

Feature 1:
Product-driven Advances in Digital Transformation (DX)

Business strategy for MLCCs in continuously growing demand

Demand for multilayer ceramic capacitors (MLCCs) is growing across the globe on the back of increasingly “Connected,” “Autonomous,” “Shared & Services,” and “Electric” (CASE) automobiles, and the advance of DX in wide-ranging fields. In the face of this rising demand, TAIYO YUDEN is focused on initiatives aimed at expanding its supply capacity and optimizing the distribution of its production sites for MLCCs.

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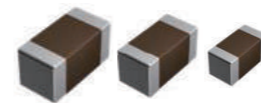
Capital investments centered on high-end and high-reliability products

TAIYO YUDEN continues to make active investments to meet growing demand for MLCCs across the globe. We are focusing our investments on cutting-edge, high-end products and on high-reliability products for automotive use, and we intend to increase our production capacity by between 10 and 15% every year. To this end, we have planned for company-wide capital investments totaling ¥300 billion over the five years from FY2021 to FY2025.

Since there are only a few MLCC manufacturers capable of delivering a stable supply of MLCCs for cutting-edge, high-end products and for high-reliability products for automotive use, there are market concerns about whether supply will be able to keep up with demand. We believe that by making capital investments in response to growing demand, we will not only strengthen our production capacity, but also improve our competitiveness.

Growing demand for MLCCs

MLCCs are found in all manner of electronics, with around 1,300 units used in a single high-end smartphone and some 10,000 units used in a single electric vehicle. Going forward, demand for MLCCs will continue to grow, both due to the increasing sophistication of smartphones and the accelerating electrification of automobiles; indeed, demand volumes are forecast to grow by 10% or so per year, with total demand for MLCCs in FY2025 expected to number around 6.5 trillion capacitors—1.6-times higher than in FY2020. In particular, there has already been significant growth in demand from high-end and high-reliability products—and responding to this increased demand is of the greatest urgency.

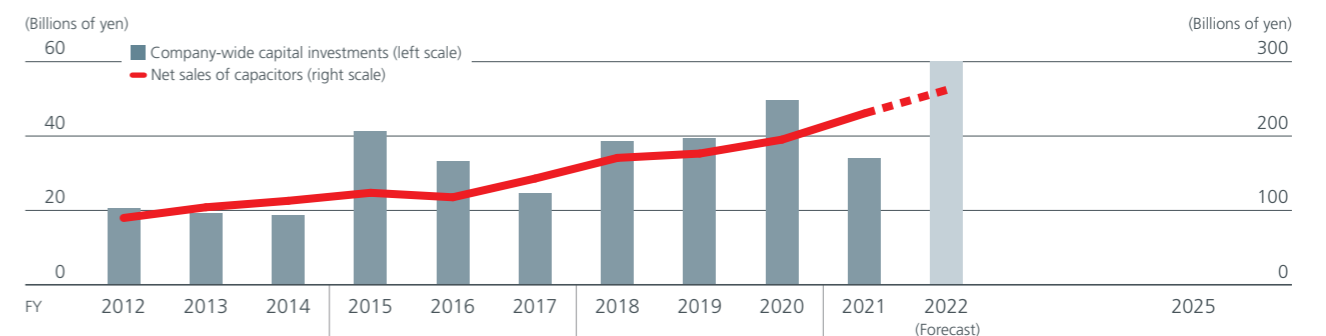


Demand forecast for MLCC (Volume)



*According to in-house research

Company-wide Capital Investments and Net Sales of Capacitors



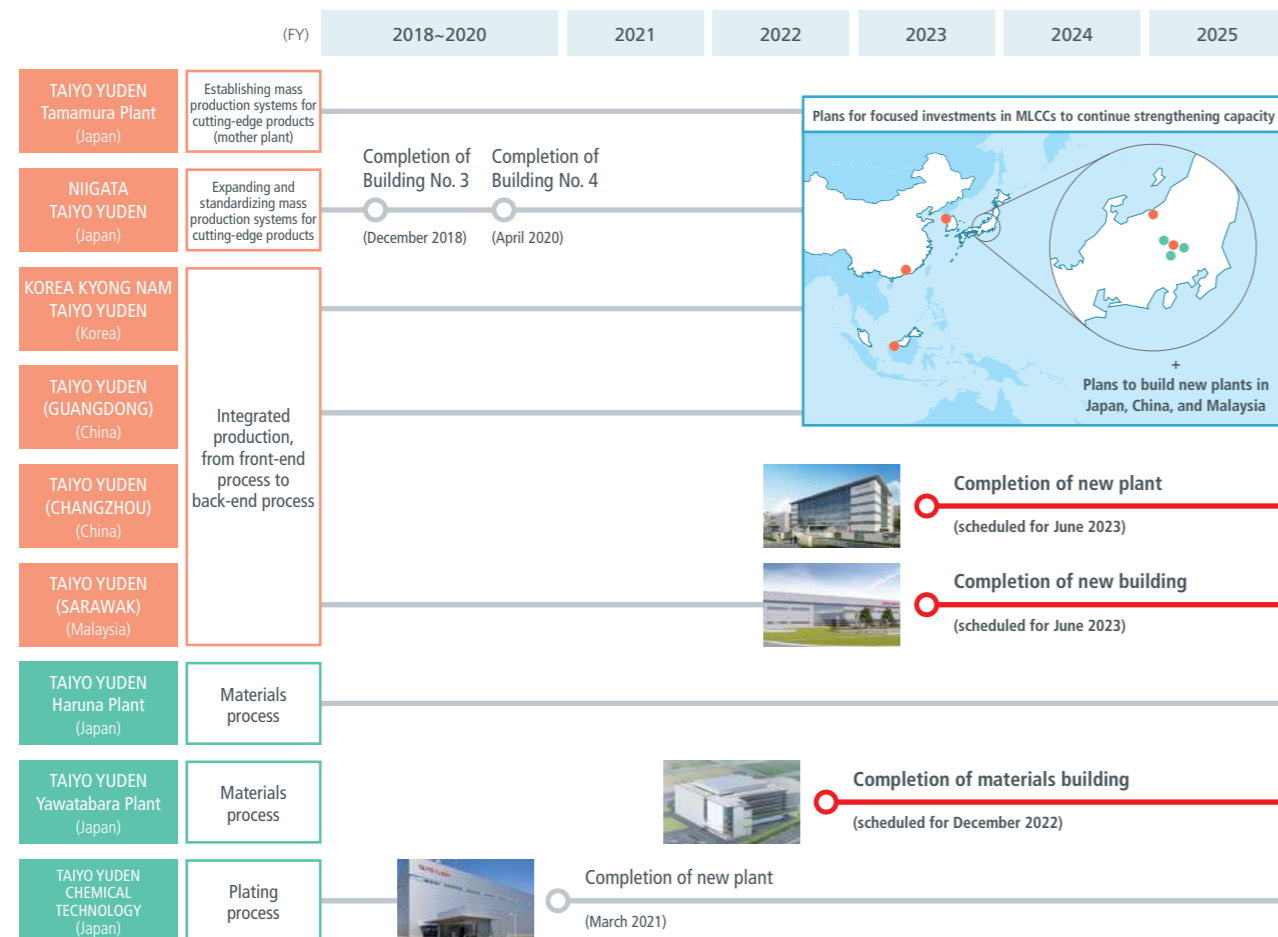
<p>Control capital investments</p> <p>Three-year total: approx. ¥ 60 billion</p>	<p>Shift to more aggressive investments</p> <p>Three-year total: approx. ¥ 100 billion</p>	<p>Increase scale of capital investments</p> <p>Three-year total: approx. ¥ 130 billion</p>	<p>Continue to strengthen production capacity</p> <p>Medium-term Management Plan 2025</p> <p>Five-year total: approx. ¥ 300 billion (plan)</p>
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02 Expansion plans that aim to realize distributed production and smooth increases in capacity

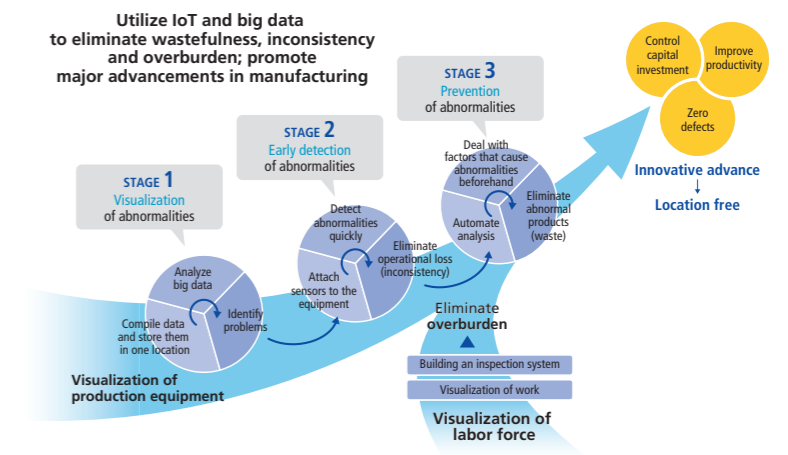
The TAIYO YUDEN Group has produced MLCCs overseas for many years and, at present, it operates production sites in Japan, Korea, China, and Malaysia. Rolling our operations out across multiple countries and regions is a strategy for distributing risk, and enables us to limit the dependence we have on any single country or region. In our medium-term management plan 2025, we continue to adhere to this policy of restricting our dependence on any single country or region, as we plan to establish new plants in three countries—Yawatabara Plant in Japan, TAIYO YUDEN (CHANGZHOU) in China, and TAIYO YUDEN (SARAWAK) in Malaysia. While we endeavor to distribute risk by ensuring our operations span multiple regions, when choosing for new sites, we deliberately choose locations that neighbor our existing regions of operations. This allows the new sites to receive support from nearby existing worksites, and helps ensure that everything from plant construction to full-scale production proceeds smoothly.

TAIYO YUDEN Group MLCC Production Sites



03 Strengthening manufacturing capabilities through "smart.E" productivity improvement activities

If we wish to increase our MLCC production capacity, we believe that in addition to strengthening our plant capacity through investments, it is vital we also work to reduce losses and improve yield through productivity improvements. At TAIYO YUDEN, we launched the smart.E project for productivity improvement activities in 2016 and, since then, we have continued working to improve yield by eliminating inconsistencies in our equipment and workforce. Our goal is to achieve zero defects, so that our customers can use TAIYO YUDEN products with peace of mind at all times. To this end, we have enlisted AIs to continually monitor the state of our "3Ms"—of man, machine, and material—for abnormalities during production, and to prompt facility managers to carry out maintenance before abnormalities occur. The progress of our "smart.E" activities has led to improvements in manufacturing at all our plants around the world, and we are moving closer to a truly borderless production system. By strengthening our production capacity and improving our productivity, we intend to enhance our overall manufacturing capabilities, and so ready ourselves to respond to explosive increases in demand.



Example Initiatives in FY2021

- In FY2021, we largely succeeded in executing our initiatives as planned.
- In our production activities, we introduced cutting-edge IoT technologies, and focused on establishing systems for identifying effective initiatives within our different locations and rolling them out across the entire TAIYO YUDEN Group. We intend to build a database of effective methods and procedures that can be referred to at all times.

