

Device & Module Solutions Business (DMB)

Shift from a Style That Supplies Components to a Style That Creates Its Own Solutions Starting from Social Issues

Managing Executive Officer
Company President, Device & Module Solutions Company

Masahiko Ezaki



— You were appointed the president of the Device & Module Solutions Business (DMB) this year. What is your vision?

DMB's vision under SF2030 is to "Resolve Social Issues with Customers" by leveraging DMB's strength in "connecting" and "switching" technologies. Based on this vision, I recognize my mission is to transform DMB into a business that can achieve sustainable growth. The basic thrust of SF2030 is to shift DMB's style of business from supplying components that resolve individual customers' issues to creating new value by considering the optimum solutions starting from social issues, working together with customers and partners, and implementing those solutions.

— Please tell us about fiscal 2022.

Under SF2030, we are focusing on four domains— devices for DC (direct drive) drive, devices for DC infrastructure, high-frequency devices, and remote/VR devices—that are expected to grow further with migration to DC to ease environmental burdens and digitalization of society. Moreover, we are also sharpening our focus on new ways of delivering value corresponding to "Green," "Digital," and "Speed," attributes that will become increasingly important in the future, in order to realize a sustainable society. In fiscal 2022, while strong demand continued, there were difficulties in procurement of components worldwide and changes in customer requirements due to the impact of the COVID-19 pandemic. In these circumstances, we ensured the supply of products to meet customer requirements through flexible production changes and timely changes of suppliers. In our focus domains, we tackled more themes related to energy, such as solar power generation and storage batteries, and semiconductor inspection equipment, and demand remained strong. As a result, net sales increased 14.8% year on year to ¥138.9 billion, and operating income rose 54% to ¥15.5 billion, a record high. Regarding social value KPIs, sales volumes of products for DC equipment and products for high-frequency devices amounted to 10 million units and 60 million units, respectively. We will

continue to strengthen our offerings of various products that create social value.

— What do you want to develop as DMB's strengths to achieve SF 1st Stage, and what do you think are the challenges for DMB?

Under the previous medium-term management plan (VG2.0), we promoted structural reforms, such as strengthening quality control and consolidating production bases, and established a strong business foundation. That is why we are now boldly steering DMB into a growth phase. Our organizational strength has made this possible. We have established an organizational structure that allows all our functional departments to work as one team toward a goal and sharpens their effectiveness. While focusing on "creating new value" by maximizing the strength of the business foundation we have laid and the organizational capabilities underlying it, we aim to transform DMB into a sustainable growth business through "organizational management that takes on the challenge of maximizing output."

Meanwhile, the challenges are "speed" and "maximization of the business opportunities we capture." In terms of speed, in order to respond more swiftly to the needs of society, it is essential to accelerate every phase from value creation, planning, and commercialization through to value proposition by linking a series of cycles, and to give customers the speed they want. We need to establish a quick and flexible business process according to the needs of the targeted market. To this end, in December 2022, we concentrated development engineers, who previously were dispersed around Japan, at the Okayama Office to develop relays, switches, modules, and other basic technologies. We aim to cut development lead times to less than half what they were in the past through a cross-functional (concurrent) structure in which departments gather together to discuss and co-create from the upstream stage of manufacturing.

In order to maximize the business opportunities we capture, going beyond "point-by-point" activities for

promoting our products to individual customers, we will expand business opportunities by “covering the ground,” which means addressing customers in an industry that share attributes, casting our net wider to cover entire industries, planning product groups, and horizontally deploying them for new applications. We will also work to strengthen our ability to respond to customers based on a structure attuned to concurrent activities, including not only personnel from sales but also from marketing and product divisions in each area, as well as product development.

— What is your strategy for fiscal 2023 for medium- to long-term growth?

During the COVID-19 pandemic, demand associated with home nesting boosted sales. Now, the market environment has stabilized, and sluggish global consumer demand persists. As distributor inventories in the market remain high, we expect it will take more time for demand to recover.

On the other hand, there are certainly areas where growth is expected, such as energy-related industries and the semiconductor inspection equipment industry. In fiscal 2023, we will emphasize the proposing of solutions to capture demand in such growth markets and cultivation of customers in the target industries and accelerate the offering of

applications for other industries where there is commonality, thus establishing a structure for growth. Specifically, we will focus on “expansion and strengthening of the four focus domains,” “strengthening of the core business through new value proposition,” and “strengthening of the revenue structure.”



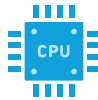

Regarding expansion and strengthening of the four focus domains, we will focus on domains where demand is expected to increase due to changes in society, aiming for year-on-year growth of 108%. To ease environmental burdens, the shift to DC power supply and electrification of products and infrastructure equipment are progressing rapidly, as is the trend toward higher-capacity energy-related applications, such as solar power generation. We will promote high-capacity relays necessary to facilitate the spread of such DC products, and modules for EV charging infrastructure that contribute to the realization of a carbon-neutral society. Furthermore, we will continue to approach customers in the gas industry with a view to developing the applications necessary to realize a hydrogen economy, since hydrogen is widely viewed as a promising next-generation energy source. Regarding high-frequency devices, demand for products for inspection applications for semiconductors and electronic devices is increasing quickly, spurred by the spread of high-speed

communication. To meet this demand, we will offer high-frequency-compatible relays and inspection modules so as to achieve sales growth. For remote/VR devices, we will combine sensors and other devices with IoT communication platform technology to create the modules necessary for realization of a digital society. We intend to achieve business growth by swiftly releasing products developed in cooperation with customers that will resolve social issues. Such products include new weather IoT sensors jointly developed with Weathernews Inc., which help mitigate risks associated with extreme weather events, and EV charging smart plug modules developed in cooperation with Ubiden, Inc. With respect to strengthening of the core business through new value proposition, we are working to create new value based on “Green, Digital, and Speed.” For example, regarding “Green,” we aim to expand the range of decarbonized products that contribute to reduction of CO₂ emissions. Also, we intend to contribute to decarbonization throughout the supply chain by shifting factories to electricity derived from clean energy and introducing visualization of the carbon footprint of each product. Finally, we are strengthening our revenue structure. We restructured our business foundation principally by improving product quality and through structural reform

Number of products supplied in focus domains

Products for DC equipment
10 million units

Products for high-frequency devices
61 million units

SF 1st Stage Targets		SF 1st Stage Focus Domains
 <p>Sales Growth (CAGR)</p>	<p>¥ 121.0 billion (FY2021 results) + 1% (Focus domains: +3%) = ¥ 125.0 billion (FY2024 targets)</p> <p>23%* (FY2021) + 24%* (FY2024)</p> <p>*Composition of focus domains</p>	 <p>DC equipment</p>  <p>High-frequency devices</p>
 <p>Social Value KPI</p>	<p>Sales volume for products contributing to the spread of new energy and high-speed communication (cumulative total for 3 years)</p> <p>Products for DC equipment 60 million units</p> <p>Products for high-frequency devices 170 million units</p>	

of production, under the previous medium-term management plan. On the other hand, we recognize the need to establish a more stable revenue base to prepare for prolonged inflation as regards labor, material, and energy costs. We intend to improve the GP ratio by emphasizing a product mix oriented toward high-value-added products, production and inventory management with high turnover, and production efficiency improvement through further automation of production and use of digital technology. We will also promote the computerization of indirect operations to improve operational efficiency. Through these measures, we will establish a strong revenue structure capable of maintaining ROIC of 10% or more.

— What transformations are needed to achieve SF2030? What assets and capabilities should be incorporated for sustainable growth?

We will engage in three transformative initiatives to achieve the transformation of our business structure. Firstly, we will pursue business transformation. We feel confident about the cases in which co-creation themes have been launched by communicating DMB’s vision, “aiming for a business that resolves social issues,” internally and externally and gaining the empathy from customers. The key is to shift from a “customer-oriented” style of providing products that satisfies customer needs to a “social-oriented” style of proposing and creating products to customers that contributes to resolving social issues. Secondly, transformation of the focus domain. In pursuit of business growth, we are shifting our resources to four focus domains. These four domains are at the intersection where we can leverage our strengths and social changes create opportunities. Thirdly, the new value proposition and how we deliver it. In terms of “Green,” we are emphasizing the offering of products that contribute to reduction of CO₂ emissions. In terms of “Digital,” we are focusing on conversion of design and production data into value. And in terms of “Speed,” we are shifting to SCM that will make timely delivery a competitive advantage and is expected to lead to benefits in the

medium to long-term, in addition to concurrent development that reduces development lead time. I recognize that the acquisition of new customers and the creation of new products are necessary to realize these goals. We will strengthen marketing and commercialization for this purpose.

— What are OMRON DMB’s competitive advantages?

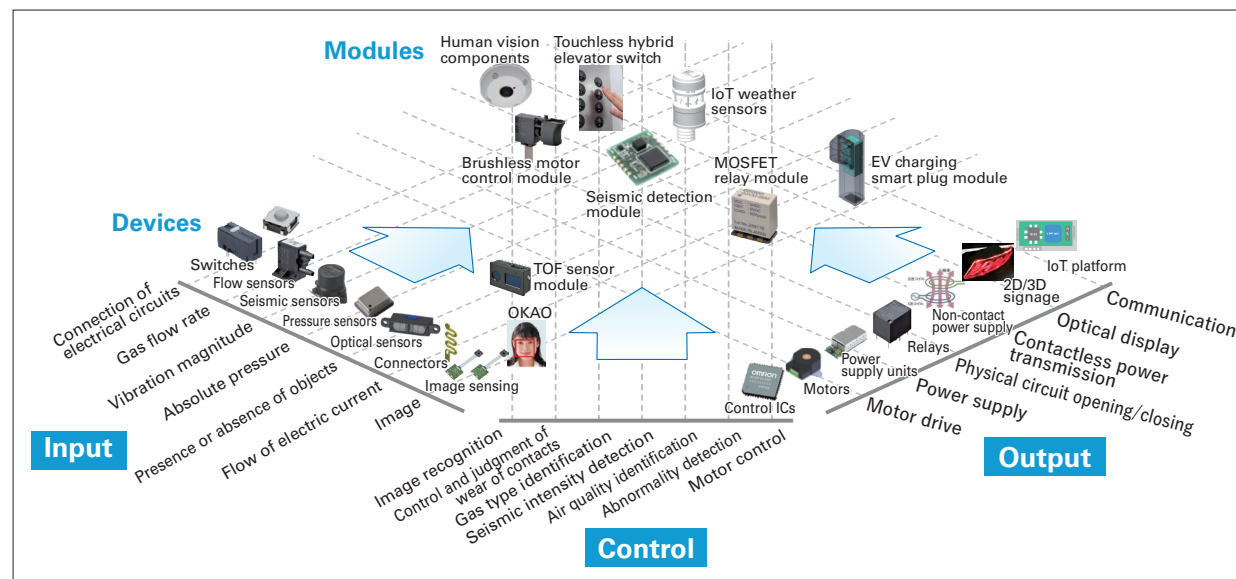
There are three principal ones. Firstly, customer assets. Our customers are leading companies in a wide range of industries. Having quickly identified social changes and needs, we have been able to develop and provide products ahead of the competition. Secondly, quality, which we have continued to refine in the course of transactions with leading companies. Thirdly, connecting and switching technologies. In addition to the fine mechanical engineering (microfabrication technology) that we have cultivated since our founding, we possess a broad lineup of technologies. Through smart sizing

(combination technology) for compact packaging of multiple functions, we can create unique, highly functional devices and modules that differ from those of specialist manufacturers.

— OMRON is committed to high cycle management. What initiatives is DMB pursuing?

Aiming to make proposals ahead of the competition, we practice high cycle management to “strengthen our ability to make proposals and realize them quickly” and “improve our ability to effectively respond to change through data-driven decisions.” Specifically, our aim is to shorten the lead time to product releases by 50% through concurrent activities and to quadruple the speed of business control of procurement, production, and sales (from monthly to weekly). We seek to improve customer satisfaction and maximize business opportunities by accelerating the cycle of value delivery in both the upstream process of creating new value and the downstream process of mass production.

<DMB’s extensive technology lineup>



Case 1 **Concurrent Co-creation with Customers to Create Solutions that Support the Spread of EV Charging Infrastructure**

In recent times, there has been an increased push for the spread of EVs and charging infrastructure to achieve decarbonization. With the aim of creating an environment where anyone to charge EVs anywhere, OMRON, in cooperation with Ubiden, the operator of the WeCharge EV charging service, has developed a module that can be retrofitted to EV charging outlets and measure the amount of charge per user. By combining Ubiden's cloud system that bills each user according to the amount of EV charging and OMRON's power control and sensing technology that measures the amount of charge along with IoT communication functions that transmit data to the cloud, we can provide seamless EV charging services. We aim to establish the service as soon as possible through concurrent activities integrating OMRON's development, production, and sales with Ubiden, to promote the introduction of EV charging and billing services to small-scale commercial facilities and



EV charging smart plug module (top) installed in an EV charging outlet to provide an EV charging and billing service

apartment buildings, thereby contributing to the accelerated spread of EV vehicles. Going forward, we will continue to address social issues and create new value by co-creating solutions based on our device & modules.



Development members

Comments from Our Partner

Ubiden's WeCharge service supports the realization of sustainable mobility through the development of EV charging infrastructure. Drawing on its outstanding technological capabilities and unique approach, OMRON provided us with valuable support as we tackled the challenge of simultaneously achieving stable product supply and reliable system operation to meet the needs of the rapidly increasing number of EVs. Our cloud system and OMRON's expertise and knowledge encompassing power control, electricity metering, and the IoT platform for transmitting electricity data, as well as its passion, have enabled rapid product development. By creating an electricity grid that allows everyone to freely use their preferred electricity, anywhere, anytime through WeCharge, we will work to realize a decarbonized society friendly to the Earth and people.

General Manager, Platform Development Department
Technical Development Division, Ubiden, Inc.

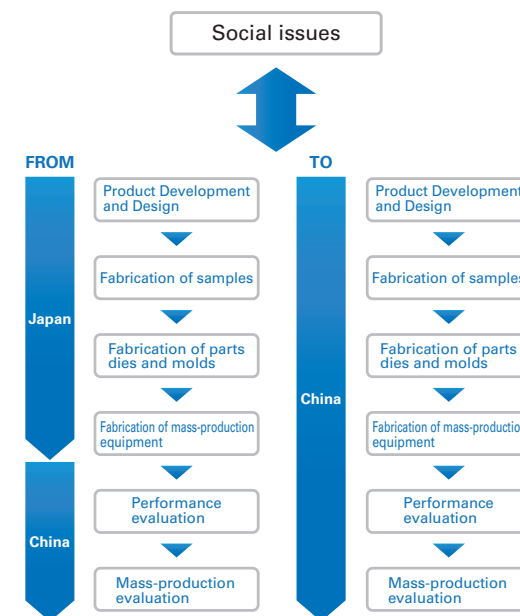
Yasutaka Kosugi



Case 2 **Achieving Speedy Value Proposition in China**

OMRON Electronic Components (Shenzhen) Ltd. (OMZ) is engaged in "Team China" activities to speedily create new solutions in China under a concurrent system. In fiscal 2022, OMZ established an engineering department. As a result, a system is in place that enables OMZ to carry out a series of processes required for new product development—product design, fabrication of parts dies and molds, fabrication of mass production facilities, and performance evaluation—all in one go. By using 3D printers and 3D measuring equipment, OMZ has shortened the time required to provide product samples to customers to less than one-third of that required in the past, thus accelerating the speed of response to customers.

<New Product Development System at OMZ>



Increasing the speed of value proposition through a one-stop system in China

As a result, China took the lead in developing relays for data centers that contribute to the spread of high-speed communications through concurrent activities involving development members in Japan. Furthermore, in June 2023, OMZ obtained CNAS*1 certification, an international laboratory accreditation standard. This enables OMZ to provide evaluation test reports bearing the ILAC/CNAS logo to its customers. Test reports certified by a third-party certification body are testaments to the reliability of the test results, confirming the quality of the products across China and enabling customers to simplify evaluation tests. Through these initiatives, OMZ is accelerating the speed of product provision to the market. OMRON will continue creating value through concurrent, high cycle activities to provide solutions faster than other companies and achieve autonomous growth.

*1 CNAS is an abbreviation for the China National Accreditation Service for Conformity Assessment. A system in which CNAS examines testing laboratories to determine whether they conform to the requirements of ISO/IEC 17025 standards for testing laboratories specified by the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC), which are equivalent to those of the International Laboratory Accreditation Cooperation (ILAC), and accredits the testing laboratories that satisfy the requirements.



For more information



Case 3 Delivering an Integrated Solution to Realize a Sustainable Society

The demand for improving efficient energy management in battery-based applications and reducing GHG emissions is growing rapidly these days. OMRON contributes to achieving carbon neutrality with customers and secure people's lives through providing high-capacity relays with low heat generation developed by using its core "connecting" and "switching" technologies.

Schneider Electric (SE), a multinational corporation specializing in energy management and automation solutions, offers fully integrated Uninterruptible Power Supply (UPS) solutions that provide highest levels of availability*2, reduced total cost of ownership (TCO)*3 and improved energy efficiency. For more than 20 years, OMRON has been facilitating SE with sophisticated, high-quality devices adding unique values in different applications. As the demand for higher efficiency in energy utilization continues to grow, UPS systems are required to operate at higher capacity with secure functioning while reducing its footprint and generating less heat. Sympathizing with the vision of solving social issues, engineers from both companies across regions came together for brainstorming sessions focusing on the end results. The mutual knowledge exchange on ways to make applications more energy efficient and SE's clear vision for UPS accelerated the development. As a result, the UPS series Galaxy VS reduced energy losses while at the same time optimizing the physical size and material consumption. A key contributor to the project's success



UPS series Galaxy VS; used in industrial and datacenter applications

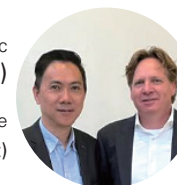
OMRON High-Capacity Relays (G7EB series)

were OMRON's high-capacity power relays offering low contact resistance that suppress heat generation. The benefits of OMRON relays can be adopted in a wide range of energy applications which will create an even bigger impact in reducing carbon footprint. Working together, OMRON and SE will continue providing solutions for highly efficient energy management and create new value to contribute to a safer society.

*2 Availability: be able to use all the time
*3 Total Cost of Ownership (TCO): Total cost from purchase to disposal

Sales Director, Asia Pacific
Foo Su Peng (left)

Sales Manager, Benelux & Denmark, Europe
Patrick Lof (right)



Comments from Our Partner

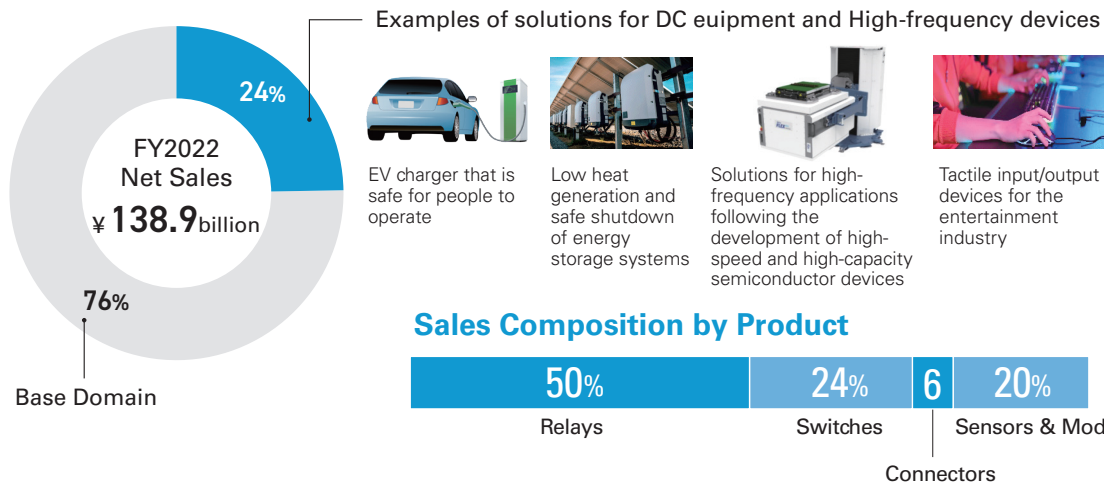
We chose OMRON as partner for our latest UPS development project since OMRON is considered one of the leading manufacturers of PCB-mounted relays. Due to tight footprint and energy efficiency constraints, we had to push the limits of power capacity and efficiency, without compromising reliability. With the G7EB relay series, OMRON fulfilled all the requirements for our applications, and we were able to reduce size, cost and losses compared to a conventional contactor-based solution. During the development phase, we had close collaboration with OMRON, not only to meet the project timeline, but also highly technical discussions related to capacitive load switching capability and physical positioning of the relay. After a successive product launch with the G7EB relay, we strived to push the technical limits even further. We challenged OMRON to increase the carry current capability, and this has resulted in the recent release of the G7EB-1A-E series where carry current is increased from 100A to 120A which aligns perfectly with our latest project development.



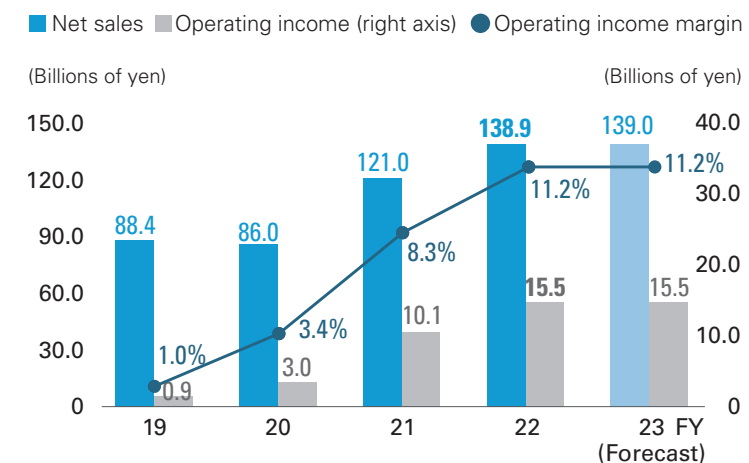
Senior Electronic Engineer
Jonas Mouridsen



Sales Composition by Business Domains



Net Sales / Operating Income / Operating Income Margin



INPUT

- R&D cost: ¥5.3 billion (results for FY2022)
- Capital expenditure: ¥9.6 billion (results for FY2022)
- Strengthened R&D system
Consolidated development bases (from 6 to 1) with the aim of reducing product release speed by 50% or more.
Established an engineering department at Shenzhen Plant in China (FY2022)
- Installed solar power generation systems at all five production sites in Japan
- Launched the DMS GREEN PROJECT, a project to promote activities that contribute to carbon neutrality initiatives through business (FY2022)

OUTPUT

- Net sales: ¥138.9 billion (+14.8% YoY)
- Operating income: ¥15.5 billion (+54% YoY)
- Development of technologies and products that contribute to achievement of carbon neutrality and realization of a digital society
- Commercialization of a new type of IoT weather sensor that helps mitigate climate change and disaster risk
- Expansion of the product lineup of high-capacity relays with low heat generation that contribute to achievement of carbon neutrality
- Expansion of clean energy production
Replacing electricity used at production sites in Japan with renewable energy is expected to reduce CO₂ emissions by approximately 1,200 tons per year (estimated).
- Number of products sold that contribute to the diffusion of renewable energy and high-speed communication
For DC equipment: 10 million units
For high-frequency devices: 61 million units

OUTCOME

- Contributed to the improvement of human life on the planet and the development of society through the diffusion of new energy and high-speed communications
Social value KPI: 10 million units for DC equipment, 60 million units for high-frequency devices (results for FY2022)



SDGs 9.4.1