

Driving business reform and organizational reinforcement, aiming for steady growth through a combination of existing business and new product development

Review of Second Year Under MEX23 Medium-Term Management Plan

Sales decreased in fiscal 2022, the second year covered by the medium-term management plan **Maximum Excellence 2023** ("MEX23"), despite increased sales of products for the automotive and semiconductor markets. The decrease was due to the downsizing of the projector business, in addition to decreased sales of rechargeable batteries and BtoC products. MEX23 was formulated during the COVID-19 pandemic, and ambitious targets were set in response to certain favorable circumstances in place at that time. Namely, growing sales of consumer lithium-ion batteries for game devices, and strong sales of ozone anti-bacterial deodorizers. Subsequent changes in the business environment meant that sales fell short of targets.

Furthermore, operating profit decreased due to soaring raw materials costs and the recording of a one-time cost associated with domestic BtoC sales business reform. This reform included reforms of the projector business conducted through fiscal 2021, which significantly reduced fixed costs. In February 2023, with the aim of pursuing further fundamental reform, we signed a sole distributor agreement with DENKYOSHA CO., LTD., and transferred our domestic BtoC product planning, development, and sales functions to DENKYOSHA. Maxell will in future be

focusing on achieving growth primarily through the BtoB business.

We expect that sales and profits for fiscal 2023, the final year covered by MEX23, will exceed results for fiscal 2022. This increase will be achieved by expanding our growth businesses to cover the reduction in revenue from the domestic BtoC sales business, reflecting soaring raw materials cost increases in our product pricing and the positive impacts of business reforms. Despite this, however, we expect operating profit for fiscal 2023 to fall significantly below our initial MEX23 target. We will continue to focus on initiatives such as bringing forward the launch of all-solid-state battery mass production, with an eye to the period covered by our next medium-term management plan.

	FY2022 Results	FY2023	
		MEX23 initial target	Forecasts
Net sales (billion yen)	132.8	125.0	133.0
Operating profit (billion yen)	5.6	12.5	7.5
Operating profit ratio (%)	4.2	10.0	5.6
ROIC (%)	3.5	Over 7.0	4.8
ROE (%)	6.3	10.0	6.2
USD to JPY exchange rate (¥)	135	105	130

Keiji Nakamura

President and
Representative Director



Message from the President

Towards the creation of **Maximum Excellence**

Maximizing profits through efficient allocation of management resources and business replacement

FY2021	FY2022		FY2023									
Downsizing of projector business <ul style="list-style-type: none"> Termination of new projector product development and termination of sales in Europe and the Americas Transfer of domestic projector sales rights to IRIS OHYAMA Inc. 	Domestic BtoC Business Alliance <ul style="list-style-type: none"> Transferred domestic consumer product planning, development, and sales functions to DENKYOSHA CO., LTD. <table border="1"> <tr> <td>Brands/Products</td> <td>maxell Optical discs, anti-bacterial deodorizers</td> <td>IZUMI Shavers, hair dryers</td> </tr> <tr> <td>Product planning and development</td> <td>DENKYOSHA</td> <td>Maxell Izumi</td> </tr> <tr> <td>Sales</td> <td>DENKYOSHA</td> <td>DENKYOSHA</td> </tr> </table>		Brands/Products	maxell Optical discs, anti-bacterial deodorizers	IZUMI Shavers, hair dryers	Product planning and development	DENKYOSHA	Maxell Izumi	Sales	DENKYOSHA	DENKYOSHA	Brought mass production of all-solid-state batteries forward <ul style="list-style-type: none"> June 2023: Commenced shipment of mass-produced batteries Progressing towards net sales of 30 billion yen in FY2030
Brands/Products	maxell Optical discs, anti-bacterial deodorizers	IZUMI Shavers, hair dryers										
Product planning and development	DENKYOSHA	Maxell Izumi										
Sales	DENKYOSHA	DENKYOSHA										

Continuing with portfolio management through comprehensive business and product monitoring

Road map



MEX23

- Expand growth businesses
- Establish structure for profit growth
- Prepare new businesses for the 2nd phase

New business launch period → The feature to be realized in 2030

- Increase the value of growth businesses
- Resilient management foundation
- Contribution of new businesses to company performance



Progress with initiatives in our three focus areas

We are concentrating business resources on the 3 focus areas of Healthcare, 5G/IoT, and Mobility. Although we have encountered difficulties with some of our initiatives in these areas, overall progress is in line with our envisioned scenario.

In the area of Healthcare, we are concentrating on medical devices such as hearing aids and blood glucose monitors, and working to expand sales by offering high-performance batteries for use in medical and measurement equipment. We are also developing all-solid-state batteries, which are entirely different from traditional batteries and provide entirely different levels of performance, and are looking to leverage this to open up markets for types of equipment that up till now haven't been powered by batteries.

In the 5G/IoT area, demand for semiconductors has been trending downward since the second half of 2022, and our products

have also been impacted by this. Our underlying competitiveness in this area is strong, however, and we expect to achieve steady growth in the longer term.

In the Mobility area, sales are growing for batteries used in tire puncture detection sensors. Demand is also growing for plastic lenses used in autonomous driving system sensors, and we feel there is further potential in this field.

Within these 3 focus areas, we have identified 13 growth businesses that will drive the future growth of Maxell, and are working to strengthen them. We set, as a materiality KPI, "Overall sales growth ratio of 13 growth businesses in 3 focus areas: 10% (FY2023 vs FY2021)," and surpassed that target in fiscal 2022 (sales growth ratio: 13%). The net sales weighting of the 3 focus areas is also increasing. In addition, from fiscal 2022, the New Business Producing Division has been allocating considerable resources to all-solid-state batteries, aerial image displays (AFIDs), and our "RIC-FOAM" low-pressure foam molding technology.

Expanding the 3 focus areas through concentration of resources into growth businesses

Materiality Solving social issues through our growth businesses

KPI Overall sales growth ratio of 13 growth businesses in 3 focus areas: 10% (FY2023 vs FY2021)

Net sales proportion of the 3 focus areas

- Proportion of the 3 focus areas
- Proportion of other areas

13 growth businesses

Healthcare

- High reliability coin-type lithium batteries
- Coin-type lithium-ion rechargeable batteries
- Tape for construction
- Healthcare equipment
- Beauty care equipment

5G/IoT

- Cylindrical-type lithium batteries
- Semiconductor process tape
- Tape for industrial processes
- Semiconductor-related embedded systems
- Hydraulic tools

Mobility

- Heat-resistant coin-type lithium batteries
- LED headlamp lenses
- In-car camera lens units

▲ Message from the President

Enhance organization to expand overseas sales

Proportion of overseas net sales accounted for 42% of Maxell's total in fiscal 2022. Considering that overseas net sales accounted for around 70% of the total in the era when battery and cassette tape sales were at their peak, there is significant room to further expand overseas sales. In light of this, we will be focusing on expanding our overseas BtoB sales.

Therefore, firstly we believe we need to change our global sales framework and approach. Currently, engineers in Japan develop products and visit clients for discussions. There is a limit to our capacity for sending engineers overseas from Japan to provide on-site support, and this hinders the smooth expansion of our overseas operations. To address this, we plan to unify overseas sales forces across segments, enabling overseas sales companies to directly build relationships with customers and expand sales of new products, and will establish a four-pole sales structure, covering Japan, Asia, the U.S., and Europe.

We will also focus our sales efforts on

niche product areas to better differentiate ourselves from competitors. This will mean that local sales staff with in-depth technical knowledge will be crucial, and we will therefore be focusing on training sales engineers and overseas marketing staff as well as significantly increasing their number.

Launch of all-solid-state battery mass production, proposing expanded range of applications emphasizing convenience of maintenance-free products

We are working to further develop all-solid-state batteries as a new core business for Maxell. In June 2023, we became the first company in the world to ship mass-produced small-size sulfide-based all-solid-state batteries. To mitigate business risk we started with an investment of around 2 billion yen and are focusing our efforts on a limited number of industries such as industrial robots.

The long lifespan of all-solid-state batteries removes the need for frequent replacement work, and can therefore help to reduce equipment

management costs. We will continue our development efforts with the aim of facilitating perpetual power sources with an emphasis on promoting the convenience of maintenance-free products, and will open up a wide range of fields in which such products will create significant value. In fiscal 2023, as capital investment depreciation begins, we expect that it will be difficult to generate profit, but we are targeting improvement from fiscal 2024 onwards. We are planning significant investment to coincide with the completion of development work on high-capacity products, and expect to boost profit from fiscal 2025. We are targeting net sales of 30 billion yen in fiscal 2030, but are looking to reach that target ahead of schedule.

Furthermore, we are advancing research into energy harvesting technologies that make it possible to generate electricity from small energy sources in the surrounding environment. This initiative has the potential to lead to extremely significant innovations. Being able to generate electricity from a variety of energy sources, such as temperature differentials, vibrations, rotational movement, or slight air movements, will truly bring us closer to being able to recharge devices

perpetually, thereby providing the freedom to install various types of equipment without constraints.

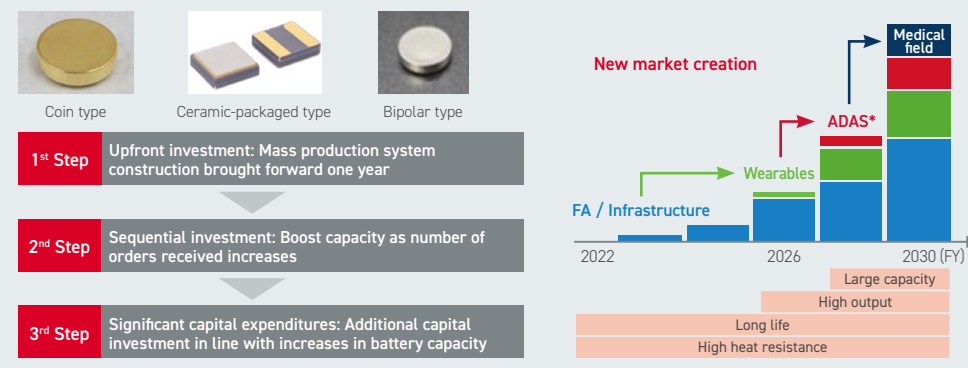
For instance, automobile tire puncture detection sensors currently utilize primary batteries and are required to transmit data about once every minute. With automated driving systems, however, they need to continuously gather and transmit wide-ranging data about contact between tires and the road surface, vehicle posture control, and so on. Since primary batteries can't provide sufficient capacity for this, there is a need to switch to using rechargeable batteries, which could, for example, be recharged using the energy from the rotation of the wheels or other energy sources. We intend to step up the development of new approaches like this.

No company has yet been successful in the energy harvesting field, and we aim to forge ahead through collaboration with other companies and universities, paving the way towards perpetual power sources and driving significant innovations.



Phased capital investment targeting all-solid-state batteries net sales of 30 billion yen by FY2030

- April 2023: All-solid-state battery mass production facilities completed
- June 2023: Shipping of mass-produced batteries (Sequentially starting customer evaluations for mass-produced products)
- FY2024 onward: Sequential investment and significant capital expenditures in line with growth of orders received and completion of high-capacity product development



*Advanced driver assistance systems

▲ Message from the President

Focusing on company-wide optimization of organizational functions and personnel enhancement

In fiscal 2021, we centralized the organizational structure—which had been separated vertically by business unit—under the corporate headquarters. This consolidation is aimed at speeding up information-sharing and communication, and enables all business divisions to advance company-wide initiatives. Furthermore, starting from fiscal 2022, the Human Resources & General Affairs Department and Finance & Accounting Department, and from fiscal 2023, the Procurement & SCM Division, have also been consolidated under the corporate headquarters. Under this new structure, we will work to generate synergies between businesses, focusing on global expansion in growth areas.

With the aim of enhancing our human capital, we are working to increase the mobility of personnel across the entire company, and will cultivate personnel with wide-ranging experience and knowledge. As part of this, from fiscal 2021 onwards we have been reviewing personnel role definitions by hierarchical level, and performing proactive evaluation that aligns with the required personnel criteria.

To ensure the penetration of the MVSS philosophy and thorough addressing of materialities, since fiscal 2020 I have been engaging in direct dialogue with employees through town hall-style meetings at various major domestic bases, including those of group



Town hall-style meeting

companies. Additionally, starting from June 2022, we held a series of 11 sustainability workshops over the course of about a year.

Steady advancement of sustainability initiatives

In fiscal 2021, Maxell identified seven materialities to address on the way to bolstering sustainability management. In fiscal 2022, KPIs were established for each of the seven materialities. Progress towards these KPIs is being monitored by the responsible officers.

One of the challenges in addressing the materialities of “Strengthening Group Governance” relates to IT systems. While the entire Group is advancing digitalization, the IT Department has formulated a longer-term roadmap for using digitalization to create new value, and will be actively advancing this initiative.

In terms of environmental initiatives, we established an Environmental Vision in July 2023 (refer to page 45). Some of our targets relating to our efforts to achieving a carbon-free society include reducing CO₂ emissions by 50% or more compared to fiscal 2013 levels by fiscal 2030, and achieving carbon neutrality by fiscal 2050. To contribute to achieving a recycling-oriented society we also aim to reduce waste generation per production unit by 19% compared to fiscal 2021 by fiscal 2030, and to commence chemical/material recycling of composite plastic waste.

Furthermore, in April 2023, the New Business Producing Division launched development work on an electrolytic reactor in collaboration with Osaka University to perform electrolytic reduction of CO₂ as part of the New Energy and Industrial Technology Development Organization (NEDO) project “Integrated Electrochemical Systems for Scalable CO₂ Conversion to Chemical Feedstocks.” Looking ahead, we will continue to work on environmental issues as a key area of focus.

To our stakeholders

For Maxell to continue growing and developing into the future, it is important for us to balance both economic value and social value. This means creating social value, including technological development, while simultaneously enhancing economic value. Without striking a balance between the two, our products will not be embraced by the public.

Our strategies of enhancing the sales and earning power of 13 growth businesses, and concentrating resources into our 3 focus areas, are aimed at simultaneously increasing economic value and social value. Maxell has expanded the range of applications of its existing products through performance enhancement and

diversification, and this approach has significant further growth potential. Moreover, new products require multiple steps from development and commercialization to market launch before going on to become core businesses, typically taking three, five, or even 10 years. We will concentrate on areas with promising growth potential while exploring other development avenues. We will steadily implement new initiatives focused on existing businesses and new products, advancing our growth scenario.

Maxell has immense potential. With strong unity between management and employees, we will continue addressing challenges, generating innovation through our strength, Analog Core Technologies, and creating value that has the power to transform society.



Keiji Nakamura

President and
Representative Director

September 2023