

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



Murata's mission is to contribute to cultural development. We have set a vision of where Murata wants to be in our "Vision 2030": becoming the best choice for our customers by providing the essentials, enabling the future, and evolving through innovation via co-creation with stakeholders.

We will realize our mission by balancing our profit creation with the contribution to realizing a sustainable society, creating and continuing to

provide value to customers and society through innovation, and reinvesting the profits generated to further create value.

To this end, we will set key materiality issues based on social issues from two categories, namely, "contribute to solving social issues through our business" and "initiatives on social issues through business activities overall," and carry out initiatives to address them.

### Key issues (materialities) originating with social issues



### Contribute to solving social issues through our business ▶ P.42



### Initiatives on social issues through business activities overall ▶ P.63



### Process of identifying materiality

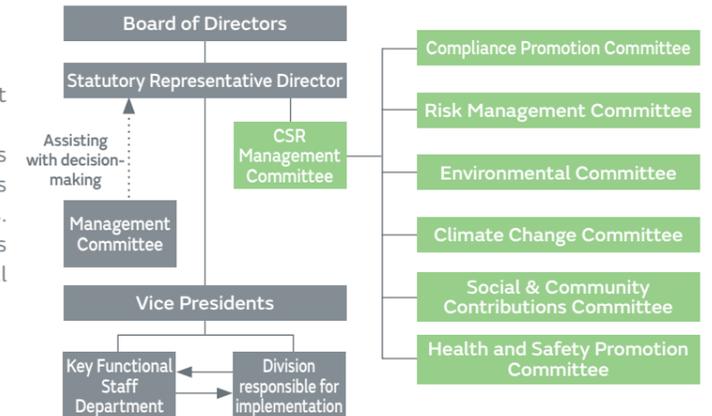
We have created a long list of approximately 100 social issues from SDGs, global risks, and internal issues, and have scored each issue in terms of stakeholder importance and importance within Murata. These issues were also debated with executives including the Representative Director, and persons concerned to identify material issues, which were decided by the Board of Directors.

For details of process of identifying materiality, please see here.  
[https://corporate.murata.com/en-global/csr/way\\_of\\_thinking/materiality#id3](https://corporate.murata.com/en-global/csr/way_of_thinking/materiality#id3)

### 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. We promote initiatives for the key issues (materiality) through these organizational structures.



### Contribute to solving social issues through our business

Materiality	Recognized business opportunities	Murata's contribution
 Communications	<ul style="list-style-type: none"> <li>● Increasing demand for components as communication systems evolve</li> <li>● Diversifying built-in communication applications</li> <li>● Emerging data-driven solutions and services</li> <li>● Building the network infrastructure to support the above, and advancing the development of smart cities</li> <li>● Merging real and virtual, including the expansion of XR technology</li> </ul>	<ul style="list-style-type: none"> <li>● Providing high-quality components that contribute to the stability of the communication systems and network infrastructure that have become indispensable social infrastructure for enriching people's lives</li> <li>● Contributing to the evolution of communication systems and the development of applications through knowledge cultivated in the field of continuous technological innovation and communication</li> </ul>
 Mobility	<ul style="list-style-type: none"> <li>● Increasing demand for components as automobiles evolve through safety enhancement including the spread of advanced driver assistance systems (ADAS) and autonomous driving, as well as the advancements of electrification</li> <li>● Integrating various transportation modes and services emerging under the concept of Mobility as a Service (MaaS), which positions transportation itself as a service</li> </ul>	<ul style="list-style-type: none"> <li>● Contributing to achieve the formation of a safe and secure transportation society, and a society that integrates various means of transportation and services through miniaturization, increased functionality and enhanced reliability of components</li> </ul>
 Environment	<ul style="list-style-type: none"> <li>● Accelerating initiatives to transition to a decarbonized society</li> <li>● Advancing the circular economy, which places value on product repair, reuse, and resource recycling</li> <li>● Advancing the development of environmental technology (clean tech) in all industry segments</li> </ul>	<ul style="list-style-type: none"> <li>● Contributing to a decarbonized society through the battery and power supply business, with our competitive advantage of safety, security, high efficiency, and long life</li> <li>● Enabling monitoring of various environmental aspects through communication and functional components, and accelerate the realization of a decarbonized society and circular economy</li> <li>● Deploying production expertise related to energy saving and renewable energy acquired in our process improvement activities widely outside the Company</li> </ul>
 Wellness	<ul style="list-style-type: none"> <li>● Transforming the medical and healthcare domain using digital technology</li> <li>● Expanding initiatives in preventive medicine and health promotion in line with the acceleration of the population aging</li> <li>● Changing health concepts, including balanced mental and social health in addition to physical health, and the pursuit of people's own happiness</li> </ul>	<ul style="list-style-type: none"> <li>● Contributing to the acceleration of digitalization in the medical and healthcare domains by providing compact, high-quality electronic components</li> <li>● Provide solutions for extending healthy life expectancy and enabling vibrant lifestyles free from anxiety by combining Murata's technologies and ideas</li> </ul>

## Examples of initiatives to contribute to solving social issues through our business



### Contributing to power saving in communications through high-frequency devices



5G is expected to become more widespread in the 2020s, with 6G expected to be introduced in 2030. Communications systems have become the infrastructure for all industries and people, and their evolution is expected to bring about significant changes in the way of life. Although 5G features high-speed communications, the high output and wide bandwidth of the signal give rise to the issue of higher power consumption. Reducing power consumption is an important issue to be solved not only for enhancing the convenience of mobile devices, but also from the viewpoint of addressing climate change.

Solving this issue was one of the goals of Murata's acquisition of Eta Wireless Inc. in September 2021. The Digital Envelope Tracking Technology that Eta Wireless Inc. possesses optimizes the voltage of RF circuits involved in transmission and reception functions of mobile devices, thereby reducing power consumption and contributing to the longer operating time of the devices. Combining Murata's existing high-frequency modules with the Digital Envelope Tracking Technology will allow us to provide a solution that enables lower power consumption. We will contribute to solving social issues through technological innovation in communications.



### Achieving a safe and secure transportation society through technological innovation of multilayer ceramic capacitors (MLCCs)

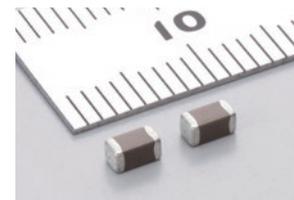


The number of sensors and processors installed in each vehicle is increasing as their safety and functionality are enhanced with the spread of ADAS and autonomous driving. This has led to an increase in the number of MLCCs required to correctly operate these devices.

In December 2021, Murata developed MLCCs for the powertrain safety of vehicles, which achieves the world's largest\*<sup>1</sup> static capacitance of 22 μF at 3216M (3.2 × 1.6 mm) size/rated 16 V, and commenced its mass production. This product is commercialized using proprietary ceramic technology and thin-layer forming technology by atomization and homogenization of electrode materials. In addition, the high temperature load test for long-term reliability has been conducted to meet the specifications of a maximum operating temperature of 125°C and rated voltage of x 150% for 1,000 hours, thus ensuring high reliability.

We will continue supporting the enhancement of the safety and functionality of automobiles through technological innovations that respond to the demand for smaller components, greater static capacitance, and higher reliability. We will thereby contribute to the realization of a safe and secure transportation society.

\*1 As of December 2021, according to Murata research.



### Contribute to a decarbonized society by deploying the company's expertise externally



In April 2022, Sendai Murata Manufacturing Co., Ltd. (Miyagi Prefecture) became the third\*<sup>2</sup> Murata production subsidiary to make a full transition to using renewable energy.

In addition, Sendai Murata Manufacturing Co., Ltd. plans to install a storage battery system that combines large-scale solar panels with storage battery units that use our lithium-ion rechargeable battery FORTELION, which features high safety and long service life. The installation is expected to reduce the burden on the power grid by using a proprietary energy management system that optimizes energy use through integrated management of information including production planning, electricity consumption, and weather conditions.

Going forward, we will contribute to the realization of a decarbonized society by expanding this mechanism to other company locations. In the future, we will also expand it outside the company using the expertise we have developed in-house.

\*2 In November 2021, Kanazu Murata Manufacturing Co., Ltd. (Fukui Prefecture) shifted to using renewable energy for all of its electricity consumption, followed by Philippine Manufacturing Co. of Murata, Inc. (The Philippines) in January 2022.

