Murata's core competencies

We will increase our collective strength by enhancing and connecting respective strengths together.

Since most of our sales are generated from products with high shares in global markets, we have opportunities to communicate with many customers in a wide range of industries, which allows us to stay ahead of and anticipate customer needs. Murata's strengths are in our global sales network, technological development capabilities, monozukuri (manufacturing) capabilities, and supply capabilities. We will increase our collective strength by combining these elements.

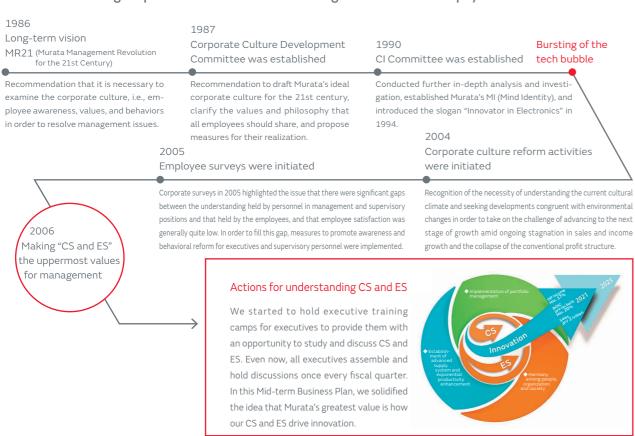
Core competencies

Innovation driven by CS/ES



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.

Initiatives involving corporate culture after establishing the Murata Philosophy



Core competencies 1 Anticipation of market changes and customer needs

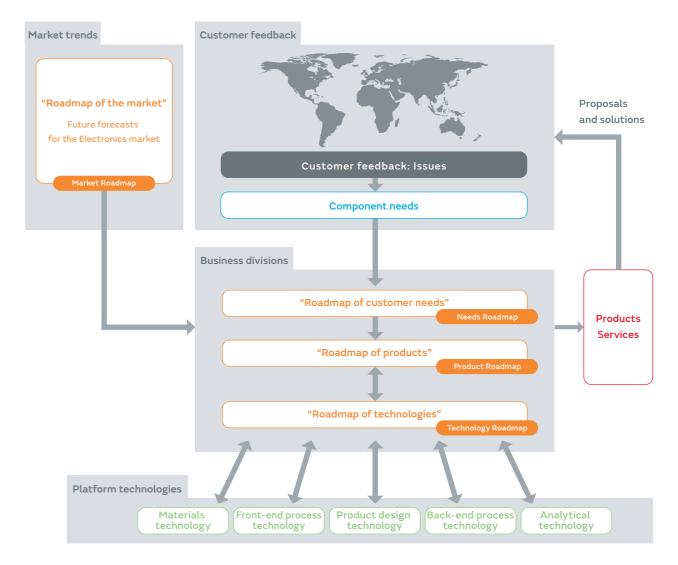
A network is in place to provide Murata's services and products anywhere around the world, including in Japan, Asia, the Americas, and Europe. Using "marketing by everyone" as our motto, we leverage our global network to anticipate customer needs ahead of any other company, and each employee maximizes value offered to customers.

Formulation of roadmaps leveraging marketing capabilities

New technologies such as IoT, automated driving, 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 that will meet customer needs by boosting cooperation among sales, marketing, development, and production in order to continue to provide customer value 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 Market Roadmap, and the sales and marketing departments in each area and the sales promotion department of the business divisions integrate this Market Roadmap with customer needs over the medium to long term, whereby composing Needs Roadmap. These are connected to Product Roadmap and Technology Roadmap by the development department. Roadmaps are revised every year and reconnected to R&D and product development.



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Core competencies

Core competencies 2

Continuous R&D investment enabling new product development and accumulation of intellectual property

Murata has built an integrated system of production from raw materials to finished products, and we have been independently developing technologies including materials technologies and fundamental technologies, and acquiring the expertise that other companies lack.

Through continuous investment in technological development, we have sought to differentiate our products, and this has become one of Murata's core competencies.

Trends in net sales and ratio of new product sales to net sales

Net sales

Ratio of new products to net sales

(%)

1,800.0

1,500.0

1,200.0

37%

900.0

600.0

490.8

566.8

631.7

523.9

530.8

618.0

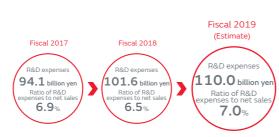
584.7

681.0

10

●R&D expenses and ratio of R&D expenses to net sales ■■ R&D expenses •●• Ratio of R&D expenses to net sales





Accumulation of intellectual property

Murata sees intellectual property strategy as a part of business and development strategies, and promotes intellectual property strategies and activities that are based on its business and development strategies. Each business division and development department has a representative and a patent leader, both of them promote intellectual property activities in cooperation with the Intellectual Property Department, those representatives and patent leaders play a central role in intellectual property activities. We also cultivate sense of intellectual property through various events such as rank-specific/professional education, workshops, and patent forums on intellectual property.



Trends in the number of parents owned by the Murata Group

The number of patents owned by Murata is increasing year by year both in Japan and in overseas. This is due to an increasing number of applications resulting from expansion in the technological field through M&As, and the inclusion of the number of patents that have been transferred. The reason for an increase in the number of foreign applications is

that our ratio of overseas sales has increased, and we have been proactive in filing new foreign applications. When moving forward with foreign applications, we utilize a PCT application to ascertain appropriate countries we should file with consideration for optimizing cost effectiveness.

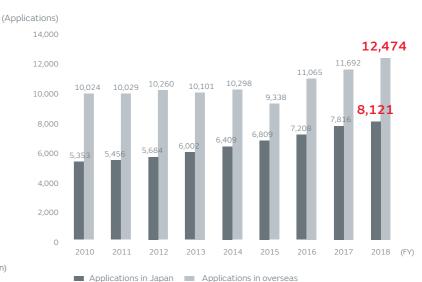
Ranking in PCT applications filed



anking among Japanese corporations

 10_{th}

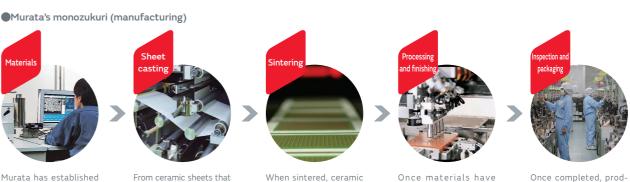
*Source: WIPO (World Intellectual Property Organization) Patent Cooperation Treaty Yearly Review 2018



Core competencies 3 Strong monozukuri capabilities enable timely supply

All technologies are directly in line with our markets and customers. Murata internally develops materials, processes, products and production technology.

These are vertically integrated to realize the provision of value to customers in a quick and timely manner.



Murata has established technologies to precisely control ceramic materials and electrode materials that critically determine the properties of electronic components.

From ceramic sheets that are 1 µm or less in thickness to complexly shaped filters created by injection forming, we pursue "functional shapes."

when sintered, ceramic crystal structures shift to achieve certain properties. Sintering is a technique to control these invisible changes within a gained electric properties from the previous processes up to sintering, ceramics are formed into electronic components through various additional processing. ucts are delivered to customers only if rigorous testing proves that they are worthy of the Murata label.

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