technologies based on our accurate understanding of customer requirements, while working to strengthen alliances in new technologies. Murata aims to contribute to the development of society and industry by working to differentiate our future product line-up from those of competitors, striving to maintain or build optimum supply structures corresponding to supply-demand balances amid a wildly fluctuating economy.

**Business opportunities**

- New demand for communication infrastructures driven by growing use of 5G and demand for small-size, large-capacity products for communication devices
- Advancements of electrification driven by the electrification of automobiles and growth of ADAS and autonomous driving vehicles

**Competitors**

Samsung Electro-Mechanics (South Korea), TAIYO YUDEN (Japan), TDK (Japan), Yageo (Taiwan), etc.

**Strengths**

- Extensive product lineup/High market share
- Technologies that enable small, high-performance products, and ensure reliability
- Reliable quality and stable supply

**Risks**

- Responses to short-term demand fluctuations amid an uncertain market outlook
- Medium-term slowdown in the overall electronics market due to stagnation in the global economy

**Business opportunities**

- Emergence and expansion of new applications and communication devices for 5G
- Addition of wireless communications functions to IoT devices
- Increasing demand for higher frequency and smaller filters with superior composite performance

**Competitors**

TAIYO YUDEN (Japan), Qualcomm (U.S.), Qorvo (U.S.), Wisol (South Korea), Shoulder (China), etc.

**Strengths**

- Extensive product lineup/High market share
- Superior characteristics (high frequency/broadband/high attenuation/low insertion loss/small size)
- Reliable quality
- Largest production capacity in the industry and reliable supply capability

**Risks**

- Potential moves by customers and component suppliers due to changes in U.S.-China relations
- Intensified competition with other manufactures and entry by low-cost manufacturers into the SAW filter market



## Other components

### Inductors (coils)

(New segment of net sales classification: Inductors/EMI filters)



An inductor is one of the passive components that make up an electronic circuit, along with a capacitor and a resistor. Major products include power inductors used for the power supply circuit and RF inductors used for the high-frequency circuit.

Power inductors are largely related to power conversion efficiency, which is an important performance of dc-dc converters, and the required performance differs depending on the property of the relevant converter to be used. In addition to traditional processes such as ferrite windings and ferrite multilayer, Murata has added the Metal Alloy process owned by Saitama Murata Manufacturing Co., Ltd. (formerly: TOKO, INC.), which became our wholly owned subsidiary in 2016, to its product lineup to achieve further miniaturization and increased performance as well as well-balanced performance at high currents, which is a characteristic of metal alloy technology, and stable performance during operation. By taking advantage of such higher performance of power inductors and Murata's monozukuri (manufacturing) capabilities as our strength, we are growing our business areas while expanding our sales channels not only into the communications market but also into the in-vehicle system market.

RF inductors are used as an inductor for high-frequency circuits for smartphones. The product series that uses the film manufacturing method,

which is Murata's unique process, has been highly regarded due to their unparalleled characteristics, which are compact and have a high Q (quality factor) value, and adopted in many high-frequency circuits. In addition, wire wound RF inductors are used for chokes in high-power amplifiers or for matching, utilizing its high current characteristics and high Q. As for 5G communications, the market is expected to expand for RF inductors through their use not only in smartphones but also in new applications such as IoT, and it is considered that the quantity of RF inductors used will increase. Meanwhile, the market for RF inductors is also expanding in the automotive field due to the shift toward electrification and the addition of advanced communication functions of automobiles such as telematics and V2X. As for RF inductors, which are characterized by compactness and high performance, Murata is expanding its lineup of highly reliable designs for automotive applications.

Murata's inductors are supported by Murata's various manufacturing methods and processes. Murata aims to create innovation through integration of advanced material development, product development, process development and basic technologies (simulations, reliability evaluation, mounting technology, application). We focus on the 5G and automotive markets and work strategically towards them by clarifying the target.

#### Business opportunities

- Increased demand for inductors for smartphones and IoT devices and their improved performance by growing adoption of 5G
- Electrification of automobiles and electrification through ADAS and autonomous driving

#### Competitors

TDK (Japan), TAIYO YUDEN (Japan), Cyntec (Taiwan), Chilisin Electronics (Taiwan), etc.

#### Strengths

- Extensive product lineup/High market share
- Compact size and high Q characteristics achieved by Murata's unique film manufacturing method
- Reliable quality and stable supply

#### Risks

- Stable supply of inductors, meeting increasing demand due to the introduction of 5G and electrification of automobiles



## Other components

### Lithium ion secondary batteries

(New segment of net sales classification: Battery and power supply)



Murata's lithium ion secondary batteries are classified into three types: cylindrical, laminated, and small batteries.

Cylindrical type batteries are reliable, keep for a long time, have high temperature characteristic and have advantages particularly in high-power applications. To leverage these characteristics, Murata focuses on the markets for the driving system and storage batteries that are growing in line with decarbonization. Currently, small engines are used for driving systems (for electric tools, gardening tools, etc.), however, it is difficult to control emissions with them. In accordance with the movements towards decarbonization, petrol engines are being replaced with batteries/motors. As for the storage battery market, Murata will expand its business not only for residential use but also for companies, promoting an integrated energy management system of solar power, storage battery modules, and power converter technologies. This energy management system will be introduced at Murata's own offices and facilities, thereby aiming for 100% renewable energy used in the business activities by 2050, contributing to the realization of a sustainable society.

Laminated type batteries can be freely changed in size owing to the laminate film exterior material. In addition, gel electrolytes are highly safe because they do not easily leak or swell. They are employed in mobile devices including tablet PCs and gaming devices.

The use of small batteries for the Tire Pressure Monitoring System (TPMS), medical devices and IoT is increasing due to their compactness and reliability. Demand for small batteries is expected to increase especially for wireless earphones and hearing aids. Murata will continue to provide safe and reliable batteries, adding fully solid-state batteries to our lineup that we developed applying manufacturing technology gained from multilayer ceramic capacitors and materials technology acquired through lithium-ion batteries.

Although the fiercely competitive environment is expected to continue in the lithium ion secondary battery market, demand is projected to grow continuously. We will provide batteries that can satisfy our customers and contribute to the realization of a decarbonized society by leveraging the competitive advantages of our batteries, such as high safety, high input/output and high capacity characteristics.

#### Business opportunities

- Trends toward cordless power tools and gardening tools, as well as shift to decarbonization (from gasoline engines to batteries and motors)
- Greater demand for small batteries for automotive, medical, wearable devices and IoT applications
- Utilization of natural energy, in-house consumption of electricity, and backup power supplies during power outage

#### Competitors

Samsung SDI (South Korea), LG Chem (South Korea), Panasonic (Japan), TDK (Japan), VARTA (Germany), etc.

#### Strengths

- High-quality, high-output technology
- Packaging technology that enables impact resistance and miniaturization

#### Risks

- Market entry and expansion by competitors in our target markets



## Other components

### Sensors

(New segment of net sales classification: Functional devices)



Murata’s MEMS inertial sensors use unique processing technology called 3D-MEMS technology and design technology that enable the output of precise strong signals at the component level. Integration with advanced circuit technology ensures high reliability, stability and accuracy even in a harsh environment. These features have gained trust from many customers and our products have been adopted not only in the automotive applications market but in other markets where high reliability is required, such as industrial equipment and medical devices.

In the rapidly growing automobile market, as the installation of safety features to protect lives, such as electronic stability control (ESC) and antilock braking system (ABS), becomes mandatory, our sensors are increasingly adopted for gyro sensors and acceleration sensors.

Recently, technologies have been developed globally for realization of self-driving cars. For the system to control self-driving and ensure safety, it needs to detect a wide range of information such as weather, traffic regulations and surrounding environment for decision making using various

sensors. For example, it has been a challenge to accurately identify the location and the direction of a car and drive it safely in poor conditions where the Global Positioning System (GPS) is ineffective, such as in a tunnel, or where cameras or radars do not function. For that purpose, demand has been increasing for MEMS inertial sensors that can accurately measure the location, position and direction of a vehicle and enable safe driving. Murata can leverage the competitive advantage of 3D-MEMS technologies in this business domain. Murata will propose products to automobile manufactures and Tier 1 customers by quickly capturing their needs for the future.

By integrating the MEMS development technology from Murata Electronics Oy (formerly VTI Technologies) in Finland, which we acquired in 2012, and Murata’s strengths in monozukuri, we will have a system to supply advanced products. We will further develop new products and enhance supply capability in a timely manner. Murata will continue to contribute to social development by improving our technologies and produce advanced MEMS inertial sensors.

#### Business opportunities

- Increased demand for high-performance sensors driven by growing use of advanced driver assistance systems (ADAS) and self-driving cars
- Demand for multi-axis sensors that assists mounting, calibration and calculation

#### Competitors

Bosch (Germany), Analog Devices (U.S.), STMicroelectronics (Switzerland), Panasonic (Japan), etc.

#### Strengths

- Low noise level, high sensitivity, high accuracy, robustness and reliability achieved with Murata’s unique 3D-MEMS designing and processing technologies

#### Risks

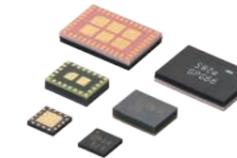
- Intensified competition with competitors



## Modules

### RF modules

(New segment of net sales classification: High frequency devices and communications modules)



RF modules are multifunctional and high-performance electronic component units that realize an analogue high-frequency circuit that controls communications among wireless devices by integrating various key devices in a small package. This module is comprised of passive devices such as SAW filters and LC filters that distinguish RF, filter out noise and pick up required signals, high-power amplifiers (PA) in transmission circuits, low-noise amplifiers (LNA) in reception circuits, antenna changeover switches (Switch) and other semiconductor devices. RF modules are used for various types of wireless devices including smartphones and tablet PCs.

Murata internally develops various key devices that form the basis for module configuration and package technologies for modularization. Since the early 2000s, Murata’s technologies for passive devices such as SAW filters and LC filters and unique packaging technologies for LTCC substrate have been leading the RF module business. As for semiconductor devices such as PA, LNA and Switch, Murata acquired the PA business of Renesas Electronics Corporation and pSemi (formerly Peregrine Semiconductor) and integrated their technologies with passive devices and packaging technologies that have been Murata’s strengths, thereby expanding the RF module business.

Murata, which internally develops these key devices, is able to carry out integrated production. As a result, Murata maintains a strong competitive advantage in terms of production capability and quality, in addition to performance. Furthermore, with a global sales network and technical support system, Murata promptly identifies market and customer needs and reflects such in product

development in a timely manner, which gives Murata an advantage in application-specific RF module business.

With the arrival of 5G, which enables “high-speed, large-capacity communication,” “multiple concurrent communication” and “low-latency real-time communication,” RF modules for realizing further high frequency, expansion of frequency bands and dual connectivity, in addition to multiple frequency bands and carrier aggregation for communications systems up to 4G, will become necessary. In addition, the modularization of electronic components is expected to advance in line with the miniaturization and increased functionalities of wireless devices.

It is expected that the unique benefits of 5G are to promote the diversification of IoT devices and bring many conveniences to life and work. We consider that the expansion of IoT devices will expand business opportunities not only with customers specializing in the communications market, such as smartphones and tablet PCs, but also with customers in new markets that we have not been involved with before.

In the 6G era, which is also called Beyond 5G, “ultra-low power consumption” and “ultra-reliable communication” are required. In order to survive in the global competition, we will continue to strengthen our “high technological capabilities” and “high-quality monozukuri (manufacturing)” that Murata has cultivated over the years. Murata will contribute to customers by promptly identifying future market and customer needs, while also leveraging our competitive advantages to propose RF modules most suitable to customers.

#### Business opportunities

- Expansion of frequency bands, advancement of communications technologies driven by growing adoption of 5G
- Modularization and miniaturization of electronic components

#### Competitors

Skyworks Solutions (U.S.), Qorvo (U.S.), Qualcomm (U.S.), Broadcom (U.S.), etc.

#### Strengths

- In-house production of key devices and packaging technologies
- Identification of customer trends and capability to propose products utilizing sales and technical support network
- Business speed, reliable quality and stable supply enabled by integrated production

#### Risks

- Potential moves by customers and component suppliers due to changes in U.S.-China relations
- Entry of low-cost module manufacturers into the market



## Modules

### Connectivity modules

(New segment of net sales classification: High frequency devices and communications modules)



Connectivity modules are essential compound components that wirelessly connect various devices. These are mounted on familiar home appliances used in our daily lives, such as smartphones, tablet PCs, digital cameras and air conditioners, in-vehicle devices such as car navigation systems, and in various settings such that they enable users to download and upload photos and music from the Internet, and perform hands-free calling while driving.

In the communications market, with the rapid progress of the IoT society where all types of objects around us are connected to the Internet, new wireless communication standards such as Wi-Fi® 11ax, Cellular LPWA (Low Power Wide Area), UWB (Ultra Wide Band) and millimeter waves are also expected to spread. In the automotive market, along with the growing adoption and progress of wireless communication functions, use for in-vehicle detection is also increasing utilizing V2X Communication that connects with infrastructure and radar technology.

For 5G in millimeter wave bands, Murata can provide communication modules with low transmission loss utilizing composite technology which integrates proprietary multilayer resin substrates, high-performance IC and antennas.

Countries around the world are now planning to provide communications services using millimeter wave bands, and started discussion regarding Beyond 5G (6G) standards. In a world in which everything can be connected through higher-speed communications, the use of connectivity modules is expected to expand further.

The growth of smartphones, which has been significantly rapid so far, is expected to slow down in the future. At the same time, competition among competitors is intensifying. Under such circumstance, Murata's connectivity modules continue to provide products and value in response to various changes, such as 5G, new communication standards, and use of wireless technology in the areas other than data communication, by taking advantage of our strengths including proprietary multilayer resin substrates technology, design technologies to realize compactness, higher performance and high reliability, and software technologies to enhance connectivity. Murata strives to build a partnership with customers to be their first choice. In addition, Murata strives to contribute to the resolution of social issues and reduction of environmental burden by proposing appropriate products in diversified business opportunities such as environment and wellness.

#### Business opportunities

- Growing adoption of 5G
- Full-fledged consideration of Beyond 5G
- Due to the development of an IoT society, automobiles and various types of devices will have wireless communication functions

#### Competitors

JCET (China), USI (China), Quectel Wireless Solutions (China), LG Innotek (South Korea), ALPS ALPINE (Japan), etc.

#### Strengths

- Millimeter wave modules using Murata's unique multilayer resin substrates
- Technologies that enable miniaturization and high performance as well as ensure reliability
- Software technologies that improve connectivity

#### Risks

- Intensified competition among competitors



## Modules

### Multilayer resin substrates (MetroCirc)

(New segment of net sales classification: High frequency devices and communications modules)



MetroCirc is a thinner multilayer resin substrate comprising LCP (liquid crystal polymer) sheets. It features exceptional RF characteristics and realizes a substrate with a stable performance due to extremely low water absorption. It is also characterized by the ability to handle a flexible bending process because it does not require an adhesive layer. In addition, high multiple layers are possible by using Murata's multilayer technology, enabling high flexibility in design. It is possible to design circuits by inserting copper foil sheets between LCP sheets, and these circuits are used as transmission wires, coils, and other functional components in smartphones, wearable devices, and other applications, contributing to smaller, thinner, and higher performance devices with low energy consumption.

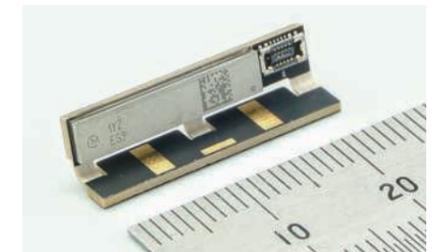
Millimeter waves over 40 GHz and other extremely high-frequency waves are used in the growing 5G network, so MetroCirc is increasingly used in millimeter wave transmission lines, as they can take advantage of the low-transmission loss properties at extremely high frequencies, one of the features of MetroCirc. In addition, we believe that there will be more opportunities for a wide range of customers to favor MetroCirc in the future as the frequencies used become higher, because this will further highlight MetroCirc's competitive superiority in terms of transmission loss compared with competing technologies, and we believe that we can take the lead even in an increasingly competitive environment.

Taking advantage of the high-frequency features and high multi layers, it is increasingly adopted in module substrates. As for millimeter wave modules,

MetroCirc enables two directional antennas by making an L shape, contributing to enhancing the competitiveness of modules. Looking ahead, customers will face more issues related to high-frequency communications as the number of devices using 5G increases; however, by using MetroCirc, we can make a variety of proposals depending on customers' designs and issues.

In addition, because LCP is a material with exceptionally low water absorption, it is highly stable for uses such as antennas, which utilizes resonance. Now that smartphones have UWB (Ultra Wide Band) and in some cases are used in digital key authentication utilizing its highly accurate positioning and measurement of distance, the market is expected to expand. MetroCirc has frequency stability and is suitable for UWB antennas.

We will further contribute to resolving customers' issues, through the combination of high-performance materials and Murata's unique ideas, developed based on our multilayer technology and high-frequency technology.



MetroCirc used in substrates for millimeter wave modules

#### Business opportunities

- Expansion of the high-frequency communications market as represented by 5G
- Resolution of customers' issues by utilizing the characteristics of MetroCirc, such as low water absorption and shape retention property

#### Competitors

ZDT (Taiwan), Flexium Interconnect (Taiwan), etc.

#### Strengths

- Low transmission loss properties at high frequencies
- Flexibility that can handle complex bending process
- High multi layers, low water absorption

#### Risks

- Intensified competition
- Changes in the demand due to changes in customers' design



## Technologies

Member of the Board of Directors  
and Senior Executive Vice President  
Director of Corporate Technology  
& Business Development Unit  
Executive in Charge of Medical Products Business

Hiroshi Iwatsubo



### Message from the Director of Corporate Technology & Business Development Unit

## We aim to provide unique value by creating new seeds and initiatives that foster future demand

### Pursuing value that is ahead of its time while remaining humble about our success

Despite facing an unprecedented year because of the COVID-19 pandemic, Murata achieved record fiscal results in 2020. However, as the person responsible for technology and business development, I recognize that today's prosperity is due to the technologies that were introduced through the struggles of our predecessors 20 and 30 years ago. Accepting this with humility, Murata must focus our energy on a renewed commitment to research and development to ensure that future generations are best positioned to tackle tomorrow's challenges.

### Sowing the technology seeds that will blossom 10 and 20 years from now

It is impossible to fully predict what will happen in the future. It is also too late to act when the world's and customers' needs become evident. That said, we need to think about what Murata can do to prepare for a future that is difficult to predict. A crucial step is to develop technology options that can be deployed when there are major changes or waves of innovation. Reaping the benefits of research and development takes considerable time, and the main

way to beat the global competition on this front is to be faster than others. Therefore, it is crucial to ready the technology now for future growth.

SAW filters are one example of readying a technology. Research on SAW filters, which are now one of our biggest earners, has continued for more than 40 years. However, the business only turned profitable in the past decade or so. Up until then, it continuously made a loss. When we first became involved in RF technology, we focused on dielectric filters and multilayer LC filters as "Murata of ceramics." However, demand for SAW filters increased as the popularity of mobile phones grew from the mid-1990s. SAW filters, which only had a narrow focus for a long time, suddenly blossomed due to this technological innovation wave.

In the future, Murata is aiming for an organizational structure that can generate as many technological options as possible. It bears repeating that this development is essential in creating new business opportunities and ensuring that we are good stewards for younger generations. As noted earlier, we are promoting Murata-style innovation so that younger employees 10 and 20 years from now can benefit from the technologies we develop today.

### Fostering a corporate culture that values the deep core of technology

We often hear: "Murata has continually produced innovative products and generated growth in each era. What is the secret to that success?" That is certainly the ultimate truth in terms of product development. Our fundamental research and development approach is to steadily work towards always advancing our technologies, solutions, and products. While this may be a surprise, there are no secrets to Murata's success. We work diligently on the concerns that are important to us and are steadfast in creating those solutions – it is just what we do. That is how Murata's research and development works.

One important differentiator is our deep understanding of and focus on technology. For example, we refrain from telling someone who offers a new idea that it is impossible or unfeasible. Our culture is one of affirmation and approach new endeavors with a "Let's give it a try" Mentality.

We frequently discover business possibilities through casual conversations with our customers. President Nakajima refers to this as the "benefits of random conversation." New ideas and breakthroughs do not always come from formal meetings. By contrast, unexpected insights emerge when standing around talking in the hall or chatting after a meeting. We can also move things along by saying, "We will see if we can make it." Even if this may seem a waste of time, we take on such challenges with conviction. This collaboration helps build customer trust which then helps to generate more opportunities. Even though it takes time to build these relationships, it is a fundamental part of Murata's model to create new business.

In terms of valuing technology, another one of our characteristics is to go to the trouble of investing in technology. Even when our net sales were only around 300 million yen, we successively introduced high-priced electron microscopes and analysis equipment that did not align with the scale of sales. If research and development is necessary, we invest and prepare for challenges ahead which is also the Murata model. Of course, our steady strengthening of the financial base enables such investments – another strength of ours.

There is also something characteristic in the personnel side of our research and development efforts. We do not take a cookie-cutter approach to human resources, but actually empower diverse members. Respecting diverse values is a Murata style. For example, one of our developer's mastered creating Noh (Japanese classical theater) masks. We recognize that everyone needs to walk their own path. We also say that even if the path is rough, you

can move forward if you believe in yourself. These aspects correlate to our research and development efforts. Rather than abandoning an initiative because there are no short-term results, we persevere and maybe even adjust the original scale and scope. From there, we look for the "green shoots" of a new business opportunity.

### Technology displays that stimulate the potential needs of customers

We will develop a pool of technologies and make a concerted effort to further outside cooperation and collaboration. We will share our advancements with outside stakeholders, customers, academia, and start-up businesses. The main aim is to uncover the potential needs of customers and others by displaying our technologies = seeds. Our business is not one of pursuing technology once the world's needs become apparent. It is already too late once those needs become clear. Reactive research and development is no way to win in a world that is competing for innovation.

We should not only develop a pool of technologies, but also stimulate the potential needs of customers and business partners by sharing these technologies. We strive to create "technology displays" to show our customers and business partners that we can fuse the external and internal knowledge required for innovation.

I do not think there is anything remarkable about a future vision that anyone can predict. It is difficult to build a competitive advantage simply through the extension of current technologies. This is certainly not the path taken by Murata. I am concerned that we will not be able to innovate in useful ways for the future if we only deal with research and development using the past framework. Companies with large organizational structures can be inhibited by preconceived notions that impede bold research and development and instead focus only on safe bets. We must avoid this scenario at all costs since innovation is hindered in such an environment.

### Developing human resources that encourage innovation

We need to further enhance the human resources pool to encourage research and development. In addition to our long-standing "career formation program" for younger employees, we also have a training system for cultivating talent at each level. We believe it is important to establish a work environment where employees can engage in research and development activities with no

inhibition. At the end of last year, we completed the construction of the Minato MIRAI Innovation Center, the largest research and development facility in the Kanto area. Our research and development at this center spans energy, healthcare, IoT, and the mobility markets. We also dedicated a floor to co-creation with our customers and partners. This will be a place for those important “random conversations” and function as a place for showcasing technology.

In addition to these initiatives, we are accelerating our activity with start-up businesses. People who have worked at large companies for many decades tend to have different ideas from those at smaller organizations that produce various things based on new concepts. Given that, there could be divergence when talking to both. That is why we encourage interaction with start-up businesses to motivate our engineers and to better understand and support these organizations. We believe this initiative will also help to create new business opportunities for Murata.

Additionally, in the past it was common for people in research and development to work in the same department or on the same technology area for a long period of time. However, at Murata, we want engineers to associate with as many technologies as possible given the expanding breadth and depth of the high-tech market.. We believe that rotating through various areas will also cultivate internal innovation.

**Accelerating enhancements to the research network in Japan and abroad**

President Nakajima conveyed the message to employees that “no-one can work alone.” While this applies to an individual’s job, the same can be said about a company’s research and development activities. Given the extent of globalization, there are things that Murata cannot do by itself. It is imperative that we collaborate with universities and other companies. I envision us as the technology exchange hub with outside entities to achieve “knowledge collaboration” – a very abundant source of innovation.

We have already achieved significant results from external collaborations. We are currently developing a new material through cooperation with U.S. universities and are now pursuing commercialization for certain applications. Additionally, by fusing our designs with a partner’s glass-based materials technology, we successfully produced unprecedented high frequency characteristics. We have many other technologies under development and hope to showcase them all at some point in the future.

Building on that, it is becoming increasingly important to identify the true value of advanced technologies, and we recognize the need for management to qualify our approach and efforts. For research and development projects that are directly connected to business, we determine whether to proceed based on discovery that factors in investment economy calculations. For projects that are at an early stage, we focus on evaluating the aptitude of the technology, such as whether it is unique and its potential. This is not easy and a task with considerable responsibility for the future. Management is committed to enhancing efforts in this area going forward.

We actively promote the acceleration of co-creation with outside entities such as start-up businesses and academia as it leads to a greater understanding and adoption of the internal development mindset. I believe one of my important tasks is to enhance our research and development network and select and support technologies with future potential by allocating the appropriate resources.

**The endless challenge to advance the future of electronics**

My steadfast belief in research and development is that “There cannot be true innovation if we pursue a technology that is sought by 100 out of 100 people in the world.” Hitting a home run in research and development requires us to have passion for and conviction in our own technologies. Breakthroughs are made when one challenges oneself with conviction. There could be a precipitous cliff or a never-ending desert ahead. We make meaningful discoveries by believing in our colleagues while facing challenges day after day. In some cases, there may be continuous pursuit of the possibilities for more than 10 or 20 years. This requires patience of the individual as well as the company. The final destination to be discovered is the blue ocean that no-one had anticipated. True research and development value is derived not by following an easy or safe path. If anything, it is the result of travelling down a painful or challenging path.

Murata will continue to create the future of electronics as an “Innovator in Electronics.” Therefore, we ask for the continued support of all our stakeholders.

**Platform technologies and core technologies**

In order for Murata to continue to create new value, we need our technologies to evolve constantly. Murata, which has an integrated production structure encompassing materials to products, has developed technologies into platforms so that technologies forming the basis can be independently researched, developed, accumulated and applied in product development.

Murata has five platform technology domains, and each platform technology is comprised of several core technologies. Each core technology has been refined over a long period within Murata, and has become a source to differentiate us from competitors and create innovations.

**Platforms**

|                                     |   |
|-------------------------------------|---|
| <b>Materials technology</b>         |  Materials design  Materials processing   |
|                                     | Materials technology is the technology to simulate and model material composition, crystal structures, and electrical properties, as well as to disperse and combine these materials while controlling ceramic particle sizes and crystal structures.   |
| <b>Front-end process technology</b> |  Laminating & stacking  Printing  Sintering  Nano & thin film fabrication  Surface finishing  Precision mechanical processing |
|                                     | Front-end process technology includes, mainly, the technology to laminate and align crystal particles by forming them into dielectric sheets, technology to thinly and accurately form internal electrodes and wirings on ceramic sheets, and technology to form thin films on a submicron level using lithography and etching.   |
| <b>Product design technology</b>    |  High frequency design  Device design  Embedded  High reliability design  Circuit design  Simulation                          |
|                                     | Product design technology includes, mainly, the technology to design RF components and modules, to achieve high performance and small devices using software, etc., to achieve high reliability under harsh environmental conditions, and simulation to analyze electromagnetic fields, heat, and stress.   |
| <b>Back-end process technology</b>  |  Packaging  Measurement  Automation  Industrial engineering   |
|                                     | Back-end process technology mainly includes the technology to achieve miniaturization and high reliability of devices through high-heat resistance connections and air-tight sealing, and technology to design equipment that transports extremely small products in different shapes at high speed and with low damage.  |
| <b>Analytical technology</b>        |  Materials characterization  Failure analysis   |
|                                     | Analytical technology includes the technology to physically and electronically evaluate material compositions through non-destructive analysis, heat analysis, organic and inorganic analysis, and surface analysis, and technology to identify the cause of failures that occurred in materials and products through the abovementioned analytical methods.  |

**TOPICS**      **Opening of Minato MIRAI Innovation Center, largest R&D hub**

Murata opened Minato MIRAI Innovation Center, a new R&D hub, in December 2020. At this center, Murata intends to bolster its design and planning capacities, as well as basic product research for new markets like energy, healthcare, and IoT, in addition to its core business in the communications and mobility markets. In particular, the company plans to increase its share of the healthcare and energy markets by strengthening collaborations with clients and industry participants using its geographical advantage. In its business related to the mobility market, Murata will increase its competitiveness by installing a large anechoic chamber for vehicles, accumulating further design expertise and gaining rapid and continuous feedback for its product design.

Minato MIRAI Innovation Center will reinforce collaboration with other R&D hubs such as the Yasu

and Yokohama Divisions. With a concept of a “place where new possibilities are born, from mixture of various things,” the center plays various roles including holding meetings for technical exchange with internal or external parties, business creation through collaboration with various customers from various industries, and organizing events. The center will provide innovative products and technologies that will help Murata lead the industry by promoting and enhancing collaboration with external parties through technology exchange events.





## Message from the Chairman of the Board

### For the company's continuous development and growth



Chairman of the Board

Tsuneo Murata

#### An outside perspective

We recognize that governance has become an increasingly important charter for a company's sustainable growth

We have appointed outside executives since 1971, long before the legal requirement to do so. This includes Statutory Auditors and Outside Directors. This was based on the belief that incorporating external viewpoints and perspectives would lead to the company's sustainable growth and improvements in management transparency. When I joined Murata in 1974 it was clear that the positive impact was already embedded within the company. I feel that it is handed down to this day as we receive valued feedback from the Outside Directors who proffer their diverse experience and knowledge in various forums such as Board of Directors meetings.

In that sense, I am very pleased that the effectiveness of our corporate governance is affirmed by the evaluation of the effectiveness of the Board of Directors, which confirmed the active discussions at the Board of Directors and reflections on the advice from our Outside Directors.

For decades, Murata aimed to create a corporate culture where everyone can freely express their opinion. As Chair, I strive for the Board of Directors' meetings to be a place where all attendees, irrespective of whether they are inside or outside

Directors, can freely share opinions, ideas, and perspective in a collaborative environment – even those that can be perceived as critical. I believe it is easy for Outside Directors to make comments at our Board of Directors' meetings as the people on the execution side attend the meetings with eagerness to receive outside opinions. In fact, various Outside Directors have been quite critical in the past. Even when appointing Outside Directors, we look to people who respect this corporate culture and can fulfill their roles in that spirit.

I believe that part of our corporate culture is to be attentive and diligent in providing careful explanation of the information that forms the basis for discussion. We strive to provide Outside Directors with broad and deep knowledge of business status reports and other topics. We also focus on devising ways to provide information that enables vital discussions on our medium- to long-term strategy at the Board of Directors' level.

Outside Directors provide advice not only to the Board of Directors, but also to the Nomination Advisory Committee and the Remuneration Advisory Committee. I feel that this has led to increased transparency. In the future, I hope to provide further details on our systems, standards, and other areas to all our stakeholders to enable a better understanding of our governance initiatives.

#### Current corporate governance

One year has passed since the President changeover.

The operations are under the direction of President Nakajima and others, and I feel that his open style has permeated the organization such as through the creation of an autonomous and decentralized organizational structure. As Chairman of the Board, this initiative enabled me to evaluate the governance and corporate strategy from a broader perspective. My checks mainly focus on whether President Nakajima and others on the execution side are implementing operations focused on sustainable growth and increasing medium- to long-term corporate value. I believe that no management issues were raised during the past year, which builds confidence in this leadership team.

In terms of strengthening corporate governance, we evolved into a Company with an Audit and Supervisory Committee and are promoting initiatives such as having Outside Directors represent more than one-third of the Directors. We also strengthened the independence of both the Nomination and Remuneration Advisory Committees. However, current trends require even more enhancements. Being mindful of the formal standards but not adhering to them too closely, we will pursue an appropriate corporate governance structure that takes into consideration our own approach and corporate culture.

#### For sustainable growth

I believe that one of our strengths is encompassed in the Murata Philosophy and corporate culture. I believe the current conditions arise from the combination of our strengths – including our technological development capabilities and vast global network – coupled with the trust and respect instilled in the Murata Philosophy. I also believe that we have great resiliency in terms of facing change and challenges. We have optimal capacity to take on dynamic environments, including the rapidly changing electronics components industry and circumstances surrounding governance. However, it is our future challenges to strengthen our ability to autonomously create new things and our capacity to actively influence transformation of the surrounding environment.

“Autonomous and decentralized” has become important even in relation to the responsiveness to change and the management stance demanded by society. That said, developing our human resources is crucial for the realization of autonomous and decentralized organizational management.

Companies across the world are taking initiatives through trial and error, but it will also be important to have the capacity to create a continuous cycle of economic value and social value in areas such as Sustainable Development Goals (SDGs) and environmental management. I believe that diverse personnel are necessary to effectively respond to the shift to a sustainable society at a global level. In terms of human resources development initiatives, we will focus on this area even more and have regular reporting and monitoring by the Board of Directors.

Fortunately, Murata has become larger as an organization, and we now have more responsibility to society. Corporate management is required to drive the shift to a sustainable society, and there are demands that the response be made with even greater urgency. The issues that need to be addressed are also becoming more diverse. Furthermore, as the company grows, it undeniably becomes harder to instill the Murata Philosophy, which is the basis of our corporate culture. The Murata Philosophy was established about 70 years ago, but it clearly encompasses everything about the spirit that is required in today's world. By reflecting on Murata's style, we will continue to pursue the governance that is guided by this spirit.



# Corporate governance

## Our basic views on corporate governance and history of initiatives for reinforcement

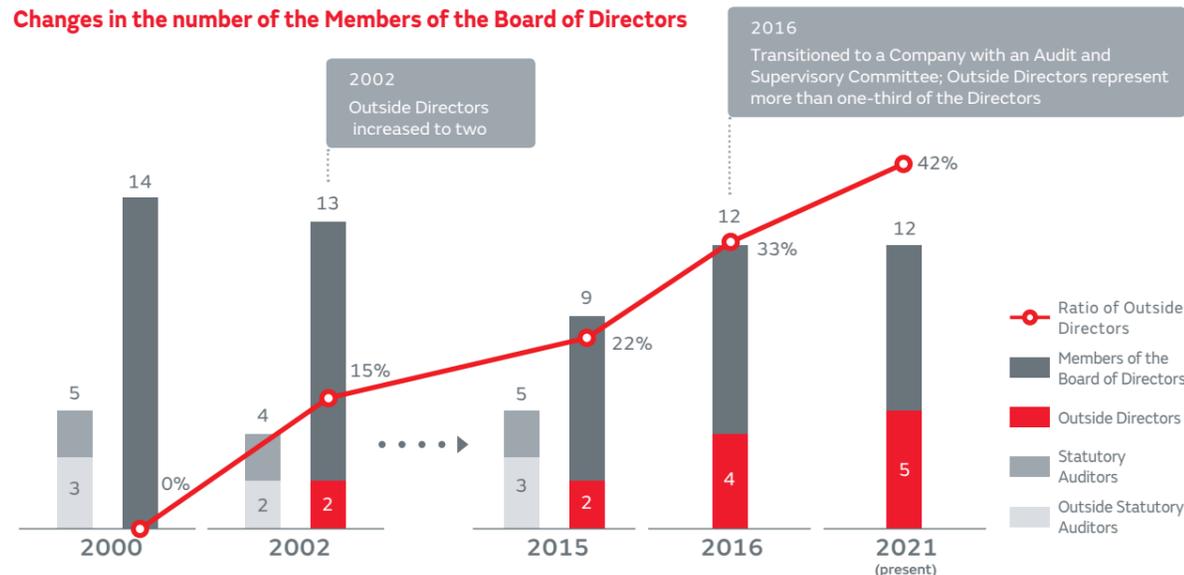
Murata considers corporate governance to be one of the highest priorities in management, and we work constantly to establish and operate optimal management systems that will realize sound corporate growth and development while taking into consideration every stakeholder.

In 1971, Murata appointed the first Outside Statutory Auditor based on the belief that it is important to incorporate external perspectives. In 2001, Murata appointed the first Outside Director. In recent years, Murata has promoted diversity

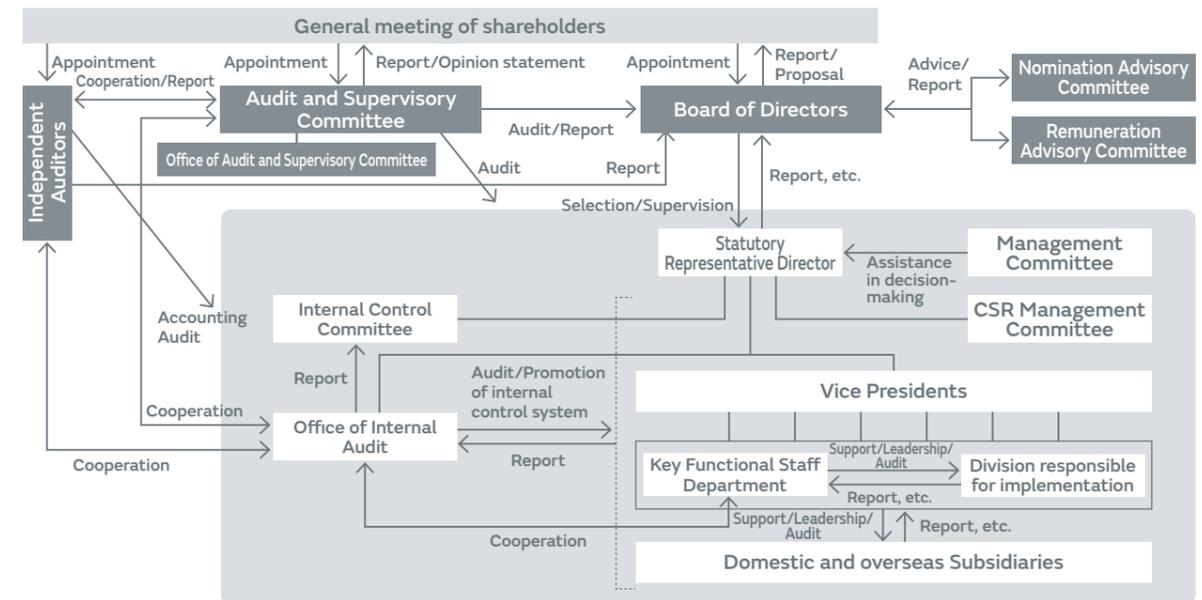
among Outside Directors and has increased the ratio of Outside Directors. After the transition to a Company with an Audit and Supervisory Committee, the ratio of Outside Directors reached one-third or more. In addition to appointing Outside Directors, we have been making efforts to strengthen our corporate governance by steadily taking measures as below, in order to strengthen executive and supervisory functions and increase the transparency of management.

|      |  |
|------|--|
| 2000 | <ul style="list-style-type: none"> <li>Established a Vice President system and declared the appointment of Outside Directors</li> <li>Established the Management Executive Committee (Currently Management Committee)</li> </ul>   |
| 2001 | <ul style="list-style-type: none"> <li>First appointed Outside Director</li> <li>* In 2002, the number of Outside Directors was increased to two.</li> <li>* In 1971, the first Outside Statutory Auditor were appointed. (We have had full-time Outside Statutory Auditors in the past.)</li> </ul> |
| 2002 | <ul style="list-style-type: none"> <li>Established the Corporate Ethics Policy and Code of Conduct</li> </ul>  |
| 2004 | <ul style="list-style-type: none"> <li>Abolished the Directors' retirement benefits system</li> <li>Established the Remuneration Advisory Committee</li> <li>Established the Internal Control Committee and the Audit Office (currently Office of Internal Audit)</li> </ul>                         |
| 2006 | <ul style="list-style-type: none"> <li>Established the basic policy on the internal control system</li> </ul>  |
| 2007 | <ul style="list-style-type: none"> <li>Established the Corporate Social Responsibility (CSR) Management Office</li> </ul>  |
| 2008 | <ul style="list-style-type: none"> <li>Established the CSR Committee (currently the CSR Management Committee)</li> </ul>   |
| 2015 | <ul style="list-style-type: none"> <li>Established the Corporate Governance Guidelines</li> <li>Established the Nomination Advisory Committee</li> </ul>   |
| 2016 | <ul style="list-style-type: none"> <li>Transitioned to a Company with an Audit and Supervisory Committee</li> <li>* Outside Directors shall represent more than one-third of the Directors hereinafter.</li> </ul>   |
| 2017 | <ul style="list-style-type: none"> <li>Introduced a restricted share remuneration plan</li> </ul>  |
| 2021 | <ul style="list-style-type: none"> <li>Reviewed compositions of Nomination Advisory Committee/Remuneration Advisory Committee</li> <li>* The majority of the members of each committee shall be Independent Outside Directors.</li> </ul>  |

## Changes in the number of the Members of the Board of Directors



## Structure of corporate governance system



- Board of Directors**  
 The Board of Directors decides on our basic management direction and particularly important matters for execution, and supervises duties implemented by Members of the Board of Directors. More than one-third of the Members of the Board of Directors shall be Independent Outside Directors.
- Audit and Supervisory Committee**  
 The Audit and Supervisory Committee determines the audit policy and plan and examines the company's business and financial conditions to conduct audits on execution of duties by the Members of the Board of Directors based on the policy and plan while working closely with other divisions in charge of the company's internal control. In addition, the Audit and Supervisory Committee may state their opinions in relation to appointment and remuneration of the Members of the Board of Directors at General Meetings of Shareholders. Three of the Members of the Board of Directors who are Audit and Supervisory Committee Members possess a considerable degree of knowledge in the areas of finance and accounting. The Committee has one full-time member who shares information concerning the status of operations and corporate finances with part-time members.
- Nomination Advisory Committee/Remuneration Advisory Committee**  
 These Committees have been established as advisory bodies for the Board of Directors in order to enhance its independence, objectivity, and accountability in relation to the nomination and remuneration of executives. The members of these committees are selected by the Board of Directors from among Members of the Board of Directors. The majority of the members shall be Independent Outside Directors to maintain independence.

- Management Committee**  
 The Management Committee has been established as a deliberative body to assist the Board of Directors and the Representative Director in making decisions. It is made up of executive Members of the Board of Directors and Members of the Board of Directors who concurrently serve as Vice Presidents, creating a system for deliberation on management issues specified by the company regulations.
- CSR Management Committee**  
 The CSR Management Committee has been established to promote CSR management including initiatives for sustainability continuously and systematically and further entrench CSR within the company and serves as a main office to handle issues outside the company. The CSR Management Committee regularly reports to the Board of Directors regarding the status of its activities.
- Internal Control Committee**  
 The Internal Control Committee is responsible for the maintenance and continual improvement of the system to secure the appropriateness of the company's operation (the internal control system) and evaluates and examines the status of maintenance and operation of the system. The Internal Control Committee regularly reports to the Board of Directors regarding the status of its activities.
- Vice Presidents**  
 In order to realize more rapid management judgments and more flexible execution, a Vice President system has been introduced, and our Vice Presidents execute their duties with authority and responsibilities.

## Adoption of "Company with an Audit and Supervisory Committee" as a governance system

Murata Manufacturing Co., Ltd. adopted the Company with an Audit and Supervisory Committee structure as a corporate governance system.

In a company with an Audit and Supervisory Committee, a Board of Directors may delegate decisions on important matters for execution to Executive Directors. Delegating decisions on individual matters for execution to Executive Directors enables swift management decisions and flexible execution of duties. We believe this arrangement also helps strengthen the Board of Directors' functions where as it enables the Board to focus more

on discussion and monitoring of the company's management policies and business strategies.

In addition, Members of the Board of Directors who are Audit and Supervisory Committee Members hold voting rights on agendas at the Board of Directors and rights to express their opinions as the Audit and Supervisory Committee concerning appointment and remuneration of Members of the Board of Directors at General Meetings of Shareholders. We believe that this ensures strong supervisory functions by Executive Directors.

**Composition of the Board of Directors and Skill Matrix**

\* ○ indicates the Committee Chairperson of Nomination Advisory Committee/Remuneration Advisory Committee.  
 Independent indicates Independent Outside Directors.

| Positions in the company Name   | Nomination Advisory Committee | Remuneration Advisory Committee | Corporate and business management | Technology, research, and development | Insight into industry | Internationality and global experience | Finance and accounting | Legal affairs and compliance | HR, personnel affairs, and human resource development | Sales and marketing | Public policy                   | Governance and risk management |
|---|-------------------------------|---------------------------------|-----------------------------------|---------------------------------------|-----------------------|--|------------------------|------------------------------|---|---------------------|---------------------------------|--------------------------------|
| Chairman of the Board<br>Tsuneo Murata<br><b>Chairman of the Board of Directors</b>   | ○                             | ●                               | ●                                 | ●                                     | ● (Electronics)       | ●                                      |                        |                              |   | ●                   |                                 | ●                              |
| President<br>Norio Nakajima   | ●                             |                                 | ●                                 | ●                                     | ● (Electronics)       | ●                                      |                        |                              |   | ●                   |                                 |                                |
| Member of the Board of Directors<br>Senior Executive Vice President<br>Hiroshi Iwatsubo   |                               |                                 | ●                                 | ●                                     | ● (Electronics)       | ●                                      |                        |                              |   | ●                   |                                 |                                |
| Member of the Board of Directors<br>Executive Vice President<br>Masahiro Ishitani   |                               |                                 | ●                                 |                                       | ● (Electronics)       | ●                                      | ●                      |                              |   |                     |                                 |                                |
| Member of the Board of Directors<br>Executive Vice President<br>Ryuji Miyamoto  |                               | ●                               |                                   |                                       | ● (Electronics)       | ●                                      |                        | ●                            | ●   |                     |                                 | ●                              |
| Member of the Board of Directors<br>Executive Vice President<br>Masanori Minamide   |                               |                                 | ●                                 |                                       | ● (Electronics)       | ●                                      | ●                      |                              |   |                     | ●                               |                                |
| Outside Director<br>Takashi Shigematsu<br><b>Independent</b>  | ●                             | ●                               | ●                                 | ●                                     | ● (Automotive)        | ●                                      |                        |                              |   |                     |                                 |                                |
| Outside Director<br>Yuko Yasuda<br><b>Independent</b>   | ●                             | ○                               | ●                                 |                                       |                       | ●                                      |                        |                              | ●   |                     |                                 | ●                              |
| Member of the Board of Directors<br>(Audit and Supervisory Committee Member, full-time)<br>Yoshiro Ozawa<br><b>Chairperson of the Audit and Supervisory Committee</b> |                               |                                 |                                   |                                       | ● (Electronics)       | ●                                      | ●                      |                              | ●   |                     |                                 | ●                              |
| Member of the Board of Directors<br>(Audit and Supervisory Committee Member)<br>Hyo Kambayashi<br><b>Independent</b>  |                               | ●                               | ●                                 |                                       |                       | ●                                      | ●                      | ●                            |   |                     |                                 | ●                              |
| Member of the Board of Directors<br>(Audit and Supervisory Committee Member)<br>Takatoshi Yamamoto<br><b>Independent</b>  | ●                             |                                 | ●                                 |                                       | ● (Electronics)       | ●                                      | ●                      |                              |   | ●                   |                                 |                                |
| Member of the Board of Directors<br>(Audit and Supervisory Committee Member)<br>Naoko Munakata<br><b>Independent</b>  |                               |                                 |                                   | ● (Intellectual property policy)      |                       | ●                                      |                        |                              |   |                     | ● (Industrial and trade policy) |                                |

**Internal control system**

The Board of Directors of Murata Manufacturing Co., Ltd. has defined a basic policy regarding the maintenance of a system to secure the appropriateness of company operations (internal control system). Based on this, the company works to maintain and operate the internal control system appropriately.

The Murata Group shares the Murata Philosophy, which acts as a fundamental management policy, and in order to embody it, we have defined a fundamental policy and code of conduct, which have been distributed across the Group. The Group has also established common rules and procedures on decision making which are applicable across the Murata Manufacturing Group members, including domestic and overseas subsidiaries. Business operation of subsidiaries is discussed based on these rules and procedures, and information on business

operation of the Murata Group is shared. Matters that satisfy specified criteria are submitted to the Management Committee or the Board of Directors for deliberation and discussion.

Divisions that supervise the various business functions (general administration, personnel, accounting, etc.) of the Murata Group define frameworks, processing procedures, and judgment standards for duties to ensure that duties within the Murata Group are performed appropriately and efficiently, in addition to providing appropriate direction to subsidiaries as required. As an independent body, the Internal Audit Department (Office of Internal Audit) evaluates and monitors whether duties within the Murata Group are conducted appropriately and efficiently, adhering to laws and regulations and the internal regulations, etc. of the company.

**Analysis and evaluation of effectiveness of the Board of Directors**

The company endeavors to improve the effectiveness of the Board of Directors by conducting an analysis and evaluation of the effectiveness of the Board of Directors as a whole once a year and discloses an overview of the procedure and results.

● Analysis and evaluation process

A questionnaire for all Members of the Board of Directors and interviews with Outside Directors were conducted and the analysis and evaluation were conducted through multiple discussions in the Board of Directors, making reference to the results of the questionnaire and interviews.

Through conducting the questionnaire and interviews, various confirmations were carried out regarding the composition of the Board of Directors, agenda items submitted to meetings, status of deliberation, personal participation of the Director, and other matters regarding the operation of the Board of Directors. Implementation, tallying, analysis, etc. of the questionnaire was carried out by a third party.



(Contents) Composition of the Board of Directors, agenda items, discussion status, participation by Directors, other operations, etc.

● Results of analysis/evaluation, recognition of challenges, future initiatives

Based on the questionnaire results and the analysis and report on the content of interviews, we have determined the company's Board of Directors is functioning effectively in light of its roles and responsibilities.

Proposals have been sufficiently submitted to the Board of Directors, and in particular, we judged that an atmosphere that enables free expression of opinion is being cultivated and broadminded and constructive discussions and exchanges of opinion are taking place. In addition, the evaluation showed that there was certain improvement in discussions on business risks and materials for the Board of Directors meetings.

On the other hand, it was recognized that mainly for the following points, there are some challenges and problems, and that more improvements are expected, and further efforts are needed in the future. Based on the results of these evaluations and challenges to be considered, we will mainly take the following actions in fiscal 2021.

| Theme   | Issues identified   | Key initiatives in fiscal 2021  |
|---|---|---|
| Improvement of reporting on ESG-related initiatives | The outline of discussions at the committee that promotes sustainability (CSR Management Committee) is reported to the Board of Directors twice a year. In fiscal 2020, in addition to this, efforts to stimulate discussions, such as providing explanations to Outside Directors, have produced results, and we will continue our efforts to further enhance and stimulate discussions. | Enhancement and stimulation of discussions  |
| Enhancement of discussions on risk approach         | There was certain improvement in the discussions on business risks, but we aim to enhance the reports and discussions with a more bird's eye view approach.   | Addition of agenda items related to risk management   |
| Internal control system                             | Improvement of reporting and discussions, expansion of discussion time  | Enhancement of reporting  |
| Overall operation of Board of Directors             | <ul style="list-style-type: none"> <li>Review of contents and methods of reporting, expansion of discussion time on portfolio strategies and risks</li> <li>Continuous efforts to improve materials for the Board of Directors meetings, etc.</li> </ul>  | <ul style="list-style-type: none"> <li>Improvement of time utilization in Board of Directors meetings</li> <li>Establishing opportunities for Outside Directors and management to exchange opinions and share views outside of Board of Directors meetings</li> </ul> |

We will continue working to further improve the effectiveness of the Board of Directors.

### Nomination of candidates for Members of the Board of Directors

#### ● Nomination policies

In consideration of the business content, scale, and management environment, etc., of Murata, we nominate personnel with knowledge, experience, and qualities that can contribute to enabling the Board of Directors to function (determination of basic management principles and important business execution, as well as supervision of execution of duties of Members of the Board of Directors) as candidates for Members of the Board of Directors. In nominating the candidates, we take into account the balance and diversity in the expertise, experience, and capabilities of the Board of Directors as a whole.

Additionally, in nominating candidates for Outside Directors, the company seeks personnel across a wide and diverse range and works to secure candidates who satisfy the independence standards of the Tokyo Stock Exchange and Murata Manufacturing Co., Ltd.

In particular, with regard to candidates for Members of the Board of Directors who will be Audit and Supervisory Committee Members, as noted above, the company nominates personnel with a wealth of knowledge and experience regarding management administration and business operations who have qualities that can contribute to improvement in the soundness and transparency of management and audit the business execution of Members of the Board of Directors from a fair and objective standpoint. At least half of the candidates for Members of the Board of Directors who are Audit and Supervisory Committee Members nominated by the company are Outside Directors.

#### ● Nomination procedures

The Nomination Advisory Committee has been established as an advisory body for the Board of Directors in order to enhance its independence, objectivity, and accountability in relation to the nomination of the Directors. The Nomination Advisory Committee deliberates on criteria for the selection of candidates for Members of the Board of Directors, independence standards for Independent Outside Directors, nomination of candidates for Members of the Board of Directors, nomination of candidates for Representative Directors and executive Members of the Board of Directors, and succession plans for President, and reports its findings to the Board of Directors.

The Board of Directors determines the nomination of candidates for Members of the Board of Directors based on the reported findings of the Nomination Advisory Committee. Nominations for candidates for Members of the Board of Directors who will be Audit and Supervisory Committee members are subject to approval by the Audit and Supervisory Committee.

### Remuneration for Members of the Board of Directors

#### ● Policies regarding remuneration

With respect to remuneration for Members of the Board of Directors, Murata Manufacturing Co., Ltd. makes it a basic policy to provide a system and level of remuneration that is considered suitable for executive-level managers of a globally competitive electronic equipment and component manufacturer in order to ensure recruitment of human talent considered to be excellent based on a comparison with same-industry competitors, to raise the morale and motivation to improve financial results, and to contribute to the maximization of corporate value.

Remuneration for Members of the Board of Directors who are not Audit and Supervisory Committee Members is made up of (i) monthly remuneration, (ii) bonus with the aim of giving a short-term incentive, and (iii) share-based remuneration with the aim of making them share values with shareholders over the long term and increasing their motivation to contribute toward sustainable growth in corporate value by giving a medium- to long-term incentive.

In order to ensure the level of remuneration and its composition that are suitable for the executive-level managers of a globally competitive electronic equipment and component manufacturer, we determine the remuneration referring to the benchmark results of the companies that are similar in business or size.

Remuneration for Outside Directors (excluding those who are Audit and Supervisory Committee Members),

who are independent of business execution, is monthly remuneration only and is determined by referring to the benchmark results of the companies that are similar in business or size.

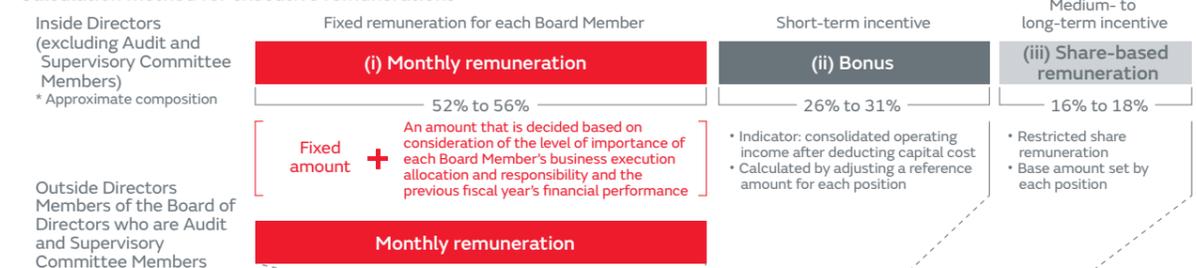
#### ● Procedures for determining remuneration

The Remuneration Advisory Committee has been established as an advisory body for the Board of Directors in order to enhance its independence, objectivity, and accountability in relation to the remuneration of Directors.

The Remuneration Advisory Committee deliberates on the remuneration system and levels for Member of the Board of Directors and reports its findings to the Board of Directors. The Board of Directors decides on the standards regarding remuneration for Members of the Board of Directors based on the report from the Remuneration Advisory Committee.

Specific remuneration amounts are calculated in accordance with the remuneration standards. Individual remuneration of Members of the Board of Directors who are not Audit and Supervisory Committee Members is decided by the Remuneration Advisory Committee, while remuneration for individual Members of the Board of Directors who are Audit and Supervisory Committee Members is decided through discussions within the Audit and Supervisory Committee.

#### Calculation method for executive remunerations



#### Amount of remuneration for each type of executive (Fiscal year ended March 31, 2021)

|   | Number of applicable executives (persons) | Total amount per type of remuneration (Millions of yen) |            |                          | Total amount of remuneration (Millions of yen) |
|---|---|---|------------|--------------------------|--|
|   |   | Monthly remuneration                                    | Bonus      | Share-based remuneration |  |
| Members of the Board of Directors (excluding Audit and Supervisory Committee Members) | 12  | 318   | 109        | 77                       | 505  |
| Members of the Board of Directors (Audit and Supervisory Committee Members)           | 6   | 73  | —          | —                        | 73   |
| <b>Total</b>  | <b>18</b>                                 | <b>391</b>  | <b>109</b> | <b>77</b>                | <b>578</b>                                     |

(Notes) 1. The above figures for total amount of compensation, etc. and number of persons are indicated for each director category taken into account of two Members of the Board of Directors who are not Audit and Supervisory Committee Members who retired, one Member of the Board of Directors who is an Audit and Supervisory Committee Member who retired, one Member of the Board of Directors who is not an Audit and Supervisory Committee Member who resigned and assumed office as Member of the Board of Directors who is an Audit and Supervisory Committee Member, and one Member of the Board of Directors who is as Audit and Supervisory Committee Member who resigned and assumed office as a Member of the Board of Directors who is not an Audit and Supervisory Committee Member during the fiscal year ended March 31, 2021.  
 2. Out of the total shown above, total compensation, etc. provided to nine outside executives is 78 million yen (monthly remuneration only).

(i) Monthly remuneration: The monthly remuneration is a fixed remuneration of an amount individually decided for each Member of the Board of Directors based on a fixed amount for service as Member of the Board of Directors, and an amount that is decided based on consideration of the level of importance of each Member of the Board of Directors' business execution allocation and responsibility and the previous fiscal year's financial performance.  
 (ii) Bonus: The total amount of bonus is decided according to the Company's financial performance, and the amount allocated to each Member of the Board of Directors is decided by giving consideration to the level of contribution to financial performance of each individual. The indicator used as a standard for bonus calculation is consolidated operating income per person after deducting capital cost, which measures the growth and productivity increase of the corporation. Bonus is calculated by adjusting a reference amount for each position based on this indicator. As for the timing of payments, the bonus is paid in two installments, once during a fiscal year and once after the end of fiscal year.  
 (iii) Share-based remuneration: Restricted share remuneration is introduced to improved corporate value over the medium to long term. The reference amount is set by position of each Member of the Board of Directors, and shares are allotted every July. Upon an eligible Member of the Board's retirement from both positions of Member of the Board of Directors and Vice President due to term expiration, compulsory retirement age, etc., transfer restrictions on the allotted shares are lifted.

#### Summary of the Criteria for Independence

- The person is not an executive of the company or its current subsidiary or a company that was a subsidiary within the past three years.
- The person is not currently a major shareholder or an executive of a major shareholder.
- The person is not an executive of a company, etc., that is currently a significant client or supplier or was a significant client or supplier within the past three years with the company or its current subsidiary.  
 \* "Significant client or supplier" refers to one with which the company has transactions of 2% or more of consolidated net sales of the company or of the client or supplier.
- The person is not an executive of an organization that has received within the past three years a donation or grant of over 10.00 million yen per annum from the company or its current subsidiary.
- The person is not an executive of a company or a subsidiary of that company, that employs or has employed within the past three years a Board Member, Statutory Auditor, or Vice President of the company or its current subsidiary.
- The person does not have any significant transaction relationship with the company, such as a consulting or advisory agreement, and has not had a significant transaction relationship in the past.
- The person is not an executive of the Independent Auditor of the company.
- The person is not the spouse or a relative within the second degree of kinship, etc., of a Board Member, Statutory Auditor, or Vice President of the company or its current subsidiary.
- The person does not have the risk of constantly creating a substantial conflict of interest with the company's general shareholders as a whole for reasons other than those considered in (1) through (8) above.



## Three-way discussion with Outside Directors



Outside Director  
Nomination Advisory  
Committee Member  
Remuneration Advisory  
Committee Member  
**Takashi  
Shigematsu**

Outside Director  
Nomination Advisory  
Committee Member  
Remuneration Advisory  
Committee Member  
(Committee Chairperson)  
**Yuko Yasuda**

Outside Director  
Audit and  
Supervisory  
Committee Member  
Nomination Advisory  
Committee Member  
**Takatoshi  
Yamamoto**

### What is the mission of Outside Directors for the dramatic strengthening of the management base to become a true global leader?

#### Evolving the Board of Directors to become a channel for accelerating Murata's transformation

**Shigematsu** At six years, I am the longest serving member on the Board of Directors. I would like to start by lending perspective on the company. Murata always values progress made through the proper channels for everything, and it has an honest corporate culture.

The Board of Directors' environment enables every member to express opinions based on their respective expertise. The company's position is truly receptive to comments from Outside Directors. I feel that the environment makes it very easy to talk meaningfully. While the discussion at the Board of Directors' meetings aims to ascertain the prospects for each business from the perspective

of motivation for monozukuri, we are also focused on shareholder profits. The Board of Directors' meeting is a forum where conclusions are reached following solid discussion, which at times include differing viewpoints.

**Yasuda** As noted by Mr. Shigematsu, I also want to praise Murata's corporate culture of working with a sincere and dedicated mindset on everything. There is an attitude to proactively improve everything. I am particularly aware of this in relation to the progress made in terms of governance in recent years through the activities of the Nomination Advisory Committee and the Remuneration Advisory Committee. The execution side seriously considers and plots the ideal vision for Murata, which I believe is a flagship trait of governance at Murata.

**Yamamoto** I have been an Outside Director for three years, but have been watching Murata and how it has evolved since the 1980s when I was an analyst. I appreciate that I am now involved at a time when Murata itself must step-up to the next stage just as there are a changeover in President from the founder to President Nakajima, major changes in the management environment and progress in technological innovation.

As the others stated, Murata is without doubt a company with effective governance, but it needs to move to the next stage. That is why I note areas where improvements could be made. To be specific, the Board of Directors can be more focused in our efforts to ensure more constructive discussion. I also feel that increased internal and external communication can improve transparency.

**Shigematsu** In terms of the structure for internal sharing of information, I feel that sharing has been achieved with good consideration given to the relevant departments. There is autonomous movement while grasping the information required by each individual. With regard to the information provided to Outside Directors. There are sometimes an excessive focus on specialist technology, and on occasion, even I, as someone who was involved

in the management of a manufacturer, am unable to understand everything. However, we are provided with an explanation of how things relate to the strategy.

**Yasuda** There are times when the information is very specialized. One of the characteristics of Murata's Board of Directors is that there are regular business reports. However, the excessive details tend to eat up time with questions asked to those in execution roles. However, from this fiscal year we started an initiative to have the needed explanations and backgrounds provided ahead of time so we can focus on more essential discussions.

In addition, Outside Directors now have the opportunity to have meetings with the Chairman of the Board and the President, which enables a more candid exchange.

**Yamamoto** I believe the foundation is the discussion about the ideal state of the Board of Directors and the role required of Outside Directors and I appreciate that progress is made while confirming these matters.

As Ms. Yasuda said, the pre-meeting explanations and the meeting with the Representative Directors are solid initiatives. Building on that, I also participated in meetings between the Audit and Supervisory Committee Members and Representative Directors. I believe these types of meetings are very important to enable us to discuss our concerns as Outside Directors.

Regarding information sharing, the initiative to include the Outside Directors in the details of Management Committee discussions is progressing. This is a significant advancement in terms of strengthening governance.

The mission of the Outside Directors is becoming increasingly important as we move towards the next stage. This is a period when we need to increase our feedback and counsel and leverage our experience to help accelerate Murata's transformation. I believe this is one of the Outside Directors' primary objectives.

### Committee activities directly connected to the Board of Directors are energized year after year

**Shigematsu** Similar to what Ms. Yasuda said, there has been a change in the committee activities as part of the efforts to evolve the company. There have also been discussions about the transformation of the corporate culture. As to whether or not it is OK to simply adopt the approach to nominations and remuneration taken by overseas global companies, I am concerned that this could cause Murata to lose its uniqueness and strength. I think the issue will be how to proceed with the best structure while maintaining harmony with the corporate culture as we aim to be the global No. 1 component & Module Supplier. There needs to be sincere discussion about this point going forward.

**Yasuda** As a Nomination Advisory Committee Member and the Chairperson of the Remuneration Advisory Committee, I would like to discuss the activities of both committees.

Looking at last year's nomination process for President Nakajima, there was a sense of trust that the organizational structure was working. I joined in June of last year and was surprised with the transparency of the information shared by the Personnel & Industrial Relations Department. I felt confident that the right actions were being done to help prepare for the future. That said, if I had to address any issue, it would be the diversity pertaining to the development of female managers and younger and mid-level staff. Further progress is required in this area.

In regard to the Remuneration Advisory Committee, the group was extremely active due to factors such as the requirement for disclosure of the remuneration system under the revisions to the Corporate Governance Code and the Companies Act. The remuneration system is operated with great transparency. Based on Murata's approach, I feel that high levels of remuneration are not only paid to management but that there is a fair system in place based on

the corporate spirit of prosperity to include all employees. I would like to seriously consider both the merits of the founder having been involved in management for a long time and the future issues and to discuss this based on transparency and impartiality.

**Yamamoto** This is also my second year as a Nomination Advisory Committee Member. Our primary mission is developing a succession plan. From a long-term perspective, we must assess the approach to executive nominations. In relation to the skills matrix, it is important that we discuss issues such as the composition of the Board of Directors for our medium- to long-term goals, what skills are required, how they match the medium- to long-term management strategy, and the selection of candidates when there is a vacancy.

Presently, nominations and remuneration are separated, but are closely connected. We need to be mindful of this when thinking about future activities.

### Further improvements while being mindful about the current state of governance

**Shigematsu** I believe that all Outside Directors share the same appreciation for governance at Murata, but we need to consider other issues that could impede our goal to be the global component & Module Supplier leader.

I am circumspect about the autonomous and decentralized organizational structure that President Nakajima advocates. Given that it ties to the Murata Philosophy, it appears to be working well. However, this could result in us being unable to enter the areas of counterparties. While having each and every employee think and work autonomously leads to Murata's strength, I also think it is important to influence each other by bouncing a diverse range of opinions off each other.

**Yasuda** When evaluating governance, Murata is successfully improving on the areas identified in the effectiveness evaluation.

As is the case with many Japanese companies, we recognize that an outstanding governance issue is how to enhance the Board of Directors' role and how to increase corporate value based on that engagement. For example, the prioritization of agenda items that should be discussed at the Board of Directors level, such as geopolitical risks. This is an increasingly important topic as Murata accelerates its overseas development. To better our collective understanding, we are also joined by experts such as Ms. Munakata to have active discussions on key issues. However, we need to give deeper consideration as to how we will discuss the key issues of management risk, the business portfolio, and the management strategy.

**Yamamoto** As Murata aims to be a true global leader, it will be essential to further enhance and implement governance and have the presence of leadership to promote this. On this point, the Murata Philosophy established by the founder plays a significant role. It includes a series of statements that could be construed as preempting today's ESG management. I believe the ability to find a means of survival by returning to the Murata Philosophy in times of doubt is a strength.

If I were to raise any issues, it would be how to contribute to the sustainable increase of corporate value, company culture development, and finding solutions to social issues. Second, it is how to fulfill our mission of providing a stable supply of products globally. A challenge is how to identify and mitigate complex global risks such as the geopolitical ones that Ms. Yasuda references and worldwide environmental issues. The third is to further strengthen the management base, as well as enhancing research and development, promoting diversity, developing human resources, and tackling supply chain problems.

### Looking towards medium- to long-term growth

**Shigematsu** From the perspective of Murata's long-term business opportunities, Murata's strength has been to connect the individual technology areas. For example, in the past, automotive and communications have been treated as separate areas. However, the world has evolved to a point that these markets will intersect and become a mainstream business. Our past automotive and communications development success makes us well-positioned to capture long term business opportunities. In terms of challenges, managing risk and developing human resources in areas such as information security will be increasingly important, as well as tracking overseas manufacturing trends.



**Yasuda** There is consensus with the Outside Directors that among the 3-layer portfolio established by President Nakajima, the new business development in the third layer is the most important. At present, capacitors represent a substantial proportion of sales in the first layer. Achieving a balanced portfolio will be an issue and a focus for the future. Murata made a major turn in direction towards the realization of sustainable management by 2030. As a result, how business resilience will coexist with increasingly large capital expenditures will need to be addressed. Another matter will be how to strengthen the human resources base. While various measures are in place, as Outside Directors, we must closely observe how recruitment and development of the next generation of human resources are carried out and whether employees are able to work with increased motivation.

**Yamamoto** I also believe the creation of new business in the third layer is particularly



**Shigematsu** I spent a long time in the automotive industry. At that time, I did not realize that many Murata products had the top share in the market globally. Although we should be proud that these products are widespread throughout society, the flip side is that we have the responsibility to ensure supply. Any unexpected delay from Murata could hold up the production of items such as smartphones, automobiles, and PCs worldwide. I believe we should take pride in having such an obligation and announce that we take that responsibility very seriously so that we gain recognition.

**Shigematsu** In terms of M&A, I feel that many acquisitions have been closely aligned to our core business. While this is an important strategy, I hope that future M&A efforts will focus on areas that differ from that core business in order to create new business pillars.

**Yasuda** As noted by Mr. Shigematsu, our ability to communicate as a company is important. Despite the wonderful management at Murata, there has been restraint in external promotion, possibly because of the humble stance taken by the company. On this point, there has been an increase in opportunities to disseminate President Nakajima's message in the media since he took over. However, I think we also need to create opportunities for other leaders throughout the company. I believe we should also consider how to tell the Murata story in a sincere but direct way.

**Yasuda** Murata has continued to grow by overcoming challenged and changing times. Personally, I have wondered whether Murata has been a change agent. Aiming to be the top company in the world as an innovator requires concepts and environments that can foster something outstanding. There needs to be internal systems and initiatives that can stimulate the power

of imagination and disruption and that can cause the change needed to cement Murata's leadership position.

**Yamamoto** I will comment on matters that relate to economic and social value. There is now a requirement to actively invest in solving social and environmental issues, as well as ESG and SDG initiatives. This should not be used as a reason for reduced profitability. It is vital that we aim to increase economic value by developing and optimizing new business opportunities. It is also important to have measures to quickly rebuild businesses that continue to have low margins and to prevent diminished quality.

**Yamamoto** of imagination and disruption and that can cause the change needed to cement Murata's leadership position.

**Now is the time when effectiveness evaluation is required – not only for the Board of Directors, but also the Outside Directors**

**Shigematsu** In conclusion, I would like to talk about how the Outside Directors will contribute to Murata's growth. I have provided advice mainly in relation to the automotive market. I hope to have discussions at the Board of Directors' meetings on how Murata can contribute to the future of vehicles, including new urban planning and proposed approaches to help realize the next generation of mobility.

**Yasuda** As noted by Mr. Shigematsu, it is important to have more substantial discussion at the Board of Directors' meetings. To achieve this, agenda setting is critical. It is vital that Outside Directors utilize our own knowledge from diverse perspectives to have thoughtful discussions with those in executive positions. I hope to contribute to Murata's growth by lending my own expertise in human resources and governance.

**Yamamoto** A popular topic of discussion has been the effectiveness evaluation of the Board of Directors over the past 10 years. All Murata companies have made progress with measures that increase effectiveness and initiatives to disclose results. However, institutional investors have doubts about invigorating the Board of Directors. Even at Murata, I think there should be efforts to actively disclose and engage on such issues.



Finally, there will be future requirements for effectiveness evaluation of the Outside Directors, who are required to supervise execution from a more impartial and objective standpoint. Every Outside Director, including me, must fulfill our mission with renewed awareness of our required role. Like Mr. Shigematsu and Ms. Yasuda, I hope to utilize my knowledge and experience to contribute to Murata's increased corporate value by accelerating social issues and environmental initiatives.

**Executives**



**Members of the Board of Directors**

**Masanori Minamide**

Member of the Board of Directors  
 Masanori Minamide has been involved in accounting, financial and corporate planning duties, and business management in Southeast Asia, accumulating a wealth of experience and a solid record of achievement.

**Ryuji Miyamoto**

Member of the Board of Directors  
 Remuneration Advisory Committee Member  
 Ryuji Miyamoto has been involved in legal, human resources, and other administrative duties, accumulating a wealth of experience and a solid record of achievement.

**Yoshiro Ozawa**

Member of the Board of Directors  
 Audit and Supervisory Committee Member (Full-time/Committee Chairperson)  
 Yoshiro Ozawa has been involved in accounting, finance, and personnel affairs in and outside of Japan, and has extensive experience and insight in these fields.

**Hyo Kambayashi**

Outside Director  
 Audit and Supervisory Committee Member  
 Remuneration Advisory Committee Member  
 Hyo Kambayashi has been engaged in affairs concerning financial auditing, internal control advising, risk management, and strengthening governance for many years as a certified public accountant and executive and has extensive experience and insight in corporate accounting, auditing and internal control.

**Takatoshi Yamamoto**

Outside Director  
 Audit and Supervisory Committee Member  
 Nomination Advisory Committee Member  
 Takatoshi Yamamoto has extensive experience of corporate analysis of companies in and outside of Japan as a securities analyst, particularly in regard to the electronics industry, and has specialized insight in finance and accounting, in addition to a wealth of experience related to global corporate management.

**Naoko Munakata**

Outside Director  
 Audit and Supervisory Committee Member  
 Naoko Munakata has extensive experience and knowledge about administrative fields including economics, international trade, and intellectual property.

**Masahiro Ishitani**

Member of the Board of Directors  
 Masahiro Ishitani has been involved in accounting, financial and corporate planning duties, and business management, accumulating a wealth of experience and a solid record of achievement.

**Hiroshi Iwatsubo**

Member of the Board of Directors  
 Hiroshi Iwatsubo has been involved in technology development and business management, planning, and sales, accumulating a wealth of experience and a solid record of achievement.

**Norio Nakajima**

President  
 Nomination Advisory Committee Member  
 Norio Nakajima has been involved in technology development and business management, accumulating a wealth of experience and a solid record of achievement.

**Tsuneo Murata**

Chairman of the Board  
 Nomination Advisory Committee Member (Committee Chairperson)  
 Remuneration Advisory Committee Member  
 Tsuneo Murata has been involved in the running and management of business and sales divisions in and outside of Japan, accumulating a wealth of experience and a solid record of achievement.

**Takashi Shigematsu**

Outside Director  
 Nomination Advisory Committee Member  
 Remuneration Advisory Committee Member  
 Takashi Shigematsu has extensive experience and insight as an executive in the manufacturing industry and the automotive industry in particular.

**Yuko Yasuda**

Outside Director  
 Nomination Advisory Committee Member  
 Remuneration Advisory Committee Member (Committee Chairperson)  
 Yuko Yasuda has engaged in introducing, assessing, and developing CEOs and evaluating the effectiveness of the Board of Directors for many years as a Japan Director at companies that search for corporate executive candidates.  
 She has extensive experience and insight in fields concerning executive personnel assessment, development and corporate governance.

**Vice Presidents**

22, of whom four concurrently serve as Member of the Board of Directors

Senior Executive Vice President

Hiroshi Iwatsubo

Executive Vice President

Satoshi Sonoda    Ryuji Miyamoto  
 Masahiro Ishitani    Masanori Minamide  
 Kenichi Mizuno

Senior Vice President

Nagato Omori  
 Ken Tonegawa

Vice President

Toshikazu Sasaki    Noriyuki Kubodera    Yoshihiro Yamada    Harunobu Sano    Kohei Miyao  
 Shinji Nomura    Hiroichi Kawahira    Toshinobu Yamazaki    Shogo Hashimoto    Masamichi Ando  
 Takaharu Sakai    Toshihiko Okamoto    Tatsuo Bizen    Yoshitaka Tanino

# Risk management

## Basic view

Murata has established a risk management system to properly manage various risks both internal and external in relation to business activities in order to continuously increase the corporate value of the Group as a whole. In addition, Murata regularly classifies and evaluates each risk in relation to business operations as a whole and takes proactive measures depending on the priority, thereby mitigating risks that may have significant impact on business activities.

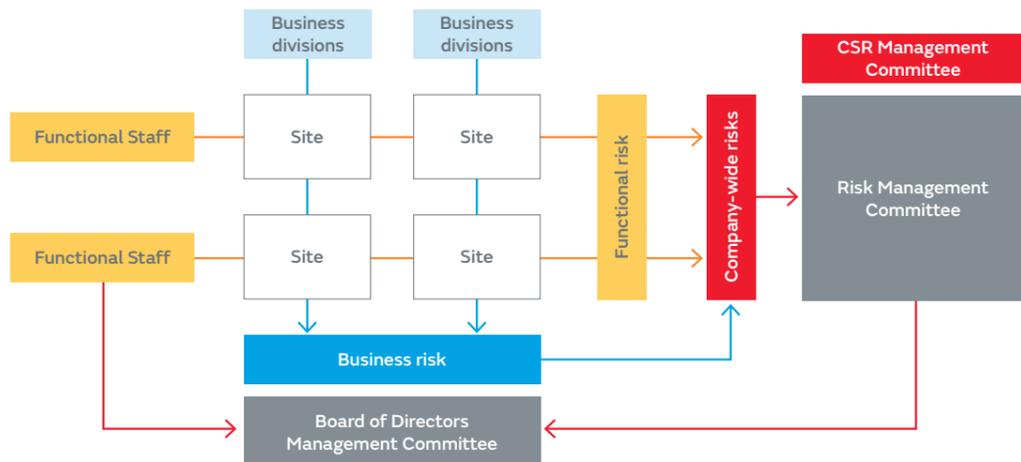
## Promotion structure

Murata has established a Risk Management Committee as a subordinate body of the CSR Management Committee chaired by the President. This committee is chaired by a Member of the Board of Directors and Executive Vice President and comprises Directors from departments including General Affairs, Personnel & Industrial Relations, Accounting, Finance, Corporate Planning, Corporate Communications, Intellectual Property, Environmental Affairs, Information Systems, and Legal Affairs. Together, the committee members study ways to address risks company-wide. We have also established the Data Security Subcommittee and BCM\* Subcommittee as subordinate organizations to study and take measures to address particular risks.

- ▶ p.91 Business continuity management (BCM)
- ▶ p.92 Data security

\* BCM (Business Continuity Management)  
Management activities that are operated on an ongoing basis to formulate, maintain, and renew the BCP (Business Continuity Plan), to allocate budget and resources for business continuity, to take preventive measures, and to conduct, check, and continually improve education and training for permeating initiatives.

## Company-wide risk management system



## Understanding risks

The Key Functional Staff Department and the Business Division responsible for implementation, which are responsible for risks, extract the risks that the Murata Group is currently facing or risks that are expected in the near future. The Key Functional Staff Department prevents the omission of risk identification by correctly recognizing: (1) risks which must be identified as company-wide risks from among the risks extracted by the Business Division responsible for implementation and (2) risks that the Key Functional Staff Department and Business Division responsible for implementation must mutually share and cooperate on. Further, the department is building a system that can appropriately respond to company-wide risks. (Refer to the figure below) Moreover, the extracted risks are comprehensively identified and managed by evaluating the importance based on the frequency of occurrence and impact and then displaying those risks on a risk map.

The Risk Management Committee reviews the details of risks with a high degree of importance and urgency from among the risks which are extracted in this manner and issues instructions for added countermeasures as needed. In addition, the departments which are responsible for each risk report on those risks with a high degree of importance and urgency to management within the Board of Directors and Management Committee. This enables management to identify the corresponding risks and take the appropriate risk countermeasures.

## Risks associated with business, etc.

Factors that may potentially have significant influence on investor decisions include the following. For more details about each risk, refer to the Annual Securities Report (the date of submission: June 29, 2021) (URL: <https://corporate.murata.com/ja-jp/ir/library/financial>; in Japanese).

| Classification of risks  | Details of risks   | Main measures   |
|--|--|---|
| <b>Risks regarding external environment</b>  |  |   |
| Risks associated with business expansion in overseas markets                                   | <ul style="list-style-type: none"> <li>Impact on our business due to rapid changes in various factors including political situation, foreign exchange, taxation, legal systems, regulations regarding finance and import/export, status of the development of social capital and other region-specific matters in the countries or regions where Murata operates.</li> </ul> | <ul style="list-style-type: none"> <li>Thorough risk assessment before expanding overseas</li> <li>Promotion of multiple production bases</li> <li>Establishment of alternative production systems</li> <li>Establishment of a system to gather information on international affairs from various sources</li> </ul>  |
| Risks related to foreign exchange  | <ul style="list-style-type: none"> <li>Impact of fluctuation of exchange rate on business activities such as production and sales</li> </ul>   | <ul style="list-style-type: none"> <li>Appropriate pricing based on the assumptions of exchange rate fluctuations</li> <li>Conclude forward exchange contracts for a certain percentage of the foreign currency-denominated transaction amount</li> </ul>   |
| Risks related to financing and fund management   | <ul style="list-style-type: none"> <li>Lack of internal funds required for investments for business growth and working capital</li> <li>Impact of deterioration of financial market conditions on owned assets</li> </ul>  | <ul style="list-style-type: none"> <li>Financing through borrowing from banks or issuance of straight bonds in Japan</li> <li>Diversified investments in highly secure financial products</li> </ul>  |
| Risks related to environmental regulations   | <ul style="list-style-type: none"> <li>Increased cost to respond to the changes of environmental regulations in Japan and abroad</li> </ul>  | <ul style="list-style-type: none"> <li>Continuous efforts to reduce waste</li> <li>Promotion of environmental measures by establishing the Environmental Committee chaired by a vice president in charge (▶ p.81 Use of sustainable resources)</li> <li>▶ p.83 Pollution prevention and chemical substance management)</li> </ul>   |
| Risks related to climate change  | <ul style="list-style-type: none"> <li>Increased energy costs such as introduction of carbon tax (transition risk)</li> <li>Interruption of major factories and procurement of materials due to extreme weather such as typhoon and heavy rain (physical risks)</li> </ul>   | <ul style="list-style-type: none"> <li>Implementation of measures for energy conservation and reduction of CO<sub>2</sub> emissions</li> <li>Execution of internal carbon pricing system</li> <li>Improvement of measures to meet TCFD and SBT guidelines (▶ p.75 Strengthening Murata's response to climate change)</li> <li>▶ p.77 TCFD)</li> </ul>   |
| Risks of suspension of business activities due to natural disasters, infectious diseases, etc. | <ul style="list-style-type: none"> <li>Long-term suspension of business activities due to major natural disasters or outbreak of infectious diseases in the areas where Murata's offices are located</li> </ul>  | <ul style="list-style-type: none"> <li>Placement of production facilities in diversified locations in and outside of Japan</li> <li>Regular emergency drills and other drills for business continuity</li> <li>Implementation of measures for COVID-19 (▶ p.84 Safe and worry-free workplaces and health management)</li> <li>▶ p.91 Business continuity management (BCM))</li> </ul>   |
| <b>Strategic risks</b>   |  |   |
| Risks associated with fluctuation in demand for our products                                   | <ul style="list-style-type: none"> <li>Surplus asset or loss of sales opportunities due to rapid changes in global economy</li> </ul>  | <ul style="list-style-type: none"> <li>Risk diversification through business expansion in automobile market, in which product life cycles are relatively long</li> <li>Appropriate adjustment of production capacity and placement of required human resources based on the medium- to long-term demand forecast</li> <li>Continuous improvement of productivity by actively utilizing IT</li> <li>Flexible adjustment of production capacity and the number of operating days</li> </ul> |
| Risk associated with product competitiveness (market share)                                    | <ul style="list-style-type: none"> <li>Decreased market share of the company due to loss of competitiveness</li> </ul>   | <ul style="list-style-type: none"> <li>Continual introduction of new products with high added value</li> <li>Continuous and proactive promotion of cost reduction</li> <li>Maintenance of supply capability to meet customer needs in a timely manner</li> <li>Maintenance and growth of market share leveraging the company's comprehensive capabilities including sales network</li> </ul>  |
| Risks associated with reliance on certain suppliers or products                                | <ul style="list-style-type: none"> <li>Decline in sales due to decreased product sales for a certain supplier</li> <li>Decline in sales due to reduced demand for particular products</li> </ul>   | <ul style="list-style-type: none"> <li>Diversification of customers</li> <li>Diversification of revenue by new business expansion</li> </ul>  |
| Risks related to M&A, business tie-ups or strategic investments                                | <ul style="list-style-type: none"> <li>Significant changes in market environment or competitive environment, conflict of interest between parties, additional cost associated with outflow of human resources, impairment losses of goodwill or other long-lived assets</li> </ul>   | <ul style="list-style-type: none"> <li>Thorough risk analysis of the target market or business, or business conditions of potential partners, regular review on the particular project, making adjustment as required and improvement of effectiveness of collaboration</li> </ul>  |
| <b>Risks with business foundation</b>  |  |   |
| Risks related to data security   | <ul style="list-style-type: none"> <li>Information leakage due to internal fraud and suspension of business activities due to cyberattack</li> <li>Impact of leakage of personal information and violation of regulations</li> </ul>   | <ul style="list-style-type: none"> <li>Personnel, technical and physical measures based on data security management (▶ p.92 Information security)</li> </ul>  |
| Risks related to public regulations and compliance   | <ul style="list-style-type: none"> <li>Punishment from regulatory agencies, lawsuits, suspension of business activities, damage to the corporate brand or loss of social credibility due to violation of regulations such as antitrust laws and import/export restrictions</li> </ul>  | <ul style="list-style-type: none"> <li>Establishment of the Compliance Promotion Committee, formulation of the Corporate Ethics Policy and Code of Conduct and implementation of compliance promotion activities (▶ p.72 Compliance)</li> </ul>   |
| Risks related to intellectual property   | <ul style="list-style-type: none"> <li>Restriction on production or sales of Murata's products or payment obligation for damages or license fee due to intellectual property dispute with the third party</li> </ul>   | <ul style="list-style-type: none"> <li>Establishment of global portfolio of intellectual properties</li> <li>Research and verification on intellectual properties of other companies at appropriate timing in design and development phase (▶ p.22 Murata's intellectual property)</li> </ul>   |
| Risks related to taxes   | <ul style="list-style-type: none"> <li>Payment obligation for additional tax and accompanying damage to our reputation</li> <li>Double taxation due to transfer pricing</li> </ul>   | <ul style="list-style-type: none"> <li>Implementation of tax treatment complying with Global Tax Policy</li> <li>Establishment of an organization specialized in taxation</li> <li>Securing and training personnel with expertise and experience</li> </ul>   |
| Risks related to hiring or retaining personnel   | <ul style="list-style-type: none"> <li>Intensifying competition in recruiting personnel with excellent expertise</li> </ul>  | <ul style="list-style-type: none"> <li>Enhancement of recruitment activities of human resources for new markets, or for DX</li> <li>Expansion of training system for human resources development, appropriate staffing focused on skills and capabilities of employees, and other initiatives to improve employees' motivation (▶ p.86 Respect for human rights and diversity)</li> </ul>   |

# Compliance

Murata believes that observing compliance based on legal compliance as well as a high degree of corporate ethics is the foundation of growth. At Murata, we strive to raise awareness of compliance among all of the Group's officers and employees through comprehensive observance of our Corporate Ethics Policy and Code of Conduct.

## Corporate Ethics Policy and Code of Conduct

Murata established the Corporate Ethics Policy and Code of Conduct in July 2002. This was revised in April 2007 in order to reflect a CSR perspective, and the Group's officers and employees united in promising to take appropriate actions with respect to stakeholders and society.

This revised Corporate Ethics Policy and Code of Conduct\* has been translated from Japanese into English, Chinese, and other local languages and distributed to officers and employees of the Group. It was also revised and tailored to the local laws and social systems in each overseas location. A Compliance Guidebook was also created with related examples in a Q&A format to improve the understanding of the Corporate Ethics Policy and Code of Conduct, and distributed to officers and employees at each site in Japan.

In addition, the company continuously delivers the message from the top management and conducts job grade-specific training and education to raise awareness on compliance.

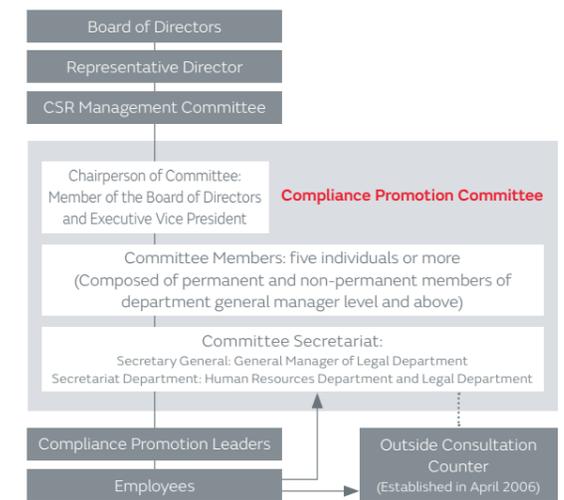
\* For details of the Corporate Ethics Policy and Code of Conduct, please see here.  
Compliance  
<https://corporate.murata.com/en-global/csr/governance/compliance>

## Compliance promotion system

Murata has established a Compliance Promotion Committee, a subordinate body of the CSR Management Committee chaired by the President. We are deliberating on, and making decisions regarding, the basic direction for revisions to the Corporate Ethics Policy and Code of Conduct and implementation of awareness-raising activities. The decisions made by the Committee are deployed to the entire Group through persons in charge of promoting compliance assigned at affiliated companies in Japan and overseas. In addition, each department assigns a Compliance Promotion Leader for the role of ensuring employee awareness for the Corporate Ethics Policy and Code of Conduct. These leaders communicate knowledge learned in an e-learning program through compliance-promotion meetings, etc. at their respective departments.

The status of compliance promotion activities and the whistle-blowing system (the number of cases reported and an overview of reporting details) is reported to the Board of Directors twice a year, and is also audited annually by the internal audit department to ensure an appropriate level of response.

## Compliance promotion system (As of April 1, 2021)



## Whistle-blowing system

In order to prevent, achieve early detection, and respond to compliance violations, Murata has introduced a whistle-blowing system within Murata Manufacturing and its domestic and overseas affiliated companies. In the event that acts such as antitrust violations or bribery which violate or may violate the Corporate Ethics Policy and Code of Conduct are discovered, the whistle-blower may report or consult about such acts using their real name or anonymously. In addition to establishing internal hotlines as points of contacts for receiving reports and consultation requests, we have established external hotlines which provide support in local or multiple languages in order to prepare an environment which makes it easier to submit reports and seek consultation. Moreover, employees can also directly report or consult with the Audit and Supervisory Committee, which audits and supervises the overall execution of corporate affairs.

When a whistle-blowing report or consultation is received, the Compliance Promotion Committee, the Chairperson of the Committee, and the Secretariat of the Committee lead the response. Coordinating with relevant departments as necessary, they check and investigate the facts and the relevant laws and rules to the extent possible. On that basis, the existence or nonexistence of a compliance violation is recognized and response measures such as recommendations for correction and recurrence prevention measures are taken as necessary.

In this process, the privacy of the whistle-blower shall be protected in addition to prohibiting reprisals against that person and extending the maximum consideration so that they do not suffer unreasonable disadvantages as a result of making the report. In addition, when reports or consultation are received under a real name, feedback on the progress and results of checking and investigating are given appropriately to the whistle-blowers.

| Classification of risks                                      | Details of risks  | Main measures   |
|--|---|---|
| Risks associated with business operations                    |   |   |
| Risks related to development of new technologies or products | <ul style="list-style-type: none"> <li>Shrinkage of existing markets due to technological innovation</li> <li>Impact of shortened lifecycles of existing products</li> </ul>  | <ul style="list-style-type: none"> <li>Continuous and active investment in R&amp;D for new technologies and new products (▶ p.49 Message from the Director of Corporate Technology &amp; Business Development Unit)</li> </ul>  |
| Risks related to procurement                                 | <ul style="list-style-type: none"> <li>Disruption to procurement and increased cost of materials due to suppliers' operational problems, deterioration of public security conditions, pandemic of infectious disease, disasters (man-made/natural), depletion of resources, etc.</li> </ul> | <ul style="list-style-type: none"> <li>Ensuring appropriate level of inventory based on material inventory policy, implementation of multi-vendor, prior confirmation of suppliers' BCP status</li> <li>Operating databases on suppliers' source locations of materials, developing ways to quickly implement responses by designing initial response frameworks</li> </ul> |
| Risks related to customer credit                             | <ul style="list-style-type: none"> <li>Uncollectible trade account receivables due to customer bankruptcy</li> </ul>  | <ul style="list-style-type: none"> <li>Diversification of customers</li> <li>Establishment of terms and conditions considering continuous credit risk assessment</li> </ul>   |
| Risks related to quality                                     | <ul style="list-style-type: none"> <li>Payment obligations for damages and damage to credibility due to accidents, recalls or suspension of production resulting from the quality of products</li> </ul>  | <ul style="list-style-type: none"> <li>Development of quality control system to comply with product compliance</li> <li>Audit or training for suppliers and other business partners</li> <li>Ensuring perfect quality in every phase of production from design to shipping (▶ p.22 Quality control at Murata)</li> </ul>  |

## Initiatives to combat COVID-19

Amid the global pandemic of COVID-19, Murata has played its role to globally supply electronic components that support society and maintain supply chains while focusing on the safety and health of employees and suppliers as well as the security of local communities as a priority.

At Murata, the Crisis Response Team set up at the headquarters has decided on and carried out various measures to prevent infection, control the spread of infection and ensure business continuity, and with employees' strong sense of responsibility and their behavior to prevent infection, we have endeavored to continue our business activities.

Specifically, we have introduced measures to prevent employees from being infected, including introduction of telecommuting and staggered working hours, restrictions on business trips, keeping logs of employee movement in company properties, partitions set up in canteens and workplaces, and requesting employees to use self-restraint in their private behavior, and designed BCPs to be prepared for potential infection of employees. We thus have worked to minimize potential impacts on employee health and our business activities from COVID-19. (▶ p.84 Safe and worry-free workplaces and health management)

## Message from Outside Director

Murata has taken measures for risks that may affect its business activities depending on the significance. However, to further improve its effectiveness, the company started new initiatives by taking a broader view of risks. Recently, the internal and external business environments have been changing rapidly, and expectations from stakeholders are rising. In response to these trends and stricter requirements for disclosure, the company is shifting from individual risk management to a new risk management system with a group-wide perspective, considering the value creation process and vision for 2030 and the Murata Philosophy. Specifically, Murata takes a broader view of risks that may affect realization of the Murata Philosophy or the achievement of the strategy, thoroughly examines risk scenarios from functional and business points of view, and

classifies the risks into four categories depending on the risk source; external environment, strategy, business foundation, business execution, which make it easier to comprehend.

In the rapidly changing business environment, for the company to identify the priority issues in management balancing between sustainability management and taking appropriate risks, it is important to not only determine risk tolerance but also assess the significance of risks from various perspectives including scope of impact, timeframe, etc. Regarding these new initiatives, as an Outside Director, I would like to contribute to increasing corporate value by overseeing whether the company is improving organizational risk sensitivity, promptly responding to the changes, and whether it is improving its overall risk management.



Outside Director and Audit and Supervisory Committee Member

Hyo Kambayashi

## Key issues (materiality) originating from social issues

Our slogan, “Innovator in Electronics,” has been advocated as a common identity to be shared among all employees. Not only does this slogan indicate our mission for Murata to become a leading innovator in the electronics industry, it also advocates that excellent innovators take the initiative in working toward a better environment and society and think seriously about how to make things better rather than doing things just because they are obliged to do

so by laws and regulations. Murata values this spirit and has always taken it seriously. To take our efforts one step further, in “Vision 2030” Murata introduces a new direction the company is heading towards for 2030 and sets a vision of where Murata wants to be: becoming a company that contributes to realizing a rich society by creating a virtuous cycle of social value and economic value.

### Setting key issues (materiality)

We defined as issues of materiality the areas to focus on to get where Murata wants to be and divided them into two categories, namely, contribution to solving

social issues through our business and initiatives to solve social issues through business activities overall.

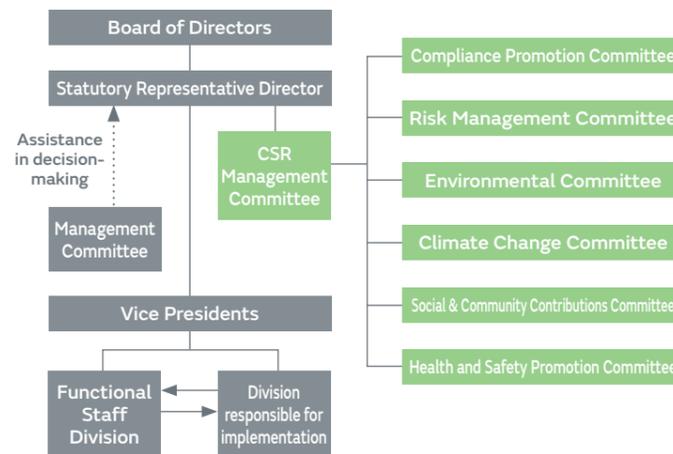
|  |  |   |
|--|--|---|
| Contribute to solving social issues through our business               | Set a course of action for solving social issues in four business opportunities as materiality   | ▶ P.33 Execute four management transformations                    |
| Initiatives to solve social issues through business activities overall | Set nine items of materiality in the fields of E (environmental), S (social), and G (governance) | ▶ P.73-96 Key issues (materiality) originating from social issues |

### Process of identifying the issues



### Promotion framework for key issues (materiality)

Murata has established the CSR Management Committee chaired by the President. The CSR Management Committee has 6 subordinate bodies that discuss issues that require cross-organizational activities. They also promote initiatives for the key issues (materiality).



### Initiatives to solve social issues through business activities overall (Mid-term Direction 2021)

| Key areas   | Key issues   | Identified risks and opportunities  | The fiscal 2019-2021 mid-term target   |
|-------------|--|---|--|
| Environment | Strengthening Murata's response to climate change<br>▶ P.75      | <ul style="list-style-type: none"> <li>Impact on the business due to an increase in natural disasters associated with climate change</li> <li>Improvement of global energy efficiency and promotion of the use of renewable energy</li> </ul>   | <ul style="list-style-type: none"> <li>To formulate methods to survey the current status of suppliers and request them to set targets, in order to promote the setting of the greenhouse gas reduction target based on the Science Based Targets (SBT<sup>*1</sup>) approach to suppliers.</li> <li>To reduce greenhouse gas emissions to 1.4 million t-CO<sub>2</sub>e or less in fiscal 2021.</li> <li>To reduce greenhouse gas emissions from domestic logistics to 2.0 kg/million yen or less in unit of real production.</li> </ul> |
|             | Use of sustainable resources<br>▶ P.81                           | <ul style="list-style-type: none"> <li>Impact on business operations due to the reduction in available water and mineral resources</li> <li>Expansion of circular economy, including regulations on waste plastics</li> <li>Growing momentum for sustainable procurement</li> </ul>                                     | <ul style="list-style-type: none"> <li>To improve waste emissions per unit of production by 7% in fiscal 2021 (compared to the average of fiscal 2016-2018).</li> <li>To improve water use per unit of production by 6% in fiscal 2021 (compared to the average of fiscal 2016-2018).</li> <li>To establish a feasible plastic recycling program and examine the economic benefits of the scheme.</li> </ul>   |
|             | Pollution prevention and chemical substance management<br>▶ P.83 | <ul style="list-style-type: none"> <li>Possibility of leakage and spillage of hazardous chemical substances and contamination of products with hazardous chemical substances</li> </ul>   | <ul style="list-style-type: none"> <li>To apply green procurement based on the Murata Standards<sup>*2</sup> to the raw materials, parts and products delivered to Murata.</li> <li>To reflect internal and external requirements (legal requirements, customer requirements, and Murata Standards) in product specifications regarding chemical substances contained in products.</li> <li>To establish a global management system for volatile organic compound (VOC) emissions.</li> </ul>  |
|             | Key common environmental issues                                  | The same as the above   | <ul style="list-style-type: none"> <li>To introduce a mechanism that saves resources and suppresses emissions of environmentally hazardous substances in advance on a trial basis by considering the environment at the product planning and design stage.</li> </ul>  |
| Social      | Safe and worry-free workplaces and health management<br>▶ P.84   | <ul style="list-style-type: none"> <li>The possibility of occurrence of industrial accidents resulting from a rapid increase in the number of employees due to business growth</li> <li>Increased health and safety awareness among employees and business partners due to the spread of infectious diseases</li> </ul> | <ul style="list-style-type: none"> <li>To avoid causing serious industrial accidents that result in death or permanent disability.</li> <li>To reduce the annual work-related accident rate per 1,000 people to 1.6 or less.</li> <li>To establish a health and productivity management promotion system.</li> <li>To reduce risks in the health care field in business operations.</li> <li>To implement health and productivity management initiatives for individual employees.</li> </ul>  |
|             | Respect for human rights and diversity<br>▶ P.86                 | <ul style="list-style-type: none"> <li>Increased human rights risks due to an increase in the number of global workers and the expansion of areas where the business is operated</li> <li>Decline in competitiveness as diverse human resources cannot fully demonstrate their abilities</li> </ul>                     | <ul style="list-style-type: none"> <li>To firmly establish “Management System on Human Rights and Labor” and make effective improvements.</li> <li>To expand and enhance employee education to raise awareness of human rights, labor, and harassment.</li> <li>To promote diversity and inclusion.</li> </ul>   |
|             | Coexistence with local communities<br>▶ P.89                     | <ul style="list-style-type: none"> <li>Increasing expectations from local communities in the areas where the business is operated</li> </ul>  | <ul style="list-style-type: none"> <li>To realize our founder's philosophy of “Wishing the presence of Murata to be pride and a source of joy in local communities” on a global level.</li> </ul>  |
| Governance  | Appropriate business transactions<br>▶ P.90                      | <ul style="list-style-type: none"> <li>Increasing global insistence for the prevention of cartels and bribery</li> <li>Damage to corporate value resulting from deviation from laws and social norms</li> </ul>   | <ul style="list-style-type: none"> <li>To expand the application of the PDCA cycle to implement the “Basic Policy for Prevention of Cartels and Bribery” at the global level.</li> </ul>   |
|             | Business continuity management (BCM)<br>▶ P.91                   | <ul style="list-style-type: none"> <li>Occurrence of major disasters</li> <li>Global pandemic of infectious diseases</li> </ul>   | <ul style="list-style-type: none"> <li>To achieve a situation where the PDCA cycles for risk management at the global level is functioning effectively, and the concept of risk management has become a part of our daily operations.</li> <li>To promote the development of a Business Continuity Plan (BCP) that responds to possible risks, to prevent risks that could disrupt Murata's business continuity, and to minimize losses in the event that these risks materialize.</li> </ul>  |
|             | Data security<br>▶ P.92  | <ul style="list-style-type: none"> <li>Increasing sophistication and volume of cyber attacks</li> <li>Leakage of information such as important technical and personal information</li> </ul>  | <ul style="list-style-type: none"> <li>To achieve a situation where the PDCA cycles for data security measures at the global level are functioning effectively and the concept of data security has become a part of our daily operations.</li> </ul>  |

\*1: SBT (Science Based Targets): Science-based greenhouse gas emission reduction targets in accordance with the Paris Agreement.  
\*2: Murata Standards refer to standards that identify materials that are subject to control by Murata among environmentally hazardous substances contained in Murata's products and materials and establish regulatory conditions and ranks for each substance.

# Strengthening Murata's response to climate change

**Background of setting the issue of materiality**

In recent years, companies have been asked to take measures to tackle climate change such as decarbonization in order to address serious environmental issues in different parts of the world. Murata has set this key issue in response to these social demands.

**Our goal**

We aim to reduce the amount of greenhouse gases emitted during manufacturing, by operating in accordance with RE100 and SBT<sup>1</sup>.

|                   |   |
|-------------------|---|
| Fiscal 2024 goals | <ul style="list-style-type: none"> <li>Greenhouse gas emissions (vs. fiscal 2019): 1.28 million t-CO<sub>2</sub>e (-20%)*</li> <li>Usage rate of renewable energy: 25%</li> </ul> |
| Fiscal 2030 goals | <ul style="list-style-type: none"> <li>Greenhouse gas emissions (vs. fiscal 2019): 0.87 million t-CO<sub>2</sub>e (-46%)*</li> <li>Usage rate of renewable energy: 50%</li> </ul> |
| Fiscal 2050 goals | <ul style="list-style-type: none"> <li>Usage rate of renewable energy: 100%</li> </ul>  |

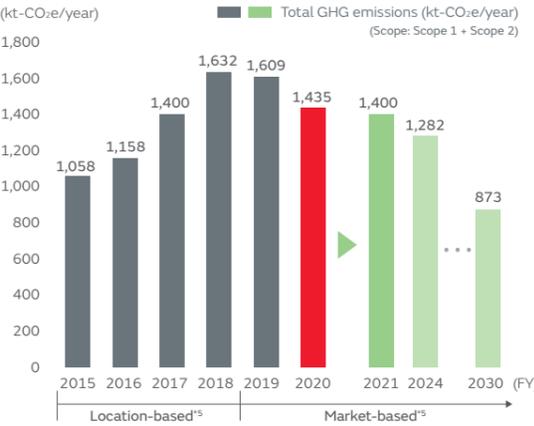
\* Scope: Scope 1 + Scope 2

## Trends in total GHG emissions, and efforts to reduce GHG emissions

Murata has long been involved in implementing energy conservation initiatives, and continues to implement anywhere from 450 to 600 energy conservation measures annually (equivalent to 40,000 to 50,000 t-CO<sub>2</sub> reduction). However, recent business expansion has outpaced these efforts, and total GHG emissions have increased in recent years.

In response, Murata has implemented measures to conserve energy and expand its use of renewable energy. GHG emissions peaked in fiscal 2018 and then began decreasing, with GHG emissions for fiscal 2020 totaling 1.435 million t-CO<sub>2</sub>e (a reduction of 174,000 t-CO<sub>2</sub>e year-over-year). We have set a goal of 1.4 million t-CO<sub>2</sub>e or less for fiscal 2021, and continue to implement initiatives to further reduce this number by fiscal 2024 and fiscal 2030.

In order to accumulate future CO<sub>2</sub> reductions, we designed an internal carbon pricing system and began putting it into operation in fiscal 2021. Specifically, we are assigning a monetary value to CO<sub>2</sub> reduction and embedding it into the investment index to introduce shadow pricing, which encourages decision-making that executes investments that are effective at reducing CO<sub>2</sub>. We will continue to implement systems that can even more effectively help to reduce CO<sub>2</sub>.



\*5: CO<sub>2</sub> calculation method  
 Location-based: Calculated using the average CO<sub>2</sub> emission coefficient for the power network in that region  
 Market-based: Calculated using the CO<sub>2</sub> emission coefficient for each power purchase agreement  
 Murata's calculation method changed since FY2019 because market-based calculation is more accurate and has become the mainstream method used in recent years

## Participation in RE100 initiatives

In fiscal 2020, Murata joined the RE100 global initiative which aims to switch the power used in business activities to 100% renewable energy. Murata has set a goal of using 50% renewable energy for business purposes by fiscal 2030, and 100% by fiscal 2050.

In order to achieve the RE100 target and GHG emission reduction targets, Murata will endeavor to reduce energy consumption through energy conservation measures, while also replacing the current energy consumption with renewable energy through combination of various methods such as onsite/offsite renewable energy generation, change

of energy contracts and utilization of renewable energy certificates.

As an example of specific measures, multilayer ceramic capacitors (MLCCs) and other electronic components which are our main products require that a high temperature state be maintained in the sintering process and use a considerable amount of power. Due to the space restrictions on the number of units that can be sintered at one time, we are promoting initiatives to make MLCCs lighter, thinner, shorter and smaller to reduce the environmental load (use of power and raw materials) during sintering. Murata will deliberate on and work towards further improvement of energy efficiency from the design and development phase of the products.



RE100 is led by The Climate Group in partnership with CDP, as part of the We Mean Business Coalition. Since 2017, Japan Climate Leaders' Partnership (JCLP) has been the Regional Delivery Partner on RE100 initiative in Japan.

Murata has joined Japan Climate Leaders' Partnership (JCLP) as an official member and is working through JCLP towards realization of a decarbonized society for the Japanese government, as well as social contribution to decarbonization through Murata's products.

## Introduction of renewable energy

Murata endeavors to expand the use of renewable energy. As a global company, we have actively promoted the introduction of solar power generation both in Japan and other countries, and we have incorporated the utilization of renewable energy certificates. During fiscal 2020, electricity originating from generation via solar power generation equipment, renewable energy certificate procurement, and other forms of renewable energy reached approximately 400 million kWh (the ratio of renewable energy to the total consumption is about 15%), which is equivalent

to a reduction of approximately 240 kt-CO<sub>2</sub>. We are continuing to explore the introduction of renewable energy in Japan and overseas to help reduce the environmental load.

As part of the initiatives in fiscal 2020, we installed solar panels on the roofs of six plant buildings at our production site in Thailand (Murata Electronics (Thailand), Ltd.), and in August 2020, we put into operation a 4.5 MW mega solar system, which is the largest of its kind in Murata. Murata also installed 2.2 MW solar panels on the roofs of the plant buildings at our production site in Singapore (Murata Electronics Singapore (Pte.), Ltd.). In addition, excess solar energy is stored in batteries installed on the premises of the plant, and Murata efficiently utilizes such renewable energy.

This way, Murata will contribute to the realization of a sustainable society by accelerating responses to climate change, combining Murata's products and systems.

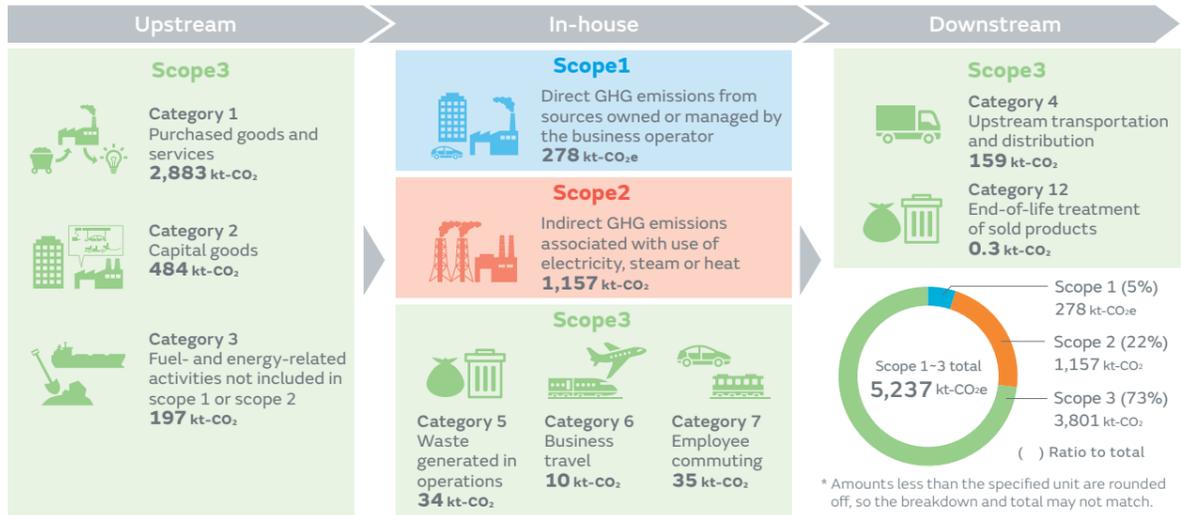


Solar power generation system at Murata Electronics (Thailand), Ltd.

## Climate change countermeasure initiatives throughout the supply chain

73% of all Murata's GHG emissions are Scope 3 emissions. We realize that reducing Scope 3 GHG is just as important as reducing Scope 1 and Scope 2 GHG, and we are currently looking into setting new Scope 3 reduction goals in accordance with SBT criteria.

Once these goals have been set, a wide variety of involved departments will work together to promote climate change countermeasures across the entire Murata supply chain.



Created based on "Supply chain emissions in Japan" (Ministry of the Environment) ([https://www.env.go.jp/earth/ondanka/supply\\_chain/gvc/files/tools/supply\\_chain\\_201711\\_all.pdf](https://www.env.go.jp/earth/ondanka/supply_chain/gvc/files/tools/supply_chain_201711_all.pdf))

\*1: SBT (Science Based Targets): Science-based greenhouse gas emission reduction targets in accordance with the Paris Agreement  
 \*2: GHG: Greenhouse gas  
 \*3: TCFD: Task Force on Climate-related Financial Disclosures  
 \*4: Carbon Disclosure Project: An international nongovernmental organization (NGO) that surveys and evaluates the environmental initiatives of entities such as companies and cities and publishes the results



Climate change is a global threat to the life of humanity and the health of the planet. It will also affect our business, our customers and our supply chain. The scientific assessment from the United Nations' Intergovernmental Panel on Climate Change (IPCC) released in 2021 called for urgent deep decarbonization action in this decade in order to avoid the worst climate impacts and maintain a liveable planet.

We believe businesses have an important role to play to fight climate change. We recognize that climate change presents both risks of increased cost and disruption for our business as well as new

opportunities for Murata to create value to our business while meeting the needs of society. The next decade presents immense opportunities to expand our business into new domains, while living out Murata's mission of contributing to the advancement of society by creating innovative products and solutions.

In this section, we adopted the framework recommended by the Task Force on Climate-related Financial Disclosures (TCFD) to discuss in detail the risks and opportunities brought by climate change and our strategy in responding to these risks and opportunities.

## GOVERNANCE

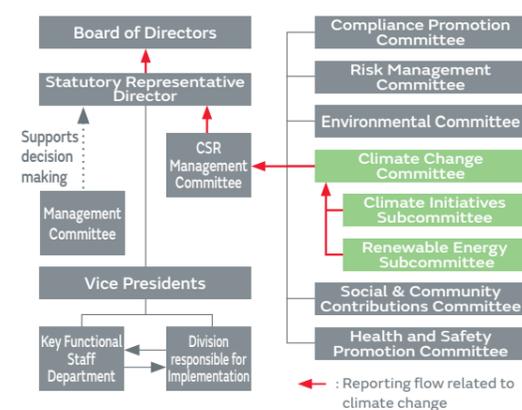
Murata is strengthening its governance in the fight against climate change. The Board has overall accountability for the management of all risks and opportunities, including climate change. Our President and an Executive Vice President, who are Executive Directors of the Board, chair Murata's CSR Management Committee and Climate Change Committee respectively and are ultimately accountable for the oversight of our climate change agenda.

The Climate Change Committee is responsible for governing Murata's overall strategies in response to climate change and monitoring the delivery of climate-related targets across the Murata group of businesses. The Committee, comprising heads of manufacturing operations, environment department, research & development and other business functions, meets at least twice a year, with additional meetings on selected topics. The agenda items discussed in fiscal 2020 included strategic initiatives to reduce GHG emissions at manufacturing operations, the development of lighter, thinner, and more efficient products to help our clients meet their carbon reduction targets, as well as progress in setting science-based emissions reduction targets ("SBT"), and the deployment of renewable energy.

The Climate Initiative Subcommittee, chaired by the General Manager of Murata Group's environment department, with senior managers of relevant departments and business units as its members, supports the Climate Change Committee in deliberating the implementation of climate-related strategies and offering a platform for collaboration and best practice sharing across the Company.

Following the discussion at the Climate Change Committee, Murata made a key decision to become a signatory of the global initiative of RE100, committing to sourcing 100% renewable electricity by 2050. As a result, in fiscal 2021, the Committee set up a new Renewable Energy Subcommittee, with members from Murata's battery, business

development and environment department, to mobilize effort to drive renewable energy adoption across the Company.



The Climate Change Committee reports different climate-related issues to the CSR Management Committee, which further scrutinizes the issues and reports to the Board of Directors. In its oversight of the Company's management plans and business strategies, the Board of Directors would take into consideration the risks and opportunities posed by climate change, relevant company policies and the status of current initiatives.

To further enhance the governance of climate change issues and reinforce our focus on long-term value creation, starting from fiscal 2021, we introduced internal carbon pricing, assigning a monetary value to carbon reduction and embedding the value into an investment index. The shadow pricing aims to encourage investment decision-making that supports the reduction of emissions and associated business costs and risks in the long run. Going forward, we will explore incorporating shadow carbon pricing into our management accounting system and the performance evaluation of each department.

## STRATEGY

Climate change is an issue of critical importance to Murata. The risks and opportunities brought by climate change are expected to have a significant impact on the sustainable development of our business in the medium and longer-term. To anticipate the potential impact and appropriately incorporate the potential effects in our strategic planning processes, we analyzed how Murata's key assets and markets would be affected.

### Our approach to climate scenario analysis

Two scenarios, with different extent of physical risks and strength of transition measures – one with high level of warming and another with strong policy interventions to limit temperature rise – were selected to assess the resilience of our assets, business strategies and climate change countermeasures.

- 4°C scenario based on IPCC Representative Concentration Pathway (RCP) 8.5, in which climate policy is less ambitious and emissions continue

to rise at current rates, with average global temperature increased by 4°C by 2100. Physical manifestations of climate change are increasingly apparent. Businesses and society at large are exposed to increasing risks of extreme climate hazards, such as extreme heat, typhoons, flooding, drought etc.

- 2°C scenario based on IPCC RCP 2.6, where average global temperature rise by 2100 is kept below 2°C in line with the goal of Paris Agreement, as a result of robust climate policies, supported by the development of innovative technologies, to curb emissions and deploy renewable energy. Physical ramifications of climate change are generally constrained but not avoided.

We focused the assessment on the material physical impacts of climate change to Murata's business in the year 2030 and 2050, and the risks and opportunities brought forth by evolving policy and regulatory changes as the world aspires to transition to a low-carbon economy.

### Our approach to climate scenario analysis (key assumptions and analytical choices):

|  |  |   |
|--|--|---|
| <p><b>Approach</b></p> <p>A mix of quantitative and qualitative methods:</p> <ul style="list-style-type: none"> <li>• Quantitative modelling to assess potential direct physical climate impact on Murata's assets</li> <li>• Qualitative approach to transition impact analysis</li> </ul>  | <p><b>Scenarios</b></p> <p>IPCC RCP 2.6 (2°C scenario) and RCP 8.5 (4°C scenario) were used as base scenarios.</p> <ul style="list-style-type: none"> <li>• The physical impact of 10 climate hazards<sup>1</sup> to the selected portfolio of assets</li> <li>• The transition impacts from policy intervention in Murata's top markets</li> </ul>  | <p><b>Scope</b></p> <p>The assessment covers:</p> <ul style="list-style-type: none"> <li>• Direct physical impacts on 20 major manufacturing sites and business facilities</li> <li>• Transition impacts in Murata's top operating locations and markets (based on revenue)</li> </ul>                    |
| <p><b>Timing</b></p> <p>Given the nature of global warming effect and typical process of public policy formulation, the following time horizons were adopted:</p> <ul style="list-style-type: none"> <li>• Medium-term: 2030</li> <li>• Long-term: 2050</li> </ul>   | <p><b>Climate models/data sets</b></p> <p>Referenced an ensemble of peer-reviewed climate models recognized by IPCC and leading climate bodies, such as CMIP5 (Fifth Coupled Model Intercomparison Project)<sup>2</sup>, GFS weather forecast model, GPM flood and precipitation data, etc. with AI technology applied to enhance the predictive power of climate modelling</p>  | <p><b>Physical risks</b></p> <ul style="list-style-type: none"> <li>• Examined the direct physical impact of 10 climate hazards to the selected portfolio of assets.</li> <li>• We plan to analyze the impact on the value chain including suppliers and product transportation in the future.</li> </ul> |
| <p><b>Value-at-risk (VaR)</b></p> <p>Reflects the estimated financial loss that can incur to the selected portfolio or asset in a year, with a certain probability, if all the estimated hazard events occur under the considered scenarios and period. VaR is estimated based on a macro view of the following two aspects.</p> <ul style="list-style-type: none"> <li>• Loss from physical damage to an asset: Evaluated with reference to historical events, asset types and cost of construction for the specific locations</li> <li>• Loss from business interruption: Evaluated based on macro-economic factors such as country GDP, population, land use (e.g. farming, commercial, residential, manufacturing, etc.), urbanization.</li> </ul> | <p><b>Policy</b></p> <ul style="list-style-type: none"> <li>• Referenced relevant climate-related policy intentions and targets announced in Murata's top operating locations and markets, including national carbon reduction targets, Nationally Determined Contributions (NDCs) for Paris Agreement, etc.</li> <li>• Policies are assumed to be more stringent in the 2°C scenario and less in the 4°C scenario.</li> </ul> |   |

<sup>1</sup> Storm surge, rainfall floods, river floods, landslides, typhoons, drought, precipitation, sea-level rise, snowmelt and extreme heat

<sup>2</sup> Coupled Model Intercomparison Project (CMIP5) is a collaborative framework led by World Climate Research Programme (WCRP) with the aim to foster climate model improvements and support national and international assessments of climate change impact, [www.wcrp-climate.org/wgcm-cmip/wgcm-cmip5](http://www.wcrp-climate.org/wgcm-cmip/wgcm-cmip5)

**Understanding the plausible impacts**

The business implications of these climate scenarios were assessed without considering any actions that Murata might take to mitigate or adapt to the evolving circumstances. We outlined the material impacts of these scenarios and included a high-level discussion of how climate change is positioned in our business strategy and our assessment of the resilience of our strategy.

| Physical risks  |   | Transition Impact   |  |   |                               |                   |   |              |   |  |                                   |  |                      |                               |                                    |   |              |   |   |                 |       |   |   |   |  |   |   |   |                 |               |  |  |  |  |  |   |   |   |   |   |
|---|---|---|--|---|-------------------------------|-------------------|---|--------------|---|--|-----------------------------------|--|----------------------|-------------------------------|------------------------------------|---|--------------|---|---|-----------------|-------|---|---|---|--|---|---|---|-----------------|---------------|--|--|--|--|--|---|---|---|---|---|
| Assessed Murata's top 20 manufacturing sites and business facilities<br>Assets: Japan, China and South-East Asia  |   | Assessed major markets (based on sales) and operating locations<br>Markets: Japan, China, the USA, European Union, South East Asia and Korea. |  |   |                               |                   |   |              |   |  |                                   |  |                      |                               |                                    |   |              |   |   |                 |       |   |   |   |  |   |   |   |                 |               |  |  |  |  |  |   |   |   |   |   |
| IMPACTS TO MURATA'S BUSINESS  | <p><b>4°C scenario</b></p> <ul style="list-style-type: none"> <li>Over 80% increase in the risk of one or a group of these assets being affected by extreme climate hazards in 2050 from that in 2020</li> <li>Risk exposure by types of acute and chronic physical risks:</li> </ul> <table border="1"> <tr> <td>High to very high level of risk</td> <td>extreme typhoons and extreme heat, with risk factors of both being over 70%</td> </tr> <tr> <td>Medium level of risk</td> <td>extreme drought and landslide</td> </tr> <tr> <td>Low level of risk</td> <td>extreme rainfall flood and sea-level rise</td> </tr> <tr> <td>Not material</td> <td>extreme precipitation, storm surge, river flood or snowmelt</td> </tr> </table> <ul style="list-style-type: none"> <li>Value at Risk (VaR): estimated to be approximately 1 billion yen. We aim to conduct analysis based on Murata-specific information in the future, and depending on the results, VaR may increase.</li> <li>Impact to our operating costs: The ramification of physical impact of climate change will likely cause increased incidences of disruption to our supply and distribution networks and higher prices of raw materials.</li> </ul> | High to very high level of risk   | extreme typhoons and extreme heat, with risk factors of both being over 70%  | Medium level of risk  | extreme drought and landslide | Low level of risk | extreme rainfall flood and sea-level rise | Not material | extreme precipitation, storm surge, river flood or snowmelt | <p><b>2°C scenario</b></p> <ul style="list-style-type: none"> <li>25% increase in the risk of one or a group of these assets being affected by extreme climate hazards in 2050 from that in 2020, a 60% point reduction in the increase of risk exposure than that in the 4°C scenario</li> <li>Risk exposure by types of acute and chronic physical risks:</li> </ul> <table border="1"> <tr> <td>Medium-high to high level of risk</td> <td>extreme typhoons and extreme heat, with risk factors respectively over 50%</td> </tr> <tr> <td>Medium level of risk</td> <td>extreme drought and landslide</td> </tr> <tr> <td>Insignificant to low level of risk</td> <td>extreme rainfall flood and sea-level rise</td> </tr> <tr> <td>Not material</td> <td>extreme precipitation, storm surge, river flood or snowmelt</td> </tr> </table> <ul style="list-style-type: none"> <li>Value at Risk (VaR): estimated to be approximately a few hundred million yen. We aim to conduct analysis based on Murata-specific information in the future, and depending on the results, VaR may increase.</li> <li>Impact to our operating costs: Increased in operating costs will likely come from transition measures, such as emissions restrictions, price of carbon relating to our operation, raw materials and products.</li> </ul> | Medium-high to high level of risk | extreme typhoons and extreme heat, with risk factors respectively over 50% | Medium level of risk | extreme drought and landslide | Insignificant to low level of risk | extreme rainfall flood and sea-level rise | Not material | extreme precipitation, storm surge, river flood or snowmelt | <p><b>Transition risks</b></p> <table border="1"> <thead> <tr> <th>Emerging Trends</th> <th>Risks</th> </tr> </thead> <tbody> <tr> <td>Countries with net-zero emissions targets account for over 70% of Murata's sales in fiscal 2020. 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|   | High to very high level of risk   | extreme typhoons and extreme heat, with risk factors of both being over 70%   |  |   |                               |                   |   |              |   |  |                                   |  |                      |                               |                                    |   |              |   |   |                 |       |   |   |   |  |   |   |   |                 |               |  |  |  |  |  |   |   |   |   |   |
| Medium level of risk  | extreme drought and landslide   |   |  |   |                               |                   |   |              |   |  |                                   |  |                      |                               |                                    |   |              |   |   |                 |       |   |   |   |  |   |   |   |                 |               |  |  |  |  |  |   |   |   |   |   |
| Low level of risk   | extreme rainfall flood and sea-level rise   |   |  |   |                               |                   |   |              |   |  |                                   |  |                      |                               |                                    |   |              |   |   |                 |       |   |   |   |  |   |   |   |                 |               |  |  |  |  |  |   |   |   |   |   |
| Not material  | extreme precipitation, storm surge, river flood or snowmelt   |   |  |   |                               |                   |   |              |   |  |                                   |  |                      |                               |                                    |   |              |   |   |                 |       |   |   |   |  |   |   |   |                 |               |  |  |  |  |  |   |   |   |   |   |
| Medium-high to high level of risk   | extreme typhoons and extreme heat, with risk factors respectively over 50%  |   |  |   |                               |                   |   |              |   |  |                                   |  |                      |                               |                                    |   |              |   |   |                 |       |   |   |   |  |   |   |   |                 |               |  |  |  |  |  |   |   |   |   |   |
| Medium level of risk  | extreme drought and landslide   |   |  |   |                               |                   |   |              |   |  |                                   |  |                      |                               |                                    |   |              |   |   |                 |       |   |   |   |  |   |   |   |                 |               |  |  |  |  |  |   |   |   |   |   |
| Insignificant to low level of risk  | extreme rainfall flood and sea-level rise   |   |  |   |                               |                   |   |              |   |  |                                   |  |                      |                               |                                    |   |              |   |   |                 |       |   |   |   |  |   |   |   |                 |               |  |  |  |  |  |   |   |   |   |   |
| Not material  | extreme precipitation, storm surge, river flood or snowmelt   |   |  |   |                               |                   |   |              |   |  |                                   |  |                      |                               |                                    |   |              |   |   |                 |       |   |   |   |  |   |   |   |                 |               |  |  |  |  |  |   |   |   |   |   |
| Emerging Trends   | Risks   |   |  |   |                               |                   |   |              |   |  |                                   |  |                      |                               |                                    |   |              |   |   |                 |       |   |   |   |  |   |   |   |                 |               |  |  |  |  |  |   |   |   |   |   |
| Countries with net-zero emissions targets account for over 70% of Murata's sales in fiscal 2020. Although the electronic components industry is not being targeted for heavy regulatory emissions control across the assessed markets, policy interventions is expected to increase over time | Increase in cost of our production activities   |   |  |   |                               |                   |   |              |   |  |                                   |  |                      |                               |                                    |   |              |   |   |                 |       |   |   |   |  |   |   |   |                 |               |  |  |  |  |  |   |   |   |   |   |
| Most countries have set energy efficiency improvement targets   | Increase in utility costs of production operation.  |   |  |   |                               |                   |   |              |   |  |                                   |  |                      |                               |                                    |   |              |   |   |                 |       |   |   |   |  |   |   |   |                 |               |  |  |  |  |  |   |   |   |   |   |
| Some countries intend to set product energy efficiency standards or carbon import tax   | Increase in the cost of accessing these markets   |   |  |   |                               |                   |   |              |   |  |                                   |  |                      |                               |                                    |   |              |   |   |                 |       |   |   |   |  |   |   |   |                 |               |  |  |  |  |  |   |   |   |   |   |
| Emerging Trends   | Opportunities   |   |  |   |                               |                   |   |              |   |  |                                   |  |                      |                               |                                    |   |              |   |   |                 |       |   |   |   |  |   |   |   |                 |               |  |  |  |  |  |   |   |   |   |   |
| All the assessed economies have set targets for adopting renewable energy and electric vehicles (EV) by 2025 or 2030  | These commitments would fuel a soaring demand for EVs and renewable energy, and hence for Murata's products.  |   |  |   |                               |                   |   |              |   |  |                                   |  |                      |                               |                                    |   |              |   |   |                 |       |   |   |   |  |   |   |   |                 |               |  |  |  |  |  |   |   |   |   |   |
| Over the past 4 years, automobiles sold globally declined by 18% <sup>3</sup> , but our sales of automotive electronic components increased by 3.7%, reaching 273.2 billion yen in fiscal 2020  | EVs, with rising share in the global automobile market and demanding more electronic components than conventional cars, could generate higher demand for our product lines  |   |  |   |                               |                   |   |              |   |  |                                   |  |                      |                               |                                    |   |              |   |   |                 |       |   |   |   |  |   |   |   |                 |               |  |  |  |  |  |   |   |   |   |   |
| Rising public concern on climate change and policy trends of pursuing a green and smart economic transition globally  | Increase the demand and opportunities for new markets of our compact, energy-efficient electronic components over the medium to long term   |   |  |   |                               |                   |   |              |   |  |                                   |  |                      |                               |                                    |   |              |   |   |                 |       |   |   |   |  |   |   |   |                 |               |  |  |  |  |  |   |   |   |   |   |
| Current NDCs are considered insufficient to limit the rise in global average temperature to below 2°C   | Our innovative technologies and products will play an increasingly important role   |   |  |   |                               |                   |   |              |   |  |                                   |  |                      |                               |                                    |   |              |   |   |                 |       |   |   |   |  |   |   |   |                 |               |  |  |  |  |  |   |   |   |   |   |
| Rising investor interest in green investment in the medium to long term   | Murata's robust environmental management and carbon-efficient innovations will make it appealing to investors   |   |  |   |                               |                   |   |              |   |  |                                   |  |                      |                               |                                    |   |              |   |   |                 |       |   |   |   |  |   |   |   |                 |               |  |  |  |  |  |   |   |   |   |   |
| RESPONSE AND RESILIENCE OF STRATEGY   | <p>(Common for Physical and Transition risks)<br/>Company-wide emissions reduction programmes, led by the Climate Change Committee, have resulted in continued reduction of our carbon footprint since 2018.</p> <ul style="list-style-type: none"> <li>Energy conservation: Initiatives to lower our demand for electricity, a major source of our emissions, included among others optimizing air-conditioning systems and production facilities' energy management systems with sensing/IoT technology, and reducing standby power use of equipment, lowering emissions and operating costs.</li> <li>Renewable energy: Introducing solar power generation facilities, purchase of renewable energy (RE) and RE certificates. RE accounted for approximately 400 million kWh (15% of overall electricity use) in fiscal 2020, contributing to curbing around 240 kt-CO<sub>2</sub>.</li> </ul>   |   | <p>Additionally, we are developing new internal systems and targets to guide emissions reduction effort.</p> <ul style="list-style-type: none"> <li>Internal systems: <ul style="list-style-type: none"> <li>An internal carbon pricing system was introduced in 2021 to align investment decision-making with the Company's commitment to emissions reduction.</li> </ul> </li> <li>New targets: <ul style="list-style-type: none"> <li>Joined RE100, committing to sourcing 50% electricity from renewables by 2030 and 100% by 2050.</li> <li>Plan to set emissions reduction targets in line with the SBTi criteria.</li> </ul> </li> </ul> <p>These initiatives will promote product and process innovation internally and contribute to accelerating the transition to a low-carbon economy. In the future, we plan to engage different relevant departments to promote climate change countermeasures across our supply chain to reduce Murata's Scope 3 emissions. (▶ P.75-76 Strengthening Murata's response to climate change)</p> | <p>(Physical risks)</p> <ul style="list-style-type: none"> <li>The assessed VaR, in the range of a few hundred million yen to 1 billion yen, is not expected to have a material impact on the Company's financial position. As a reference, the potential financial loss would account for less than 0.5% of Murata's net profit in fiscal 2020.</li> <li>Business Continuity Plan (BCP) to minimize the impact of hazards on our operations. (▶ P.91 Business continuity management (BCM))</li> </ul> <p>(Transitional risks)</p> <ul style="list-style-type: none"> <li>The net costs of capital investment projects related to energy saving are considered to be negligible because these projects can generate saving in energy costs over time and hence have a less aggressive threshold on rate of return compared to other investments.</li> </ul> |                               |                   |   |              |   |  |                                   |  |                      |                               |                                    |   |              |   |   |                 |       |   |   |   |  |   |   |   |                 |               |  |  |  |  |  |   |   |   |   |   |

<sup>3</sup> Source: Global sales statistics by International Organization of Motor Vehicle Manufacturers (<https://www.oica.net/category/sales-statistics/>)

**RISK MANAGEMENT**

CSR Management Committee regularly evaluates the materiality of a wide range of social, environmental, and economic issues through a structured process. In the most recent materiality assessment, climate change was identified as a critical risk and endorsed by the Board of Directors as an important issue that Murata should prioritize management oversight and actions. (▶ P.73 Key issues (materiality) originating from social issues)

On a strategic level, the Climate Change Committee provides oversight on Murata's climate change agenda, including the continuous monitoring of evolving climate-related risks. In fiscal 2021, we started to use scenario analysis to evaluate the potential risks and opportunities of plausible future climate states and the resilience of our business strategy. On the operational level, ISO 14001 is enforced in our production facilities to

assess environmental risks and drive continuous improvement.

Risks arising from climate change are incorporated into company-wide enterprise risk register under the supervision of the CSR Management Committee. For example, guidelines for responding to severe weather conditions are provided in our Business Continuity Plan (BCP) to minimize business disruption. (▶ P.69 Risk Management, ▶ P.91 Business continuity management (BCM))

Our participation in industry associations, such as Japan Climate Leaders' Partnership (JCLP), and global alliances, such as RE100, can help us gather insights into emerging risks and opportunities related to climate change.

**METRICS AND TARGETS**

We are in the process of setting science-based emissions reduction targets to contribute to the world's effort in keeping average temperature rise at 1.5°C. As a member of RE100, we have committed to achieving 50% electricity from renewable energy installation ratio by 2030 and 100% by 2050.

In fiscal 2021, although our business is expected to grow (sales up 6.3% year on year)<sup>4</sup>, we aim to reduce our Scope 1 and 2 GHG emissions by 2.4% from fiscal 2020 to 1.4 million t-CO<sub>2</sub>e. (For a breakdown of our emissions by scope and category, please refer to P. 104.)

Looking ahead, we will expand the scope of climate scenario analysis to provide more comprehensive risks and opportunities assessment. We will formulate plans that take these into account and accelerate the decarbonization of the value chain.

| GHG Emissions (kt-CO <sub>2</sub> e <sup>5</sup> ) | FY2018       | FY2019       | FY2020       |
|--|--------------|--------------|--------------|
| <b>Total emissions</b>                             | <b>6,074</b> | <b>5,979</b> | <b>5,237</b> |
| Scope 1  | 312          | 307          | 278          |
| Scope 2 <sup>6</sup>                               | 1,320        | 1,302        | 1,157        |
| Scope 3  | 4,442        | 4,371        | 3,801        |

Figures are rounded to the nearest unit, so the breakdown and total may not match

<sup>4</sup> From the business forecast announced on July 29, 2021.  
<sup>5</sup> The approach we use in measuring our emissions (Scopes 1, 2 & 3) are in line with the emissions accounting methodology defined in the GHG Protocol. Our annual emissions data have been reviewed and certified by third-party assurer to ensure consistency and reliability of the emissions data.  
<sup>6</sup> Scope 2 emissions calculation method: Prior to FY2019, Murata's Scope 2 emissions were accounted through location-based method, using average emissions factor of the electricity grid in a specific region. In FY2019, Murata changed to market-based method, using emissions factor of individual electricity grid to account for its Scope 2 emissions.

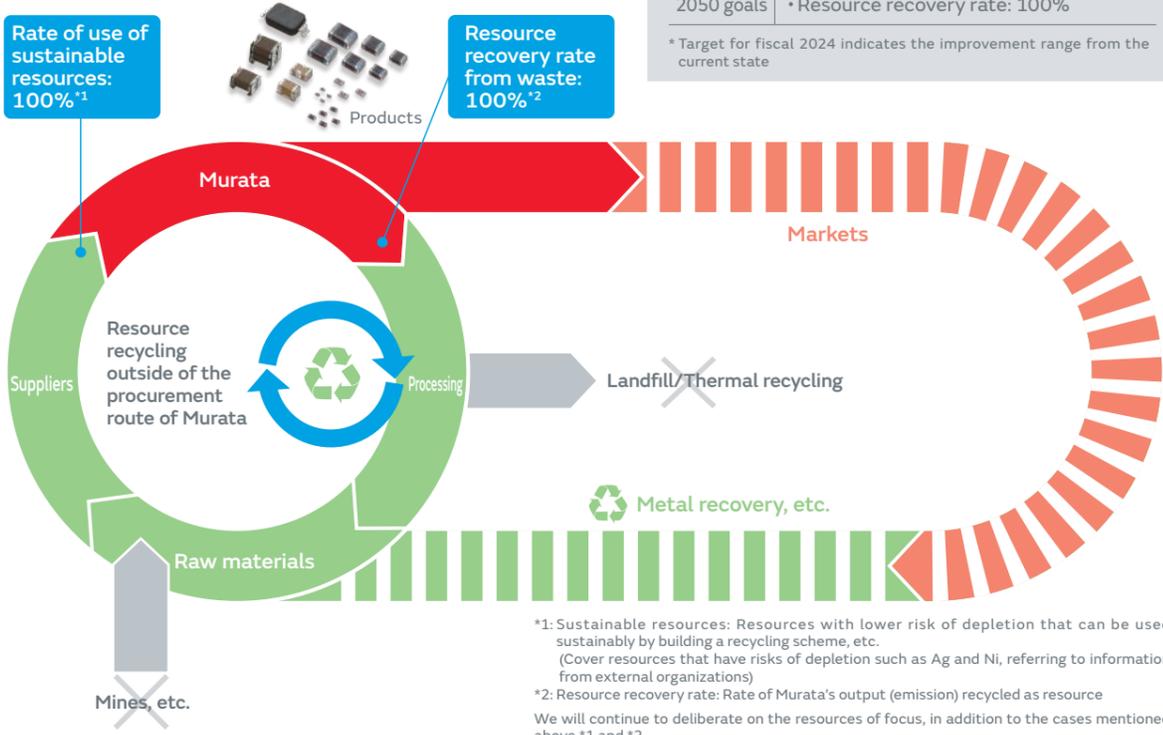
# Use of sustainable resources

**Background of setting the issue of materiality**  
 With the population growing around the world, issues such as depletion of resources and increased amount of waste are becoming more and more serious. Murata has set this key issue to tackle these problems while aiming for sustainable growth.

**Our goal**  
 We will realize sustainable use of resources in our business activities, while contributing to cultural development through co-creation with collaborators.

|                    |  |
|--------------------|--|
| Fiscal 2024 goals* | • Rate of use of sustainable resources: 1%<br>• Resource recovery rate: 5%     |
| Fiscal 2030 goals  | • Rate of use of sustainable resources: 25%<br>• Resource recovery rate: 50%   |
| Fiscal 2050 goals  | • Rate of use of sustainable resources: 100%<br>• Resource recovery rate: 100% |

\* Target for fiscal 2024 indicates the improvement range from the current state



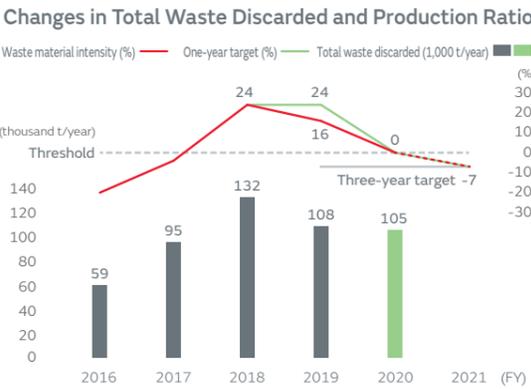
\*1: Sustainable resources: Resources with lower risk of depletion that can be used sustainably by building a recycling scheme, etc. (Cover resources that have risks of depletion such as Ag and Ni, referring to information from external organizations)  
 \*2: Resource recovery rate: Rate of Murata's output (emission) recycled as resource  
 We will continue to deliberate on the resources of focus, in addition to the cases mentioned above \*1 and \*2

**Murata's initiative towards realization of use of sustainable resources**

**Waste management**

Murata's waste management processes are based on "compliance," "control of the production of waste," and "zero emissions" as fundamental principles. To help achieve the medium-term target for fiscal 2019 to 2021 of improving the amount of waste per production output by 7% from the fiscal 2016-2018 average, we worked in fiscal 2020 toward a single-year target of keeping the amount of waste no larger than the basic unit value for fiscal 2016 to fiscal 2018. We were able to achieve the target as a result of reduction measures taken, including revision of manufacturing methods for our products and the introduction of an in-house waste liquid processing facility. We are also working to put resources to effective use by, for example, reusing or recycling some packaging materials. Going forward, Murata endeavors to achieve the medium-term goal by improving manufacturing methods for further reduction in defect rates,

introducing certification systems which enable waste liquid processing among Murata Group companies and other measures.

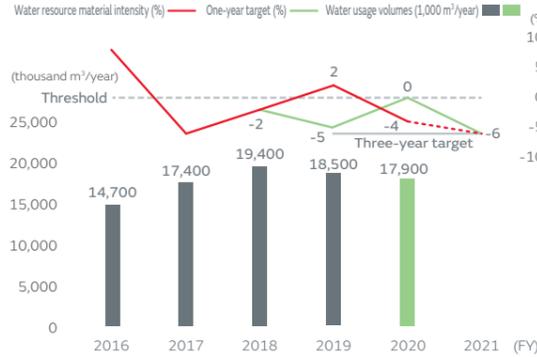


**Water resource management**

Murata is promoting effective use of water resources used in business activity. We take measures for water risk that can affect our corporate activity. To help achieve the medium-term target of reducing water usage per production output by 6% from the fiscal 2016 fiscal 2018 average in fiscal 2021, we worked in fiscal 2020 toward a single-year target of keeping the amount of water usage no larger than the basic unit value for fiscal 2016 to fiscal 2018. We were able to achieve the target in fiscal 2020 by significantly improving the amount to be 4% less than the basic unit value for fiscal 2016 to fiscal 2018. Initiatives at each worksite, such as recycling of wastewater at Toyama Murata Manufacturing Co., Ltd. (Toyama Murata), contributed to the achievement. In fiscal 2021, we plan to achieve the medium-term target by taking measures such as promoting

recycling of water and saving water used in scrubbers or other facilities.

**Trend for water use and comparative unit ratio of production**



**Initiatives at Toyama Murata Manufacturing Co., Ltd.**

Toyama Murata received a 2021 "Eco-Business" certificate from Toyama Prefecture.\* The certificate was awarded based on the initiatives that Toyama Murata has been taking, including reduction of CO2 emissions and waste and recycling.

\* Toyama Prefecture's Eco-Business certification: Toyama Prefecture certifies businesses that have been engaged in reduction of waste, recycling, and other environmentally friendly business activities as "Eco-Business." (For Toyama Prefecture's website, please see: <https://www.pref.toyama.jp/1705/kurashi/kankyoushizen/haikibutsu/recycle1/company.html>)

**Details of Toyama Murata's initiatives evaluated by Toyama Prefecture**

- <Three R's (reduce, reuse, recycle) of waste initiatives>
  - Reduced waste by installing an in-house processing facility for alkaline waste liquid, which is its main waste liquid.
  - Partially uses treated wastewater as pure water.
  - Recycles ferric chloride waste liquid completely by our business partners through concentrated regeneration treatment.
  - Keeps the amount of landfill waste to zero.
- <Initiatives in business activities for the environment>
  - Obtained ISO14001 certificate. Set environmental goals and taking actions in a planned manner.
  - Using materials that do not contain RoHS regulated substances to manufacture more environmentally friendly products.
  - Set the targets for energy and water consumption as environmental targets, and working on measures including the introduction of energy-efficient equipment for energy saving, replacement of indoor and outdoor lighting with LED, and wastewater recycling.



Toyama Murata Manufacturing Co., Ltd.



Waste liquid processing facility at Toyama Murata

Aiming for a sustainable society, Toyama Murata will continue to implement environmentally friendly business management to protect the natural environment in the area, and to be a company that local communities can be proud of.

## Pollution prevention and chemical substance management

**Background of setting the issue of materiality**  
 Recently, stricter environmental regulations have been enacted in European countries, China, countries in Southeast Asia and other countries. Murata has set this key issue in order to promote initiatives to proactively prepare for these regulatory changes and to minimize impacts on environment.

**Our goal**  
 Murata aims to realize monozukuri in harmony with local communities and takes on challenges beyond the conventional scheme in order to fulfill its social responsibility to provide monozukuri towards a sustainable society.

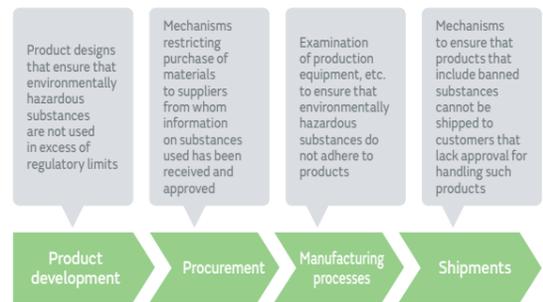
We will promote initiatives to reduce VOC emissions, including introduction of an IoT system to prevent environmental incidents by human error, reconsideration and update of materials and manufacturing methods.

### Chemical substance management

In addition to efforts to comply with laws and regulations such as the RoHS Directive and the REACH regulations\*, we have established voluntary standards that take account of global trends regarding environmentally hazardous substances and customer requests, and actively work to comply with reduction requirements and bans on such substances in our products under the management structure as illustrated in the figure below.

\* REACH regulations: a regulation of the European Union regarding registration, evaluation, approval and restriction of chemicals

### Management of environmentally hazardous substances at Murata



Furthermore, Murata has been taking proactive actions to address any revisions in laws related to environmentally hazardous substances.

The current RoHS restricts use of ten types of chemical substances in electronic or electric equipment sold in European Union countries. Of these, restrictions on the use of four specified types of phthalic esters were added in July 2019, but Murata had banned the use of these phthalic esters in new products to be developed since July 2017, in advance of the enforcement of the amended RoHS Directive. To prevent contamination through contact, we also included packing materials and tools that come into contact with products in production or logistics processes in the scope of the control.

Murata will continue to promote measures to reduce risks, including exposure risks to the staff in the manufacturing process which requires handling of chemical substances, as well as environmentally hazardous substances contained in the products.

### Pollution prevention

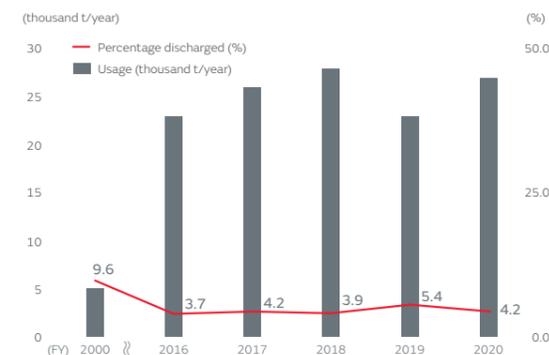
Murata recognizes contamination by chemical substances as a material environmental risk, and has been working to prevent it. In particular, regarding equipment related to storage or intra-plant transportation of liquid chemical substances, we are implementing measures by setting four voluntary standards, to prevent accidents. There were no major environmental accidents or violation of environmental laws and regulations in fiscal 2020.

### Voluntary standards for prevention of environmental accidents and pollution (equipment-related)

- Prohibition of underground storage tanks
- Permeation barrier coatings
- Prohibition of underground piping
- Installation of emergency containment structures

In order to control discharge of volatile organic compounds (VOCs), an air pollutant, we voluntarily installed regenerative thermal oxidizers (RTO), a type of exhaust gas treatment equipment, at facilities whose emission level is high, and eliminated 96% of the amount used.

### Trends in volume of VOC use and rate of discharge into the atmosphere (Japan)



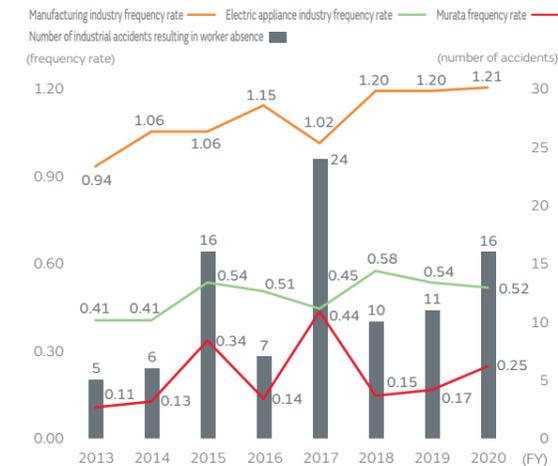
## Safe and worry-free workplaces and health management

**Background of setting the issue of materiality**  
 A foundation of CS and ES, which are Murata's important values, is the physical and mental health of employees. Based on this recognition, Murata has set this key issue in order to implement health management that ensures safety and security.

**Our goal**  
 We aim to provide employees with safe workplaces where each and every employee can feel healthy and work with peace in mind.

team to ensure safety of employees and the obligation of employees to maintain their own health by implementing measures from a variety of angles.

### Trends in frequency rates of industrial accidents and the number of industrial accidents resulting in worker absence



### Health and safety

Murata has established the Health and Safety Promotion Committee as a subcommittee of the CSR Management Committee. The subcommittee, which is chaired by a Member of the Board of Directors and Executive Vice President, discusses health and safety policy and health management plans, as well as setting targets to implement them. The subcommittee deliberates and manages the initiative plan and its progress at each worksite to achieve health and safety target as a company. By proactively taking preventive measures for occupational accidents, Murata has kept the frequency rates of industrial accidents at a lower level than the average of the manufacturing industry or electrical industry, and has had no major accident in recent years.

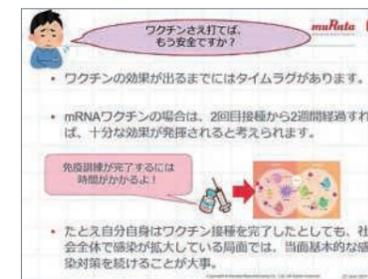
In fiscal 2020, we conducted an analysis of industrial accidents that occurred in order to further mitigate the risk of these accidents. The analysis found that more than 70% of all cases lacked preliminary risk identification in the risk assessment process, and that more than 70% of the causes of all accidents were due to unsafe behavior. In response to these results, we set the goal of improving health and safety management and building a culture of safety and launched new initiatives under this goal. Specifically, we strive to prevent occupational accidents by sharing a system to ensure comprehensive risk identification with all worksites in Japan and overseas, in order to improve effectiveness of the risk assessment. In addition, we will improve our risk management by developing a safety management method that uses a health and productivity management approach, external resources, and IoT systems. We will also work to build a culture of safety by improving safety and health education systems and fostering personnel in charge of safety and health in the next generation.

We thus aim to develop a work environment where safety is respected as the top priority and to enhance safety and health literacy among employees through a two-track approach comprising the obligation of the entire management

### Measures for COVID-19

We are currently moving out of the early 2020 emergency response to a stage of operations under life with COVID-19. Assuming it would be a long-term battle, Murata focuses on mitigation of employees' anxiety and feeling of isolation and provides them with physical and mental care, giving them a sense of belonging as a member of Murata.

An effective way to protect employees from a vague sense of anxiety is to share accurate information and evidence regarding COVID-19. Murata held an online information session with an occupational physician for employees of the group and business partners, which was attended by around 3,000 people. The materials can be shared with employees' families, and we also developed a video from the briefing session and turned them into e-learning materials to create an on-demand environment where employees can learn at any time. Furthermore, our health nurses regularly compile and post recent medical knowledge on the company intranet and newsletters in a way they can be easily understood. English and Chinese versions are also created and rolled out globally.



Online information session with an occupational physician

In response to the changes in the workplace due to the COVID-19 pandemic, we provided employees with guidance on work from home and provided managers with guidance on communication in fiscal 2020. In fiscal 2021, we collected information on changes and trends with employees that arose through health management consultations in Japan and organized the most effective ways of providing mental health care through managers or supervisors (called "line care" in Japan). We turned these examples and methods into teaching materials so that they can be utilized in workplace management and distributed them to managers to enhance line care. We have also worked to enhance self-care, on the assumption that "employees who are still in process of building relationships at the workplace" are the most susceptible to COVID-19 pandemic. For example, we provide an online self-care training program for new employees at operational locations with a high percentage of staff working from home. The program provides an opportunity to learn specific self-care methods such as how to cope with stress and the importance of consulting others through group work.

Through these efforts, we have maintained trust and unity within our teams at many workplaces.

**Health and productivity management**

In response to the changes in the working environment due to the COVID-19 pandemic, we made changes to the "Murata Health Management Plan," which was established to sincerely engage in nurturing employees' health. Under the concept of "down-to-earth health and productivity management," various members at 11 Murata group sites, including health nurses, administration staff executing health-promotion functions, members of health insurance associations, members executing safety functions and human resources functions, discussed, reviewed and integrated their points of views into the plan. We have established four plans based on the mental and physical states of employees that were acquired through quantitative data and daily health management duties.

**Details of health management plans**

|        |   |
|--------|---|
| Plan 1 | Creating a system that promotes health management<br>Various functions work together on the basis of the actual state of physical and mental health of all employees to prevent illness |
| Plan 2 | Implementing health policies conforming to data and the actual conditions of employees<br>Improvement of sleep, smoking, exercise, and eating   |
| Plan 3 | Enhancing stress management<br>Fortification of self-care and employee mental health support from the line manager, improvement of stress check implementation                          |
| Plan 4 | Improving health literacy   |

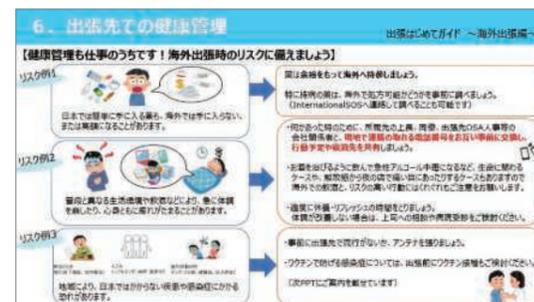


Discussion and review of health management plan

**Health-related support for employees who travel overseas and expatriates**

As a global business, Murata has numerous employees who travel overseas as well as expatriates. Since fiscal 2020, we have enhanced our health follow-up system so that our employees can lead safe, secure, and healthy lives while overseas. Our occupational physicians check the health status of employees bound for long-term overseas business trips, and interview those who need it before they travel. "First-time guide for overseas business trips," which includes precautions concerning overseas business trips, is posted on the company intranet.

Under the cooperation between the global human resources function and the health promotion function, we hold seminars for expatriates and their families that cover risk management, health management, and mental health aspects to be aware of while living abroad. In fiscal 2021, our health nurses are conducting self-care training for overseas expatriates who have difficulties in traveling to and from Japan. To date, this training has been provided at sites in Singapore, India, and Europe. Through these initiatives, we are creating an environment where our employees can work overseas in good health and with enthusiasm.



First-time guide for overseas business trips

**Respect for human rights and diversity**

**Background of setting the issue of materiality**

With rapid business expansion in recent years, Murata has grown into a global company with diverse employees. In order for employees with various backgrounds to challenge each other and grow together, the human rights of each employee need to be respected. Based on that belief, Murata has set this key issue.

**Our goal**

We aim for sustainable growth leveraging diverse human resources globally, understanding and respecting the concept of human rights.

**Human Rights and Labor Policies**

To be an innovator who can provide solutions to customer problems and social problems leveraging diverse human resources, it is essential to respect the human rights of individuals. Murata has set its "Human Rights and Labor Policies" based on that belief.

The policies reflect human rights awareness embedded in the Murata Philosophy and the company's history, while specifying our commitment to respect, protect, and not violate the basic human rights of each employee. We held discussions with management on how recent business expansion has been affecting human resources, organizations and local communities, conducted analysis on the expectations from stakeholders, and reflected the results in the policies.

We will continue such initiatives globally based on the advice of experts.

However, Murata will continue to prepare for future challenges, review the status of human rights management systems at each worksite and follow up as necessary, with the headquarters taking the main role. In addition, for the matters to be considered from a global perspective, the Group will make improvements as a whole. As Murata's business evolves and expands, various issues regarding human rights may arise. Murata will continue to regularly implement human rights due diligence.

**Education of human rights**

Murata started a review on education that is already being conducted, as it considers raising employee awareness as one of the important ways of addressing human rights issues. In Japan, harassment is a familiar problem to everyone, and therefore Murata has held educational sessions on the Human Rights and Labor Policies and harassment.

In addition, humanitarian affairs personnel at each Japanese group company held a study session online together to discuss topics such as what human rights means from a global perspective, what kinds of human rights issues are occurring now, and the human rights risks that Murata could encounter. The results of this study session will be used in setting goals for each worksite.

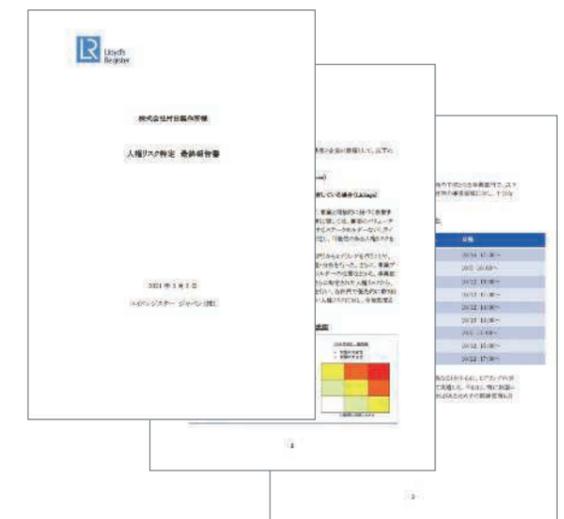
In fiscal 2020, educational sessions were held among domestic worksites, however, we will consider holding such sessions targeting overseas worksites.

Approach to Human Rights and Labor Policies  
[https://corporate.murata.com/en-global/csr/people/human\\_rights](https://corporate.murata.com/en-global/csr/people/human_rights)

**Human rights due diligence**

With the help of external experts, we reviewed our human rights due diligence system and established a process to reconfirm and improve the actual state of each plant and each business from various perspectives, such as forced labor (including child labor, foreign workers, and working hour issues etc), gender disparity, various forms of harassment, impact on the community, and the impact of products on society. In the process, Murata ensures there is no violation of human rights, such as forced labor or trafficking in persons, as well as identifies risks. Human rights due diligence is also reviewed and discussed between directors at the Management Committee.

In the due diligence process undertaken recently, we found no major issues to be addressed.



### Culture of leveraging diverse individual strengths and collaboratively working together

Murata regards diversity and inclusion as accepting and leveraging not only visible diversity such as gender, age and race, but also qualities and strengths such as thoughts, knowledge, experiences, and viewpoints. We are implementing initiatives to develop a culture focused on mutual trust and cooperation.

### Promotion of Women's Participation and Advancement in the Workplace and Promoting an understanding of SOGI

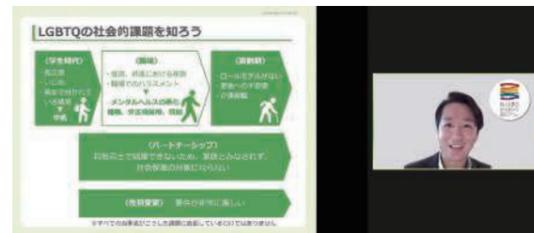
As part of initiatives for diversity, Murata promotes women's advancement and raises awareness for various SOGI\*.

Murata Manufacturing Co., Ltd. has set targets regarding female career advancement: 1) proportion of women in technical fields in new graduate for career-track hiring: 10% or more; and 2) proportion of women in managerial positions: 10% by the end of fiscal 2030. Murata continually holds seminars especially for female new graduates who seeks employment in technical positions. As a result, the proportion of women to the total new graduates for career-track positions has been 10% or more for fiscal 2017 to fiscal 2020. The number of female employees in engineering positions has been steadily increasing.

To improve the proportion of women in managerial positions, Murata has newly introduced a specialty managerial level to provide more opportunities for them in fiscal 2019. Murata also endeavors to establish a female network through medium- to long-term career development support and discussion sessions.

Regarding various SOGI, Murata held a discussion session targeting directors and department heads, at which they exchanged opinions and deepened their understanding. Murata has also held SOGI study sessions in Japan for supervisors and other employees, and a total of 466 employees have participated. Murata will continuously hold such study sessions to raise employee awareness. We will also take initiatives to change facilities such as toilets and change rooms that are easy to use for everyone regardless of the SOGI.

\* SOGI: Sexual Orientation & Gender Identity



SOGI workshop

Promotion of diversity and inclusion  
<https://corporate.murata.com/en-global/csr/people/employees#id3>

### Developing human resources globally

At Murata, we see the fostering of human resources as our most important management objective and we have formulated the policy for fostering Human Resources. We are working to ensure that the policy becomes entrenched in the company, while continuously making efforts to solve problems.

We offer various training programs to our employees and support their career formation, such as by providing education and work opportunities that enable each individual to make the most of their strengths and unique characteristics and maximize their innate talents and abilities. Due to the expansion of production and mergers and acquisitions (M&A) outside of Japan, the ratio of employees outside of Japan has reached 60%. Accordingly, Murata has been holding global human resources meetings regularly, and discussing and implementing various measures such as promotion of talent management and dissemination of the Murata Philosophy while strengthening human resources development not only in Japan but also globally. In addition, Murata is increasing hiring of workers overseas in preparation of further business expansion in global markets.

In fiscal 2007, we launched a rotation system to hire such human resources and promote hiring of individuals to positions suited to their skills on the global level. Under the rotation system, we dispatch local employees at overseas sites to affiliates in Japan or in other countries. As of fiscal 2020, the system had rotated a total of 958 people. During fiscal 2020, the number of dispatched employees decreased year on year due to the impact of immigration restrictions, etc. resulting from the COVID-19 pandemic.

Going forward, Murata will aim to increase the ratio of employees at overseas indirect divisions who have work experience at other sites.

We aim to increase this ratio from 5% in fiscal 2020 to 7% in fiscal 2024 and 10% in fiscal 2030, in order to promote the use of human resources with work experience at other overseas sites, and to create opportunities for global interaction. We will manage the organization with a greater focus on autonomy, collectiveness and evolution through developing human resources with diverse viewpoints and experiences.

### Dissemination of the Murata Philosophy

Now that we have expanded our business globally and that work styles and the way of thinking are more diversified, it has become more important than ever to share Murata's values among all employees. At Murata, we make continuous efforts to deepen understanding of the Murata Philosophy on a global basis by providing training sessions in which our executives communicate the Murata Philosophy, offering opportunities to discuss the Murata

Philosophy in the workplace, and holding workshops at group companies in Japan and overseas. We also provide opportunities to learn the founder's ideology and Murata's history by utilizing Murata Innovation Museum, which opened in 2019. In fiscal 2020, there were less opportunities for the employees to communicate with each other in person due to the COVID-19 pandemic, however, we strived to actively pervade the management philosophy by holding online discussions between directors, online tours at the Murata innovation museum, etc.

For more information on the Murata Philosophy, see: (▶ p.3 What Murata creates)



Murata Innovation Museum online tour

### Employee engagement initiatives

Since 2004, Murata has been engaged in various activities to reform its organizational culture in order to build a corporate culture that fosters employees' motivation and growth. Murata believes it is important to ensure that each and every employee feels rewarded and grows through their work. Based on that belief, we conducted employee surveys to grasp the current situation, analyzed the issues and have been making improvements. We have implemented the PDCA cycle at a global level after conducting a world-wide employee survey from fiscal 2021. As part of "Mid-term Direction 2024," we aim to raise the ratio of employees who return positive answers in employee engagement to 70% by fiscal 2024 and 76% or higher by fiscal 2030.

### TOPICS

### Global activities towards "One Murata"

Since 2013, Murata has held global human resources meetings in which human resource officers at overseas sites get together and discuss solutions to global issues.

Murata also has implemented "global project activities," which include four themes of 1) Talent management, 2) Compensation (review of remuneration), 3) Utilization of IT by Millennials, and 4) Dissemination of the Murata Philosophy, under a slogan of "One HR, One Murata." Themes 1) and 2) mainly consist of members in managerial positions, and 3) and 4) consist of mainly young employees. Management is also involved in these activities. We aim to have all members learn a lot of things and grow through these activities, as well as achieve the themes. As online meetings have gained popularity, these meetings are more accessible by young employees who would not have participated otherwise and they are held more frequently.

In these global project activities, the participants are required to have a global perspective or a broader perspective, not just see things from an ordinary point of view. In addition, more effort and

time for understanding one another are required when discussing with global members from various backgrounds and with differences of position and language barriers. They may experience a conflict and may need patience, however the process of deliberating and considering together enables the participants to grow further.

The project started in January 2021, and we hope the members will come up with new ideas through active discussion. Murata will continue to take various measures to build a culture of collaboration in which diverse talents are fully utilized.



Global project

## Coexistence with local communities

### Background of setting the issue of materiality

Under our founder’s philosophy of “Wishing the presence of Murata to be a source of pride and joy in local communities,” Murata aims to be a company that makes employees happy and proud and has contributed to society as a member of local communities.

In order to meet increased expectations from the local communities where Murata operates, we believe it is necessary to reinforce the initiatives to achieve the philosophy. For this reason, Murata has set this key issue.

### Our goal

We aim to keep in harmony with local communities regardless of changes in the business environment and to be a company that makes communities proud.

### What we do to achieve our goal

In order to respond to the expectations from local communities, we have reviewed the Basic Policies for Activities to Contribute to Society and Local Communities and established the Guidelines for Activities to Contribute to Society and Local Communities. In doing so, we have developed a system to actively grasp the needs and expectations of local communities, identify the areas to focus on based on the status of the local areas, and promote activities that will lead to the resolution of issues in those communities.

Under these policies, we will engage in communications with the members of local communities and continuously contribute to the realization of a sustainable society, mainly focusing on activities to support the development of the next generation, local community support, environmental protection, cultural support, and academic support.

List of Murata’s contribution activities for society  
<https://corporate.murata.com/en-global/csr/people/society>

### Practical example

#### Opening of Mulabo!

Murata opened “Mulabo!,” an experience facility for children in Yokohama, Kanagawa, with the concept of “a place where budding engineers are born,” in order to contribute to the development of STEAM education and culture.



### Visiting class to experience programming “Control the Teacher Robot!!”

In order to nurture the abilities to think, judge, express and learn, and other human qualities, 12 visiting classes to experience programming have been implemented at elementary schools in Tokyo, Kyoto, Shimane, and Okayama since fiscal 2019 and attended by a total of 544 students. The classes have been highly evaluated by the teachers and students who attended, and the number of schools which hope to have the class is increasing in the areas where we operate the program. We will gradually expand our efforts in Japan.



\* In fiscal 2020, only two classes were conducted in Kyoto due to the COVID-19 pandemic. (Number of students attended: 133)

### Support for countermeasures for COVID-19

Murata provided materials needed in Japan, China, Southeast Asia and Europe, such as thermometers and over 160,000 facial masks. Murata also provided ventilators and other equipment for intensive care units to hospitals in Europe. Murata then moved its focus to system support including support through local governments for hospitals under pressure and support for students who have financial difficulties in continuing their studies.



### TOPICS

Murata, with Kyoto Prefecture and the Seven Shotengai shopping district (Nagaokakyo City, Kyoto Prefecture) carried out a verification test of “AIRSual,” a system which can analyze and visualize the concentration of CO<sub>2</sub> in the air, with a view to reduce the infection risk from COVID-19\*.

Murata has also provided the system to Nagaokakyo City, Kyoto Prefecture, where the headquarters is located. The city highly evaluated the system, stating “it provides the residents of the city with sense of safety and security when using public facilities during the COVID-19 pandemic.” As the system promotes adequate ventilation, it helps to avoid the “Three Cs.” even in a closed room, and it is expected to mitigate the risk of a COVID-19 cluster.



<https://corporate.murata.com/en-global/newsroom/news/company/csrtopic/2021/0525b>

### Support through the Murata Science Foundation

The Murata Science Foundation provides grants to research in natural science centering on electronics as well as research activities contributing to solving various problems in the humanities and social sciences, with an aim to contribute to the development of science, technology and culture. During fiscal 2020, the Foundation provided a total of 426.41 million yen in grants for 306 cases (including dispatch assistance outside of Japan). The cumulative grants since the establishment of the Foundation amount to 4.30 billion yen.

## Appropriate business transactions

### Background of setting the issue of materiality

Murata’s Corporate Ethics Policy and Code of Conduct define how we engage in appropriate transactions with suppliers, how we comply with antitrust laws, and how we prevent bribery and corruption. We aim to engage in fair business transactions with these practices serving as a foundation for our daily business activities and duties. At Murata, we recognize the importance of conducting fair business transactions in order to realize healthy sustainable growth and to earn social trust while expanding business globally. Therefore, Murata has set this key issue.

### Our goal

We aim to maintain zero occurrence of major violation of appropriate business transactions.

### Compliance programs for appropriate business transactions

Murata considers bribery and violation of antitrust laws as the key compliance risk in expanding business globally and strives for their prevention by introducing compliance programs for appropriate business transactions. In 2014, Murata released the Basic Policy for Prevention of Cartels and Bribery\* (available in Japanese, English and Chinese) as an addendum to the Corporate Ethics Policy and Code of Conduct in order to disseminate Murata’s attitude towards cartels and bribery throughout the Group. Furthermore, in order to effectively mitigate risk of violation of antitrust laws and bribery, Murata has set rules based on the result of risk surveys conducted globally. These rules are disseminated within the company through messages from the President and training.

### Prevention of violation of the antitrust laws

To prevent cartels, Murata has set global rules stating that (1) contact with competitors must be avoided whenever possible and (2) approval must be obtained in advance in situations requiring contact with competitors. A control process requiring that officers and employees apply for approval and report their results in such situations has been established for use throughout the entire Group. In addition to creating guidelines that include these internal rules and procedures, officers and employees are made aware of this information through either in-person or online training. We also regularly check the operational status of the control process.

We believe it is necessary to thoroughly disseminate the rules and processes within the Group in order to prevent violation of antitrust

laws. Murata will continue to provide education and training to officers and employees in Japan and other countries so they have practical knowledge of antitrust laws, their related company rules and processes. In addition, we will ensure adherence to these rules through conducting monitoring.

### Prevention of violation of the Subcontract Act

In order to ensure compliance with the Act against Delay in Payment of Subcontract Proceeds, etc. to Subcontractors (the Subcontract Act), Murata implements continuous education for all employees engaged in procurement activities through e-learning, etc. As part of an internal system to prevent violation of the Subcontract Act, audits and diagnostic checks are periodically performed on departments that demand purchases and make orders. Murata has also established its procurement system that manages and checks a series of procurement tasks to prevent violation of the Subcontract Act.

### Prevention of bribery

Murata has set rules on actions such as exchanging gifts or business entertaining based on the policies established in the Basic Policy for Prevention of Bribery, and activities of officers or employees are managed to prevent unlawful benefit for the purpose of dishonest profit from being provided or received, and to prevent facilitation payments from being made.

Each year, Murata obtains the individual commitment of officers and employees to comply with the basic policy and conducts online training so that we can respond to changes in compliance requirements.

We also continue to expand on in-house training as a general form of training, hold segmented e-learning classes by level, and provide education regarding foreign and domestic laws, prohibited matters, and the risks of illegal conduct, etc.

As the business environment surrounding Murata becomes more globalized each year and the business expands into new domains, the importance of maintaining transparency is ever increasing. We will further develop the system to prevent bribery, and in order to ensure its effectiveness, we will continue to maintain and operate the compliance program.

\* Basic Policy for Prevention of Cartels and Bribery  
[https://corporate.murata.com/-/media/corporate/about/csr/management/compliance/compliance\\_pdf0002.ashx?la=en-global&vid=20151007015611147100](https://corporate.murata.com/-/media/corporate/about/csr/management/compliance/compliance_pdf0002.ashx?la=en-global&vid=20151007015611147100)

## Business continuity management (BCM)

### Background of setting the issue of materiality

Even when a major natural disaster that has a significant impact on our business activities occurs, we are required to fulfill our social responsibility by promptly resuming the supply of products while ensuring the safety of people's lives. As a company that aims to be the global No.1 component & module supplier, Murata recognizes the importance of promoting business continuity management at a global level. Therefore, Murata has set this key issue.

### Our goal

We aim to establish BCM systems at business sites and plants in Japan and overseas, so that we are well prepared for a disaster.

### Basic policy for BCM

1. We act in a way to ensure the safety of employees and other persons concerned and to prevent secondary disaster.
2. We strive to prevent suspension of supply to the market, while making every effort to restore the production capacity.
3. We support recovery in areas affected as a member of local communities.
4. We implement the necessary preventive measures based on a cost effectiveness analysis in order to minimize loss of assets due to disaster and to resume production promptly.
5. We review the business continuity plan (BCP) regularly or in accordance with changes of the business environment and continuously improve business continuity management.
6. Under the active leadership of management, all employees cooperate for the maintenance of business continuity management.

### Business continuity plan (BCP)

Major natural disasters give rise to the risk of halting the company's operation for a long period. In order to fulfil its responsibility to stably provide products to customers, Murata has measures in place to ensure damage is minimized and its business remains in operation by designing a BCP, ensuring earthquake resistance and safety of buildings and production facilities, maintaining backups for communication and information systems, and maintaining extra inventory to prevent supply disruption.

In the procurement of materials, we operate databases on source locations of materials so that

our procurement activity will not be disrupted when risks materialize from natural disasters and are working to develop ways to quickly implement responses by designing initial response frameworks based on risk scenarios and work-flows. For important materials, we have implemented measures such as maintaining levels of inventory that takes into account expected lengths of time required for recovery in the event of materialization of risks, in addition to diversifying suppliers and confirming the status of BCP measures taken by suppliers, to ensure stable procurement.

### Efforts made in fiscal 2020

We conduct counter-disaster and business continuity drills on a regular basis in order to confirm that planned initial responses are effective, continuously enhance them, improve crisis-response capability and grasp what needs to be improved in our BCP.

In fiscal 2020, a BCP drill in the form of a workshop was conducted for members of the Crisis Response Team, under the scenario that the headquarters is affected by the disaster, and based on the result, the headquarters BCP and basic rules of BCM were revised.



BCP training

### Efforts to be made

We need to promote the development of a BCM system that responds to possible risks at a global level, prevent risks that could disrupt the company's business continuity, and minimize losses in the event that these risks materialize.

Murata has been taking measures to ensure autonomous BCM activities to evaluate the effectiveness of BCP through regular drills, etc., are implemented at each business site and plant in and outside of Japan. We are also working to establish a group-wide BCM system to ensure continuous supply of products to the market.

In addition, Murata considers it as important to be prepared for a Nankai trough earthquake, which is expected to cause extensive and enormous damage, and has been working to develop preventive measures in order to fulfill its responsibility as a component manufacturer.

## Information security

### Background of setting the issue of materiality

The risk of information leaks caused by internal fraud targeting information retained by companies and by disruptions to business activities caused by cyberattacks have been increasing in recent years.

In order to provide reassurance to all stakeholders, we believe that it is important to protect the various types of information we retain, including technical, management, and personal. This includes both information handled by the company and information provided by clients, customers, and partners. For this reason, Murata has set this key issue.

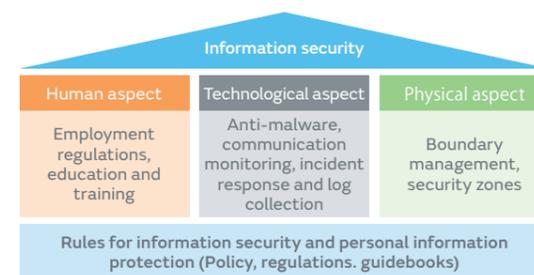
### Our goal

We aim to minimize risk by running through the information security risk management PDCA cycle routinely in order to prevent potentially serious incidents from happening.

In FY 2007, Murata established an information security subcommittee as a lower branch of the Risk Management Committee, which incorporates recent risk trends and related guidelines from Japan and overseas based on international standards (ISO27001) to implement information security management. Specifically, Information security basic policy, Information security management regulations, Privacy policy and other rules are enacted to develop and operate information security measures in terms of human, technical, and physical aspects. The information security subcommittee periodically meets to examine new and persistent risks, and to propose and implement measures. The subcommittee also strives to increase the adoption and improvement of such measures through internal and external audits and diagnostics.

Due to an incident where an individual subcontracted to a Murata outsourcing partner had inappropriately handled personal information and other data\*, we now confirm how data is being managed when we provide such data to any outsourcing partner in order to prevent a similar incident from occurring.

\* News release: <https://corporate.murata.com/en-global/newsroom/news/company/general/2021/0805>



### Human aspect

Information security-related rules are described in the employee handbook and the pledge with employees. In addition, the Information Security Guidebook, which explains the rules in an easy-to-understand manner, is written and distributed in Japanese, English, and Chinese so that all officers and employees in Japan and overseas can understand information security and handle information in the proper way.

The company also implements annual training, phishing e-mail exercises, new employee and in-house training by level, information security training for telecommuting employees, and other forms of education targeting all employees to increase their awareness on information security. (Global training ratio\* = 96% [\*Training ratio = (Number of sites that have conducted training) / (Total number of sites)])

### Technological aspect

In order to deter leaks of Murata's company secrets and personal information as well as interruptions of business activities due to cyber attacks, we continue to strengthen anti-malware measures, hardware asset management, firewall construction, Internet communication checks, ID management, system access controls, and diagnosis and countermeasures for vulnerabilities in current information systems.

Moreover, we are globally collecting and monitoring various logs to construct a system for responding to incidents which may become a security accident. In particular, we continue to strengthen security at the plant sites that form the basis of our business activities and promote responses and countermeasures to constantly changing cyberattacks and risks in order to maintain a stable and safe production system.

### Physical aspect

To prevent unauthorized intrusions into premises at offices, sites and affiliated companies in Japan and overseas, access control of people and vehicles is carried out at all times. Security zones are established within business sites according to the level of security control, and various measures including access controls using ID cards, etc. are implemented in highly secure zones to prevent unauthorized internal and external intrusions. Moreover, in order to continuously improve the physical security level, we periodically diagnose and audit the operating conditions from the perspectives of early detection and evidence accumulation measures in addition to restricting people's movements and preventive measures, and we are promoting the construction of a system to horizontally deploy responses to accidents and incidents which may become accidents with other offices, sites and affiliated companies.

# Supply chain management

## Promoting CSR approach to procurement with a focus on partnership with suppliers and optimization of supply chain management

Based on the Procurement Policy underpinned by the principles of honesty, fairness, and sincerity, Murata has always sought to build partnerships with its suppliers, working to realize mutually satisfying and prosperous relationships. In particular, regarding quality, we have worked with suppliers to improve unique technologies and management technologies in order to increase the technological capabilities, decrease the defect ratio, and improve yield. We will continue these initiatives and make further improvement in order to realize prosperity with all of our stakeholders.

We are also required to extend our CSR activities to the entire supply chain, addressing issues such as human rights, child labor, forced labor, gender or religious discrimination as well as responsible procurement of minerals. Murata considers human rights in procurement activities as a key issue and takes measures to mitigate risk in daily operations.

To take concrete actions on these measures, we have revised the group's Procurement Policy and Attitude and Conduct Murata Expects of Suppliers, in addition to revising the risk assessment method for new suppliers and existing suppliers.

## Murata group's Procurement Policy and Attitude and Conduct Murata Expects of Suppliers

We have revised the Procurement Policy and Attitude and Conduct Murata Expects of Suppliers in response to globally growing requirements for ESG.

|  |                               |
|--|-------------------------------|
| Procurement Policy                               | Basic Policy on Procurement   |
|  | Procurement Code of Conduct   |
| Attitude and Conduct Murata Expects of Suppliers | Our Expectations of Suppliers |
|  | Supplier Code of Conduct*     |

\* The Supplier Code of Conduct is stipulated in the Murata Group Supply Chain CSR Procurement Guideline.

### Procurement Policy

Murata strives to realize a sustainable society based on its management philosophy. We conduct procurement activities based on the Procurement Policy which consists of the Basic Policy on Procurement and Procurement Code of Conduct. By complying with the policy, we strive to build a strong, long-term partnership with the suppliers, and aim for realization of a sustainable society for the entire supply chain.

## Attitude and Conduct Murata Expects of Suppliers

In line with revised procurement policy, we have also revised the Attitude and Conduct Murata Expects of Suppliers.

For details, please visit our website.

Attitude and Conduct Murata Expects of Suppliers  
<https://corporate.murata.com/en-global/csr/people/suppliers>

Based on the Code of Conduct of the Responsible Business Alliance (RBA) (hereinafter "RBA Code of Conduct"), we have formulated the Murata Group Supply Chain CSR Procurement Guideline (hereinafter "the guideline"), which summarizes our approach to data security, business continuity plans (BCP), import/export control, etc. In the guideline, we summarized the standards of conduct and activities that we would like suppliers to specifically implement and comply with in the Supplier Code of Conduct.

We posted the guideline on our website in Japanese, English and Chinese and also distribute the document to our existing suppliers, as well as new suppliers prior to the first transaction.

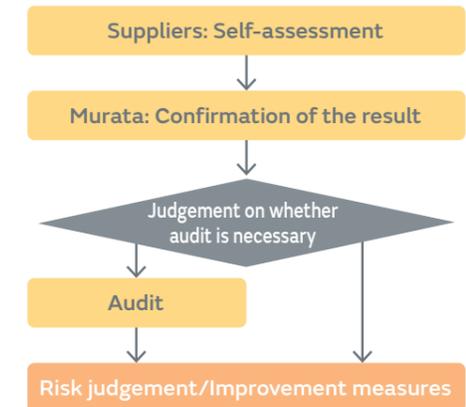


### Risk assessment for suppliers (audit)

• New supplier with which Murata will start transaction

When starting a new transaction with a supplier, we conclude a CSR Agreement and request that the supplier self-assesses based on the guideline using the CSR Compliance Checklist (hereinafter "the checklist"). Furthermore, audits are performed for our important suppliers to assess risks and seek improvement of CSR, as well as on quality control systems and management of chemical substances. If any risks are identified in the audit or self-assessment at the suppliers, we ask and help them to plan and implement measures for improvement, and, based on the result, we start transacting with them.

Currently this process is only applied in Japan. However, we plan to extend its application to suppliers overseas in accordance with anticipated risks.



### • Existing suppliers

We disseminate our Procurement Policy and the guideline to suppliers so they are well aware of and understand them. In addition, we ask them to perform self-assessment every year based on the checklist with an aim to raise awareness of risks associated with CSR and make improvement. In accordance with the establishment of the guideline, we reviewed the contents of the checklist and conducted a survey targeting 154 major suppliers in fiscal 2020.

As a result, we achieved a response rate of 100% and found no significant risks at those suppliers. We found minor risks at two suppliers and they took remedial measures.

|        | Scope           | Number of companies | Number of companies that needed improvement | Ratio of suppliers with low risk |
|--------|-----------------|---------------------|---|----------------------------------|
| FY2019 | Major suppliers | 110                 | 0   | 100%                             |
| FY2020 | Major suppliers | 154                 | 2   | 97%                              |

Going forward, in addition to self-assessment, we plan to perform on-site audits at the supplier site, and help take remedial measures if risks are identified.

With growing and increasingly sophisticated CSR procurement, Murata strives to secure a reliable supply chain and provide assurance to stakeholders.

### Basic Policy on Procurement

Murata conducts procurement activities based on the following basic policy.

|   |   |
|---|---|
| <p><b>1. Compliance</b><br/>We conduct our business in compliance with laws, regulations and internal rules as well as social ethics.</p> <p><b>2. Fairness</b><br/>We provide fair trading opportunities, being open to the global market.</p> | <p><b>3. Fairness and sincerity</b><br/>We aim to establish trusting and cooperative relationships with suppliers and enhance partnerships.</p> <p><b>4. Social responsibility</b><br/>We will fulfill our social responsibility towards human rights and the environment through procurement activities.</p> |
|---|---|

### Procurement Code of Conduct

At Murata, we will act in compliance with the following code of conduct.

|  |  |
|--|--|
| <p>1. Compliance with laws and social norms</p> <p>2. Promotion of sound business management</p> <p>3. Emphasis on quality, deadlines and stable supply</p> <p>4. Reinforcement of capability to respond to fluctuating demands</p> <p>5. Establishment of BCP for supply chain management</p> | <p>6. Supply of environment-friendly materials</p> <p>7. Compliance with the data security rules</p> <p>8. Respect for human rights and consideration for work environment</p> <p>9. Maintenance of sound partnerships</p> <p>10. Promotion of responsible procurement of minerals</p> |
|--|--|

**Promoting “responsible minerals procurement”**

**Background**

It is concerned that 3TG (tin, tantalum, tungsten and gold) and cobalt that are mined in conflict-affected and high-risk areas (CAHRAs)<sup>\*1</sup> such as Democratic Republic of the Congo (DRC) and its neighboring countries, are associated with financing of armed groups, forced labor, child labor and other violation of human rights, destruction of the environment, money laundering, and other crimes. Here, we would like to introduce Murata’s initiatives to ensure responsible minerals procurement.

**Our goal**

In order to ensure the minerals used in our products do not have OECD Annex II risks<sup>\*2</sup> such as financing of armed groups or violation of human rights in CAHRAs, we continue to conduct appropriate due diligence in accordance with the OECD Due Diligence Guidance.

**Our efforts**

In order to promote responsible minerals procurement, Murata has established “Responsible mineral procurement policy” and developed a framework to manage Annex II risks in CAHRAs in relation to specified minerals included in our products. In order to identify smelters/refiners in supply chains, we conduct surveys in accordance with the industry standard RMAP (a program of the RMI for the assessment of smelters/refiners)<sup>\*3</sup> and evaluate them according to the company standard. In the case a high-risk smelter/refiner is used, we report the details of the risk and proceed with remedial measures. In response to requests from customers for our supply chain information, we provide information on the result of the surveys using the Conflict Minerals Reporting Template (CMRT) issued by the Responsible Minerals Initiative (RMI)<sup>\*4</sup> as well as information on cobalt using the Cobalt Reporting Template (CRT).

Responsible mineral procurement policy, OECD Due Diligence Guidance  
 Efforts in accordance with the five steps of the OECD Due Diligence Guidance  
<https://corporate.murata.com/en-global/csr/people/suppliers>

**Recognition of the current status and initiatives**

We regularly conduct surveys on our suppliers to keep the information updated. Through conflict minerals surveys, we have confirmed that products including multilayer ceramic capacitors, which are our mainstay, inductors, thermistors and piezoelectric components are conflict free.

If fiscal 2020, we conducted conflict minerals surveys on 200 suppliers who deal with 3TG, achieved a response rate of 100%, and identified

310 refiners. We also conducted cobalt surveys on 104 companies, achieved a response rate of 83%, and identified 45 refiners. Overall, we confirmed 77% are RMAP conformant.

|   | Gold | Tin | Tantalum | Tungsten | Cobalt | Total |
|---|------|-----|----------|----------|--------|-------|
| Number of smelters and refiners   | 159  | 73  | 36       | 42       | 45     | 355   |
| Total number of smelters and refiners which received conformant certificate | 109  | 62  | 36       | 40       | 26     | 273   |

Through these surveys, we recognized the main three issues for which we believe it is important to proceed with corrective measures.

**Issue 1: Improvement in the ratio of RMAP conformant smelters/refiners in our supply chain**

We request our suppliers to establish a management system and implement risk assessment and to use RMAP conformant smelters/refiners. However, our RMAP conformant rate has not reached 100% as of present, so we are not able to guarantee that all of our products do not have OECD Annex II risks.

**Initiative**

For the suppliers who reported that they use smelters/refiners that are not RMAP conformant, Murata shares the issue with them and works with them towards improvement and solutions, instead of removing them from our supply chain.

**Issue 2: Improvement of the cobalt survey to achieve response rate of 100%**

Because the cobalt survey is not a legal requirement, it is more difficult to obtain support from some suppliers as they do not see it as a priority issue.

**Initiative**

We continue to ask our suppliers for understanding and support by sending letters requesting disclosure on smelters/refiners.

**Issue 3: Response to new minerals other than 3TG and cobalt for which there is a concern about risks**

Recently, there have been increasing inquiries about CSR risks of minerals other than 3TG or cobalt from customers. At Murata, we conduct risk assessments based on RMAP. However, for the minerals that are not covered in RMAP, we have no means to guarantee that they are risk-free.

**Initiative**

Mica has been added as an RMI managed mineral since last year. We currently can confirm that our products do not include mica. However, we will continue to actively investigate the status of usage of other minerals such as lithium, copper, nickel and zinc to address increased risks and the expansion of

target minerals. We will work to ensure transparency of supply chains by working closely with customers, suppliers, and other companies in the industry and remain committed to CSR procurement that takes account of human rights and other risks.

**Addressing issues through industry actions**

Murata is a member company of the “Responsible Minerals Trade Working Group”<sup>\*5</sup> of the Japan Electronics and Information Technology Industries Association (JEITA), and of the RMI. By joining organizations that take the initiative in the industry, we are proactively working on issues that are difficult to solve as an individual company, such as creating industry-wide frameworks.

**Initiative 1**

As the cobalt survey has only started recently, there are more smelters/refiners who are not RMAP conformant as compared with those of 3TG. We are also engaged in activities to encourage smelters and refiners that are yet to participate in the RMAP to undergo audits as a member of JEITA’s “smelter-supporting team.”<sup>\*6</sup>

**Initiative 2**

We participate in the JEITA-sponsored Responsible Minerals Sourcing Inquiry Briefings as a lecturer, educating various companies including our suppliers to convey the importance of the initiatives by sharing the most recent information.



**Initiative 3**

As for new materials that may have risks, we will actively discuss within the JEITA’s Responsible Minerals Trade Working Group to identify the issues and propose systems and make proposals to RMI to promote efficient RMAP support.

\*1: Conflict Affected and High Risk Areas  
 \*2: Annex II risks  
 \*3: RMAP (a program of the RMI for the assessment of smelter/refiner) <http://www.responsiblemineralsinitiative.org/responsible-minerals-assurance-process/>  
 \*4: RMI <http://www.responsiblemineralsinitiative.org/>  
 \*5: JEITA’s Responsible Minerals Trade Working Group <https://home.jeita.or.jp/mineral/index.html> (in Japanese)  
 \*6: JEITA’s smelter-supporting team [https://home.jeita.or.jp/mineral/eng/index\\_e.html](https://home.jeita.or.jp/mineral/eng/index_e.html)

**Promotion of CSR procurement activities with suppliers**

In accordance with our Procurement Policy, we have been working to ensure transparency of supply chains by establishing the management system and mitigating risks since 2009. We will continue to work closely with our suppliers and engage in appropriate business activities.

|                                     | 2009   | 2013 | 2016   | 2019 | 2020   | 2021 | 2022  | ...  |
|-------------------------------------|--|------|--|------|--|------|---|--|
| Promotion of CSR Procurement Policy | Promotion of EICC (RBA) Code of Conduct              |      |  |      | Establishment and dissemination of CSR Procurement Guideline |      |   |  |
| Risk evaluation                     | Existing suppliers                                   |      | Implement self-assessment  |      |  |      | Plan regular audits   |  |
|                                     | New supplier with whom Murata will start transaction |      |  |      |  |      | Implement self-assessment<br>Conduct audits for new suppliers |  |
| Measures against conflict minerals  |  |      | Start using CMRT for response (3TG: tantalum, tin, tungsten, gold) |      | Start using CRT for response (cobalt)                        |      |   | Measures against new minerals such as mica |



## Consolidated financial and ESG data highlights

| (FY)  | 2010      | 2011      | 2012      | 2013      | 2014      | 2015      | 2016      | 2017      | 2018      | 2019      | 2020      |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>Business results</b>   |           |           |           |           |           |           |           |           |           |           |           |
| Net sales (Millions of yen)   | 617,954   | 584,662   | 681,021   | 846,716   | 1,043,542 | 1,210,841 | 1,135,524 | 1,371,842 | 1,575,026 | 1,534,045 | 1,630,193 |
| Operating income (Millions of yen)                                    | 77,485    | 44,973    | 58,636    | 125,891   | 214,535   | 275,406   | 201,215   | 163,254   | 266,807   | 253,247   | 313,240   |
| Operating income / net sales (%)                                      | 12.5      | 7.7       | 8.6       | 14.9      | 20.6      | 22.7      | 17.7      | 11.8      | 16.9      | 16.5      | 19.2      |
| Income before income taxes (Millions of yen)                          | 82,062    | 50,931    | 59,534    | 132,336   | 238,400   | 279,173   | 200,418   | 167,801   | 267,316   | 254,032   | 316,417   |
| Net income attributable to Murata Corporation (Millions of yen)       | 53,492    | 30,807    | 42,386    | 93,191    | 167,711   | 203,776   | 156,060   | 146,086   | 206,930   | 183,012   | 237,057   |
| Shareholders' equity (Millions of yen)                                | 821,144   | 808,542   | 860,963   | 955,760   | 1,123,090 | 1,229,159 | 1,354,819 | 1,456,600 | 1,603,976 | 1,694,104 | 1,920,805 |
| Total assets (Millions of yen)  | 988,508   | 1,000,885 | 1,087,144 | 1,243,687 | 1,431,303 | 1,517,784 | 1,634,999 | 1,797,013 | 2,048,893 | 2,250,230 | 2,462,261 |
| Net cash provided by operating activities (Millions of yen)           | 105,610   | 57,589    | 88,537    | 185,751   | 259,936   | 252,451   | 243,920   | 225,249   | 279,842   | 350,334   | 373,571   |
| Net cash used in investing activities (Millions of yen)               | (133,999) | (46,487)  | (56,173)  | (117,150) | (91,379)  | (205,316) | (202,697) | (194,165) | (303,741) | (284,431) | (150,275) |
| Net cash provided by (used in) financing activities (Millions of yen) | (14,561)  | (9,148)   | (9,655)   | (40,899)  | (66,966)  | (56,614)  | (11,729)  | (83,585)  | 51,546    | 17,650    | (118,189) |
| Cash and cash equivalents at end of year (Millions of yen)            | 63,020    | 65,302    | 90,068    | 118,884   | 212,936   | 212,570   | 239,184   | 187,910   | 217,805   | 302,320   | 407,699   |
| Average exchange rate (Yen/U.S. dollar)                               | 85.72     | 79.07     | 83.11     | 100.24    | 109.94    | 120.14    | 108.42    | 110.86    | 110.91    | 108.75    | 106.06    |

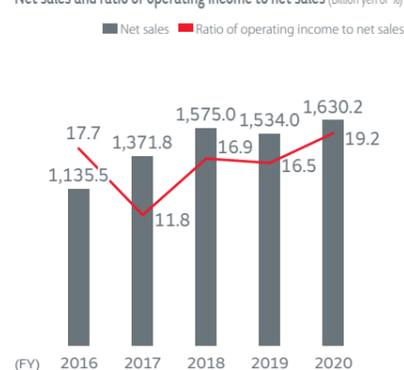
### Indices

|   |          |          |          |          |          |          |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Shareholders' equity ratio (%)                                    | 83.1     | 80.8     | 79.2     | 76.8     | 78.5     | 81.0     | 82.9     | 81.1     | 78.3     | 75.3     | 78.0     |
| Basic earnings attributable to Murata Corporation per share (yen) | 83.08    | 48.12    | 66.94    | 146.88   | 264.06   | 320.85   | 244.62   | 228.62   | 323.45   | 286.05   | 370.51   |
| Return on equity (ROE) (%)  | 6.6      | 3.8      | 5.1      | 10.3     | 16.1     | 17.3     | 12.1     | 10.4     | 13.5     | 11.1     | 13.1     |
| Shareholders' equity per share (yen)                              | 1,275.27 | 1,276.85 | 1,359.65 | 1,504.84 | 1,768.33 | 1,935.35 | 2,122.83 | 2,276.82 | 2,507.11 | 2,647.88 | 3,002.12 |
| Cash dividends per share (yen)                                    | 33.33    | 33.33    | 33.33    | 43.33    | 60.00    | 70.00    | 73.33    | 86.67    | 93.33    | 97.00    | 115.00   |
| Capital expenditures (Millions of yen)                            | 56,752   | 68,445   | 77,662   | 68,197   | 101,184  | 172,540  | 158,579  | 306,608  | 291,581  | 281,599  | 196,660  |
| Depreciation and amortization (Millions of yen)                   | 61,795   | 61,008   | 72,323   | 76,884   | 84,935   | 99,105   | 113,523  | 141,625  | 124,419  | 140,267  | 143,074  |
| Research and development expenses (Millions of yen)               | 39,778   | 40,978   | 48,766   | 54,649   | 64,990   | 77,982   | 81,809   | 94,181   | 101,589  | 102,486  | 101,727  |

Our consolidated financial statements are prepared in conformity with accounting principles generally accepted in the United States.

The company implemented a three-for-one common stock split, effective April 1, 2019. Information per share was calculated on the assumption that the relevant stock split had been implemented at the beginning of fiscal 2009.

Net sales and ratio of operating income to net sales (Billion yen or %)

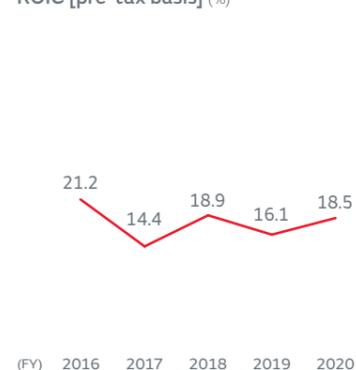


Trends in return to shareholders (Billion yen or %)



\* From earnings forecast announced on July 29, 2021

ROIC [pre-tax basis] (%)



ROIC [pre-tax basis]: Operating income / Invested capital (Property, plant and equipment + Inventories + Trade accounts receivable - Trade accounts payable)

Proportion of women recent graduates hired for engineering positions (Unit: %)



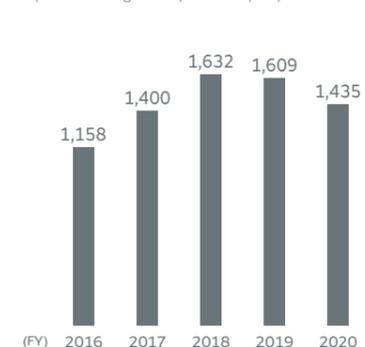
\* Murata Manufacturing Co., Ltd. on a non-consolidated basis

Average paid vacation days taken per person and rate of taking paid vacation (Day or %)



\* Murata Manufacturing Co., Ltd. on a non-consolidated basis

Total GHG emissions (1,000 t-CO<sub>2</sub>e/year) (Included ranges: Scope 1 + Scope 2)



\* A market-based method of CO<sub>2</sub> calculation adopted, beginning in fiscal 2019



## Analysis of business results and financial position

### Review of fiscal 2020

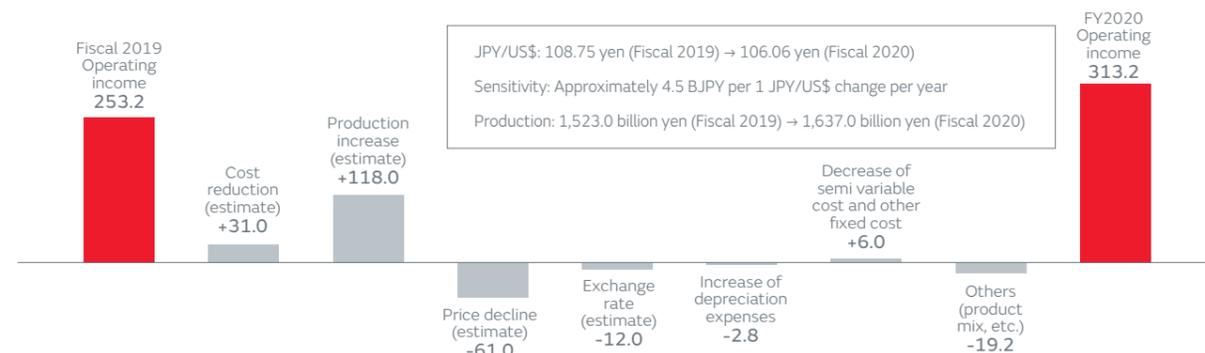
Demand for personal computers (PCs) used in telecommuting and online education in fiscal 2020 remained firm along with robust demand for video game consoles on the back of stay-at-home demand. In the smartphone market, from the second quarter of fiscal 2020 onward there were signs of a strong move to secure components against the background of the launch of 5G. In the automotive market, there was a suspension of production by automakers during the first quarter of fiscal 2020 and shortages of semiconductors in the fourth quarter of fiscal 2020. Mainly due to these factors, the production output of automobiles fell on a year-on-year basis, but there was a move to secure components for a future production increase.

Given such a background, sales of multilayer resin substrates and lithium ion batteries decreased for smartphones. However, multilayer ceramic capacitors (MLCCs) remained firm in a wide range of applications, and inductors and connectivity modules increased for PCs with more RF modules being used for smartphones. As a result, net sales for fiscal 2020 increased by 6.3% year on year to 1,630.2 billion yen, marking a record high.

Looking at profits, operating income was 313.2 billion yen, up 23.7% from the previous fiscal year, income before income taxes was 316.4 billion yen, up 24.6% from the above-mentioned period, and net income attributable to shareholders of the company was 237.1 billion yen, up 29.5% from the above-mentioned period. We marked a record high in each profit level. Negative factors, such as a fall in product prices and the impact of the currency fluctuations, were offset by positive factors, including the effects of a production increase and cost reduction initiatives.

ROIC (Return on Invested Capital) (pre-tax) is established as a priority management index in "Mid-term Direction 2021." ROIC (pre-tax) in the fiscal year under review was 18.5%, up 2.4 percentage points from the previous fiscal year. The increase in ROIC (pre-tax) was due to higher operating income despite greater invested capital with capital expenditures incurred to expand buildings and production capacity in anticipation of stronger demand for electronic components in the medium to long term.

### Actual increases and decreases in operating income (Billion yen)



### Sales by product

(Billion yen)

|                          | FY2019 results | FY2020 results | Increase/decrease | Reasons for increase/decrease  |
|--------------------------|----------------|----------------|-------------------|--|
| Capacitors               | 559.4          | 626.5          | +67.1 (+12.0%)    | Sales increased year on year as sales of MLCCs increased for PCs and PC peripherals significantly and for smartphones and car electronics as a strong move to secure components started.   |
| Piezoelectric components | 129.3          | 129.3          | +0.0 (+0.0%)      | Sales were almost unchanged year on year as sales of piezoelectric sensors declined for car electronics although SAW filters increased for IoT devices.  |
| Other components         | 363.0          | 387.6          | +24.6 (+6.8%)     | Sales increased year on year as sales of lithium ion batteries slipped for smartphones due to the impact of an ongoing review of the business portfolio, and also as sales of inductors for PCs rose and sales of connectors for smartphones grew. |
| Modules                  | 478.6          | 484.1          | +5.5 (+1.1%)      | Sales increased year on year as sales of RF modules increased for smartphones, and also as sales of connectivity modules rose for PCs whereas sales of multilayer resin substrates declined for smartphones.                                       |

### Sales by application

(Billion yen)

|                           | FY2019 results | FY2020 results | Increase/decrease | Reasons for increase/decrease   |
|---------------------------|----------------|----------------|-------------------|---|
| Audiovisual               | 61.0           | 71.9           | +10.8 (+17.8%)    | Sales increased compared to the previous fiscal year as sales of lithium ion batteries and MLCCs increased significantly for video game consoles against the background of demand generated by the stay-at-home economy, although sales of connectivity modules and lithium ion batteries fell for digital cameras. |
| Communication             | 792.2          | 804.9          | +12.8 (+1.6%)     | Sales increased compared to the previous year as sales of MLCCs and RF modules increased for smartphones and as sales of MLCCs and connectors rose for wearable devices, although sales of MLCCs declined for base stations.  |
| Computers and peripherals | 230.5          | 291.5          | +61.0 (+26.5%)    | Sales increased compared to the previous fiscal year as sales of MLCCs and connectivity modules rose considerably for PCs due to demand for products used in telecommuting and online education, and sales of MLCCs increased for servers and data storage.   |
| Automotive Electronics    | 263.5          | 273.2          | +9.7 (+3.7%)      | Sales increased compared to the previous fiscal year because demand for MLCCs grew as there was a move to secure components in anticipation of an increase in the production output of automobiles, although the production output of automobiles dropped.  |
| Home appliance and others | 183.1          | 186.1          | +3.0 (+1.6%)      | Sales increased compared to the previous fiscal year as sales of lithium ion batteries for power tools and cleaners increased, despite a decreased demand for stationary energy storage batteries, dragged by a sluggish housing market.  |

(Note) The above figures are based on our estimates.

### Overview of financial conditions

(Billion yen)

|             | FY2019 results | FY2020 results | Increase/decrease | Reasons for increase/decrease   |
|-------------|----------------|----------------|-------------------|---|
| Assets      | 2,250.2        | 2,462.3        | +212.0 (+9.4%)    | Assets increased from the end of the previous fiscal year, mainly due to increases in cash, and property, plant and equipment.  |
| Liabilities | 555.4          | 540.6          | -14.8 (-2.7%)     | Liabilities increased from the end of the previous fiscal year, mainly due to a decrease in short-term borrowings.  |
| Equity      | 1,694.8        | 1,921.6        | +226.8 (+13.4%)   | Equity increased from the end of the previous fiscal year, mainly due to an increase in retained earnings. The ratio of shareholders' equity increased by 2.7 percentage points to 78.0%. |

### Cash flows

(Billion yen)

|   | FY2019 results | FY2020 results | Increase/decrease | Reasons for increase/decrease   |
|---|----------------|----------------|-------------------|---|
| Net cash provided by operating activities           | 350.3          | 373.6          | +23.2 (+6.6%)     | Net cash flow provided by operating activities was 373.6 billion yen. An increase of 42.6 billion yen in trade notes and accounts receivable was more than offset by net income of 237.0 billion yen and depreciation and amortization of 143.1 billion yen.  |
| Net cash used in investing activities               | -284.4         | -150.3         | +134.2 (+47.2%)   | Net cash used in investing activities was 150.3 billion yen. While cash inflows included maturities and sales of marketable securities, investment and other of 42.7 billion yen, there were cash outflows due to 199.9 billion yen in payment for purchases of property, plant and equipment aimed at boosting buildings and production capacity in particular, and 26.5 billion yen in payment for purchases of marketable securities, investments and other. |
| Net cash provided by (used in) financing activities | 17.7           | -118.2         | -135.8 (—)        | Net cash used in financing activities was 118.2 billion yen. There were cash outflows due to dividend payment of 67.2 billion yen and a 50.9 billion yen decrease in short-term borrowing.  |

### Overview of segment information

(Billion yen)

|                            |                    | FY2019 results | FY2020 results | Increase/decrease | Reasons for increase/decrease   |
|----------------------------|--------------------|----------------|----------------|-------------------|---|
| Components                 | Net sales          | 1,098.3        | 1,175.4        | +77.1 (+7.0%)     | Net sales and segment income both increased due to increases in sales of products including capacitors, inductors and connectors and as impairment losses on lithium ion batteries were booked in fiscal 2019.                        |
|                            | Segment income     | 249.7          | 313.0          | +63.3 (+25.4%)    |   |
| Modules                    | Net sales          | 478.6          | 484.1          | +5.5 (+1.1%)      | Net sales and segment income both increased as sales of RF modules increased for high-end smartphones, and sales of connectivity modules rose for PCs whereas sales of multilayer resin substrates declined for high-end smartphones. |
|                            | Segment income     | 49.4           | 54.3           | +4.8 (+9.8%)      |   |
| Others                     | Net sales          | 59.2           | 61.1           | +1.8 (+3.1%)      | —   |
|                            | Segment income     | 5.7            | 7.8            | +2.1 (+36.1%)     |   |
| Corporate and eliminations | Net sales          | -102.1         | -90.4          | +11.8 (—)         | Overall expenses increased as there were gains from sales of precious metals totaling 7.8 billion yen in fiscal 2019 and expenses related to the Minato MIRAI Innovation Center and smart factories in fiscal 2020.                   |
|                            | Corporate expenses | -51.6          | -61.8          | -10.3 (—)         |   |
| Consolidated               | Net sales          | 1,534.0        | 1,630.2        | +96.1 (+6.3%)     | —   |
|                            | Operating income   | 253.2          | 313.2          | +60.0 (+23.7%)    |   |



## Consolidated Balance Sheets

(Millions of yen)

|   | End of FY2019<br>March 31, 2020 | End of FY2020<br>March 31, 2021 |
|---|---------------------------------|---------------------------------|
| <b>Assets</b>   |                                 |                                 |
| <b>Current assets</b>   | 1,027,227                       | 1,184,180                       |
| Cash  | 239,656                         | 363,979                         |
| Short-term investments  | 106,950                         | 64,218                          |
| Marketable securities   | 29,554                          | 22,599                          |
| Trade notes receivable  | 100                             | 25                              |
| Trade accounts receivable   | 281,958                         | 342,260                         |
| Allowance for doubtful notes and accounts                             | (1,026)                         | (1,414)                         |
| Inventories   | 334,408                         | 361,331                         |
| Prepaid expenses and other  | 35,627                          | 31,182                          |
| <b>Property, plant and equipment</b>                                  | 1,002,210                       | 1,078,838                       |
| Land  | 72,707                          | 73,359                          |
| Buildings   | 633,041                         | 741,346                         |
| Machinery, and equipment, tools, dies, furniture and autos and trucks | 1,310,534                       | 1,418,356                       |
| Construction in progress  | 133,148                         | 100,277                         |
| Accumulated depreciation  | (1,182,318)                     | (1,286,598)                     |
| Operating lease right-of-use assets                                   | 35,098                          | 32,098                          |
| <b>Investments and other assets</b>                                   | 220,793                         | 199,243                         |
| Investments   | 49,059                          | 41,438                          |
| Intangible assets   | 38,576                          | 33,524                          |
| Goodwill  | 73,032                          | 71,058                          |
| Deferred income taxes   | 42,220                          | 37,796                          |
| Other   | 17,906                          | 15,427                          |
| <b>Total assets</b>   | 2,250,230                       | 2,462,261                       |
| <b>Liabilities</b>  |                                 |                                 |
| <b>Current liabilities</b>  | 284,300                         | 317,911                         |
| Short-term borrowing  | 51,000                          | 97                              |
| Trade accounts payable  | 79,330                          | 85,927                          |
| Current portion of bonds  | -                               | 39,982                          |
| Accrued payroll and bonuses   | 45,374                          | 52,909                          |
| Income taxes payable  | 28,294                          | 41,525                          |
| Accrued expenses and other  | 73,611                          | 90,516                          |
| Current operating lease liabilities                                   | 6,691                           | 6,955                           |
| <b>Long-term liabilities</b>  | 271,123                         | 222,705                         |
| Bonds   | 149,764                         | 109,853                         |
| Long-term debt  | 207                             | 772                             |
| Termination and retirement benefits                                   | 84,602                          | 74,005                          |
| Deferred income taxes   | 5,644                           | 7,603                           |
| Noncurrent operating lease liabilities                                | 28,408                          | 25,051                          |
| Other   | 2,498                           | 5,421                           |
| <b>Total liabilities</b>  | 555,423                         | 540,616                         |
| <b>Equity</b>   |                                 |                                 |
| <b>Murata Corporation's Shareholders' equity</b>                      | 1,694,104                       | 1,920,805                       |
| Common stock  | 69,444                          | 69,444                          |
| Capital surplus   | 120,775                         | 120,880                         |
| Retained earnings   | 1,616,783                       | 1,786,660                       |
| Accumulated other comprehensive loss                                  | (59,335)                        | (2,627)                         |
| Unrealized gains (Losses) on securities                               | (61)                            | (32)                            |
| Pension liability adjustments   | (25,999)                        | (14,814)                        |
| Foreign currency translation adjustments                              | (33,275)                        | 12,219                          |
| Treasury stock, at cost   | (53,563)                        | (53,552)                        |
| <b>Noncontrolling interests</b>                                       | 703                             | 840                             |
| <b>Total equity</b>   | 1,694,807                       | 1,921,645                       |
| <b>Total liabilities and equity</b>                                   | 2,250,230                       | 2,462,261                       |



## Consolidated Statements of Income

(Millions of yen)

|  | FY2019<br>April 1, 2019 - March 31, 2020 | FY2020<br>April 1, 2020 - March 31, 2021 |
|--|--|--|
| <b>Net sales</b>   | 1,534,045                                | 1,630,193                                |
| Cost of sales  | 952,583                                  | 1,007,992                                |
| Selling, general and administrative                              | 229,587                                  | 203,680                                  |
| Research and development   | 102,486                                  | 101,727                                  |
| Impairment losses on goodwill                                    | 3,934                                    | 3,554                                    |
| Other operating income   | 7,792                                    | —  |
| <b>Operating income</b>  | 253,247                                  | 313,240                                  |
| Interest and dividend income                                     | 4,017                                    | 1,667                                    |
| Interest expense   | (512)                                    | (384)                                    |
| Foreign currency exchange loss                                   | (3,614)                                  | (10,237)                                 |
| Other - net  | 894                                      | 12,131                                   |
| <b>Income before income taxes</b>                                | 254,032                                  | 316,417                                  |
| Income taxes   | 71,050                                   | 79,392                                   |
| <Current income tax>   | <69,127>                                 | <80,476>                                 |
| <Deferred income tax>  | <1,923>                                  | <(1,084)>                                |
| <b>Net income</b>  | 182,982                                  | 237,025                                  |
| Less: Net income (loss) attributable to noncontrolling interests | (30)                                     | (32)                                     |
| <b>Net income attributable to shareholders of the company</b>    | 183,012                                  | 237,057                                  |



## Consolidated Statements of Comprehensive Income

(Millions of yen)

|  | FY2019<br>April 1, 2019 - March 31, 2020 | FY2020<br>April 1, 2020 - March 31, 2021 |
|--|--|--|
| <b>Net income</b>  | 182,982                                  | 237,025                                  |
| <b>Other comprehensive income (loss), net of tax</b>                       |  |  |
| Unrealized gains on securities   | (107)                                    | 29                                       |
| Pension liability adjustments  | (4,425)                                  | 11,185                                   |
| Foreign currency translation adjustments                                   | (28,588)                                 | 45,568                                   |
| <b>Other comprehensive income (loss)</b>                                   | (33,120)                                 | 56,782                                   |
| <b>Comprehensive income</b>  | 149,862                                  | 293,807                                  |
| Less: Comprehensive income (loss) attributable to noncontrolling interests | (88)                                     | 41                                       |
| <b>Comprehensive income attributable to Murata Corporation</b>             | 149,950                                  | 293,766                                  |



## Consolidated Statements of Cash Flows

(Millions of yen)

|  | FY2019<br>April 1, 2019 - March 31, 2020 | FY2020<br>April 1, 2020 - March 31, 2021 |
|--|--|--|
| <b>Operating activities</b>  |  |  |
| Net income   | 182,982                                  | 237,025                                  |
| Adjustments to reconcile net income to net cash provided by operating activities |  |  |
| Depreciation and amortization  | 140,267                                  | 143,074                                  |
| Losses on sales and disposals of property, plant and equipment                   | 2,477                                    | 1,054                                    |
| Impairment losses on long-lived assets   | 23,756                                   | 1,531                                    |
| Impairment losses on goodwill  | 3,934                                    | 3,554                                    |
| Provision for termination and retirement benefits, less payments                 | 2,719                                    | 4,918                                    |
| Deferred income taxes  | 1,923                                    | (1,084)                                  |
| Changes in assets and liabilities  |  |  |
| (Increase) decrease in trade notes and accounts receivable                       | (14,481)                                 | (42,560)                                 |
| (Increase) decrease in inventories   | 8,680                                    | (16,027)                                 |
| (Increase) decrease in prepaid expenses and other                                | (4,185)                                  | 4,644                                    |
| Increase (decrease) in trade notes and accounts payable                          | 4,492                                    | 4,353                                    |
| Increase (decrease) in accrued payroll and bonuses                               | 2,209                                    | 6,986                                    |
| Increase (decrease) in income taxes payable                                      | (9,631)                                  | 12,636                                   |
| Increase (decrease) in accrued expenses and other                                | (690)                                    | 19,755                                   |
| Other - net  | 5,882                                    | (6,288)                                  |
| <b>Net cash provided by operating activities</b>                                 | <b>350,334</b>                           | <b>373,571</b>                           |
| <b>Investing activities</b>  |  |  |
| Payment for purchases of property, plant and equipment                           | (285,935)                                | (199,876)                                |
| Payment for purchases of marketable securities, investments, and other           | (27,018)                                 | (26,542)                                 |
| Maturities and sales of marketable securities, investments, and other            | 30,666                                   | 42,705                                   |
| Decrease in long-term deposits and loans   | 5,913                                    | 5,827                                    |
| (Increase) decrease in short-term investments                                    | (10,781)                                 | 23,299                                   |
| Acquisition of businesses, net of cash acquired                                  | (479)                                    | —  |
| Other - net  | 3,203                                    | 4,312                                    |
| <b>Net cash used in investing activities</b>                                     | <b>(284,431)</b>                         | <b>(150,275)</b>                         |
| <b>Financing activities</b>  |  |  |
| Net increase (decrease) in short-term borrowing                                  | 27,993                                   | (50,908)                                 |
| Proceeds from long-term debt   | 98                                       | 249                                      |
| Repayment of long-term debt  | (211)                                    | (136)                                    |
| Proceeds from issuance of bonds  | 49,889                                   | —  |
| Dividends paid   | (59,926)                                 | (67,180)                                 |
| Other - net  | (193)                                    | (214)                                    |
| <b>Net cash used in financing activities</b>                                     | <b>17,650</b>                            | <b>(118,189)</b>                         |
| Effect of exchange rate changes on cash and cash equivalents                     | 962                                      | 272                                      |
| <b>Net increase (decrease) in cash and cash equivalents</b>                      | <b>84,515</b>                            | <b>105,379</b>                           |
| Cash and cash equivalents at beginning of year                                   | 217,805                                  | 302,320                                  |
| Cash and cash equivalents at end of year   | 302,320                                  | 407,699                                  |
| <b>Additional cash and cash equivalents information</b>                          |  |  |
| Cash   | 239,656                                  | 363,979                                  |
| Short-term investments   | 106,950                                  | 64,218                                   |
| Short-term investments with the original maturities over three months            | (44,286)                                 | (20,498)                                 |
| <b>Cash and cash equivalents at end of year</b>                                  | <b>302,320</b>                           | <b>407,699</b>                           |



## ESG data

Included range: Consolidated: the Murata Manufacturing Group as a whole Non-consolidated: Murata Manufacturing as a standalone company

|  | Unit   | FY2016              | FY2017    | FY2018    | FY2019    | FY2020    | Included range |                         |
|--|--|---------------------|-----------|-----------|-----------|-----------|----------------|-------------------------|
| Environment  | Total GHG emissions  | t-CO <sub>2</sub> e | 3,587,000 | 5,660,000 | 6,074,000 | 5,979,000 | 5,237,000      | Consolidated            |
|  | Scope1   | t-CO <sub>2</sub> e | 142,000   | 251,000   | 312,000   | 307,000   | 278,000        | Consolidated            |
|  | Scope2 <sup>1</sup>  | t-CO <sub>2</sub>   | 1,016,000 | 1,149,000 | 1,320,000 | 1,302,000 | 1,157,000      | Consolidated            |
|  | Scope3   | t-CO <sub>2</sub>   | 2,429,000 | 4,260,000 | 4,442,000 | 4,371,000 | 3,801,000      | Consolidated            |
|  | Category 1: Purchased goods and services   | t-CO <sub>2</sub>   | 1,794,000 | 3,201,000 | 3,380,000 | 3,262,000 | 2,883,000      | Consolidated            |
|  | Category 2: Capital goods  | t-CO <sub>2</sub>   | 390,000   | 754,000   | 717,000   | 693,000   | 484,000        | Consolidated            |
|  | Category 3: Fuel- and energy-related activities not included in scope 1 or scope 2 | t-CO <sub>2</sub>   | 60,000    | 74,000    | 95,300    | 178,000   | 197,000        | Consolidated            |
|  | Category 4: Upstream Transportation and Distribution                               | t-CO <sub>2</sub>   | 125,000   | 152,000   | 163,000   | 174,000   | 159,000        | Consolidated            |
|  | Category 5: Waste generated in operations  | t-CO <sub>2</sub>   | 25,000    | 35,000    | 42,000    | 20,000    | 34,000         | Consolidated            |
|  | Category 6: Business travel  | t-CO <sub>2</sub>   | 7,700     | 9,800     | 10,000    | 9,600     | 9,800          | Consolidated            |
|  | Category 7: Employee commuting   | t-CO <sub>2</sub>   | 27,000    | 34,000    | 35,000    | 33,000    | 35,000         | Consolidated            |
|  | Category 12: End-of-life treatment of sold products                                | t-CO <sub>2</sub>   | 310       | 330       | 350       | 320       | 290            | Consolidated            |
|  | Percentage of GHG emissions by region  |                     |           |           |           |           |                | Consolidated            |
|  | Japan  | %                   | 71        | 70        | 68        | 66        | 77             | Consolidated            |
|  | China  | %                   | 18        | 19        | 21        | 21        | 9              | Consolidated            |
| Asia   | %  | 10                  | 10        | 11        | 12        | 13        | Consolidated   |                         |
| Europe   | %  | 1                   | 1         | 0         | 1         | 1         | Consolidated   |                         |
| Total energy consumption <sup>2</sup>  | TWh  | 5.37                | 6.49      | 7.72      | 7.81      | 8.07      | Consolidated   |                         |
| Non-renewable electricity consumption  | MWh  | 1,712,000           | 2,067,000 | 2,443,000 | 2,321,000 | 2,168,000 | Consolidated   |                         |
| Renewable energy consumption (wind, solar, biomass, hydraulic, geothermal, etc.) | MWh  | 40                  | 30        | 23,000    | 35,000    | 396,000   | Consolidated   |                         |
| Emissions of air polluting substances  | Volume of use of Volatile Organic Compound (VOC)                                   | t                   | 22,300    | 26,400    | 27,200    | 23,100    | 27,200         | Consolidated (domestic) |
|  | Volume of discharge of Volatile Organic Compound (VOC)                             | t                   | 840       | 1,280     | 1,280     | 1,240     | 1,150          | Consolidated (domestic) |
| Waste management   | Total emissions volume   | t                   | 59,000    | 95,000    | 132,000   | 108,000   | 105,000        | Consolidated            |
|  | Recycling rate   |                     | 95        | 94        | 92        | 95        | 98             | Consolidated            |
|  | Comparative waste intensity (Baseline: FY2016-2018 per-unit average)               | %                   | -20       | -4        | 24        | 16        | 0              | Consolidated            |
| Water resource management  | Hazardous waste volume <sup>3</sup>  | t                   | 18        | 39        | 62        | 52        | 43             | Consolidated            |
|  | Water intake volume  | 1,000m <sup>3</sup> | 14,700    | 17,400    | 19,400    | 18,500    | 17,900         | Consolidated            |
|  | Municipal water supply (or from other water supply facilities)                     | 1,000m <sup>3</sup> | 9,900     | 11,600    | 13,100    | 12,400    | 12,800         | Consolidated            |
|  | Freshwater and groundwater   | 1,000m <sup>3</sup> | 4,800     | 5,700     | 6,300     | 6,100     | 5,100          | Consolidated            |
| Recycling rate <sup>4</sup>  |  | 21                  | 19        | 20        | 20        | 21        | Consolidated   |                         |
| Comparative water resource intensity (Baseline: FY2016-2018 per-unit average)    | %  | 8                   | -6        | -2        | 2         | -4        | Consolidated   |                         |
| Environmental violations   | Accidents and significant exceeding of laws and regulations                        | cases               | 0         | 0         | 0         | 0         | 0              | Consolidated            |

\* Amounts less than the specified unit are rounded off, so the breakdown and total may not match.

\*1: Market-based method of CO<sub>2</sub> calculation was adopted in place of location-based method in FY2019.

\*2: Total energy consumption is the total amount of purchased power converted into primary energy.

\*3: Hazardous waste: Waste as defined by the laws of each country. In Japan, it refers to specially controlled industrial waste.

\*4: Recycling rate: Calculated by dividing recycled volume by the sum of recycled volume and water intake volume.

|  | Unit   | FY2016      | FY2017 | FY2018 | FY2019 | FY2020 | Included range   |                         |
|--|--|-------------|--------|--------|--------|--------|------------------|-------------------------|
| Attracting and cultivating human resources | General employee education (number of e-learning registrants)  | persons     | 25,529 | 26,877 | 30,783 | 32,962 | 33,975           | Consolidated (domestic) |
|  | Employee education expenses  | million yen | 1,061  | 1,438  | 1,476  | 1,463  | 1,012            | Consolidated            |
|  | Total overseas local employees using the deployment system to affiliated companies in Japan and other countries              | persons     | 537    | 616    | 737    | 876    | 958              | Consolidated            |
| Society                                    | Number of management staff <sup>1</sup>  | persons     | 498    | 543    | 625    | 656    | 712              | Non-consolidated        |
|  | Men  | persons     | 497    | 538    | 620    | 646    | 699              | Non-consolidated        |
|  | Women  | persons     | 1      | 5      | 5      | 10     | 13               | Non-consolidated        |
|  | Number of management staff at the level of department general manager and above (included in the number of management staff) | persons     | 125    | 125    | 145    | 158    | 156              | Non-consolidated        |
|  | Men  | persons     | 125    | 125    | 145    | 158    | 155              | Non-consolidated        |
|  | Women  | persons     | 0      | 0      | 0      | 0      | 1                | Non-consolidated        |
|  | Ratio of female management staff   | %           | 0.2    | 0.9    | 0.8    | 1.5    | 1.8              | Non-consolidated        |
|  | Number of employees (consolidated)   | persons     | 59,978 | 75,326 | 77,571 | 74,109 | 75,184           | Consolidated            |
|  | Ratio of women among all employees   | %           | 52.4   | 50.4   | 49.2   | 47.6   | 47.8             | Consolidated            |
|  | Number of recent graduate hires <sup>2</sup>   | persons     | 242    | 294    | 341    | 399    | 447              | Non-consolidated        |
|  | Ratio of women   | %           | 30.2   | 28.6   | 30.2   | 36.6   | 36.9             | Non-consolidated        |
| Number of mid-career hires <sup>3</sup>    | persons  | 247         | 363    | 428    | 224    | 121    | Non-consolidated |                         |
| Ratio of women                             | %  | 10.5        | 7.4    | 9.1    | 9.8    | 12.4   | Non-consolidated |                         |
| Ratio of mid-career hires among all hires  | %  | 50.5        | 55.3   | 55.7   | 36.0   | 21.3   | Non-consolidated |                         |

|                                |  | Unit        | FY2016 | FY2017 | FY2018 | FY2019 | FY2020           | Included range          |
|--------------------------------|--|-------------|--------|--------|--------|--------|------------------|-------------------------|
| Diversity & Inclusion          | Average number of years continuously employed  | year        | 14.6   | 14.4   | 14.1   | 14.9   | 14.7             | Non-consolidated        |
|                                | Men  | year        | 15.0   | 14.7   | 14.4   | 15.2   | 15.1             | Non-consolidated        |
|                                | Women  | year        | 13.0   | 13.2   | 13.0   | 14.0   | 13.2             | Non-consolidated        |
|                                | Rate of resignations due to personal reasons   | %           | 0.7    | 1.1    | 1.3    | 1.3    | 1.4              | Non-consolidated        |
|                                | Average age  | age         | 40.1   | 40.1   | 40.0   | 41.0   | 40.1             | Non-consolidated        |
|                                | Men  | age         | 41.0   | 41.0   | 40.8   | 41.8   | 41.1             | Non-consolidated        |
| Women                          | age  | 36.3        | 36.7   | 36.6   | 37.7   | 36.5   | Non-consolidated |                         |
| Work safety and hygiene        | Work accident (accidents requiring work stoppage) frequency <sup>4</sup>                         | -           | 0.14   | 0.44   | 0.15   | 0.17   | 0.25             | Consolidated (domestic) |
|                                | Number of serious incidents  | cases       | 0      | 2      | 0      | 0      | 0                | Consolidated (domestic) |
|                                | Number of industrial accidents resulting lost workdays   | cases       | 7      | 24     | 10     | 11     | 16               | Consolidated (domestic) |
| Social contribution activities | Total number of volunteering employees   | persons     | -      | -      | -      | 17,088 | 5,365            | Consolidated            |
|                                | Number of visiting lectures (science education, environmental education, career education, etc.) | cases       | -      | -      | 108    | 129    | 72               | Consolidated            |
|                                | Number of factory visits and work experiences  | cases       | -      | -      | 128    | 140    | 58               | Consolidated            |
|                                | Number of activities for forest preservation and greening  | cases       | -      | -      | 21     | 39     | 17               | Consolidated            |
|                                | Total social contribution expense  | million yen | -      | -      | -      | 167    | 215              | Non-consolidated        |

\*1: Number of management staff...Includes expert managerial positions from fiscal 2020.

\*2: Number of recent graduate hires...It was decided to include global hiring, etc. in the number of newly hired graduates, and the figures have been recalculated from 2016.

\*3: Number of mid-career hires...The definition was reevaluated, and the figures have been recalculated from 2016.

\*4: Frequency rate of industrial accidents resulting lost workdays...Represents the frequency of accidents as number of casualties due to industrial accidents per million actual work-hours.

|   |  | Unit    | As of June 29, 2021 |
|---|--|---------|---------------------|
| Composition of the Board of Directors                     | Number of members  | persons | 12                  |
|   | Outside Directors  | persons | 5                   |
|   | Outside Directors appointed as Independent Directors             | persons | 5                   |
|   | Inside Directors   | persons | 7                   |
|   | Ratio of Outside Directors                                       | %       | 41.7                |
|   | Female Directors   | persons | 2                   |
| Ratio of female Directors                                 | %  | 16.7    |                     |
| Composition of Audit and Supervisory Committee            | Number of members  | persons | 4                   |
|   | Outside Directors  | persons | 3                   |
| Composition of Nomination Advisory Committee              | Committee Chairperson  | -       | Inside Director     |
|   | Remuneration Advisory Committee Members                          | persons | 5                   |
|   | Outside Directors  | persons | 3                   |
| Composition of Remuneration Advisory Committee            | Committee Chairperson  | -       | Outside Director    |
|   | Number of members  | persons | 5                   |
| Number of meetings, etc.                                  | Outside Directors  | persons | 3                   |
|   | Number of meetings of the Board of Directors                     | times   | 10                  |
|   | Board of Directors meeting attendance rate                       | %       | 100.0               |
|   | Board of Directors meeting attendance rate for Outside Directors | %       | 100.0               |
|   | Number of meetings of the Audit and Supervisory Committee        | times   | 10                  |
|   | Audit and Supervisory Committee meeting attendance rate          | %       | 97.5                |
|   | Number of meetings of the Nomination Advisory Committee          | times   | 4                   |
| Number of meetings of the Remuneration Advisory Committee | times  | 3       |                     |

## CSR-related policy list

CSR Charter/Corporate Ethics Policy and Code of Conduct/Human Rights and Labor Policies/EHS Disaster Prevention Policy/Procurement Policies/Quality Policy/Disclosure Policy/Basic Policies for Activities to Contribute to Society and Local Communities/Basic Policy for Prevention of Cartels and Bribery/Global Tax Policy

For other data, please see:

ESG data collection [https://corporate.murata.com/en-global/csr/esg\\_data](https://corporate.murata.com/en-global/csr/esg_data)  
 GRI Standards reference table <https://corporate.murata.com/en-global/csr/gri>  
 SASB reference table <https://corporate.murata.com/en-global/csr/sasb>

## Company data

### Company overview

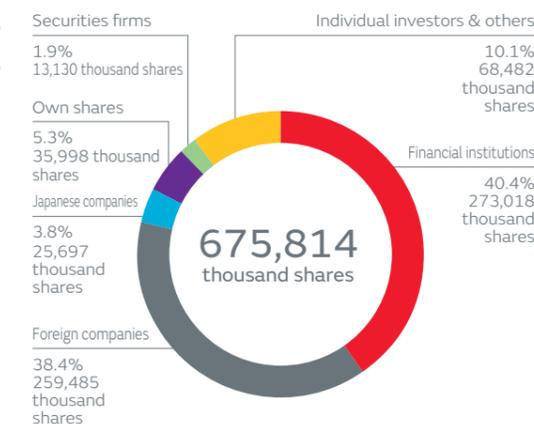
|                               |   |
|-------------------------------|---|
| Trade name                    | Murata Manufacturing Co., Ltd.                              |
| Date of incorporation         | December 23, 1950 (established in October 1944)             |
| Common stock                  | 69,444 million yen  |
| Location                      | 10-1, Higashikotari 1-chome, Nagaokakyo-shi, Kyoto 617-8555 |
| Subsidiaries in Japan         | 29 companies  |
| Subsidiaries outside of Japan | 60 companies  |

### Stock information (as of March 31, 2021)

#### Stock data

|                              |                         |
|------------------------------|-------------------------|
| Number of shares outstanding | 675,814 thousand shares |
| Number of shareholders       | 123,521 persons         |

#### Ownership breakdown



#### Stock exchange listing

|          |                                    |
|----------|------------------------------------|
| Japan    | Tokyo Stock Exchange First Section |
| Overseas | Singapore Exchange                 |

#### Major shareholders

| Name   | Number of shares (unit: one thousand) | Ownership (%) |
|--|---------------------------------------|---------------|
| The Master Trust Bank of Japan, Ltd. (Trust Account) | 49,715                                | 7.8           |
| Custody Bank of Japan, Ltd. (Trust Account)          | 33,036                                | 5.2           |
| Nippon Life Insurance Company                        | 22,083                                | 3.5           |
| SSBTC CLIENT OMNIBUS ACCOUNT                         | 16,792                                | 2.6           |
| The Bank of Kyoto, Ltd.                              | 15,780                                | 2.5           |
| Meiji Yasuda Life Insurance Company                  | 15,722                                | 2.5           |
| Custody Bank of Japan, Ltd. (Trust Account 7)        | 13,471                                | 2.1           |
| The Shiga Bank, Ltd.                                 | 10,653                                | 1.7           |
| STATE STREET BANK WEST CLIENT - TREATY 505234        | 9,125                                 | 1.4           |
| Custody Bank of Japan, Ltd. (Trust Account 5)        | 9,005                                 | 1.4           |

(Note) The Company holds 35,998 thousand shares of its own stock. As these shares do not confer voting rights, they are excluded from the above table.

# One year at Murata

In fiscal 2020, under our Mid-term Direction 2021, we strengthened our efforts to make the telecommunication and automotive markets, our focus markets, the pillars of our medium- to long-term earnings, establishing a new research and development hub in Minatomirai, Yokohama.

In addition, in order to achieve one of the themes of our Mid-term Direction, "harmony among people, organization and society," Murata has joined the global environmental initiative RE100 and strived to contribute a decarbonized society by advancing efforts for introduction of renewable energy and create the foundation for sustainable growth.

## Product-related news

Start of mass production of FORTELION 24V Battery Module, which uses long-life lithium-ion batteries with a high level of safety, for industrial equipment

<https://www.murata.com/en-global/news/batteries/stbm/2020/0421>



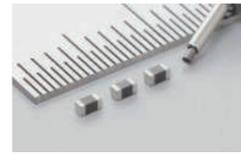
Development of 6-DOF XYZ-Axis MEMS inertial sensor —Enabling centimeter-level accuracy of ADAS functionality and automated driving systems—

<https://www.murata.com/en-global/news/sensor/gyro/2020/0528>



Introduction of the world's smallest ferrite chip beads for automotive power supply applications

<https://www.murata.com/en-global/news/emc/emifil/2020/0609>



Development of the world's first multilayer ceramic capacitor with a capacitance value of 1.0μF in the 01005 inch size

<https://www.murata.com/en-global/news/capacitor/ceramiccapacitor/2020/0630>



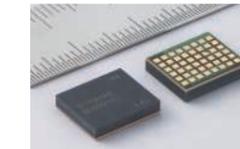
Development of the world's first haptics-generating middleware that enables the design of a realistic "behavior feeling" in an intuitive manner

<https://www.murata.com/ja-jp/news/other/other/2020/1015>  
\*Japanese site only



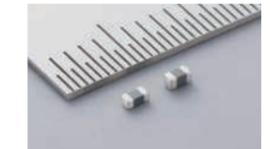
Introduction of the low-profile DC/DC converter that realizes the ultra-compact footprint and height of power-conversion circuitry

<https://www.murata.com/en-global/news/power/dc/dc/2020/1029>



Introduction of the world's first chip ferrite beads suitable for automotive applications at temperatures up to 175°C

<https://www.murata.com/en-global/news/emc/emifil/2020/1202>



## April 2020 | May | June | July | August | September | October | November | December | January 2021 | February | March

## Corporate news

Fabric with antimicrobial performance jointly innovated by Murata and Teijin Frontier —Establishment of a joint venture company to develop a plant-derived fabric that emits electricity, creating a better environment—

<https://corporate.murata.com/en-global/newsroom/news/company/general/2020/0604>

The two companies have jointly developed the world's first piezoelectric fabric "PIECLEX" that generates electrical energy and exhibits antimicrobial performance when a motion is applied. They established PIECLEX Co., Ltd. as a joint venture company to promote development, manufacturing and sales of piezoelectric fabric.



All-electric, light truck utilized by Izumo Murata Manufacturing, first Japanese company to deploy in its operation —Contributing to a reduction in greenhouse gases—

<https://corporate.murata.com/en-global/newsroom/news/company/general/2020/0805>

Izumo Murata Manufacturing Co. Ltd., in collaboration with Sankyu Inc. (Chuo Ward, Tokyo), a delivery partners for business location logistics, has become the first Japanese manufacturing company to introduce an all-electric light-duty truck, the FUSO eCANTER, developed by Mitsubishi Fuso Truck and Bus Corporation, contributing to reducing the environmental burden in the local communities.



The Murata Science Foundation's grant totaling a record 414 million yen for academic and cultural development

<https://corporate.murata.com/en-global/newsroom/news/company/general/2020/0713>  
\* Japanese site only

The foundation seeks to contribute to the development of Japanese science and culture through the awarding of grants to promote research in the areas of natural sciences, in particular electronics, in addition to humanities and social sciences. This year marks the 36th awarding of the grants.

Opening of "Mulabo!", an experience facility for children to enjoy science

<https://corporate.murata.com/en-global/newsroom/news/company/general/2020/1005>

Established in Minatomirai, Yokohama in December 2020. Based on the concept of "a place where budding engineers are born," the facility contributes to the development of STEAM education and culture under the theme of "science," which is linked to Murata's business activities.



Opening of Minato MIRAI Innovation Center, largest R&D hub in Kanto region

<https://corporate.murata.com/en-global/newsroom/news/company/general/2020/1215>

Murata bolsters its design and planning capacities, as well as basic product research for new markets like energy, healthcare, and IoT, in addition to its core business in the communications and automobile markets.



Participation in global environmental initiative RE100 —Aiming for 100% renewable energy used in business operations by 2050—

<https://corporate.murata.com/en-global/newsroom/news/company/csrtopic/2020/1217>

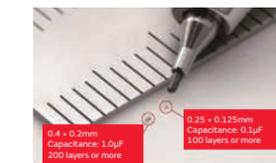
Murata expressed to contribute to the realization of a carbon-neutral society by engaging in various strategies, such as aiming to promote the use of renewable energy at its production subsidiaries in Japan and outside of Japan, in addition to such reductions of the environmental burden during the production process.



Winning Excellence Awards at 2020 Nikkei Superior Products and Services Awards for "GRM02" and "GRM01" series, small, large-capacity multilayer ceramic capacitors

<https://corporate.murata.com/en-global/newsroom/news/company/general/2021/0104>  
\* Japanese site only

The series of 01005 inch size (0.4 × 0.2mm), a maximum capacitance of 1.0μF, and 008004 inch size (0.25 × 0.125mm), a maximum capacitance of 0.1μF, multilayer ceramic capacitors were selected for Excellence Awards at the 2020 Nikkei Superior Products and Services Awards, which recognize outstanding new products and services.



Offer of contract employment to workers from JTB GAIAREC, INC.

<https://corporate.murata.com/en-global/newsroom/news/company/general/2021/0304>

Murata has offered contract employment opportunities to four loaned workers from JTB GAIAREC, INC., a company affected by the COVID-19 pandemic. By employing workers from a different industry, Murata hopes to gain awareness and insights beyond itself and its industry, taking this as an opportunity for further growth.

Start of a service that provides data from a traffic counter system mapping traffic volume in Indonesia in April 2021—Enhancing effectiveness of outdoor ads along roads—

<https://corporate.murata.com/en-global/newsroom/news/company/general/2021/0324>



We are working on boosting the digital information infrastructure in Southeast Asia through the provision of sensing data from a traffic counter system and contributing to the digital transformation.