

# Murata's core competencies 1

## 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.

# Innovation driven by CS/ES

"CS and ES," the values safeguarded by Murata, are the driving forces for innovation.

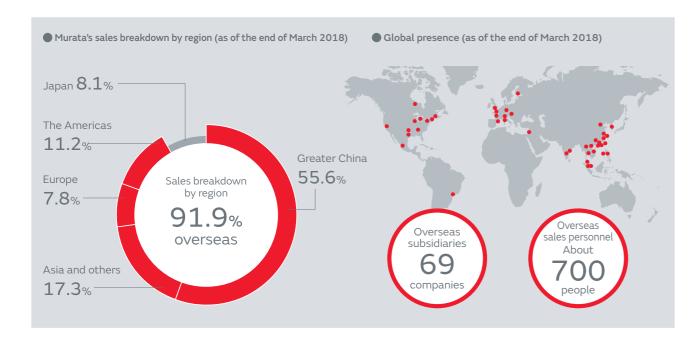
CS means "to create and provide value that customers appreciate," and ES means "each and every employee feels rewarded and continues to grow through his or her work."

Innovations and value that customers appreciate are created when each employee around the world feels rewarded and keeps growing while working together. Customer satisfaction then further raises employee motivation. Murata embraces this spiral effect.

# Global sales network enables anticipation of market changes and customer needs

Over 90% of Murata's products are sold overseas.

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.



# Continuous R&D investment enables new product development

Murata has built an integrated system of production from raw materials to finished products, and we have been independently developing various fundamental technologies, such as materials technology, and acquiring the expertise that other companies lack by continuously investing in R&D.

By having each production process independently refine technologies and cooperate, we are able to satisfy customer needs quickly.



# Strong monozukuri capabilities enable timely supply

All technologies are directly in line with our markets and customers.

Murata's technologies are closely coordinated and integrated from materials to products. All technological departments move together and realize the provision of value to customers in a quick and timely manner.

Materials

Sheet casting

Sintering

Processing and finishing

packaging

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  $1 \mu m$  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 furnace.

Once materials have 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.

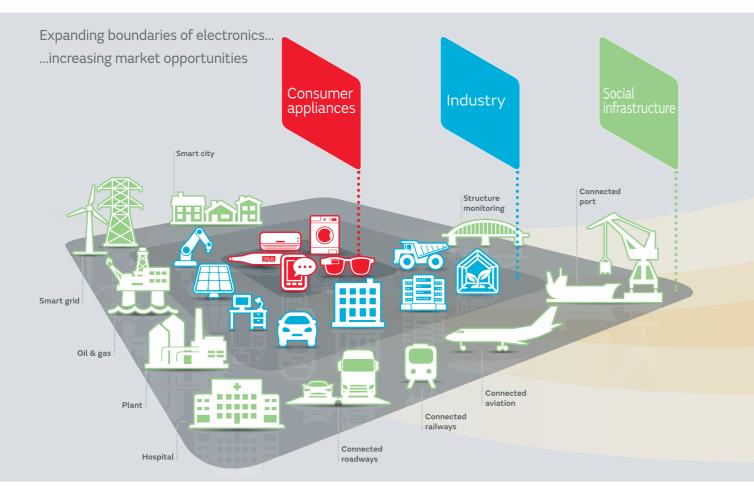
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# Murata's core competencies 2

## Murata's business opportunities are expanding as objects become increasingly digitized.

All types of objects are being digitized in society around us, and business opportunities for Murata are further expanding. Markets in which Murata's technologies can be applied, such as communications, computer-related equipment, automotive electronics, and home appliances continue to expand, and we have a high product share in each field.



### Murata's market share

#### Chip multilayer ceramic capacitors

Indispensable to electronic circuits, these components serve to store and adjust flows of electricity. They are key to the advanced functionality of smartphones and other mobile devices, and as they continue to become thinner and more compact are increasingly being incorporated into such information devices.

Application: Communications Application: Automotive electronics



#### Connectivity modules

Enabling various devices to access the Internet via radio signals, these modules lead the trend towards increasing multifunctionality and IoT in smartphones and in-vehicle equipment.

Application: Communications, computers and peripherals



### SAW filters

The filters that extract only the required portion of a radio signal are key devices in high frequency circuits. With its unique miniaturization technology, Murata helps RF circuit downsizing.

#### Application: Communications

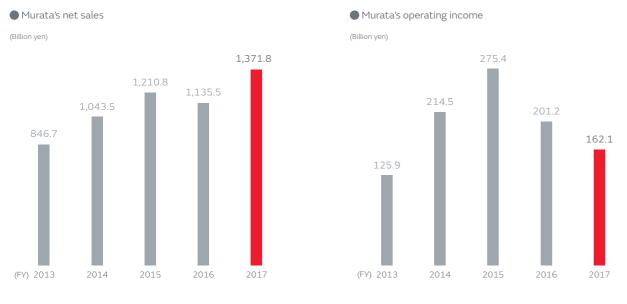


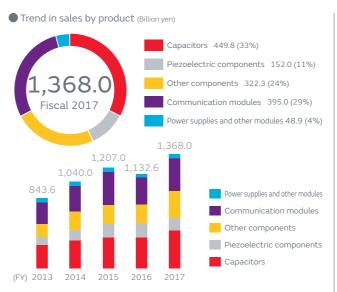
#### Timing devices

These are component parts that generate the clock signal in combination with the IC. As electronic outfitting of automobiles progresses, communication between ECUs is needed and timing devices that deliver a highly accurate, high quality clock signal are called for.

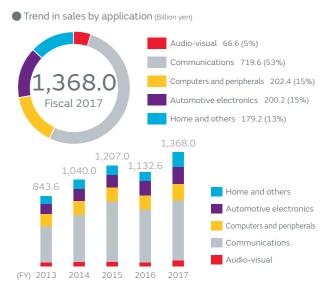
Application: Automotive electronics







<sup>\*</sup> Sales by product are for the main business of electronic components and related products.



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\* Based on the Company's estimate