

# Within, the Future

Integrated Report 2023 Maxell, Ltd.

# Maxell Group's Basic Management Policy



The "Mission" Maxell must carry out

**M**ission "Contribute to a sustainable society by innovating unique, original technologies"

#### The "Future" Maxell wants to realize

Vision "Create Maximum Excellence for employees, customers and society by leveraging unique Analog Core Technologies"

The "Value" and "Strengths" Maxell commits to provide

Maxell commits to maximizing corporate value for all stakeholders through three key sources of value

 Technological Value
 Create new value through the sincere pursuit of originality and technological excellence

 Customer Value
 Respond to customer needs with safe and secure products created by Monozukuri (Manufacturing) above and beyond customer expectations

 Social Value
 Take on the many challenges of a changing world to create a prosperous and sustainable society

The "Spirit" Maxell must cherish

**S**pirit

Value

- Corporate Creed -"Harmony and cooperation, working with heart and soul, and contributing to society" **S**logan

"Within, the Future" - The future is within

- Brand Slogan -

The "Shared Slogan" of Maxell group







### Analog Core Technologies

The core of Maxell, the element without which we cannot be who we are, is our Analog Core Technologies. Human senses, such as seeing, hearing and touching traverse the border between digital and analog, and lie beyond it. We believe the analog world has the ability to stimulate these senses and express them without limit.

Analog Core Technologies connect the analog to the digital, and play an indispensable role in realizing Monozukuri (Manufacturing) in complex and delicate fields that cannot be achieved by digital technology alone.

Please refer to page 6.

#### Maxell, Ltd. Integrated Report 2022

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# **Table of Contents and Editorial Policy**

The Company positions its Integrated Report as an important tool for communicating with its stakeholders. In it, we present an overview of Maxell's Value Creation, and report on our mechanisms for Value Creation, growth strategies, and the current state of our activities.

### Introduction

### The capital and strengths underpinning Maxell, and an overview of our corporate activities

- 1 Maxell Group's Basic Management Policy
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- 3 History of Innovation
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#### How This Report is Structured

- Reading over the "Value Creation Process" (p.7-8) section of the Introduction and the "Materialities / Action Plans / KPIs" (p.11-12) section of Chapter 1 will give you an understanding of the mechanisms and main points of Maxell's Value Creation
- The "Message from the President" (p.13-16) looks back over the medium-term management plan, while the "Message from the Financial Director" (p.17-19) introduces management analysis of short-term performance.
- Information on the status of progress with KPIs can be found in the "Materialities / Action Plans / KPIs" (p.11-12) section.
- Management evaluations and challenges are discussed in the "Outside Director Roundtable Discussion section" (p.60-62).

#### Editorial Policy

The purpose of this Report is to communicate the features of Maxell Group, which conducts business on the basis of co-existing with society, to all stakeholders, including shareholders and investors. It contains information on business, performance, and sustainability-related activities and their outcomes in the form of an Integrated Report. Detailed financial and sustainability information not included in this Report is disclosed on our website.

#### Period Covered by this Report

This Report focuses on fiscal 2022 (April 2022 to March 2023), but also includes some fiscal 2023 events.

### The Path to Realizing **Our Vision**

#### Growth strategies and measures for Value Creation

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Version)"

GRI "GRI Sustainability Reporting Standard"\*

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Guidance for

Collaborative

Value Creation

Ministry of the Environment "Environmental Reporting Guidelines (2018 Ministry of the Environment "Guidelines for Environmental Reporting (3rd Edition) (May 2014)" Environmental Consideration Law

"ISO 26000:2010" \*International sustainability reporting guidelines compiled by the Global Reporting Initiative

Value Reporting Foundation (VRF) "The International (IR) Framework"

"Guidance for Collaborative Value Creation" The "Guidance for Collaborative Value Creation," which was prepared by the Ministry of Economy, Trade and Industry, was used as a reference in this Report.

Published September 2023

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# Maximum Capacity Dry Cell

The Company name originates from the brand name "Maxell" (Maximum Capacity Dry Cell = a dry cell with the highest performance) created for the dry batteries that constituted its business at the time of its foundation.



# Foundation

# 1961

The dry battery and magnetic tape divisions were spun off from Nitto Electric Industrial Co., Ltd. (currently Nitto Denko Corporation), and established as Maxell Electric Industrial Co., Ltd.

Please refer to the following website for the Company's history and development. https://www2.maxell.co.jp/corporate/history.html

1963 First in Japan

Commenced production of alkaline dry batteries

1966 First in Japan Commercialized audio cassette tapes

1976 First in Japan Commercialized floppy disks

1978 Commercialized VHS video cassette tapes

### 1981 Commercialized coin-type lithium manganese dioxide batteries

1983 First in Japan

Commenced production of lithium thionyl chloride batteries for memory backup

# 1984

Commercialized 12-inch, write-once-read-many optical disc cartridges, IC cards and memory cards

# 1987

Commercialized the world's smallest-diameter silver oxide battery

1989 Commercialized data cartridges for computer use. Entered the professional video tape market for broadcasting stations

# 1995 First in the world

Commercialized optical modulation overwrite magnetooptical (MO) discs

1996 Commenced production of lithium-ion batteries

# 1998 First in the world

Commercialized rewritable DVD-RAM discs

# 2004

Commercialized heat-resistant coin-type lithium manganese dioxide batteries

2005 Commenced shipments of in-car camera lens units

# 2008

Developed heat-resistant separators that improve the safety of lithium-ion batteries

# 2017

Developed "RIC-FOAM\*1," a proprietary injection foam molding technique \*1 Resilient & Innovative Cellular Foam

# 2018

Developed Air Patch Battery for medical/ healthcare patches

# 2019

Commenced shipping samples of coin-type all-solid-state batteries using sulfide-based solid electrolytes

Commercialized head up displays (AR-HUD<sup>\*2</sup>)

# First in the world

**Developed ceramic-packaged** sulfide-based all-solid-state batteries that are surfacemountable on boards

2022

Commercialized aerial image display "Advanced Floating Image Display (AFID)"

# First in the world

\*2 Augmented Reality Head Up Display

Commenced shipments of massproduced small-size sulfide-based all-solid-state batteries

3

and Strategy Progress Report The Current Status of the Business Portfolio Shift, and the Future Energy Segment Functional Materials Segment **Optics & Systems Segment** 

> Life Solution Seament Toward the Creation of New Businesses

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# 1960s-1980s

Led the way in developing and launching a succession of consumer products during Japan's period of high economic growth, and established development, production, and sales systems in Japan and overseas.

In 1966, Maxell succeeded in commercializing the first audio cassette tape in Japan. In 1976, we commercialized the first floppy disk in Japan, and in 1987, we commercialized the world's smallestdiameter silver oxide battery. We led the world in creating new value in these ways. In addition to the "Mixing & Dispersion" technology that we cultivated through the development of dry batteries, our founding product, we further refined the magnetic powder-coating technology and technology for forming housings that we cultivated with our cassette tapes, and they are now being used in a variety of products as our "Fine Coating" technology and "High Precision Molding & Forming" technology.

Furthermore, we completed construction of a plant and a technology research laboratory in Kyoto. Overseas, we established sales bases in the United States, Germany, and the United Kingdom, and production bases in the United States, the United Kingdom, and Malaysia, to build a system for global expansion.



Audio cassette tapes





Floppy disks

# 1990s-2010s

While supporting the digital society with highly-functional recording media, the mainstay of the business was shifted from consumer products to industrial components.

The market for cassette tapes, video tapes, and floppy disks, which had its heyday in the 1980s, shrank on the one hand, while PCs, mobile phones, smartphones and other products rapidly gained popularity on the other. Against this backdrop, we shifted the mainstay of our business from consumer products to industrial components, while supporting the transformation from the analog era to the digital era.

By applying the technologies that we cultivated in magnetic tapes, we entered the market for data cartridges for computers and professional video tapes, and in 1996, we also started producing lithium-ion batteries. Furthermore, in 2004, we commercialized heat-resistant coin-type lithium manganese dioxide batteries for tire pressure monitoring systems (TPMS) modules, and in 2005, we commenced shipments of in-car camera lens units, which served as the foothold for our automotive channel-oriented business subsequently.



Lithium-ion batteries

# 2020s

Further enhancing value creation through our unique analog core technologies, and contributing to a sustainable society

In the 2020s, we are supplying products for the 5G/IoT, healthcare and mobility areas that capitalize on the analog technologies that the Company has cultivated, including tape for semiconductor manufacturing processes, highly-reliable coin-type lithium batteries for medical applications, and LED headlamp lenses. Alongside this, in light of the growing global awareness for a sustainable society, we are also focusing on developing and commercializing all-solid-state batteries, which are being counted on as permanent power sources, and aerial image displays that answer demand for contactless solutions. In June 2023, we commenced mass shipments of all-solidstate batteries for FA<sup>\*1</sup> equipment, and in the future we will offer them for the infrastructure, in-vehicle (back-up power source), and medical fields as well, as we continue to respond to the world's needs with state-of-the-art technologies.

By drawing together synergies with Maxell Frontier, Maxell Izumi, Maxell Kureha and Ube Maxell Kyoto, which have newly joined the Group since 2013, and by leveraging our unique analog core technologies going forward, we will continue to create new value that contributes to a sustainable society. \*1 Factory Automation



Ceramic-packaged all-solid-state batteries



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Maxell Group Network

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	Energy Net sales 36.8 billion yen Operating profit 2.4 billion yen sales billion yen	Energy	Functional Materials	Optics & Systems	Life Solution	Introduction         Maxell Group's Basic Management Policy         Table of Contents and Editorial Policy         History of Innovation         At a Glance         Sources of Value Creation         Value Creation Process         Key Maxell products that provide value to society         1         The Path to Realizing Our Vision
Operatio	ng profit Illion yen Functional Materials Net sales 29.3 billion yen Operating profit 900 million yen	Major Products Lithium-ion batteries for consumer use, electrodes for lithium-ion batteries, coin-type lithium-ion rechargeable batteries, lithium primary batteries, silver oxide batteries, chargers and battery packs, electrode application products, solar power generation	Major Products Adhesive tapes, functional materials, coated separators, industrial rubber products	Major Products Optical components, electroforming and precision components, semiconductor-related embedded systems, molding dies and plastic moldings, RFID' systems, IC cards, projectors, video equipment * Radio Frequency Identification	Major Products Health & beauty care equipment, small electric equipment, audio equipment, optical discs, charging equipment, accessories, dry batteries, hydraulic tools	Atterialities / Action Plans / KPIs         Message from the President         Message from the Financial Director         Financial Highlights         Non-Financial Highlights         Value Creation Report         Special Feature: All-solid-state batteries and the impact         they will have on society in the 3 focus areas         Value Creation Process by Business Segment,         and Strategy Progress Report
	Japan 76.8 billion yen by region billion yen	Growth Businesses Heat-resistant coin-type lithium batteries Cylindrical-type lithium batteries	Growth Businesses Tape for construction and construction materials Tape for semiconductor manufacturing processes	Growth Businesses LED headlamp lenses In-car camera lens units Semiconductor-related ambedded austemp	Growth Businesses Health & beauty care equipment Hydraulic tools	The Current Status of the Business Portfolio Shift, and the Fu Energy Segment Functional Materials Segment Optics & Systems Segment Life Solution Segment Toward the Creation of New Businesses Consolidation and Enhancement of Sales Force Intellectual Property that Supports New and Existing Businesses
Americas 14.1 billion yen Number of Major Subsidiaries	Total Group 19	Highly-reliable coin-type lithium batteries Coin-type lithium rechargeable batteries	Tape for industrial processes	embedded systems	2	3 Management Foundation Enhancement Creating Human Resources and Organizations that Generate Value Creating Economic Value through Environmental Activities Reporting Based on TCFD Recommendations Strengthening Group Governance
(as of March 31, 2023) Number of Employees (as of March 31, 2023)	(affiliated companies: 2) 4,111	785	803	1,333	945	Corporate Governance Board of Directors Outside Director Roundtable Discussion
(as of March 31, 2023) Capital investment (FY2022)	3,825 million yen	1,556 million yen	359 million yen	1,485 million yen	425 million yen	Data Section

- The number of subsidiaries shown in each segment only covers manufacturing companies (the Total Group number also includes non-manufacturing companies)

- The Total Group's number of employees includes 245 employees of administrative divisions, etc., that cannot be categorized into specific segments

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# Sources of Value Creation

# What are Analog Core Technologies?

Indispensable technologies that connect the analog to the digital, and realize Monozukuri (manufacturing) in complex and delicate areas that cannot be achieved by digital technologies alone - Realize delicate and high-guality Monozukuri (manufacturing) that supports the advancement of digital society



Mixing & Dispersion (Mixing) Technology for **mixing** more uniformly, in any size, hardness, or viscosity

Realizes new combination of materials

Fine Coating (Coating) Technology for COating at more uniform

thicknesses, from a few millimeters to nanometers Improves the stability of product performance



### **High Precision Molding & Forming** (Formina)

Technology for **forming** that was cultivated through the manufacture of disks and lenses Realizes mass-production of components with greater precision



#### High-Precision Molding & Forming (Forming) Forming (high-precision technology resulting from unique Elemental expertise and flow analysis) High-performing technology resulting from 40 or more years of Technologies accumulated expertise Processing (lens piece polishing technology, high-cycle technology) Monozukuri Integrated Monozukuri, from design through to (Manufacturing





Example) Molding die for LED headlamp lenses with 8 cavities

Illustration of Aerial Image Display (AFID) in use





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All-solid-state

batteries

Butyl tapes

Dicing tapes

EMC\* countermeasure materials

(Coating)

die molding Strengths Realizes high-precision lenses with shapecorrecting technology tailored to a variety of desians



# Value Creation Process



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Flows back to INPUT



# The Path to Realizing Our Vision

Applying "priority issues of management" (materialities) to action plans, and entering the implementation phase

Following a three-year period of consideration, Maxell Group is beginning to engage in action plans for priority issues of management, in order to realize its Vision. In Chapter 1, we report on that strategy and path.

7 Priority Issues (Materialities) and Action Plans https://www2.maxell.co.jp/csr/materiality.html



# 2023~

Implementation of Materialities

Materialities are priority issues for realizing Maxell's MVVSS, and are also embedded in the next medium-term management plan after MEX23.





Vision

# In an effort to keep everyone within the Company informed, we have released a video (in Japanese, English and Chinese) explaining Maxell's 7 materialities and action plans. Additionally, some action plans and KPIs are being revised in light of internal and external changes in the business environment. Once revised, they will be promptly posted on our website.

Maxell's seven materialities and action plans https://youtu.be/nbPgocz0qB8

The "Future" Maxell Wants to Realize

Create Maximum Excellence for employees,

customers and society by leveraging unique

Analog Core Technologies

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# Materialities / Action Plans / KPIs

Progress Legend 🛇: Target achieved and KPI updated 🔘 100% or more: Numerical values or items achieved

090-99%: Generally in line with plans with regard to medium- to long-term targets 🗠 89% or lower: Unachieved / Challenges exist toward targeted fiscal year of achievement

Materiality	Action Plan	Target (products/technologies)	KPI	Period	Progress	Reference
01	Evolution of unique, original technologies that generate new value	Strengthen development of new products and technologies in growth areas, by utilizing unique, original technologies = "Analog Core Technologies" (integration of companywide technologies, optimization of development resources, preparation of next-generation development technologies)	Number of patents related to next-generation development technologies: 1.5 times in five years	Medium	O	p.39
Creating innovation hrough unique, original echnologies	Strengthen marketing for efficient R&D	Promote adoption of priority products in growth areas by utilizing "Analog Core Technologies," and accelerate the realization of synergy effects • Strengthen global marketing in four regions (Japan, Asia, Americas and Europe) • Strengthen cross-sales	Sales proportion of highly profitable A and B businesses: Over 50% (FY2023)	Short		p.18
	Strengthen partnerships to create new businesses	Obtain co-creation partners for key products in growth fields utilizing "Analog Core Technologies"	Sales proportion of new businesses: Over 15% (FY2030)	Long	$\bigtriangleup$	p.35
02	Contribution to the advanced information society through 5G/IoT-related businesses	Extend battery life and expand uses of cylindrical-type lithium batteries • Semiconductor-related embedded systems • Tape for semiconductor manufacturing processes, tape for industrial processes				
Solving social issues hrough growth pusinesses	Contribution to advanced medical and health areas through healthcare-related businesses	Widespread use of products and technologies for improving housing waterproofing and airtightness in high- and low-temperature environments around the world Strengthen new healthcare products • High reliability coin type lithium batteries	Overall sales growth ratio of 13 growth businesses in three focus areas: 10% (FY2023 vs FY2021)	Short	0	p.14
	Contribute to a safe and secure society brought by highly-reliable sensing through mobility-related businesses	<ul> <li>Heat-resistant coin-type lithium batteries</li> <li>LED headlamp lenses</li> <li>Develop in-car camera next-generation hybrid lens units</li> </ul>				
US	Strengthen management that leverages human resources (build a human resources	Build a framework for talent management that strives to maximize the performance of individuals and organizations as a whole	Talent management system: Introduced FY2022	Short	$\diamond$	p.41
Creating human	strategy, promote the right person in the right place and talent management)	Maintain and continue appropriate communication between managers and staffs in order to maximize the abilities and skills of human resources	Career interview implementation ratio: 100%	Short	$\bigtriangleup$	p.41
esources and rganizations that enerate value	Establishment of a system for human resource development and evaluation that	Establishment of a recruitment system that clarifies the human resources we seek, and an allocation system that allows proactive human resources to play active roles	Formulate human resources portfolio	Medium	0	p.41
	creates proactive human assets capable of creating something out of nothing	Setting challenging targets, and improvement of management ability to evaluate challenges appropriately	Education for personnel evaluators: 2 times/ year	Short	0	p.41
	Promoting diversity and inclusion (utilize	Improve employee satisfaction by fostering a workplace culture in which each and every diverse human resource can play an active role	Improve overall satisfaction in employee awareness survey: 90% or higher (FY2026)	Medium	0	p.42
	diverse human resources and accept different values)	Maintenance and continuation of recruitment and promotion without being swayed by attributes such as gender or nationality	Recruitment ratio of new female graduates: 50% or higher for administrative jobs, 25% or higher for engineering jobs	Medium	O	p.42
	Improve productivity and promote	Continuously improve productivity by enhancing the job satisfaction of each and every employee (continue holding employee awareness survey)	Improve job satisfaction ratio in employee awareness survey: 90% or higher (FY2026)	Medium	0	p.43
	the transmission of skills through the standardization of business processes	Implementation of re-skilling education to improve productivity and promote skill transfer	Implementation of basic digital literacy education program. Implement for all employees	Short	$\diamond$	p.43

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Progress Legend 🔅: Target achieved and KPI updated 🔘 100% or more: Numerical values or items achieved

O90-99%. Generally in line with plans with regard to medium- to long-term targets △8% or lower: Unachieved / Challenges exist toward targeted fiscal year of achievement

Materiality	Action Plan	Target (products/technologies)	КРІ	Period	Progress	Reference
04	Transformation to manufacturing that solves the social issues ahead of customer issues	Assume that the social issues that lie ahead of customer issues = issues that remain unresolved, and envision them as "unknown manufacturing" from Maxell's standpoint Promoting manufacturing by incorporating new policies while leveraging conventional manufacturing knowhow	Sales proportion of highly profitable A and B businesses: Over 50% (FY2023)	Short		p.18
Maximization of customer value	Establishment of a system that prioritizes quality and product safety based on integrity	Building a foundation for quality assurance activities that incorporate new measures within the context of high awareness	Promote SQM (Super Quality Management for Maxell Group) and zero* new recall cases	Short	0	ß
	Enhancing the value of the Maxell brand's core products and services	Aiming to enhance the value of products and services that "maximize customer value" by incorporating new measures while making use of conventional manufacturing	Continuous improvement of format unification with regard to customer feedback	Ongoing	0	p.38
<b>05</b> Creation of economic	Strengthen environmental technologies and environmentally conscious products	Target: Maxell products and services Activity: Establish framework of new evaluation standards and evaluation formatting by FY2023: 1. Reduction 2. Long-term usability 3. Reuse and recycling 4. Ease of decomposition and treatment 5. Environmental conservation 6. Energy-saving 7. Contribution to the SDGs etc.	Define standards to show the degree of contribution to social and environmental issues, and visualize the progress of sustainability. Incorporate specific measures in the next medium-term management plan	Short	O	p.46
value through		Target: CO <sub>2</sub> emissions (Scope 1 & 2 for domestic business sites) Activity:	Domestic $CO_2$ emissions: Reduce by 50% by FY2030 (compared to FY2013)	Long	Long O	(8 54
environmental activities	Conserving resources and energy, and	<ol> <li>Promote energy-conservation activities at business sites</li> <li>Promote renewable energy (in-house consumption)</li> </ol>	Renewable energy ratio (= Volume of renewable energy used/total electricity): 10% in FY2030	Long	$\diamond$	— p.47, p.51
	promoting the introduction of renewable energy	Target: Waste plastic (domestic business sites) Activity: Determine targets and initiatives by FY2023 1. Recycling if chemical materials 2. Reducing waste by improving productivity	Begin considering contributions to the reduction of waste plastic generated by business sites (chemical material recycling), and incorporate specific measures in the next medium-term business plan	Short	0	p.47
06	Continuously improve the business portfolio through the two axes of market growth and business earnings (ABC-XYZ control)	Target: All businesses Activity: Monitor ABC-XYZ operation by rotating PDCA cycle every quarter, formulate measures for upgrading the classification of each business, follow-up actions, determine new classifications for the next fiscal year, etc.	Sales proportion of highly profitable A and B businesses: Over 50% (FY2023)	Short	$\bigtriangleup$	p.18
Strengthening business portfolio management	Implementing portfolio strategies that anticipate market changes	Target: New businesses Activity: 1. Identifying new businesses based on "Analog Core Technologies" 2. Monthly monitoring	Sales proportion of new businesses: Over 15% (FY2030)	Long		p.35
	Promoting efficiency at global production bases	Target: All businesses Activity: 1. Senior management and the Corporate Strategy Division play a core role in determining the direction for improving production efficiency 2. Pursue optimal manufacturing sites in Maxell Group from the perspective of opportunities and risks	Hold discussions on current issues and future possibilities from the perspective of production area optimization as well as portfolio optimization, and incorporate concrete measures in the next medium- to long-term management plan	Long	_	_
<b>07</b> Strengthening group	Build effective governance in group management (deepen management)	<ul> <li>Target: Management</li> <li>Activity:</li> <li>1. Share the objectives and measures across the Group (participation of general managers)</li> <li>2. Risk reduction activities: Promote activities through information security management and the Risk Management Committee</li> <li>3. Strengthen diversity and work-life management</li> </ul>	Further strengthen group governance by enhancing activities across the company, and by strengthening the operation of an appropriate management system, etc.	Medium	0	p.52
governance	Implementing governance to maximize group synergies (technology, information, marketing)	Target: Technology, information, marketing         Activity:         1. Sharing of strategies (regular meetings at each domestic group company)         2. Maximize synergies through Maxell Innovation (MI) activities (companywide initiatives to create innovation)         (1) New development themes         (2) Creation of integrated technologies and products through new production technologies         (3) Joint application of intellectual property through cross-divisional IP activities	Create attractive value for the future by sharing information on markets and customers on a group-wide basis and by integrating technologies within the group. Integrate group- wide IT basis for basic business operation (FY2027)	Medium	O	p.52

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Message from the President

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 mediumterm management plan.

	FY2022	FY20	)23	
	Results	MEX23 initial target	Forecasts	
Net sales (billion yen)	132.8	125.0	133.0	0
Operating profit (billion yen)	5.6	12.5	7.5	
Operating profit ratio (%)	4.2	10.0	5.6	Ĩ
ROIC (%)	3.5	Over 7.0	4.8	
R0E (%)	6.3	10.0	6.2	
USD to JPY exchange rate (¥)	135	105	130	

### Keiji Nakamura President and

Representative Director



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#### Towards the creation of Maximum Excellence

#### Maximizing profits through efficient allocation of management resources and business replacement

FY2021	FY2022			FY2023
Downsizing of projector business	Domestic BtoC Business Alliance			Brought mass production of all-solid-state batteries forward
• Termination of new projector product development and termination of sales in Europe and the Americas	<ul> <li>Transferred domestic consumer product planning, development, and sales functions to DENKYOSHA CO., LTD.</li> </ul>			<ul> <li>June 2023: Commenced shipment of mass-produced batteries</li> <li>Progressing towards net sales of 30</li> </ul>
<ul> <li>Transfer of domestic projector sales</li> </ul>		maxell	IZUMI	billion yen in FY2030
rights to IRIS OHYAMA Inc.	Brands/ Products	Optical discs, anti-bacterial deodorizers	Shavers, hair dryers	
	Product planning and development	DENKYOSHA	Maxell Izumi	
	Sales	DENKYOSHA	DENKYOSHA	Coin type Ceramic-packaged Bipolar type type

Continuing with portfolio management through comprehensive business and product monitoring



# 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-solidstate 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

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

#### 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.



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# 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 fourpole 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 maintenancefree 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





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### 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 MVVSS 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 carbonfree society include reducing CO<sub>2</sub> 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 CO<sub>2</sub> as part of the New Energy and Industrial Technology Development Organization (NEDO) project "Integrated Electrochemical Systems for Scalable CO<sub>2</sub> 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.



# Message from the Financial Director

Aiming to maximize corporate value through promotion of ROIC-focused management and strengthening of our management foundation



#### **Review of Fiscal 2022**

In fiscal 2022, we revised our full-year profit forecast downward at the time of our secondquarter financial result announcement, and operating profit was 5.638 billion yen, down 39.6% year-on-year. The main factors behind this were the global surge in raw materials costs and a one-time cost stemming from the reform of our domestic BtoC business. We have been playing catch up with the soaring raw materials costs and have been quick to reflect the increases in product prices in a reasonable manner based on objective figures.

The decision to reform the domestic BtoC business in fiscal 2022 was made based on the financial discipline and future prospects. Although demand for ozone anti-bacterial deodorizers expanded during the COVID-19 pandemic, leading to increased profit, that demand subsequently plateaued, resulting in a loss for fiscal 2022. Furthermore, in order to concentrate on business that leverages our strengths, Analog Core Technologies, in April 2023, we transferred the product planning, development, and sales functions of this product group to DENKYOSHA CO., LTD., a company with strong consumer electronic product sales capabilities. Under this new structure, we will aim to expand our brand business in the domestic consumer market.

As part of this business reform, we recorded a one-time cost of approximately 600 million yen, including expenses related to personnel transfers. Some reform-related costs are continuing to be incurred in fiscal 2023, but we will concentrate resources on businesses focused on our Analog Core Technologies, and continue with reforms to ensure a steady return towards profitability.

Regarding cash flow, in fiscal 2023, we plan to invest aggressively, resulting in increased investment cash flow and a slightly negative free cash flow. The land sales we conducted in fiscal 2022 were aimed at addressing this in advance.

#### Domestic BtoC Sales Business Alliance



#### Objectives of Business Alliance

#### - Expansion and reinforcement of BtoC business

Further expand BtoC business through integration of Maxell's planning and development capabilities with DENKYOSHA's sales capabilities

#### - Maximization of corporate value

Accelerate maximization of corporate value through concentration of resources into businesses focused on our Analog Core Technologies

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#### Progress with ROIC Management

Since fiscal 2019, we have been utilizing return on invested capital (ROIC) as a core metric across the Group. Since introducing the ROIC metric, we have continued to explain it to employees in order to deepen their understanding. This has involved implementing e-learning initiatives and emphasizing how their efforts up until now have directly contributed to results, thus helping to make it more tangible for employees on the frontlines. We also now use ROIC as one of the criteria in personnel assessment. Furthermore, we now link the annual plans of each business division with ROIC. setting targets that are closely aligned with the work of employees on the frontlines, such as determining how much sales prices need to be increased to achieve the target ROIC.

In MEX23, our target is to achieve ROIC of more than 7%, which exceeds the cost of our invested capital (WACC: weighted average cost of capital) of 6%. However, due to factors such as the deteriorating business environment leading to reduced earnings, the outlook for fiscal 2023 is 4.8%. While strengthening investments for future growth, we intend to further strengthen management focus on capital costs. Through these efforts, we aim to achieve our target ROIC of more than 7% from fiscal 2024 onwards.

As part of our efforts to enhance ROIC through boosting profit, we are advancing initiatives such as ABC-XYZ (profit and loss control by business), and profit and loss improvement by model project (PIPJ).

With ABC-XYZ, we visualize the profit or loss of each business, rank all business segments based on factors like operating profit ratio and growth potential, and manage them within four guadrants: "Resource concentration businesses" (A & B) and "Developing businesses" (C) with high profit ratios or growth potential and "Profit securing businesses" (X) and "Observing businesses" (Y) with low profit ratios or growth potential. By efficiently executing strategies in accordance with each rank, we can boost the replacement of our business portfolio. In fiscal

2022, factors like soaring raw materials costs and component supply shortages, especially for semiconductors, led to an increase in the number of "Observing businesses" (Y) and the ratio of "Resource concentration businesses" (A & B) was 43%. We will continue strengthening growth businesses to attain the materiality KPI of 50% in fiscal 2023.

The profit and loss improvement by model project is a financial discipline at the product level, focusing on profit and loss control for each individual model. It is aimed at generating profits by increasing the profitable products and reducing the unprofitable ones. The number of target models was around 6,000 in fiscal 2022, and this is expected to decrease to approximately 5.000 in fiscal 2023. The reduction in losses for fiscal 2022 amounted to more than one billion yen, and we are aiming for a similar reduction in fiscal 2023. We will be brushing up our efforts in this area and incorporating them into our monthly actions.

On the other hand, in order to optimize denominator factors of ROIC such as inventory and non-current assets, , we are focusing on monitoring investments and improving the cash conversion cycle (CCC). To shorten the CCC, we are working on improving working capital through actions like inventory optimization. In fiscal 2022, the CCC grew longer due to factors such as soaring raw materials costs and semiconductor shortages, which led us to increase inventory levels. We are aiming for improvements through reducing and optimizing inventory levels, including from a manufacturing perspective.

In terms of investment monitoring, we conduct thorough examinations of the profitability of investments through our Investment Committee. For new investments amounting to 100 million yen or more, the Investment Committee creates a checklist based on which deliberations are conducted. Each person responsible for technology, marketing, procurement, environmental issues, financial affairs, legal affairs, and intellectual property,

scrutinizes proposals based on their own expertise to determine whether it contributes to the enhancement of corporate value and if it is truly worth investing in. Cases that have passed this review process are then referred to the Management Committee and Board of Directors. After an investment is carried out, progress is monitored through reviews conducted on a quarterly basis.

Boosting the replacement of businesses and products through continuous monitoring and thoroughgoing discipline.

Strengthen marketing for efficient R&D

management to improve ROIC

- · Transformation to manufacturing that solves the social issues ahead of customer issues Action
- · Continuously improve business portfolio through the two axes of market growth and business earnings Plans (ABC-XYZ control)
- KPI Sales proportion of highly profitable A and B businesses: Over 50% (FY2023)



ratio of A and B businesses

Investments in our existing growth businesses are progressing according to plan, and we intend to step up our growth investments in new businesses. We will concentrate capital expenditure on the "13 growth businesses," and aim to deliver results starting from fiscal 2023.

Our capital expenditure for fiscal 2023 is expected to increase significantly, from 3.8 billion yen in fiscal 2022 to 8 billion yen. The cumulative

models through rigorous cost planning

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# Message from the Financial Director

capital expenditure for the three fiscal years of 2021, 2022, and 2023 is expected to be 13.9 billion yen against the planned 16 billion yen, due to delays in component procurement caused by the global semiconductor shortage in 2021 and 2022.

As for our growth investment capacity (for new business creation, etc.), our projection for the cumulative total for the three fiscal years of 2021, 2022, and 2023, is 6 billion yen against the planned 17 billion yen. We intend to maintain the current growth investment capacity limit and step up investments in growth areas such as all-solidstate batteries from fiscal 2023 onwards.

#### Working towards PBR Over 1.0

As we work towards achieving a price-to-book ratio (PBR) of over 1.0. it is crucial for us to enhance and maximize corporate value. We will achieve this by driving improvements in

#### Promoting Management Approach to "Commit to Value," Taking Into Account Cost of Capital and Stock Price



both ROIC and return on equity (ROE), while

strengthening our management foundation.

essential factor in improving ROIC and ROE.

The Finance & Accounting Department will

support this by promoting disciplined growth

BtoB business, accelerated launching of new

businesses, and expansion of existing growth

businesses. Additionally, to enhance capital

that facilitates flexible shareholder returns.

payments will continue to be made in a

investments to further bolster the shift towards

efficiency for ROIC and ROE improvement, we will

utilize financial leverage and establish a structure

Regarding shareholder returns, dividend

stable manner, in line with our basic policy of

maintaining a dividend payout ratio of 30% to

40%. We expect that the dividend per share for

fiscal 2023 will be the same as in fiscal 2022 at

40 yen, with a projected dividend payout ratio of

Expanding business earnings is the most

35.2%. Additionally, in fiscal 2022, we conducted share buybacks and disposition totaling 5 billion yen. The total amount of share buybacks in recent years has reached approximately 10 billion yen. In terms of strengthening the business foundation, we are committed to promoting sustainable management, and enhancing governance, human capital, and environment-focused management, while also expanding and enhancing our disclosure of non-financial information.

We intend to disclose information on these initiatives in the autumn of 2023. We will continue to ensure appropriate returns to shareholders and investors. Through investor relations and shareholder relations activities, we aim to enhance communication with stakeholders and work towards achieving a price-to-book ratio of over 1.0 as soon as possible.

#### Dividends

Continuous and steady payment of dividends in line with basic policy of "maintaining dividend payout ratio of 30% to 40%"

	Interim	Year-end	Total
FY2022	20 yen	20 yen	40 yen
FY2023 (forecast)	20 yen	20 yen	40 yen

#### Share Buybacks

- Enhance shareholder return measures taking into account current cash on hand, stock price, and other factors

- Conduct share buybacks and disposition after ensuring sufficient funds for investments for growth

Buyback period	May 16, 2022 through March 10, 2023
Number of shares acquired (total value)	3,645,700 shares (5 billion yen)
Plan after buyback	Disposition of all acquired shares

# Noritoshi Masuda

September 2023

Director



#### Introduction

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# 20

(%)

36.6

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# Net Sales



Net sales are trending downward mainly due to a review of the business portfolio. In FY2022, sales of products for the automotive and semiconductor markets increased, but as a result of factors such as a reduction in sales of projectors accompanying a business downsizing, and a drop in sales of rechargeable batteries and BtoC products, net sales declined 3.9% compared to the previous year.

#### Shareholders' Equity/Shareholders' Equity Ratio (Millions of yen) (%) 123.035 61 90,444 82.816 81,162 81,498 49.2 45 2018 2019 2020 2021 2022 (FY) Shareholders' Equity - Shareholders' Equity Ratio

Maxell views around 50% as an appropriate shareholders' equity ratio from the standpoint of capital structure optimization. It is working to return profits to shareholders stably and on an ongoing basis, as well as ensure it has a robust financial condition, while utilizing borrowings as well.

#### Operating Profit/Operating Profit Ratio



In FY2021 Maxell posted its highest operating profit since relisting, but in FY2022, operating profit fell by 39.6% compared to the previous year due to the impact of declining sales of rechargeable batteries, BtoC products and projectors, as well as soaring raw material costs. The operating profit ratio was 4.25%.



Maxell has been employing ROIC as an important, groupwide management benchmark since FY2019, as an indicator that demonstrates profitability with regard to invested capital. As a result of the decline in operating profit in FY2022, ROIC declined to 3.48%.





Maxell's basic policy is to continue to return profits to shareholders stably and appropriately, while taking into consideration recent capital investment funding and investment funds focused on future business development. Maxell adopts a dividend payout ratio of 30-40% as a guide when paying dividends to its shareholders.

ROE/ROA

(%)



In FY2022 ROE improved significantly, to 6.32%, as a result of a return to a current net profit. On the other hand, ROA declined to 3.89% as a result of the decline in operating profit.

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\*1 From the beginning of FY2021, the Company has applied the "Accounting Standard for Revenue Recognition" (ASBJ Statement No. 29 of March 31, 2020), etc. The numbers relating to FY2021 onwards are after application of the accounting standards, etc. \*2 Ordinary dividend: 18 yen Special dividend: 250 yen

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# Non-Financial Highlights

#### Number of Employees



At the end of FY2022 the number of employees had fallen slightly compared to the previous year, mainly as a result of a decline in the number of manufacturing staff at group companies overseas.



The ratio of new female graduates who joined the company in April 2023 was 60% for administrative positions (target: 50%) and 29% for engineering positions (target: 25%), so the targets were achieved in both cases. The overall ratio was 36%.



Education expense per person fell temporarily in FY2020 due to business restructuring, etc., but investment was bolstered from FY2022, and education expense per person reached its highest level in 5 years.



Due to the impact of a business portfolio review, the number of patent applications had been declining from 2018, but in FY2022 the number climbed by 11% compared to the previous year thanks to focused investment in invention-creation resources for next-generation development technologies, such as all-solid-state batteries, and an increase in invention creation in the Optics & Systems Segment. As a result, the number of patents also increased.

CO<sub>2</sub> Emissions (Scope 1, 2)



Domestically, Maxell's CO<sub>2</sub> emissions declined by 26% in FY2022 compared to the previous fiscal year, and by 0.4% overseas, leading to a 17% reduction in CO<sub>2</sub> emissions across Maxell Group as a whole. Additionally, from this year's Integrated Report, the trend includes Maxell Izumi, Ube Maxell Kyoto and Maxell Kureha for 5 years.



Domestically, Maxell's total waste emissions fell by 7.6% in FY2022 compared to the previous fiscal year, and by 1.7% overseas, leading to an 8.9% reduction in waste emissions across Maxell Group as a whole. Additionally, from this year's Integrated Report, the trend includes Maxell Izumi, Ube Maxell Kyoto and Maxell Kureha for 5 years.

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\* Scope 1: Direct emissions due to fuel incineration, etc. at business sites. Scope 2: Indirect emissions from purchased electricity, etc.

# **Value Creation Report**

Developing "All-Solid-State Batteries" that have an impact on society in the 3 focus areas

# **Direction of development of applications in the 3 focus areas**



# Development Road Map (product development aligned to market expansion)



#### The Potential of All-Solid-State Batteries, and Maxell's Strengths

Because all-solid-state batteries do not use an electrolyte solution, there is no risk of electrolyte leakage or combustion. They have the potential to be applied to a variety of purposes, and can be expected to be essential to future society as independent power supplies that can be used in low- and high-temperature environments that are off-limits to people, for example. To that end, Maxell will make steady progress along the development road map outlined on the left.

Because Maxell is using an argyrodite-type sulfide-based solid electrolyte as an electrolyte, it is possible to realize a long operating life and high heat resistance while achieving a large capacity and high output also.

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# ••• Special Feature: All-solid-state batteries and the impact they will have on society in the 3 focus areas

# **?**

# Helping to Make Industrial Robots Maintenance-Free

# Achieve long hours of operation in severe environments and reduce maintenance costs to contribute to enhanced productivity

# Development of all-solid-state batteries through the evolution of Analog Core Technologies

In modern industry, industrial robots are indispensable to manufacturing. Those robots utilize batteries, but conventional batteries are of limited use under high temperatures, and maintenance is also required accompanying battery replacements, so there is a need to equip batteries with a longer operating life. With their long operating life and ability to withstand high temperatures and high humidity, all-solid-state batteries offer a way of resolving these issues, and as such, they are capable of contributing to the realization of a maintenance-free society in a broad range of fields.

As a result of not using an electrolyte solution, all-solid-state batteries are superior on the safety and long operating life fronts. On the other hand, the powders need to be mixed and hardened uniformly. Maxell has made further advances with its Analog Core Technologies, such as the powder mixing and hardening techniques it cultivated with micro batteries and lithium-ion batteries, and employs a new manufacturing method that does not generate variability in characteristics. Furthermore, Maxell established a sealing technology that enables the batteries to retain their airtightness even when used for long periods of time under harsh conditions, and succeeded in developing all-solid-state batteries that use a ceramic package. Additionally, Maxell realized mass production promptly, as a result of moving ahead with commercialization while integrating design, production technology and manufacturing from the mass production facility concept stage.

# Toward a higher heat resistance and a longer operating life

In products for industrial robots, because the shock-resistance and vibration-resistance that are demanded differ depending on the environment in which the products are used, the structural design within the ceramic package is important for realizing a long operating life. Going forward, Maxell will improve its current products while

moving ahead with commercializing all-solid-state batteries for a broader range of uses and establishing mass-production technologies, in parallel.

Additionally, customers who are exploring adopting all-solidstate batteries have begun requesting further high heat resistance and longer operating lives. With the technologies that led to commercialization as a foundation, we will add unprecedented products to enhance our lineup by drawing on the development capabilities we have steadily realized in response to customers' needs over many years, and the unique Analog Core Technologies that lie at the core of Maxell's manufacturing.

#### Development Road Map for the FA/Industrial Robot Field



Capital Investment Plan

1st Step Up to April 2023



# Social issues to be resolved

 Declining labor force population
 Infrastructure deterioration
 Energy problems







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# ••• Special Feature: All-solid-state batteries and the impact they will have on society in the 3 focus areas

# Helping to Improve Vehicle Safety

# Expand supply for sensors and as backup power sources for automobiles used in severe environments

# Strive to raise awareness of all-solid-state batteries and expand their uses

Accompanying progress in vehicle electrification and employing electronic devices to achieve "safe driving" and "reduced environmental impact," which are challenges in the automobile market, responses are being sought to the heat problems posed by EVs' batteries, integrated circuits, etc., and to backup power sources for emergencies. Additionally, the need has emerged to optimize safe driving and operating costs by monitoring vehicle balance using tire wear and air pressure detection, for example. Maxell has always believed that all-solid-state batteries are ideally suited to achieving



long operating life in the severe environments posed by these invehicle uses.

However, although all-solid-state batteries had for some time been attracting attention as the main power sources for automobiles, not much interest had been shown in them as small industrial batteries. In light of that, the Sales & Marketing Division has been holding proactive public relations activities with the goal of lifting the batteries' market profile, including by disseminating information via press releases and social media, and through exhibitions. Furthermore, as a result of promoting all-solid-state batteries' strong points to customers based on our global sales network, progress has been made in cultivating uses for the batteries, and this has led to their adoption in the FA field, where a long operating life under high temperatures is demanded.

### Aim for a global product rollout in the mobility area

The in-house communication at Maxell is good, and a culture exists of addressing things with a sense of urgency. Additionally, building amicable relationships with customers and enthusiastically resolving customers' challenges is in our DNA. Leveraging these strengths, we have begun holding business discussions about all-solid-state batteries with the sensor makers and tire makers that we have a track record in supplying with heat-resistant coin-type lithium batteries for TPMS<sup>\*1</sup> modules, which we commercialized in 2004 and for which we currently hold the leading market share<sup>\*2</sup>. The companies are pinning high expectations on all-solid-state batteries' ability to offer a long operating life in severe environments, and we will strive to expand supply by preparing a lineup of primary and rechargeable batteries as small batteries for use in vehicles.

The needs of customers that operate global businesses are becoming more diverse. Going forward, in order to bolster both our technology sales capability to connect technology seeds with customer needs, and capability to undertake marketing and respond to customers in the global market, we are planning to increase our

# Social issues to be resolved

 Improved vehicle safety
 Reduced environmental burden
 Greater mobility efficiency





workforce of overseas marketing and market development staff by around three times by fiscal 2026.

- \*1 Tire Pressure Monitoring System
- \*2 As of September 2023. Share of heat-resistant coin-type lithium batteries for TPMS worldwide. Maxell's research.



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# ••• Special Feature: All-solid-state batteries and the impact they will have on society in the 3 focus areas

# Helping to Make Medical Care More Efficient

# Cultivate various uses, such as small-sized devices for clinical trials that need to be highly reliable

# All-solid-state batteries that also cope with sterilization treatment

Against the backdrop of aging populations in developed countries and population growth in emerging countries, the cost of medical care is increasing, and furthermore, medical care professionals are facing an increased burden as a result of the infection control measures introduced in recent years. Amid that, moving ahead with making medical care more efficient through digitalization and the use of devices is being counted on to improve patients' and medical care professionals' QOL by helping to alleviate their burdens.

In order to resolve such issues, Maxell is eyeing the possibilities of utilizing all-solid-state batteries in the medical care field as well. When utilizing small devices with built-in batteries in medical care, one challenge is sterilization treatment. With autoclave sterilization (steam sterilization under pressure), the commonlyused sterilization approach, the treatment takes place at 130°C or higher, and since it is not possible to use mainstream, electrolytesolution-based batteries, a special sterilization treatment is needed for the batteries alone. Because Maxell's all-solid-state batteries are capable of withstanding high temperatures, high pressures, and high levels of humidity, autoclave sterilization can be used in the same way as for other devices.

# Increase probabilities that support usability for medical care purposes

Initially, Maxell proceeded with developing coin-type all-solid-state batteries, and due to the batteries' heat resistance and long operating life, they succeeded in satisfying customers' needs for wearables. However, after receiving requests for batteries that have a long operating life under 100°C-plus environments, and which are able to be reflow-mounted<sup>\*1</sup> and sterilized from various industries, the need arose to increase the batteries' airtightness and chemical stability. To that end, we employed ceramic packaging for the exterior cladding,

which had no precedent in batteries, and achieved products that have a long operating life in 105°C environments, are reflow-mountable on circuit boards at around 250°C, and can handle autoclave sterilization at around 130°C.

In markets where high levels of reliability are demanded, such as for medical care purposes or in-vehicle uses, in addition to a high level of technological skill, a market track record and probabilities that support performance, such as theoretical analysis, are required. Because our all-solid-state batteries will be world-first\*2 products, it will be important to lift such probabilities. To begin with, we will work to commercialize all-solid-state batteries for industrial devices and accumulate results-based data on long life performance under high temperatures. We hope to realize social implementation worldwide in 2030, and contribute to environmental initiatives and to resolving issues facing various industries, not just the medical care field.

\*1 A method of installing components on a circuit board by melting cream solder in a hightemperature furnace

\*2 As of September 2023. With regard to the commercialization of small, sulfide-based all-solidstate batteries. Maxell's research

#### Lineup of specifications tailored to customers' demands



Power supply module kit Ceramic-packaged for evaluation

#### Development Road Map for the Healthcare Field

Coin-type



# Social issues to be resolved

Reduced burden for patients Implant treatment Contactless diagnoses









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### Masayuki Yamada, Senior Manager. Business Development Department,

New Business Producing Division

Political

Social

Economical

Technological

**Optics & Systems** 

Aim to respond to the external environment and risks,

and grasp opportunities, based on PEST analysis

Clarify difficult-to-predict political situations and geopolitical risks,

Aim for a society that solves social issues through the environment,

Identify growth areas resulting from the maturity of developed countries

Shift to customer-oriented approach and business model transformation

in response to technological innovation and changes in consumer behavior

and shift from a growth emphasis to a sustainability emphasis

and the growth of emerging countries

human resources, supply chains and governance

Life Solution

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# The Current Status of the Business Portfolio Shift, and the Future

Currently in the process of transforming to a highly profitable structure by accelerating the shift to BtoB businesses



Develop optimal products and provide services by aligning technologies at a high level in response to the complex and delicate demands of each customer

Themes Develop products tailored to customers
 Maximize resources and improve efficiency Going Strengthen overseas businesses (local production for local consumption) Forward



E Energy F Functional Materials 0 Optics & Systems L Life Solution

### Value Creation Process by Business Segment, and Strategy Progress Report

Work to increase sales of lithium batteries. centering on the healthcare field, by leveraging the technological strengths we have cultivated since our foundation

- Mission Become an excellent business division that drives company profit and focuses on value, while harboring a sense of pride and responsibility as a founding business division
- Vision Continue to contribute to the development, safety and security of society through innovation in batteries and systems by using Maxell's original, unique technologies

#### Hiroyuki Ota General Manager, Energy Division

# Situation in Fiscal 2022

Sales of primary batteries increased, centering on batteries for automotive and medical care uses, but sales of rechargeable batteries declined significantly due to the impact of a decline in customers' production triggered by the semiconductor shortage. Consequently, energy sales as a whole fell by 4.8% (1.857 billion yen), to 36.774 billion yen. On the profit front, as a result of the impact of the decline in revenue from rechargeable batteries, coupled with the impact of soaring costs for raw materials such as lithium and cobalt, operating profit fell by 41.8% (1.691 billion yen) to 2.359 billion yen.





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# **Strategy Progress Report**

### **Current Situation Regarding Strategic Products**

#### Market Size, Growth Rate and Market Trends

#### TPMS Devices Market (Domestic and Overseas)



· Market growth slowing after completion of legalization in each country

#### Key Market Share / Positioning



#### Maxell's Strengths



Temperature: -40°C to +125°C Acceleration: 2,000G (3,000G when used in tire mount type)

TPMS (illustration)

Operate in severe environments

Market experience as top manufacturer Track record of shipping approximately 1.5 billion units cumulatively, over a 20-year period



Market Size, Growth Rate and Market Trends

type lithium batteries

batteries used in medical care

2024

forecast

2025 (Year)

forecast

(Maxell's research)

· Demand will expand due to an increase in the number of diabetics, and cost reductions in CGM

2023

forecast

2022

#### Key Market Share / Positioning

2021

Quantity (Hundred Units)

CGM Demand Forecasts

800

600

400

200

CGM (illustration)



#### Maxell's Strengths

Ensure safety thanks to sealing and long-life technologies cultivated through heat-resistant coin-

Achieve the high degree of reliability demanded from

Market share for rechargeable hearing aid batteries

Key Market Share / Positioning

2021

2022

2023

forecast

2024

2023 Target

High-capacity and cycle characteristics differentiate

Maxell's batteries from those of its competitors

Improved reliability thanks to sealing technology

Approximately

forecast

2025

forecast

(Year)

### Maxell's Strengths

· Significant growth anticipated as a result of reduction in battery-replacement



cultivated through heat-resistant coin-type lithium batteries

Market Size, Growth Rate and Market Trends Rechargeable Hearing Aid Market Forecasts (Domestic and Overseas)

(Thousand Units)

10 000

8.000

6.000

4 000

2 000

burden and running costs

Laminated structure results in compact, thin designs



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(Maxell's research)

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Put briefly, the strength of Maxell's production engineering technology is the ability to process accurately and at high speed, with Analog Core Technologies. Furthermore, those Analog Core Technologies are evolving every time Maxell engages in new production, such as by introducing new facilities. For example, the Analog Core Technologies needed for highly-reliable coin-type lithium batteries, one of our focus products, are "mixing" and "forming." I will go over how we are evolving our Analog Core Technologies while enhancing our production engineering capabilities.

In order to enhance our production engineering capabilities, whenever we introduce new facilities, we always introduce new technologies by coming up with themes for the challenges to

#### be addressed, such as boosting production speed or improving accuracy. Naturally, engaging in those challenges also gives rise to various issues, but we overcome those issues by resolving them as a team. We have continued to evolve our Analog Core Technologies by repeatedly taking on challenges in this way, and they are the very thing that creates the "strength of Monozukuri (manufacturing)" that is one of Maxell's values.

In the future also, we will continue to enhance our production engineering capabilities and provide products that meet the expectations of our customers and society, so that Maxell's values may be recognized.





INPUT

Invest capital in

growth businesses

BUSINESS

PROCESS

Business growth

strategy

OUTPUT

Products &

Services

OUTCOME

Results & Impact

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Va	lue Creation Process	by Business Segmer	lt - Business Strategy from 2023 -	Introduction
	FY2022 Result	,		Maxell Group's Basic Management Policy
		acturing Capital Intellectual Ca	pital Human Capital	Table of Contents and Editorial Policy
	Net sales Capital in	vestment Research and	Consolidated number	History of Innovation
	29.3 billion yen Depreciat	400 million yen development costs tion cost		At a Glance
		700 million yen	,	Sources of Value Creation
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		Target Markets and Strategies		
	North America and Southeast Asia markets	Semiconductor market (China and Taiwan)	Eyeglass lens molding applications	1 The Path to Realizing Our Vision
	Promote adoption of airtight	Expand market position	Continue to introduce	Materialities / Action Plans / KPIs
	materials (North America) Promote adoption of waterproof	for dicing tape	new products for use in molding high refractive	Message from the President
	materials (Southeast Asia)		index lenses	Message from the Financial Director
	Develop competitive technology	and strengthen sales force in resp	onse to the needs of each market	Financial Highlights
		es that are committed to cost and c		Non-Financial Highlights
	Create new products toward bo		)	
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		oducts and Services to be Creat		Special Feature: All-solid-state batteries and the impact they will have on society in the 3 focus areas
	Tape for construction	Tape for semiconductor manufacturing processes	Tape for industrial processes	Value Creation Process by Business Segment, and Strategy Progress Report
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	Enhance airtightness of	Increase capacity and promote	Improve reliability	Toward the Creation of New Businesses
	housings and buildings	wider adoption	Make compatible with	Consolidation and Enhancement of Sales Force
	Foster a culture that emphasizes airtightness	Respond to demand for data centers	conditions of use when molding eyeglass lenses	Intellectual Property that Supports New and Existing Businesses
		•••••		3 Management Foundation Enhancement
		Business Value		Creating Human Resources and Organizations that Generate Value
	Productivity		Profitability	Creating Economic Value through Environmental Activities
	High-efficiency production by		rough market creation and	Reporting Based on TCFD Recommendations
	new demand in the ma	arket	share expansion	Strengthening Group Governance
	Contribute to health and eco	onomic development through the e	ffective utilization of highly	Corporate Governance
		aterials in everyday life and indust		Board of Directors
				Outside Director Roundtable Discussion
			ial Value ctions of adhesive materials	

to life and to industry

**Environmental Value** 

Energy-saving in housings and buildings



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Aim to expand overseas sales of tape for construction, and to strengthen and increase sales of tape for semiconductor manufacturing processes and for industrial processes

- Mission Contribute to a sustainable society by continuing to create new value through the further enhancement of Analog Core Technologies
- Aim to be an excellent supplier of converting Vision products

Yukinobu Yamazaki General Manager, Functional Materials Division

# Situation in Fiscal 2022

Sales of adhesive tape increased, centering on tape for construction, and for industrial materials, sales of industrial rubber products firmed up. As a result, sales of functional materials as a whole rose by 4.5% (1.268 billion yen) to 29.286 billion yen. On the other hand, operating profit declined by 53.6% (998 million yen) to 863 million yen due to the impact of soaring costs for raw materials such as naphtha and rubber.



# **Strategy Progress Report**

### **Current Situation Regarding Strategic Products**

Tape for Construction

#### Trend and Forecasts for North American Housing Starts



· Accompanying growth in the number of housings being built, the number of airtight housings will also increase

The ratio of airtight housings will also climb steadily from 2021

#### Key Market Share / Positioning



#### Maxell's Strengths



Utilize Analog Core Technologies to provide customized products that are tailored to overseas living environments (products that can solve potential problems in various construction environments)

Airtight and waterproof materials

Example of construction using airtight materials

The ability to "mix all kinds of materials and coat at all thicknesses" is a characteristic of our Analog Core Technologies, and is also one of the "strengths" of our production engineering capabilities.

With our tape for construction, we use a technology that applies a thick coat of highly-viscous adhesive material comprising combined and mixed butyl rubber and other ingredients. With our tape for industrial processes, we use a technology that uniformly coats adhesive material comprising dissolved and mixed silicon and other ingredients, to a thickness of a few dozen microns. With our tape for semiconductor manufacturing processes, we use a technology for creating a thin film (as little as 10 microns or under) of adhesive material comprising dissolved and mixed reactive polymers.

The mission of the Production Engineering Department is to evolve these technologies, which we have built up thanks to our frontrunner's expertise, into high-efficiency, high-quality mass production facilities, with methods that are appropriate to each product. We achieved greater efficiency by making large roll-to-roll coating machines wider and faster, and we achieved higher quality by automating quality checks. Going forward, we will enhance the PDCA cycle and drive growth to more highlyprofitable plants, while striving to evolve further by incorporating the latest AI technologies, etc.

Ability to manufacture high-quality products steadily

by utilizing Analog Core Technologies (thin film and

characteristics, and low contamination of wafer and

Design technology prowess in special adhesives

with high fixation strength, excellent peeling

Functional Materials Segme

**Tape for Semiconductor Manufacturing Processes** 

2023

· The semiconductor market is projected to continue to grow going forward as well

· Accompanying growth in sales of key semiconductors, demand for dicing tape will also increase

Maxell's Strengths

smooth coating)

package surfaces

Dicing tape

share

2023 Target

forecast

2024

forecast

2025

forecast

(Maxell's research)

(Millions of m<sup>2</sup>)

2026 (Year)

forecast

35

30

25

20

15

10

Forecasts for Sales Value of Major Semiconductors and Shipment Volume of Dicing Tapes

2022

Systems on Chips Microprocessors NAND Flash Memory DRAM Memory

CMOS Image Sensors Other — Dicing Tape Shipment Volume (right axis)

· Will be driven by memory (DRAM, NAND) in particular

(Billions of dollars)

500

400

300

200

100

2020

2021

(average annual growth rate: 11.3%)

Key Market Share / Positioning

We intend to continue to send products out into the world that provide "value" to our customers, by capitalizing on "concurrent" and "timely" development and the "strengths" of our production engineering capabilities.

#### Tape for Industrial Processes



 The eyeglass lens market for high refractive index lenses that use a tape method is expanding

#### Key Market Share / Positioning

2023 Targe Share of tape for eveglass lens molding (for high refractive index lenses)

#### Maxell's Strengths



"

Tape for eyeglass lens molding Ability to inhibit lens cloudiness and the generation of bubbles and wrinkles at the time of molding through compounding and coating technologies for silicon-based adhesives



Senior Manager, Production Engineering Department, Functional Materials Division. Maxell, Ltd

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# Optics & Systems Segment

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Focus on developing next-generation technologies for in-car lenses, and on strengthening semiconductorrelated embedded systems in line with market trends

- Mission Refine Optics & Systems' core technologies to realize a safe and secure information society
- Vision Enhance Analog Core Technologies and shift from products to services, to contribute to people's lives and society with optical and systems component products

Noriyoshi Bito General Manager, Optics & Systems Division

# Situation in Fiscal 2022

As a result of orders from automobile- and semiconductor-related customers firming up, sales of in-car optical components and semiconductor-related products both increased. However, the impact of downsizing in the projector business was considerable, and sales at Optics & Systems overall declined by 5.2% (2.064 billion yen) to 37.476 billion yen. Operating profit rose by 16.5% (551 million yen) to 3.889 billion yen as a result of the profit growth from automotive optical components and semiconductor-related products compensated for the impact of the decline in projector-related revenue.





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**Strategy Progress Report** 

### **Current Situation Regarding Strategic Products**

LED Headlamp Lenses

#### Forecasts for Number of Automobiles Produced and Installation Rate of LED Headlamps



· Demand for automobiles is recovering to the 2019 (pre-COVID-19) level Increase installation rate of LED headlamps

· Pursue higher performance and higher functionality, such as light distribution control functions and built-in sensors



lenses

#### Maxell's Strengths



efficiency and stably provide high-quality products.

I ED headlamp Light guides lenses

"

Free-form surface optics design and high-precision molding technology Compatible with diverse designs, such as adaptive driving beam (ADB) headlamps Track record of quality by integrated Free form production from die design through

to molding

For sensing



In-car Camera Lens Units

**Optics & Systems Segment** 

· Accompanying growth in CASE\* and ADAS, the number of in-car camera lens units installed in each car will increase · Demand expansion for sensing and higher resolution

\* Connected, Autonomous, Shared & Service, Electric

#### Kev Market Share / Positioning



#### Maxell's Strengths



Combine aspherical glass and plastic Realize high precision, high durability, and

Support for development of embedded systems; contract

Semiconductor-related Embedded Systems

#### Forecasts for Japan-made Semiconductor Manufacturing Equipment



 Demand for semiconductors has expanded as a result of the development of 5G/ IoT ICT Demand for semiconductor manufacturing equipment is growing

#### Key Market Share / Positioning

2023 Target Share among major manufacturers in the semiconductor manufacturing equipment industry No. (Maxell's research)

#### Maxell's Strengths



development and manufacturing

Long history of trust with global leading semiconductor manufacturing equipment manufacturers and technical expertise Customization capability of embedded IoT solutions Integrated operation from design and development through to production and assembly Provides multi-models production capacity and high quality

Maintains relationships with key customers

Manage

Co Itd



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### Life Solution Segment

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Pursue customer satisfaction, and work to transform business structure to increase profit and sales

Mission Contribute to a sustainable society by continuing to take new steps

Vision Ensure happy futures for all people through products capable of coexisting with nature

Naoto Sugimune General Manager, Life Solution Division

### Situation in Fiscal 2022

Sales of BtoC products declined due to an uphill battle in sales of health and beauty care products and other factors, and sales across the Life Solution segment as a whole fell by 8.7% (2.786 billion yen) to 29.240 billion yen. Operating profit fell by 1.556 billion yen, to a loss of 1.473 billion yen, due to the decline in sales of BtoC products and the impact of rapid yen depreciation on products' import prices, coupled with structural reform costs that emerged at the domestic BtoC business.



Strategy Progress Report

### **Current Situation Regarding Strategic Products**

Shavers

#### Forecasts for Domestic Shaver Market Size (based on value)



Domestic: Lifestyle changes, including a recovery in inbound tourism, are expected to fuel demand

Trend from a holding-off purchase to a revitalization of consumption

#### Key Market Share / Positioning



#### Maxell's Strengths

- Blade technology cultivated over 65 years, and customer credibility worldwide → 3 types of blades (reciprocating, rotary, and rotation dome) are manufactured only by Maxell Izumi
- Long-term sharpness warranty achieved as a result of excellent precision processing technology



Precision presswork Precision electroforming



"

The strength of Maxell Izumi's tool business is its ability to respond to specific demand, and to changes and trends in that demand. Furthermore, as a result of Monozukuri (manufacturing) that employs multi-product, small-volume production, we are capable of responding to the varied and

diverse needs not only of our customers inside and outside Japan, but also of customers in other industries, which we have been focusing on cultivating in recent years. However, this multi-product, small-volume production ultimately presented a challenge, in that it conflictingly ended up generating bind manufacturing costs. If a production plan becomes

that it conflictingly ended up generating high manufacturing costs. If a production plan becomes complicated, a large amount of time and effort is spent responding to that. Accordingly, we resolved this challenge with product assembly that maintains small-volume production, and a

Hydraulic Tools

Life Solution Segment

#### Forecasts for Global Hydraulic Tool Market Size (based on value) (Maxell's research) (Billions of yen) (%) FY2023 share by market value: 18% FY2025 share by market value: 20% 28 22 10 ≫~ 2020 2021 2022 2023 2024 2025 (Year) Forecast Forecast Forecast Global Market — Maxell Izumi's Share (right axis)

 $\cdot$  Growth of approximately 3% is anticipated as facility upgrades recover from FY2023

Key Market Share / Positioning

bomestic share 60% bare 572023 Target 572023 Target 60bal share 12% of that, North America share 20% 61bal share 18%

Maxell's Strengths

- Ultra-high-pressure hydraulic technology → enables high-power tools to be made small and lightweight. Potential to advance into other industries, outside of hydraulic tools
- Enhanced' lineup of models with specifications that respond to market demands (compatibility with universal battery packs)
- Compatible with the Company's own battery packs as well as battery packs with high market share
- \* 3 types, the largest number in the industry

#### Tool Business that Supports the Work of Professionals Contributing to the Provision of Stable Electricity Infrastructure

Maxell Izumi excels in ultra-high-pressure hydraulic technology, and in 1988 it led the world in bringing battery-operated hydraulic tools to the market. Ever since then, it has led the industry as a pioneer in the market for hydraulic tools that support electricity infrastructure, and commands a 50% share of the domestic market.

On the other hand, looking worldwide, European, American, and Chinese companies are steadily gaining prominence in the same market. In response to foreign players that are using price competitiveness as a means to steadily expand their market shares, Maxell Izumi has made it its mission to "Aim to be the world's No. 1 player with Monozukuri (manufacturing) that impresses above and beyond customer expectations," and is moving forward with securing global share and introducing the world's No. 1 products to the market.

Recently, in addition to our battery-operated hydraulic crimping tools, our "nano18" small, hydraulic-less crimping device for crimp terminals of 1.25mm<sup>2</sup> to 8mm<sup>2</sup> has generated a strong response. The nano18 is a product that we introduced to the market with confidence, having undertaken repeated market research and prototyping. By rolling out our small, ultra-high-pressure technologies in traffic-related and other segments of the infrastructure industry, we will move ahead with entrenching the Maxell Izumi brand and cultivating new markets.



Electric Motor-driven Crimping Tool nano18



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machining process in which the input lot number is set by pursuing the cost-conscious minimum and optimum lot number.

The challenge going forward is inventory control. With multi-product, small-volume production, it is important to accurately forecast demand. When that forecasting accuracy is poor, we risk ending up saddled with a lot of inventory or suffering opportunity losses as a result of running out of stock. In order to boost accuracy, we will forecast future inventory from day-to-day sales trends, and place an even greater emphasis on initiatives that reduce the risk of high costs through adjusting production plans and monitoring inventory, so that it becomes possible to run operations with an inventory that is both appropriate and small.

#### to-day & Contro costs Departmen o run Division May

# Toward the Creation of New Businesses

Define new businesses that have merit, and engage in development and market creation by leveraging Maxell's strengths

#### Mission

Continue to launch high-value new businesses through companywide technology synergies

Vision

Grow the Company by creating new businesses that extend throughout the world

Action Plan Implement a portfolio strategy that anticipates market changes
Proportion of sales accounted for by new businesses:

KPI

Over 15% (FY2030)



# Policies for Fiscal 2023

We will accelerate the launching of new businesses, with a powerful will to harness our wisdom and spirit to overcome challenges and "follow things through," toward expansion of business scale by 2030. We will implement the following 3 strategies in particular:

# Contribute to resolving social issues with Maxell's unique Analog Core Technologies Promote the development of next-generation technologies that bring contributions to the environment Develop technologies and undertake capital investment toward expanding the business of all-solid-state batteries

The initial investment in the facility for mass-producing all-solid-state batteries is moving ahead as planned, and we are progressively entering business discussions on new products, such as AFID and foamed sheets. We are also working on CO<sub>2</sub> recycling as a medium- to long-term theme.

#### Developing technologies that contribute to the resolution of social issues (contributions that range from the individual through to lifestyles through to a global scale)

Social issues		Solutions	Innovations
People	<ul> <li>Declining birthrate and aging population</li> <li>Measures for infectious diseases</li> </ul>	Improve healthcare efficiency Implant treatment Contactless diagnoses	<ul> <li>Optical design: Aerial Image Displays (AFID)</li> <li>Battery design: All-solid-state batteries</li> <li>Analysis technologies: Early diagnosis of dementia</li> </ul>
Environment	<ul> <li>Natural disasters</li> <li>Climate change</li> </ul>	• Carbon neutrality CO <sub>2</sub> capture Mobility efficiency	<ul> <li>Electrode design: CO2 recycling</li> <li>Molding technology: Foamed sheet</li> <li>Optical design: HUD (Head Up Display)</li> </ul>
Industry	<ul> <li>Declining labor force population</li> <li>Energy problems</li> </ul>	<ul> <li>Maintenance-free Increase communication speed Heat resistance, long life, small size</li> </ul>	<ul> <li>Dispersion technology: EMC countermeasure materials</li> <li>Battery design: All-solid-state batteries</li> <li>Material design: MID' products</li> </ul>
			* Molded Interconnect Device

#### Maxell's Base and Core Technologies (Resolving Social Issues by combining Technologies from Other Fields)



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### Toward the Creation of New Businesses

### Medium- to Long-Term Strategy

Develop next-generation products that center on the resolution of social issues in the 3 focus areas



Take the lead in fostering a culture of rising to the challenge, to create new products that resolve issues of

### Aerial Image Displays (AFID)

- "Contactless tech" continues to grow even after COVID-19, with the "contactless access control" market growing to a Market scale of around 3 trillion ven\*3
- A user interface that enables touch operation of floating images, which Characteristics is equipped with a non-contact, high-precision area sensor on a highluminance, high-contrast aerial image display that utilizes Maxell's proprietary LLIS\*4 technology
- **High Luminance** Maxell's proprietary optical technology provides Strengths bright, vivid images In-air Operation Realizes contactless operation with an optical
  - area sensor Energy savings are realized thanks to a backlight Low power consumption
    - unit that concentrates light highly efficiently



Maxell Agua Park Shinagawa (Living Things' briefing terminal)

The global market for foam plastics is projected to grow to be worth more than \$50 billion\*4 accompanying the spread Market of products for construction materials. EVs. etc.

Clean mixing process of molten resin and foaming

RIC-FOAM is Maxell's original physical foam molding technology naracteristics t contributes to an energy-saving, low-carbon society through being lightweight by reducing the amount of resin used

Foam Technology Strengths

Automobile door module

(high dimensional accuracy)

\*3 Maxell's research

\*4 Laser Like Image Source

Foamed Sheet

agent (low-pressure gas) Injection Molding: Patent-licensed business Extrusion Moldina: PC\*5 sheet

Compatible with a wide range of thermoplastic resins 5-50% reduction in quantity used



PC foam sheets used to reduce weight in fields such as mobility

\*5 Polycarbonate: Characterized by wide range of operating environment temperatures (-30-100°C) and high strength



External view of

backlight using

- Retroreflective sheet

contactless touch sensor

(detects finger position)

(generates the original

Beam splitter

Image source

image)

RIC-FOAM Example of injection molding machine structure



Molded body using PC foam sheet, and cross-sectional structure

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Toshiyuki Watanabe Senior Manager, Design Department, New Business Producing Division

We will propose products that maximize customer value by pursuing development from a multifaceted perspective and by promoting product development with a market orientation focused on resolving the issues of our customers, on the basis of the Analog Core Technologies of "mixing, coating, and forming" that we have cultivated in developing and manufacturing batteries and tapes, along with our mass-production processing technologies and our optical structure design technologies for projectors, as well as by strengthening cross-divisional functions, enhancing human capital allocation and liquidity, and capitalizing on individual's respective experiences and expertise.

In the medium- to long-term, with an eye on megatrends, we are planning to deploy foamed sheet products that are geared to reducing the impact on the environment and conserving energy, and introduce products that respond to demand for all-solid-state batteries of even higher capacity, greater heat resistance, and longer operating life. In addition, we also intend to roll out new products that bring excitement to the world, including by proposing imaging technologies that evolve optical technologies such as AFID. Alongside new business creation and intellectual property creation, the New Business Producing Division wants to drive the Company as a whole, to enable a transformation to a culture of taking on challenges.

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### Consolidation and Enhancement of Sales Force

We will implement proposals that provide more value to our customers than ever before

Mission

Ascertain customer needs, create new value, and contribute to a sustainable society

Vision

Maximize\* the value of Maxell technologies and provide them to customers \*Combine Maxell technologies (uniqueness and differentiation) and match them to customers' respective needs



### Policies for Fiscal 2023

Strengthen global sales, cultivate new businesses, and bolster our marketing and sales capabilities with a sense of urgency.

Strengthen BtoB businesses and shift to a highly-profitable business structure, to realize sustainable growth
 Strengthen sales and development capabilities globally, and grow in global niche BtoB businesses
 Raise awareness of Diversity & Inclusion, and create businesses that respond to diversifying needs

### Strengthen Global Sales Structure

Expand global sales of new products through a cross-segment sales organization
Shift from product-specific specialized sales to account sales, and boost the ability to resolve customers' challenges globally

### Expand sales of new products through a cross-divisional sales organization



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### Sales Strategy



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Strengthen Capability	o Develop Markets	and Acquire	Customers
-----------------------	-------------------	-------------	-----------

 $\boldsymbol{\cdot}$  Acquire targeted markets and needs, by focus segment

Capture growth opportunities that leverage Maxell's Analog Core Technologies, and realize business
growth through differentiated products



# Carry out human investment in order to strengthen global sales structure, and strengthen the capability to develop markets and acquire customers



# Strive to enhance the level of customer satisfaction by unifying the format of customer feedback

Action Plan	Enhance the value of the core products and services of the Maxell brand	
КРІ	Continuous improvement of format unification with regard to customer feedback	

• The format concerning customer feedback was unified at the end of FY2022

A survey on the level of customer satisfaction was carried out on 117 major customers inside and outside Japan
When there were items that customers were dissatisfied with, the causes were analyzed, and sales representatives followed up with the customers concerned

• The next survey is scheduled to be carried out at the end of FY2023

### Intellectual Property that Supports New and Existing Businesses

Aim to build intellectual property (IP) that is conducive to Value Creation, and to contribute to our businesses through IP utilization

### Mission

Ensure Maxell's superiority and support the realization of technologies that create a sustainable society, through a cycle of IP Basic Duties. IP Utilization and Innovation Activities

### Vision

Be a company where IP is respected, and become a driving force for value creation, through vigorous IP activities

# Action Plan Evolution of unique, original technologies that generate new value

KPI

Number of patents related to next-generation development technologies: 1.5 times in 5 years (progress as of end of March 2023: 1.2 times (starting from FY2021))



### **Basic Policy**

With a focus on Maxell's unique Analog Core Technologies, we are promoting business activities that integrate our technological and IP strategies. In addition, we are striving to secure Maxell's superiority and contribute to a sustainable society through the basic duties of creating, developing, and managing rights for the purpose of adequately protecting Maxell's IP including the "Maxell" brand; the proactive utilization of IP; and the pursuit of innovation in unique technologies. At the same time, in the interests of building a fair business environment, we firmly maintain a stance of respecting other companies' IP, including by carefully checking other companies' patents from the early stages of research and development.

Furthermore, in order to leverage IP for the sustainable growth of Maxell's Value Creation, the IP investment and utilization strategy is reported to the Board of Directors and is advanced on the basis of governance.



### — In order to protect our original technologies, we defend Analog Core Technologies and the products that utilize them through the solid implementation of basic duties such as IP creation, identification of expertise, and acquisition and management of rights.

IP strategy to support business: In order to maximize the contribution of IP to our businesses with our business environment, business strategy and IP information analysis as the base, we will steadily build an IP portfolio that will come to life in five to 10 years' time. We will achieve this through IP grand design activities, whereby we plan IP activities by "backcasting" – casting an eye back from the future use of IP envisioned at each business, to the present – and through strategic invention activities that prioritize fostering IP rights with a focus on important technologies.



### We contribute to profits directly, and contribute indirectly by using IP to protect our businesses and expand them

**IP utilization policy:** We will contribute to the protection and development of the Company's businesses with IP. Additionally, we will obtain licensing fees by licensing Maxell's IP to other companies, which will directly contribute to the Company's profit and lead to the emergence of new innovation and the continuous creation of new IP. We are proactively advancing licensing activities in the area of batteries, which is Maxell's founding business, and the area of video and communications, in which we possess high-value patents. In cases where the Company's IP is not respected appropriately, we are prepared to take action when compelled to, such as lawsuits.

**Anti-counterfeit measures:** To reduce the risk of brand damage due to the improper use of the brand by third parties, we are taking firm measures against the manufacture and sale of counterfeit products that imitate designs or pose as Maxell brands, as well as the improper filing and registration of similar trademarks. Such measures include customs registration in major countries, and monitoring e-commerce sites.

### Promoting the creation of original technologies for realizing a sustainable society, by providing cross-divisional support for cutting-edge research and development

Company-wide innovation activities from an IP perspective: Through collaborations with the IP Innovation Division, the New Business Producing Division and the Marketing & Sales Division, as well as the Group's companies, we will comprehensively explore the intellectual and human assets related to the technologies owned by Maxell Group, and drive innovation activities with the premise of creating new businesses across business segments by leveraging these assets. Contributing to the SDGs through invention-creation activities: In order to promote innovation that contributes to the SDGs, we are pursuing the creation of IP that demonstrates an awareness of connections to those goals, from the invention discovery stage. As part of that effort, we are working to mention the specific SDGs that the invention in question will contribute to, in the invention's patent descriptions.

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# **Management Foundation Enhancement**

In the area of sustainability promotion as well, we are executing action plans to achieve our targets

### Sustainability Promotion System

- Managed by corporate headquarters in collaboration with representatives of each business division
- Group-wide promotion system that involves all Group companies
- The Corporate Sustainability Department has formed a cross-divisional working group to advance sustainability initiatives

Pres	sident	
Corporate Sustain	ability Department	Г
Workin	ng group -	[

### Key initiatives in FY2020

- Formulation of Corporate Sustainability Vision
- Launch of Sustainability page of corporate website, disclosure of ESG-related information
- Activities to raise awareness about sustainability (education, lectures by external experts, etc.)
- Revision of long-term CO<sub>2</sub> emissions reduction targets and advancement of concrete measures
- Summarization of alignment between business activities and SDGs (level of contribution to addressing social and environmental issues)

### Key initiatives in FY2021

- Identification of 7 materialities and 20 action plans, and disclosure of information on these in our integrated report. Continuation of work on identifying KPIs
- Expressed support for TCFD recommendations
- Summarization of contributions of Maxell products and services to achievement of SDGs (level of contribution to addressing social and environmental issues)
- Promotion of adoption of renewable energy (solar power generation equipment for in-house consumption)

### Key initiatives in FY2022

 Disclosure of human capital-related information

Business divisions

Group companies

**Corporate headquarters** 

- Partial revision of some action plans and setting of action plan KPIs
- Conduction of dialogues between president and employees at all business sites

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# **Creating Human Resources and Organizations that Generate Value**

Maxell Group implements a variety of initiatives aimed at ensuring that the individuality of each employee is respected, and that our workplaces are rewarding to work at. These initiatives include the promotion of diversity and inclusion, work-life balance, and personnel training aimed at passing on Maxell's technological strengths to future generations.

 Action plan
 Strengthen the management that leverages human resources (build a human resources strategy, promote the right person in the right place and talent management)

 KPIs
 (1) Talent management system: Introduce to Group companies by FY2026 NEW

 (2) Career interview implementation ratio 100%

### Introduction of New Talent Management System Completed

To further enhance trust in the Maxell brand and achieve sustainable growth, it is essential to have personnel who can identify issues, think independently, and take action in response to various changes to customer needs and market environments. We have identified three key words for the desired talent profile: self-driven employees, innovative employees, and energetic and positive employees. We will redouble our efforts to recruit and nurture exceptional personnel, enabling a diverse range of individuals to bring together and coordinate their expertise, take on the challenge of creating new value, and work together on helping to create the future.

Furthermore, in fiscal 2022 we successfully introduced our new talent management system, which we had set as a KPI. The system is aimed at visualizing human resources information and facilitating personnel development and promotions. We intend to update our human resources KPIs and introduce talent management systems at all Group companies by the end of fiscal 2026.

### Desired talent



We aim to continue 100% implementation of career interviews by reviewing the manual and other operational procedures.

# Ensuring role awareness of management who "commits to value"

In fiscal 2021, we completely revamped the managerial personnel treatment system. This included redefining Maxell's managerial staff role requirements in order to provide clear and easily understandable standards for the work of each managerial staff member as leaders of Maxell's transformation.

These role definitions emphasize that committing to value involves managing the organization, crafting pathways for achieving objectives, and ensuring responsiveness to customer demands and values, and they make it clear that achieving these things results in the generation of corporate value. We are committed to fostering awareness of this among our managerial staff.

Expectations of managerial personnel

1. Strengthen organizational foundation

2. Establish realization processes

### 3. Create customer value

### 4. Create corporate value

The above expectations are defined in greater detail for each management level

Action plan	Establishment of a system for human resource development and evaluation that creates proactive human assets capable of creating something out of nothing	
KPIs	<ol> <li>Formulate human resource portfolio: operation start</li> <li>Education for personnel evaluators: 2 times/year</li> </ol>	

# Bolster human resource portfolio based on human resources development policy

Maxell conducts training with a focus on key action items in line with the 3 basic educational policies.

### **Basic educational policies**

 Human resources are the most important management resource for a company, and in addition to fostering a culture of ongoing education, we aim to be a company in which people grow and develop.
 Cultivate human resources able to identify societal changes, work sincerely towards achieving greater creativity and technological capabilities, and provide value to employees, customers, and society.
 Develop human resources able to advance globalization and diversity.

Based on these policies, we conduct a hierarchical career education program, and during the evaluation period, training to personnel evaluators to enhance the capabilities of our personnel.

In fiscal 2022, we redefined "Succession Human Capital" as the core of our human resources portfolio, and reviewed our next generation leader selection and education programs based on this definition.

Furthermore, we implement personnel development measures in 3 areas: Globalization, Sales & Marketing, and Technology. This includes training tailored to each specialized field and hierarchy level, global education such as overseas training, and regularly updated education themes and methods aligned with current trends. Through a wide-ranging educational curriculum, we nurture talent capable of generating new value.

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### Creating Human Resources and Organizations that Generate Value

### Human resources development system



As for the successor training program, we redefined the gualifications, capabilities, and experience required of Maxell's executives, and select future and upcoming executive candidates through our human resources committee. We are planning to create a strong workforce able to create robust new businesses by revising our education programs for selected participants to place greater emphasis on practical workplace training, and by promoting job rotations and other measures.

Promoting diversity and inclusion (utilize diverse human Action plan resources and accept different values) (1) Improve overall satisfaction in employee awareness survey: 90% or higher (FY2026) KPIs (2) Recruitment ratio of female graduates: 50% or higher for administrative jobs, 25% or higher for engineering jobs

### "M-Wing" diversity promotion project

At Maxell, we emphasize diversity and inclusion and aim to enhance organizational problem-solving capabilities, creativity, and flexibility by harnessing personnel with differing values, sensibilities, and experience. In particular, we place strong emphasis on activities at "M-Wing," a company-wide project run by members selected from each business division. The project's slogan is "companies and workplaces where everyone can thrive," and we continue to work towards this goal.

In addition to M-Wing activities, in fiscal 2023 we also conducted workshops for executives, where the importance of promoting diversity and inclusion at Maxell as well as the current challenges we face in this area are discussed

Our management team and employees are working together to ensure Maxell is a company where a diverse workforce can work comfortably and thrive.



### Promoting Women's Advancement in the Workplace

At Maxell, we are raising awareness of diversity, particularly among management and leadership-level personnel. We have also been working to revise company policies to facilitate more flexible working arrangements and actively promoting recruitment and appointment of women while nurturing role models. In fiscal 2019, Maxell achieved a 2-star "Eruboshi" certification, which is awarded to companies in recognition of outstanding efforts in promoting women's participation in the workplace. We are committed to further advancing women's participation in our workplaces.

We have set targets for the ratio of female hires among new graduate recruits, and are aiming to continue achieving a rate of 50% or higher for administrative jobs and 25% or higher for engineering jobs. For new hires in fiscal 2023, the ratio of female hires in administrative and sales positions exceeded that of male hires for the first time.



"Eruboshi" certification

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### Creating Human Resources and Organizations that Generate Value

### Gender ratio' of new graduate recruits

		Female	Male
FY2021 cohort		22.2%	77.8%
	Engineering jobs	16.7%	83.3%
	Administrative/sales jobs	33.3%	66.7%
FY2022 c	phort	15.0%	85.0%
	Engineering jobs	11.8%	88.2%
	Administrative/sales jobs	33.3%	66.7%
FY2023 cohort		36.4%	63.6%
	Engineering jobs	29.4%	70.6%
	Administrative/sales jobs	60.0%	40.0%

\* Gender ratio among recruits with a bachelor's degree or higher

### **Creating Pleasant Workplaces**

Maxell has established a variety of flexible work arrangements to ensure that all employees can work flexibly in a way that matches their lifestyles and life stages. To facilitate a balance between work and family life, especially for those engaging in childcare and nursing care, we have established systems that go beyond legal requirements. The ratio of employees who return to their jobs after taking childcare or nursing care leave stands at 100%.

In fiscal 2022, the rate of male employees taking parental leave reached 40%. In fiscal 2023 we are introducing an additional five days of paid parental leave at birth and working on creating workplaces where taking parental leave is easy.

### Employees taking childcare and/or nursing care leave

	FY2019	FY2020	FY2021	FY2022
Childcare leave	9 employees	9 employees	14 employees	15 employees (10 female, 5 male)
Nursing care leave	1 employee	1 employee	0 employees	1 employee

# Aiming to improve overall satisfaction in employee awareness surveys

At Maxell we conduct an employee awareness survey once a year. In fiscal 2021, approximately 2,000 Maxell Group employees were surveyed. The survey primarily assesses employee perceptions regarding the effectiveness of organizational activities, individual job satisfaction, education, and satisfaction with employee treatment systems.

In fiscal 2022, improvements were observed in the areas of "acceptance of diversity" and "satisfaction with employee treatment systems," indicating that ongoing work on human resources measures is yielding results. To continue enhancing satisfaction, we will focus on initiatives such as talent management to enable individuals to build their careers and acquire the skills they need, organizational invigoration through communication initiatives, and management enhancement measures utilizing 360-degree feedback.

### Overall satisfaction score for company life (maximum 7.00 points)

FY2018	FY2019	FY2021	FY2022
4.11	4.29	4.37	4.50

\* Employee awareness survey was not conducted in FY2020.

### Promoting digitalization to assist with work style reforms

Maxell is proactively promoting digitalization as a key measure in strengthening its management foundation and advancing work style reforms.

To strengthen our management foundation, we are carrying out business reforms and revamping our core systems to standardize operations, moving away from the current form of management in which each domestic and overseas site establishes its own operational foundation individually. In this way, we are working towards lower operation costs, stronger corporate governance, and optimized utilization of human resources.

We are aiming to realize automation of operations and increase operational efficiency as much as possible particularly in indirect departments such as general affairs, accounting, and business operations, and looking to enhance productivity and reduce costs by promoting the digitalization measures in the upper right corner.

### Maxell's digitalization initiatives for work style reform and productivity enhancement

- Establishment and enhancement of teleworking environments.
- Online meeting standardization, streamlining, and stabilization, and promotion of efficient meeting format
- Shift to paperless operations
- Promotion of cloud utilization
- Digitalization of application approval and circulation procedures
- Business streamlining and digitalization through utilization of robotic process automation
- Strengthening of security measures in response to increased cloud utilization and teleworking

Action plan	Improve productivity and promote the transmission of skills through the standardization of business processes
KPIs	<ul> <li>(1) Improve job satisfaction level in employee awareness survey: 90% or higher</li> <li>(2) Company-wide education* target achievement rate: Maintain at 100% NEW</li> <li>* Management (hierarchial and selective education), sales, technology, dobal education, etc.</li> </ul>

### Developing 5G/IoT engineers through IoT Human Resources Development Program

We aim to develop 5G/IoT engineers who can play an active role in the creation of IoT businesses, acquiring knowledge on programs related to IoT through practical education provided via the IoT Human Resources Development Program. Specifically, we provide opportunities for employees to learn practical programming and master the programming language Python with the aim of nurturing personnel who can use their IoT and AI knowledge to implement devices and applications. Approximately 60 employees are currently participating.

By steadily implementing such initiatives, we are strengthening our ability to connect needs and seeds based on reliable technologies, ultimately enhancing our capacity to create new businesses based on IoT and AI technologies.

In addition to the specialized training mentioned above, to enhance the IT literacy of each employee, we have created an environment in which employees can continue to learn, including the preparation of a platform where they can learn basic computer skills and Office operation skills that are useful in the workplace. We set the implementation of a basic digital literacy education program

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### Creating Human Resources and Organizations that Generate Value

for all employees as a KPI, and almost all employees participated in this in fiscal 2022. In the future, we will update the KPI for the "100% achievement of the company-wide education plan", which is determined by the education committee, including executives, to include new educational content. This will help drive improvements in employee productivity.

### Promotion of occupational health and safety activities

### Maxell Group's occupational health and safety activities

Maxell Group companies work as a team to carry out occupational health and safety activities under the basic policy of "Put Highest Priority on Health and Safety."

In fiscal 2022, the number of accidents remained largely unchanged year-on-year. However, we have intensified our efforts to eliminate recurrent accidents by "strictly adhering to basic safety behavior rules" and conducting "5W analysis (asking "why?" five times) for unsafe actions and conditions." In fiscal 2023, we will continue with these initiatives to strive for the elimination of workplace accidents.



BCP (business continuity planning)

disaster preparedness training

The domestic Group companies conduct "mutual safety inspections" to improve the degree of health and safety across the Group and promote communication from the point of health and safety. We are committed to creating a safety-conscious workforce and working towards achieving "zero accidents." All Group employees aim to establish pleasant workplaces where everyone can work safely and securely without accident and foster a culture of safety.



FY2022 work-related accident occurrence rates (by years of experience)



### Efforts to maintain and promote employee health

### Enhancing health management

Maxell recognizes that the well-being and active engagement of employees are essential for company growth and the enhancement of corporate value. Maxell is therefore committed to a health management approach aimed at maintaining and improving the health of employees.

Maxell utilizes employee health checkups and receipt data to implement preventive programs targeting individuals with lifestylerelated diseases as well as those at risk of such diseases. Maxell also ensures that employees seconded overseas undergo thorough health checkups to enhance health management.

With regard to mental health, Maxell has shifted the focus of its stress-related efforts towards stress prevention. This includes diagnoses focused on employee stress resilience as part of statutory stress checks, seminars explaining how to utilize stress check results, and guidance from instructors on how to prevent high-stress situations.

Maxell also provides, through its employee assistance program, individualized support for a wide range of concerns that employees may have. This includes support such as external counseling services and return-to-work programs to assist those returning to their workplaces, in addition to advice from specialist staff.

Through such efforts, Maxell has once again been recognized as a "2023 Certified Health & Productivity Management Outstanding Organization" (in the large enterprise category), following on from its recognition in 2022. Maxell continues to promote the selection of its Group companies as well, and is aiming for recognition as a "White 500" enterprise, focusing on enhancing employee welfare, various initiatives to prioritize the health of all Group employees, and creating comfortable workplaces.



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# Creating Economic Value through Environmental Activities

At Maxell Group, we recognize that addressing global environmental issues, including global warming, is an urgent priority. To help address such issues, we have introduced a company-wide environmental management system and are advancing company-wide efforts.

### **Environmental Management**

### **Operation of Environmental Management System**

In light of developments such as the adoption of the UN Sustainable Development Goals (SDGs) and the Paris Agreement, there is a growing demand for companies to make even greater contributions towards achieving a sustainable society. Maxell Group recognizes that alongside enhancing corporate value, it must play a more significant role in environmental conservation.

Maxell Group is committed to environmental initiatives, including efforts to help prevent global warming, in accordance with its "Environmental Conservation Action Guidelines."\*1 The environmental activities of Maxell Group are led by the president and are conducted in line with the environmental management system. We ensure compliance with regulations such as the REACH regulation and the RoHS directive and are steadily reinforcing our compliance efforts. We are also bolstering our focus on activities aimed at achieving environmental results based on the ISO 14001:2015 standards.

The Financial Stability Board (FSB) launched the Task Force on Climate-related Financial Disclosure (TCFD) to promote the identification and disclosure of the risks and opportunities that climate change presents to companies and financial markets. In October 2021, Maxell announced its endorsement of the TCFD's recommendations and is now conducting scenario analyses (refer to pages 49, 50, and 51).

\*1 Environmental Conservation Action Guidelines:

https://www.maxell.co.jp/csr/csr2/csr\_guideline.html (in Japanese only)

### Establishment of Maxell Group's Environmental Vision

Since the coming into effect of the Paris Agreement, companies have been expected to reduce their total greenhouse gas emissions, irrespective of business expansion. Maxell has been working to reduce the environmental impact of its manufacturing activities for some time. Maxell has identified "Creating Economic Value through Environmental Activities" as an important issue (materiality) and is conducting business operations with the target of reducing CO<sub>2</sub> emissions.

In 2020, the Japanese government set the target of achieving carbon neutrality by 2050, thereby necessitating even greater  $CO_2$  reduction efforts.

Maxell Group has established the Environmental Vision in July 2023 and is pursuing a variety of initiatives on the way to achieving its goal of reducing domestic CO<sub>2</sub> emissions by 50% from the fiscal 2013 levels by fiscal 2030 to achieve a carbon-free society (Scope 1 and 2 emissions). Additionally, looking towards 2050, the group will continue with efforts such as factory energy efficiencyboosting initiatives, increased use of renewable energy, and the use of non-fossil certificates. The group will also contribute to the achievement of carbon neutrality by fiscal 2050 (global Scope 1 and 2 emissions) and the realization of a sustainable society through the implementation of decarbonization technologies developed by Maxell Group. This includes "Electrolytic Reactors" used in the electrolytic reduction of CO<sub>2</sub> developed through the production of electrodes using dispersion and coating technologies which are the Analog Core Technologies that Maxell has developed over the years in the course of developing and manufacturing products like magnetic tapes and lithium-ion batteries.

To contribute to achieving a recycling-oriented society, Maxell Group has also set targets to reduce waste intensity per production as a way to promote waste-free design and manufacturing throughout the entire Group. The initial focus will be on reducing loss resulting from manufacturing errors.

Additionally, in response to growing concern over plastic waste-

related issues like ocean plastic pollution, the group has set the target of commencing chemical and material recycling of composite plastic waste generated at its facilities by fiscal 2030.

### Implementation of Maxell Group Environmental Action Plan for Fiscal 2022

Based on the belief that environmental activities and contribution to business performance should be managed in an integrated manner, Maxell Group aims to motivate its workforce through the management of indicators (on intensity per production basis: amount consumed/amount produced) that help to visualize efforts for improvement. The indicator we used until the previous fiscal year, which was based on intensity per net sales, is no longer used due to the increasing cost of electricity and other energy resulting from soaring crude oil prices and the rising waste disposal costs, which made it impossible to provide appropriate evaluations.

In fiscal 2022, we successfully achieved the target for energy and waste intensity per production. However, in terms of the target for water usage intensity per production, which had not been achieved, we fell short of the target due to our inability to reduce the fixed water usage volume in line with the decrease in production amount. We will persevere with efforts to make

### Environmental Vision

# Maxell aims to achieve "a carbon-free society" and "a recycling-oriented society" by pursuing innovation and contributing to the realization of a sustainable society in which everyone can live with peace of mind.

Initiatives towards achieving a carbon-free society				
<b>T</b>	FY2030	Reduce CO <sub>2</sub> emissions by 50% or more (vs FY2013)	Subject: Scope 1 and 2 emissions (domestic)	
Targets -	FY2050	Achieve carbon neutrality	Subject: Scope 1 and 2 emissions (global)	
Initiatives towards achieving a recycling-oriented society (Resource saving and resource recycling of plastics, etc.)				
Targets	FY2030	<ul> <li>Achieve waste intensity per production<sup>*2</sup> of 0.0450 (tons/million yen) or less (reduction by 19% vs FY2021)</li> <li>Commence chemical/material recycling of composite plastic waste</li> </ul>	Scope: Global	

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\*2 Waste intensity per production is an index for generated waste amount. Waste amount (t) / production amount (million yen)

### Creating Economic Value through Environmental Activities

### Environmental Action Plan for FY2022\*

No.	Action targets		Classification*2	FY2022			FY2023
NU.			Classification	Targets	Results	Evaluation	Targets
1		Net sales ratio of eco-friendly CSR/CSV products (%)	Domestic/overseas	100	100	999	100
2	Regi	stration ratio of eco-friendly CSR/CSV products using new assessment approach (%)	Domestic/overseas	100	100	999	100
3	Mark	et introduction ratio of eco-friendly CSR/CSV products (%)	Domestic/overseas	100	100	999	100
4		"Eco Mind" education participation ratio (%)	Domestic/overseas	100	100	999	100
5	5 Continuation of zero emissions (years) (target: manufacturing facilities) (Final disposal volume: less than 5t, final disposal ratio: less than 1%)		Domestic	22	22	999	23
		Intensity per production x 10 <sup>-3</sup> (kL/million yen)	Domestic/overseas plants	420	403	999	398
6	Energy		Domestic plants	350	330	999	324
-		Intensity per personnel and floor space (kL/person + km <sup>2</sup> )	Domestic/overseas offices	22	16	999	18
7	Waste	Intensity per production x 10 <sup>4</sup> (t/million yen)	Domestic/overseas plants	571	532	999	538
/	vvaste	Recycling ratio (%)	Domestic/overseas plants	70	90	999	70
8	Water	Intensity per production x 10 <sup>-2</sup> (m <sup>3</sup> /million yen)	Overseas plants	747	840	ø	800

\*1 Value of in-house production amount at overseas plants converted to yen at fixed exchange rates

\*2 Overseas plants: Maxell Digital Products China Co., Ltd., Wuxi Maxell Energy Co., Ltd., Maxell Tohshin (Malaysia) Sdn. Bhd., Maxell Europe Ltd. Telford Plant, PT. Sliontec Ekadharma Indonesia

improvements and conserve water.

In fiscal 2022, Maxell Group experienced no significant environmental incidents, and was subject to no environmental fines or complaints. Additionally, with the enforcement of the Fluorocarbon Emissions Control Act, we conducted both simplified inspections (quarterly) and statutory inspections. These inspections showed an annual leakage of 167 tons of fluorocarbons, a volume that is below the reporting threshold.

### Reduction of CO<sub>2</sub> Emissions, Including Scope 3 Emissions

Maxell Group calculates total CO<sub>2</sub> emissions across the entire supply chain, including Scope 3 emissions. Scope 3 emissions refer to indirect emissions other than Scope 1 and Scope 2 emissions. For emissions calculations, starting from fiscal 2018, we aggregate and disclose performance data in accordance with the "Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain" issued by the Ministry of the Environment and the Ministry of Economy, Trade and Industry.

In fiscal 2022, as in fiscal 2021, our Scope 3 emissions decreased, primarily owing to the downsizing of the projector business,

which consumes significant amounts of electricity during use. This resulted in a decrease in the proportion of CO<sub>2</sub> emissions associated with the use of sold products. We aim to further reduce CO<sub>2</sub> emissions during product use by promoting energy-efficient design.

Evaluation: I Achieved Achievement rate 95% or higher Achievement rate less than 95%

### Breakdown of Scope 3 CO<sub>2</sub> emissions by category (Excluding Maxell Izumi, Ube Maxell Kyoto and Maxell Kureha)



Action Plan	Strengthen environmental technologies and environmentally conscious products
КРІ	Define standards to show the degree of contribution to social and environmental issues, and visualize the progress of sustainability Incorporate specific measures in the next medium-term management plan

### Reduction of Environmental Burden through Environmentally Conscious Products

At Maxell Group, we evaluate the quantitative environmental impact of new products at each stage of their life cycle in accordance with environmentally conscious design assessment criteria at the design and development stages, and register those that meet certain standards as "environmentally conscious products."

When a product does not meet the standards for "environmentally conscious products," we conduct CSR/CSV product assessments. Products deemed to meet certain criteria through this assessment are registered as CSR/CSV products that contribute to the achievement of the SDGs. In light of the current 100% CSR/CSV product registration rate, we are exploring new criteria to identify outstanding products that contribute significantly to major societal and environmental issues such as global warming, resource depletion, increasing waste generation, and ocean plastic pollution. The establishment of these new criteria will be aimed at raising awareness among design and development team members and boosting their motivation.

### **Recycling of Products**

In accordance with the "Act on the Promotion of Effective Utilization of Resources," Maxell has joined an association called the Japan Portable Rechargeable Battery Recycling Center (JBRC) and displays recycling symbols on the lithium-ion batteries manufactured and sold, and promotes the use of the association's collection and recycling system to customers. In fiscal 2022, the amount of small lithium-ion batteries collected through the association's activities was 592 tons, which is an 11% decrease from the previous fiscal year, which also saw a decrease, but we believe that recycling is becoming a firmly ingrained habit among consumers.

With regard to projector recycling, in April 2019 we received approval from the Ministry of the Environment under the "wide area certification system" to promote recycling, and we have continued to collect projectors for recycling since then. As for hair dryers and Maxell, Ltd. Integrated Report 2022

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### Creating Economic Value through Environmental Activities

shavers, they fall under the "Act on Promotion of Recycling Small Waste Electrical and Electronic Equipment," and collection is carried out by each municipality.

Action Plan	Conserving resources and energy, and promoting the introduction of renewable energy		
КРІ	<ol> <li>Domestic CO<sub>2</sub> emissions: Reduce by 50% by FY2030 (vs FY2013)</li> <li>Renewable energy ratio: 15% by FY2030 (renewable energy consumption/total electricity) NEW</li> <li>Begin considering reduction of waste plastic generated by business sites (chemical and material recycling), and incorporate related concrete measures into the next mid-term management plan</li> </ol>		

### Helping to Prevent Global Warming

We have set "Conserving resources and energy, and promoting the introduction of renewable energy" as a materiality action plan. The plan includes a KPI of achieving a 50% reduction in CO<sub>2</sub> emissions by fiscal 2030 compared to fiscal 2013, and we are proactively working towards this.

Concrete measures undertaken by Maxell Group as part of plant electricity-saving measures include visualizing electricity consumption patterns to reduce wasteful electricity usage, improving operational efficiency through demand management at facilities, updating air conditioning systems, switching to LED lighting, and planting of green walls. In fiscal 2022, the Kobuchizawa Works, Kyoto Works, and Ono Works began solar power generation for in-house consumption. The Kyoto Works started generating 109 MWh from September, and the Ono Works started generating 114 MWh from January. Furthermore, in fiscal 2022, we started purchasing non-fossil certificates. These efforts allowed the Group to exceed the "Renewable energy ratio of 10% by fiscal 2030" KPI in fiscal 2022, and we therefore set a target of "Renewable energy ratio of 15% by fiscal 2030" as a new KPI. Additionally, we have contracted with electricity companies we selected based not only on price but also on  $CO_2$  emission coefficient trends in order to reduce our  $CO_2$  emissions.

In fiscal 2022, domestic CO<sub>2</sub> emissions decreased 26% compared to the previous fiscal year, and overseas emissions decreased by 1.2%, resulting in an overall 17% reduction for Maxell Group as a whole (a 47% reduction from fiscal 2013). Note that the activities of Maxell Izumi, Ube Maxell Kyoto, and Maxell Kureha have been included in the calculations from fiscal 2022 onwards.

In addition to solar power generation for in-house consumption, the Ono Works is also selling electricity generated with its solar power facilities. In fiscal 2022, 1,428 MWh of electricity was generated, contributing to the prevention of global warming.

CO<sub>2</sub> emissions (Scope 1 and 2<sup>\*1</sup>)

42.7

2019

Scope 1 Scope 2 Scope 1 + 2

23.5

76.3

Domestic

(kt-CO<sub>2</sub>)

55.1

2018

21.1



Since Maxell Group offers a wide range of products, we monitor the transport-related energy intensity per production at each manufacturing base.

In fiscal 2022, the total for all manufacturing bases increased by 5.7% compared to the previous fiscal year.

	Production amount (million yen)	Usage (thousand ton-km)	Intensity (ton-km/million yen)
FY2020	60,112	909.9	151
FY2021	58,186	1014.0	174
FY2022	51,919	958.0	184

Energy intensity per production



Scope 1 Scope 2 Scope 1 + 2

\*1 Scope 1: Direct emissions due to fuel combustion, etc. at business sites Scope 2: Indirect emissions from purchased electricity, etc. \*2

2021

46.5

20.3

49.3

2022 (FY)

28.4

20.9

62.1

40.4

2020

21.7

\*2 Electricity/CO<sub>2</sub> conversion coefficient: UK 0.19, Malaysia 0.65, China 0.61, Indonesia 0.77 (unit is t-CO<sub>2</sub>/MWh for all countries) Maxell, Ltd. Integrated Report 2022

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### Creating Economic Value through Environmental Activities

### Waste Reduction and Recycling

Regarding the conservation of resources, which we have set as a materiality's action plan, in light of the recent emphasis on addressing the environmental issue of plastic waste, we plan to set KPIs for reducing plastic waste generated at our business sites. We are currently exploring chemical and material recycling, and intend to establish concrete targets for this in our next medium-term management plan.

Furthermore, at Maxell Group, we are working towards "Zero emissions"<sup>\*1</sup> by ensuring thorough waste separation, promoting the monetization of valuable waste through information sharing at each business site, and expanding and enhancing in-house intermediate processing. For example, in the lithium-ion battery manufacturing process, we separate waste such as end cuts generated in each production step and deliver these to the recycling companies to recycle copper, aluminum and rare metals such as cobalt from waste materials (43 tons in fiscal 2022). At the Ono Works, we also recycle silver oxide (2.6 tons in fiscal 2022). The amount of valuable waste generated domestically in fiscal 2022 was down 9% compared to the previous fiscal year. As a result of our intensified recycling efforts, domestic manufacturing bases achieved zero emissions for the 22nd consecutive year.

\*1 Criteria for zero emissions (criteria for each business site): Final waste disposal volume less than 5 tons/year and final disposal ratio less than 1%/year

### Water Consumption Reduction Initiatives

Maxell Group strives to reduce water consumption in manufacturing processes and conserve water resources through reutilization and other practices. For instance, at the Kyoto Works, a system to recover and reuse 100% of drain water was introduced in fiscal 2019 in response to increased steam usage due to the increased production of lithium-ion battery electrodes. This resulted in a saving of 40 km<sup>3</sup> of water annually. In Maxell Group's domestic business sites, there was a 17% reduction in water usage compared to the previous fiscal year, and at overseas Group's business sites where water risk<sup>\*2</sup> is particularly high, there was a 5% reduction compared to the previous fiscal year. Overall, Maxell Group achieved a 15% reduction in water usage compared to the previous fiscal year.

\*2 Water Risk Atlas (Aqueduct) by World Resources Institute (WRI)











Water intensity per production Overseas (m<sup>3</sup>/million yen)



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### **Reporting Based on TCFD Recommendations** Analysis of climate change risks and opportunities for the Maxell Group

Since the Paris Agreement came into effect, demand has been growing for companies to reduce their total greenhouse gas emissions, regardless of business expansion. Maxell has long been proactively working to reduce the environmental impact of its manufacturing processes.

We have identified "Creating Economic Value through Environmental Activities" as an important issue (materiality), and are operating our businesses with a total emissions reduction target for greenhouse gases in place.

### **Basic Approach**

Climate change is a threat to both humanity and the health of the Earth, affecting our businesses, customers, and supply chain. As one of the companies addressing climate change, we believe that we have a significant role to play in contributing to global efforts to prevent climate change. Whereas we understand that climate change poses risks, such as increased costs and business disruption, we also see it as an opportunity for Maxell to create new value by meeting the societal needs that emerge.

Maxell announced its endorsement of the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) in October 2021. In line with the TCFD recommendations, we analyze the risks and opportunities posed by climate change to our businesses, and work to disclose relevant information relating to governance, strategy, and other areas. Maxell is implementing initiatives in accordance with the framework below, which covers the four core elements of the TCFD recommendations: governance, strategy, risk management, and metrics and targets.

### (1) Governance

The Board of Directors is responsible for decisions relating to Maxell's climate change initiatives.

- The Board of Directors is our highest decision-making body and is responsible for all decisions, including those concerning climate change-related issues.
- The president and representative director is in charge of climate change-related issues. The president also serves as the head of the Environmental Committee, and is responsible for incorporating all environment-related issues into our corporate strategy and targets.

### Board of Directors decisions on climate change-related initiatives

(1) Endorsement of TCFD recommendations (October 2021)

- (2) Setting of medium- to long-term goal of reducing CO<sub>2</sub> emissions by 50% or more by FY2030 (vs FY2013) and a commitment to focus on addressing environmental issues (November 2021)
- (3) Introduction of solar power generation for in-house consumption (December 2021)

(4) Disclosure of TCFD scenario analyses (July 2022)

- We have established an Internal Control Committee to ensure and strengthen the effectiveness of corporate governance for the enhancement of the entire Group's corporate value and the achievement of management objectives. With regard to climate change, the Environmental Committee is working to establish a Group-wide management system and enhance its functions.
- The Environmental Committee is responsible for drafting Maxell Group's overall strategy for climate change and managing the Group's progress towards achieving its climate changerelated targets. The committee is composed of environmental promotion officers and environmental management officers from business divisions at each business site, as well as the chairs of specialized subcommittees. The committee meets three times a year.

### Governance structure



### (2) Strategy

In July 2023, Maxell established an Environmental Vision to clarify the ideal features of its environmental management from a longterm perspective, positioning the resolution of environmental issues as one of the top priorities.

### Environmental Vision

"Maxell aims to achieve 'a carbon-free society' and 'a recyclingoriented society' by pursuing innovation, and contribute to the realization of a sustainable society in which everyone can live with peace of mind."

### <Initiatives towards achieving a carbon-free society> Targets

- FY2030: Reduce CO<sub>2</sub> emissions by 50% or more (Scope 1 and 2, domestic)
- FY2050: Achieve carbon neutrality (Scope 1 and 2, global)

### Climate change risks and opportunities

In 2021, we began conducting a climate change scenario analysis, starting with the Energy Division as a model case. In fiscal 2022, we extended this analysis to cover Maxell's three other business divisions: the Functional Materials Division, the Optics & Systems Division, and the Life Solution Division.

The analysis focused on production areas where Maxell is likely to be most affected by climate change. We conducted analyses based on 1.5°C and 4°C temperature increase scenarios, to identify risks and opportunities, and consider relevant measures. • Scenarios considered: 1.5°C (RCP1.9/SSP1) and 4°C (RCP8.5/SSP5)

Although climate change presents risks for all four divisions, it can also be turned into an opportunity through harnessing the innovative proprietary technologies that Maxell has developed over many long years.

For all four divisions, the medium- to long-term risks identified under the 1.5°C temperature increase scenario include increased tax burdens due to the introduction of carbon taxes, and significant impacts on businesses from changes in consumer behavior. Additionally, it was found that under a 4°C temperature increase scenario, the exacerbation of extreme weather events such as storms could have a significant impact on businesses.



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### **Reporting Based on Recommendations of TCFD** Analysis of climate change risks and opportunities for the Maxell Group

Scenario analysis Scenario where the goal is to limit temperature increase to 1.5°C: Regarding the transition risks, it is assumed that governmental regulations will be tightened and that net zero CO<sub>2</sub> emissions will be achieved by 2050 through the implementation of countermeasures.

Scenario where temperature rises by 4°C: Regarding physical risks, abnormal weather events would be expected to intensify if additional policies are not implemented and no progress is made with climate change countermeasures.

### **Risks and opportunities**

Definitions for large, medium, and small business impacts: Large: 1 billion yen or more, Medium: 100 million yen to less than 1 billion yen, Small: less than 100 million yen

			Degree of business impact							Major opportunities					
	Risks		Major risks	Energy Division		Functional Materials Division			Systems ision	Life Soluti	on Division	Energy Division	Functional Materials Division	Optics & Systems Division	Life Solution Division
Cate	gories	Sub-categories		1.5	4	1.5	4	1.5	4	1.5	4				
	Carbon tax increases		Introduction of carbon tax will have broad impact on raw materials, containers, and packaging materials, and result in increased costs	Medium	Small	Large	Small	Large	Small	Medium	Small	Cost reductions through installation of energy-saving equipment and improvements to energy-saving processes		Lessening environmental impact with low-carbon alternative materials	
	Policies/ regulation	CO <sub>2</sub> emissions of each country	s Need to switch to high- efficiency manufacturing	Small	Small	Small	Small	Small	Small	Small	Small	CO <sub>2</sub> monitoring advances and batteries integrated into infrastructural facilities, leading to increased sales	Growing demand for renewable energy in semiconductor and housing- related businesses	Growing demand for CO <sub>2</sub> monitoring leads to increased sales in semiconductor- related businesses	Growing recognition of value of environmentally conscious products, leading to increased sales
		Strengthening of emissions reduction policies	equipment due to strengthened energy-saving policies	Small	Small	Small	Small	Small	Small	Small	Small	-	-	-	-
Transition risks	Market	Price increases/ decreases for important products	Profitability improvement due to growing market recognition of environmental value of carbon-neutral environmentally compliant products	Small	Small	Medium	Small	Medium	Small	Small	Small	Increased sales with growing environmentally conscious pr		Acceleration of CASE and transition to Smart Cities - Increased sales of semiconductor manufacturing equipment by expansion of AI/IoT - Increased sales by growth in installation number of automotive sensing cameras	Increased sales with growing recognition of value of environmentally conscious products
	Reputation	Changes to consumer behavior	Growth of environmentally conscious purchasing by consumers in response to climate change	Medium	Small	Small	Small	Medium	Small	Small	Small				
		Changes to reputation among investors	Deterioration of reputation among investors and difficulty in procuring funds if climate change countermeasures deemed inadequate	Small	Small	Small	Small	Small	Small	Small	Small	_	_	_	_
		Rise of average temperatures	Increase in expenses due to increase in electricity consumption	Small	Small	Small	Small	Small	Small	Small	Small	Increased sales of batteries	Increased sales of tapes for construction due to growing demand for airtight houses as temperatures rise	resistant in-car camera lens units	Increased sales of sterilization/deodorization
	Chronic	Changes to precipitation/ weather patterns	Frequent damage to business sites due to increased precipitation and flooding	Large	Large	Large	Large	Large	Large	Medium	Medium	used as disaster/emergency power sources	Increased demand for waterproofing tape and increased waterproofing technology-related sales	<ul> <li>Increased sales of systems such as disaster surveillance sensors, surveillance cameras, disaster monitoring systems, and others</li> </ul>	products due to mold growth
Physical		Rising sea levels	Increasing chronic damage to business sites at low altitudes	Small	Small	Small	Small	Small	Small	Small	Small	_	_	_	_
rísks	Acute	Intensification of abnormal weather	Frequent abnormal weather events such as storms cause repeated damage	Large	Large	Large	Large	Large	Large	Medium	Medium	Increased sales of batteries used as disaster/emergency power sources	Increased sales of masking tape and glass protection (anti-shatter) tape for use in disasters	<ul> <li>Increased market share and sales with environmentally resistant in-car camera lens units</li> <li>Increased sales of systems such as disaster surveillance sensors, surveillance cameras, disaster monitoring systems, and others</li> </ul>	Increased disaster- preparedness-related demand

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### Response to Climate Change-Related Risks Based on Climate Change Scenarios

We have considered our response to the risks in the 1.5°C temperature rise scenario from the impact of an increased tax burden due to the introduction of carbon taxes on business. activities. To reduce CO<sub>2</sub> emissions and mitigate the burden of carbon taxes, we will focus on energy-saving activities, solar power generation for in-house use, and the promotion of non-fossil certificates.

To mitigate risks associated with the potential impact on our business by changing consumer behavior, we will continue to provide products and services that help to resolve societal issues through the introduction of environmentally conscious products based on a new set of criteria, which we have set as an action plan.

In the 4°C temperature rise scenario, we anticipate impact from intensified abnormal weather events such as severe storms. To address this risk, we will enhance our business continuity planning to minimize damage and strengthen our resilience against disruptions in our own operations and in our supply chain.

### Response to Climate Change-Related Opportunities Based on Climate Change Scenarios

Based on the climate change scenarios, we believe that many opportunities will arise for products developed through harnessing the Analog Core Technologies of each business unit of Maxell (detailed examples on page 50).

From fiscal 2023, we will be conducting scenario analyses for group companies and overseas factories.

### (3) Risk Management

Maxell evaluates and manages the impact assessment of environmental risks and opportunities related to climate change through its Environmental Committee. When there are risks and opportunities that are considered particularly significant for the entire Maxell Group, the Management Committee deliberates on the assessment results and makes any necessary decisions. When necessary, these matters are further deliberated on by the Board of Directors.

### **Environmental Committee**

The Environmental Committee oversees climate change-related risks, opportunities, and strategies, and manages group-wide progress towards achieving climate change-related targets.

### (4) Metrics and targets

Maxell has set two KPIs as materialities for its initiatives contributing to a carbon-free society.

### Scope 1 and 2 (vs FY2013)



In FY2022, we achieved a 47% reduction (vs FY2013). To achieve its medium- to long-term targets, Maxell is implementing energy-saving measures with a broader and longerterm perspective in its domestic factories (including process improvements and upgrading to high-efficiency equipment) and has formulated a plan for reducing CO<sub>2</sub> emissions through the use of renewable energy (such as solar power and the utilization of nonfossil certificates), and is actively advancing these initiatives.



### Renewable energy ratio

Action Plan	Conserving resources and energy, and promoting the introduction of renewable energy
КРІ	Renewable energy ratio: 15% by FY2030 NEW

We surpassed our KPI of achieving a "renewable energy ratio: 10% by FY2030" in FY2022, due to the introduction of solar power for inhouse use, the utilization of non-fossil certificates and the adoption of green electricity (CO<sub>2</sub>-free electricity). We therefore set a new KPI of achieving a "renewable energy ratio: 15% by FY2030."



### Scope 3

CO<sub>2</sub> emissions from the "Purchased Goods and Services" category account for a large portion of overall emissions and, we are therefore working to ascertain the emissions reduction targets of our major suppliers and collaborating with them on achieving those reductions.

The next in line is the "Use of Sold Products" category, which also accounts for a significant portion of CO2 emissions. We will therefore continue to design and sell energy-efficient products and work towards reducing their emissions.

Maxell has been disclosing Scope 3 emissions in its integrated reports since 2018.

### Integrated Report 2021

https://www2.maxell.co.jp/ir/pdf/MAX\_IR21\_E\_interactive.pdf Integrated Report 2022 https://www2.maxell.co.jp/ir/pdf/MAX\_IR22\_E\_interactive.pdf

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# Maxell's domestic CO<sub>2</sub> emissions reduction targets (Scope 1 and 2)

# Strengthening Group Governance

At Maxell, we are working proactively to generate synergies within the Group through cross-organizational collaboration between business units and operating companies.

Acti

KPI

 

 Action Plan
 Build effective governance in group management (deepen management)

 KPI
 Further strengthen group governance by enhancing activities across the company, and by strengthening the operation of an appropriate management system, etc.

# Internal audits covering all Group companies conducted every other year

At Maxell Group, risks are managed and considered through the Risk Management Committee with the aim of strengthening governance and enhancing corporate value. Additionally, internal audits of all Group companies are conducted every other year.

# 12 Group companies audited in fiscal 2022, necessary improvements to be made within 1 year

As of March 31, 2023, Maxell Group has 4 domestic and 14 overseas consolidated subsidiaries. A breakdown of these companies is provided below. In fiscal 2022, 12 of the companies were subjected to internal audits.

Improvement plans based on PDCA cycles were created in response to the issues identified during these internal audits with the aim of making necessary improvement plans to be implemented within 1 year. Additionally, an Internal Control Committee has been established to conduct regular monitoring of constituent committees. Issues identified during internal audits and issues raised at Internal Control Committee meetings are reported to Board members to facilitate improvements.

### Maxell Group's consolidated subsidiary companies

Business category	China	Domestic	Asia	Europe and Americas
Manufacturing	1	3	2	0
Sales/services	-	3	3	2
Manufacturing/sales	3	_	_	1

See p. 58 for details on information security and the Risk Management Committee

on Plan
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Advancing Development Projects through Company-wide Cross-Functional Organization

Maxell Group is advancing development projects through companywide cross-functional organization that transcends organizational boundaries in order to generate group-wide synergies and expedite the launch of new businesses.

We are preparing new businesses on the way to the next phase  $(2^{nd} \text{ phase})$  of our medium-term management plan, MEX23, as we work towards sustainable growth.

### Group Synergy Networking Event

To promote collaborative development and create new business, Maxell is working to enhance intergroup interactions with efforts led by the New Business Producing Division. This involves the sharing of core technologies, development themes, and challenges between Maxell and each group company.

At a networking event held at Maxell Kureha, participants shared information on business development approaches and held in-depth discussions on core technologies as a way to explore synergies that can accelerate business.



arge heat press facility

### Maximize synergies through Maxell Innovation activities (companywide initiatives to create innovation)

Since fiscal 2019, Maxell has been implementing a project called Maxell Innovation, which is aimed at sustained creation of new businesses. The project involves soliciting ideas and business proposals from employees, subjecting them to an evaluation and selection process, and promoting the creation of new businesses.

In fiscal 2022, Maxell held a new-business-proposal pitch contest, involving various internal and external training and activity program teams.

### TOPICS

ies

# Holding pitch contests aimed at maximizing technology integration and synergies

About 100 proposals have been gathered through the contests so far. These will be brushed up and nurtured into future businesses.

### Aims

- Nurturing the ability of personnel to discover new business ideas
- Creating new businesses by combining and integrating core technologies
- Searching for proposals that can be developed into businesses on the way to 2030



A proposal pitch contest

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Consolidation and Enhancement of Sales Force

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One of Maxell Group's basic management policies is to pursue medium- to long-term enhancement of corporate value by implementing management measures from the perspective of all stakeholders, including shareholders, investors, customers, and employees. Under this policy, we are striving to strengthen corporate governance by simultaneously accelerating management decision-making and business execution, and by enhancing the monitoring system.

### **Corporate Governance System**

### Corporate Governance Organizational Chart

### Management structure

The Board of Directors of the Company is responsible for establishing group-wide management policies and medium- to long-term business strategies. It is also responsible for overseeing the execution of duties by directors and executive officers and the execution of operations by operating companies. The Board of Directors is chaired by the President and Representative Director. and as of June 23, 2023, it consisted of 8 members, including 3 outside directors.

As a "Company with an Audit and Supervisory Committee," since June 2016, we have been working to strengthen the audit and supervisory functions of the Board of Directors through an independent Audit and Supervisory Committee. In addition, the "Nomination and Remuneration Committee," the majority of whose members and the chairperson are independent outside directors, has been established as an advisory body to the Board of Directors with the aim of ensuring objectivity and transparency in the determination of matters related to the nomination and compensation of directors, and working to improve the effectiveness of the Board of Directors' supervisory functions.

We also adopt an executive officer system to facilitate prompt decision-making and more efficient management with regard to business execution.

### **Corporate Governance Guidelines**

In order to achieve sustainable growth and increase corporate value at Maxell Group over the medium- to long-term, we have established "Corporate Governance Guidelines,"\* which define our basic approach and basic policies on corporate governance. We will strive to ensure appropriate information disclosure and transparency, appropriately fulfill the roles and responsibilities of the Board of Directors, and further invigorate constructive dialogue (engagement) with shareholders and investors.

\* Corporate Governance Guidelines: https://www2.maxell.co.jp/ir/governance/



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### Appointment of Directors, and Ensuring Diversity

### **Appointment of Outside Directors**

The Company secures its management oversight system as a result of appointing outside directors who express their opinions to the Board of Directors from an independent and objective standpoint.

### Reasons for Appointment as Outside Directors

### Name Reasons for Appointment As a lawyer specializing in corporate legal affairs, Ms. Sachiko Murase has a wealth of expertise and a high level of professional knowledge. In addition to her experience as an outside officer at listed companies, since being appointed as a director at the Company she has been committed to Sachiko Murase providing valuable advice at Board of Directors' meetings. Accordingly, she is expected to continue to contribute to sustaining and strengthening the Group's growth strategies, corporate governance, and risk management. Mr. Kazuhiro Aigami has served as the Representative Director for JVCKENWOOD Corporation and in other important posts, and thus has a wealth of management experience, as well as extensive insight into global sales and marketing strategies. Accordingly, he is expected to contribute to Kazuhiro Aigami sustaining and enhancing Maxell's global business strategies and governance by providing his advice and recommendations regarding the Company's overall management. Mr. Kazuyoshi Hata has served as a Senior Executive Officer at Konica Minolta, Inc., and in other roles, and as such, he not only has a proven track record and vast experience in business management and business reforms, but also a wide range of insight stretching from the technology Kazuyoshi Hata arena through to the management planning arena. Accordingly, he is expected to contribute to sustaining and enhancing Maxell's business strategies and governance in new business fields by providing his advice and recommendations regarding the Company's overall management.

Note: The Company has appointed the three outside directors – Sachiko Murase, Kazuhiro Aigami, and Kazuyoshi Hata – as independent officers based on the standards defined by the Tokyo Stock Exchange, and has submitted notification of this to the Exchange.

### Status of Outside Directors' Activities (April 1, 2022 - March 31, 2023)

Name		Status of Activities				
	Attendance at	Status of comments at Board of Directors' meetings He comments appropriately based on his specialist perspective concerning management as a whole.				
Kazuaki Tsutsumi	Board of Directors' meetings: Attended 13 of 13 meetings	Overview of duties carried out in connection with the role expected to be fulfilled by outside directors He actively points out challenges extending across management as a whole and makes recommendations conducive to enhancing corporate value, based on his wealth of experience at, and broad-ranging insight into, global companies and investment funds.				
Sachiko Murase	Attendance at Board of Directors' meetings: Attended 16 of 16 meetings	Status of comments at Board of Directors' meetings         She comments appropriately based on her specialist perspective on corporate legal affairs as an attorney.         Overview of duties carried out in connection with the role expected to be fulfilled by outside directors         She actively points out challenges relating to corporate governance and makes recommendations conducive to enhancing corporate value, based on the high level of expertise she has cultivated as an attorney. She also provides beneficial advice on empowering female employees.				
Kazuhiro Aigami	Attendance at Board of Directors' meetings: Attended 13 of 13 meetings Audit and Supervisory Committee meetings: Attended 13 of 13 meetings	Status of comments at Board of Directors' meetings and Audit and Supervisory         Committee meetings         He comments appropriately based on his specialist perspective concerning management as a whole.         Overview of duties carried out in connection with the role expected to be fulfilled by outside directors         He actively points out challenges relating to global management and makes recommendations conducive to enhancing corporate value, based on his wealth of experience and broad-ranging insight as a businessman. In addition, as Chairman of the Nomination and Remuneration Committee, which considers the personnel system and remuneration of the Company's senior management, he actively makes recommendations on the structuring of the Company's executive and remuneration systems, from an objective standpoint.				
Kazuyoshi Hata	Attendance at Board of Directors' meetings: Attended 13 of 13 meetings Audit and Supervisory Committee meetings: Attended 13 of 13 meetings	Status of comments at Board of Directors' meetings and Audit and Supervisory Committee meetings         He comments appropriately based on his specialist perspective concerning management as a whole.         Overview of duties carried out in connection with the role expected to be fulfilled by outside directors         He actively raises points concerning business reforms and growth strategies and makes recommendations conducive to enhancing corporate value, based on his wealth of experience and broad-ranging insight as a businessman. In addition, as a member of the Nomination and Remuneration Committee, which considers the personnel system and remuneration of the Company's senior management, he actively makes recommendations on the structuring of the Company's executive and remuneration systems, from an objective standpoint.				

Note: Kazuaki Tsutsumi retired after the end of his term of office at the end of the 77th General Meeting of Shareholders held on June 23, 2023.

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### Directors' Skills Matrix

	Position at the Company	Experience and Expertise									
Name		Business Portfolio Management	Global Business	Sales & Marketing	New Technology Creation	Production Improvement	Finance	Legal Affairs & Compliance	ESG		
Keiji Nakamura	President and Representative Director	0			0	0			0		
Hiroyuki Ota	Director	0			0	0			0		
Shinichiro Takao	Director		0	0					0		
Noritoshi Masuda	Director		0				0	0	0		
Sachiko Murase	Outside Director							0	0		
Hiroyuki Suzuki	Director (Full-time Audit and Supervisory Committee member)		0				0	0	0		
Kazuhiro Aigami	Outside Director (Audit and Supervisory Committee member)	0	0	0					0		
Kazuyoshi Hata	Outside Director (Audit and Supervisory Committee member)	0			0	0			0		

### **Remuneration for Directors**

### **Basic Policy**

- 1. We will adopt a remuneration system that meets the mandates of stakeholders and contributes to sustainable growth and enhancement of corporate value.
- 2. We will set up remuneration that enables the recruitment of diverse and competent human resources who are responsible for Group management.
- 3. From the viewpoint of accountability, we will design a system that emphasizes transparency, objectivity, and rationality.

### **Determination Policy**

The appropriateness of the policy for determining directors' remuneration is discussed at the Nomination and Remuneration Committee, an advisory body to the Board of Directors, in which the majority of members and chairperson are independent outside directors, and the policy is decided at the Board of Directors based on the committee's recommendations.

### **Remuneration Structure**

Remuneration for directors (excluding outside directors and directors who serve as Audit and Supervisory Committee members) consists of a fixed monthly "base remuneration" (monetary remuneration), "bonuses" (monetary remuneration) to be paid as short-term incentives, and "share-based remuneration" to be paid as medium- to long-term incentives.

### Directors' Remuneration for Fiscal 2022

Classification	Number of Directors to be Paid	Total Remuneration (million yen)
Directors (excluding directors who serve as Audit and Supervisory Committee members and outside directors)	5	96
Directors who serve as Audit and Supervisory Committee members (excluding outside directors)	1	20
Outside directors	5	26

Classification	Type of Remuneration	Summary			
	Base remuneration	A fixed amount is paid monthly in accordance with the position and responsibilities.			
Directors (excluding outside directors and directors who serve as Audit and	Short-term incentives (bonuses)	In the interest of achieving single-fiscal-year performance targets, bonuses will be paid in June or July of the following fiscal year in an amount calculated in the range of 0% to 200% of the standard amount for each position according to the degree of achievement of company-wide performance (operating profit, ROIC, and ROE) and individual performance (track record in addressing management issues), for the relevant fiscal year.			
Supervisory Committee members)	Medium- to long-term incentives (share-based remuneration)	As a performance-linked stock grant trust system aimed at sustainable performance improvement in the medium- to long-term and maximizing corporate value, points will be granted in June or July of the following fiscal year, which will be calculated in the range of 0% to 200% according to the degree of achievement of performance (ROIC) during the term of office, and the shares will be granted at the time of retirement, according to the relevant points.			
Outside directors/directors who serve as Audit and Supervisory Committee members	Base remuneration	As their position is independent from business execution, their base remuneration consists only of the monthly fixed base remuneration.			

### Definitions of Skills (Experience and Specialties)

 Business Portfolio Management: Business management experience at a domestic listed company with multiple businesses or at a global company

• Global Business: Experience in overseas business management and extensive knowledge of overseas culture and business environments

• Sales & Marketing: Extensive knowledge in the area of sales and marketing, and experience as a leader in the area

• New Technology Creation: Management experience and extensive technological knowledge as a leader in charge of promoting new technology creation (innovation)

 Production Improvement: Extensive knowledge in the area of manufacturing, including productivity improvement and cost reduction, and experience as a leader in the area • Finance: Extensive knowledge in the area of corporate finance, and experience as a leader in the area

· Legal Affairs & Compliance: Extensive knowledge in the area of legal affairs and compliance, and experience as a leader in the area

• ESG: Extensive knowledge in the area of ESG, and experience as a leader in the area

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### Assessment of the Effectiveness of the Board of Directors

Based on the Corporate Governance Guidelines, the Company regularly evaluates the effectiveness of the Board of Directors, with the aim of increasing the effectiveness of the Board of Directors and enhancing corporate value.

For fiscal 2022 as well, we analyzed and evaluated the effectiveness of the Board of Directors as follows.

# 1. Methods of analysis and evaluation related to the effectiveness of the Board of Directors

An anonymous survey of all directors regarding the following items was carried out, and based on the outcome of an external agency's tabulation and analysis of those survey results, the effectiveness of the Board of Directors was analyzed and evaluated at the Board of Directors, and ways to respond going forward were considered.

- Board of Directors' structure
- Board of Directors' effectiveness
- Effectiveness of appointment and remuneration systems for directors and executives
- Board of Directors' management
- Personal evaluation
- Structure of support and cooperation by outside directors
- Roles of Audit and Supervisory Committee members, and the expectations placed on them
- Relationship with shareholders and other stakeholders

\*The evaluation covers the same items covered in fiscal 2021 in order to make the results comparable with the results of the fiscal 2021 evaluation.

# 2. Outline of analysis and evaluation results related to the effectiveness of the Board of Directors, and responses going forward

The Board of Directors of the Company recognizes that it is undertaking appropriate discussions based on the mutual understanding of directors regarding the roles and responsibilities that the Board of Directors should perform. In addition, with regard to establishing successor development plans, which emerged as an issue in fiscal 2021, the Board of Directors recognized that the established plans would need to be continuously monitored.

On the other hand, the Board of Directors reacknowledged that deepening medium- to long-term strategic discussions at the Board of Directors, and examining agenda items that are aligned with objectives of the Board of Directors, are the matters that need to be continuously addressed going forward. Based on the analysis and evaluation results, the Board of Directors of the Company will concentrate on addressing the abovementioned issues, and will strive to further improve its effectiveness.

### **Enhancing Internal Control Systems**

Maxell Group has established the Internal Control Committee to ensure and strengthen the effectiveness of corporate governance, toward enhancing the corporate value of the Group as a whole and achieving management objectives.

Through the Committee's activities, we are striving to improve the management system and to strengthen the functions of the Group as a whole, including compliance and risk management, thereby enhancing our internal control systems.

### Organizational Structure of Maxell Group's Internal Control Systems



### Strengthening Compliance and Fostering Ethical Awareness

### **Compliance System**

Maxell Group established the "Maxell Group Code of Conduct," which is shared and applied within the Group, in order to realize its fundamental philosophy of "ensuring fair and transparent corporate activities," and is constantly working to strengthen its compliance system. Specifically, we have established a Compliance Management Committee, which is working to establish a system to strengthen compliance within the Maxell Group. The Compliance Management Committee is chaired by the director in charge of risk management, and is composed of the directors and executive officers in charge of the sales, procurement, development, finance, general affairs, and IT departments, along with the heads of the legal and internal auditing departments. In addition, the committee meets regularly (2 times or more per year) with the president and the director who serves as full-time Audit and Supervisory Committee member attending as observers. The Compliance Management Committee deliberates and decides on policies for responding to issues that need to be addressed, such as issues related to compliance promotion activities and corporate ethics activities, including education; issues that audits, etc., of business divisions and Group companies inside and outside Japan have demonstrated; and matters related to compliance violations. It reports on the outcomes of its activities.

The Compliance Management Committee also sets outs a compliance program that employees should engage in on a daily basis, chiefly from the standpoints of "preventing violations of competition laws," "preventing bribery" and "preventing anti-social trading," and it holds regular audits to confirm the state of that program's implementation. The Committee carries out audits by making on-site visits to each business division and Group company within Japan once a year, and to Group companies overseas once every two years. It uses these visits to confirm the content of various ledgers and work-related emails, and to confirm the presence or absence of contact with rival companies and/or civil servants through interview-based hearings.

Meanwhile, since 2016 the general managers of each business division and the presidents of each Group company have been designated as their respective division and company's compliance promotion officers, and simultaneously, the compliance promotion officers assigned to each business division and each Group company have been positioned as secretariats. The compliance promotion officers are responsible for making known and implementing decisions pertaining to compliance made by the Compliance Management Committee, at the respective business divisions and Introduction

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Group companies they are in charge of, and also have a duty to take appropriate steps, such as by setting out business procedures for preventing compliance violations by disseminating compliance awareness among employees.

The status of the Compliance Management Committee's activities outlined above is reported at the Board of Directors once a year, via the Internal Control Committee, which oversees the activities of all the committees in Maxell Group.

### Anti-Bribery

Up to now, Maxell Group has also been implementing initiatives concerned with the prevention of bribery in relationships with civil servants as well as non-civil servants. Furthermore, in October 2021, the "Maxell Group Anti-Bribery Guidelines" were established with the aim of continuing to maintain fair relationships with society by complying with applicable bribery-related laws and regulations in all countries and areas related to Maxell Group's business activities, and acting in a highly ethical manner. These Guidelines include eight specific action guidelines, such as prohibiting facilitation payments, and all employees at Group companies inside and outside Japan have studied the content of the Guidelines through e-learning or other platforms (3,561 employees have participated).

In addition, by conducting on-site interviews and by confirming the content of accounts and ledgers in the regular audits of Group companies inside and outside Japan, checks are made regarding whether or not activities are violating these Guidelines. We will continue working to prevent corruption in all forms, including bribery, in the future as well.

### Export Control

With regard to Security Export Control, the Export Control Committee carries out accurate compliance determination, and undertakes rigorous application and user screenings (Catch-all Control screenings), in order to prevent the diversion of Maxell's products to weapons of mass destruction and conventional weapons, and ensure compliance with relevant laws and regulations.

In November 2014, we acquired a Special General Bulk Export License,\* and will continue to work on responsible self-management.

\* Special General Bulk Export License: A system under which a company submits its internal export control rules and related information to the Ministry of Economy, Trade and Industry (METI). Provided METI recognizes that the company in question is carrying out appropriate export control, it provides the company with a bulk license for a combination of specific destinations and items that would otherwise require individual licenses.

# Establishment of an Internal Reporting Desk Independent from the Management

Maxell Group has established the "Maxell Compliance Helpline" as an internal reporting system that can be utilized by employees of the Group, and is enhancing its capacity for in-house "self-cleansing" by ensuring that it becomes aware of any illegal and fraudulent activities promptly. In addition, in order to promote compliance management, we have also established a whistle-blowing hotline to an attorney who is independent of the management, as a contact point for cases that are difficult to investigate internally. Furthermore, the internal reporting system stretches globally – we have already established a dedicated contact point that allows employees of overseas Group companies to report directly in their own language.

Incidentally, there were 13 cases of internal reports in fiscal 2022, but no reports concerning major legal violations, etc.

### Respect for Human Rights

Maxell Group recognizes respect for human rights as one of its key management issues. In September 2013, we formulated the "Maxell Group Human Rights Policy" based on the International Bill of Human Rights and the International Labour Organization (ILO)'s Declaration on Fundamental Principles and Rights at Work. In an effort to raise awareness of respect for human rights among all employees, we continue to conduct training at each employee level, and education through e-learning, every year.

In addition, as one part of our efforts to address harassment, consultants selected by both labor and management have been assigned to each business site, and awareness-raising activities are being conducted to maintain and strengthen internal systems and prevent harassment, such as by making the internal whistleblowing system well known within the Company.

### Implementing Compliance and Ethics Education

Compliance and ethics education activities covering all Group employees (including temporary employees and part-timers) Since 2009, Maxell Group has designated October of each year as

"Corporate Ethics Month," and it carries out Corporate Ethics Month activities globally with the aim of becoming a model company that is trusted by society in all its company activities in regions worldwide, as a result of Maxell Group employees executing sincere and fair business, protecting the environment, ensuring sound relationships with society, civil servants, etc., respecting human rights, and ensuring good workplace environments that are free from power harassment and sexual harassment. More specifically, we distribute the President's compliance message in the local language of each country, and we also hold e-learning courses, "workplace discussion meetings" that bring together employees to hold discussions on an individual workplace basis, and "compliance lectures" to which external lecturers are invited, on themes such as "preventing violations of competition laws," "preventing bribery," "preventing anti-social trading," and "preventing insider trading," and attendance records are kept.

As a new initiative in fiscal 2022, we distributed a "compliance card" for employees. Employees can use the internal reporting contact points printed on the cards, and can also refer to the "Maxell Group Code of Conduct" on their smartphones and other devices by following a URL (via a QR code).

### Compliance education as one part of hierarchical training

Compliance education tailored to employment posts is held for new employees, for newly-appointed managers newly taking on a managerial position, and for all managers/senior managers. Additionally, compliance education that involves direct lectures by attorneys or other external experts is held for executive officers, who are the Company's top management.

Number of employees who participated in compliance education and activities held in Japan over the past 3 years (total number of people)

	FY2020	FY2021	FY2022
e-learning	7,504	6,629	7,344
Ethics Month "workplace discussions"	4,131	3,226	3,158
New distributions of compliance cards	_	_	3,622
Hierarchical training (managers/senior managers, newly appointed managers, new employees, others)	72	281	305
Training for executives	34	23	33
Total	11,741	10,159	14,462

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Number of employees who participated in compliance education and activities held overseas over the past three years (total number of people)

	FY2020	FY2021	FY2022
Americas	117	81	74
Europe	129	114	104
Asia	1,238	1,742	1,716
Total	1,484	1,937	1,894

### **Risk Management**

Maxell Group identifies and reviews company-wide risks, designates departments responsible for managing each risk item, and decides on and manages response policies.

The Risk Management Committee convenes once a year and makes decisions on important risk management matters related to strategy, finance, hazards, and operations, and summarizes each risk management activity. The results are then reported to the Internal Control Committee.

### Maintaining Information Security

Maxell Group has set out an "Information Security Policy" and is thoroughly implementing rules, systems, and safety measures related to security. We are also conducting thorough employee education to raise the security awareness of each and every employee. In addition to annual education on information security and personal information protection, we also regularly conduct "targeted e-mail drills" as training for cyberattacks. We also acquired "PrivacyMark" certification as a way of thoroughly protecting personal information, and continue to keep that certification updated and current.

With cyberattacks growing more diverse recently, we are also working on strengthening our security measures.

### Promoting the Business Continuity Plan

Maxell Group is working to strengthen its business continuity plan in order to reduce the risk of business interruptions arising from large-scale disasters, such as earthquakes, and accidents.

In addition to establishing an employee safety confirmation system, we have formulated initial action plans and business recovery plans for emergencies, and in order to ensure the execution of these plans, we conduct training at each business site in anticipation of large-scale disasters. Furthermore, in order to respond to contingencies at our business partners, we are making steady progress in developing a database that includes information

### Risk Management System

measures

Report			
Risk Management C	Committee		
Chairperson/ Person responsible for risk management	Directors		
Committee members	Directors/executive officers		
Strategic risk			
Financial risk			
Hazard risk			
Operation risk	Respective person responsible		
Internal Auditing Office			
Secretariat			

implementation of measures

Business divisions and he	adquarters	
Energy Division		
Functional Materials Division		
Optics & Systems Division		
Life Solution Division		
New Business Producing Division		
Sales & Marketing Division		
Corporate Strategy Division		
Corporate Communications Division		
China Strategy Division		
Monozukuri Division	Person	Person in charge of
Quality Assurance Division	responsible	promoting risk
Procurement & SCM Division		analysis
IP Innovation Division		
IT Management Department		
Asset Facilities Department		
Finance & Accounting Department		
Human Resources & General Affairs Department		
Export Control Department		
Legal Department		
Internal Auditing Office		

on the locations of our primary to secondary suppliers. At the Group's overseas sales and manufacturing sites, we formulate and operate overseas crisis management manuals to ensure thorough crisis management, including with regard to terrorism and other unstable situations

Going forward, the Group will work to minimize all risks facing its entire workforce while also making improvements, including in its responses when emergencies strike.

### Global Tax Policy (published on October 1, 2021)

As a global company, Maxell Group believes paying tax correctly is an important part of its contribution to society and local communities overseas.

Maxell Group publishes its "Global Tax Policy,"\* which covers "Governance and risk management," "Compliance and reporting," and "Arranging our taxes," in the interests of enhancing the transparency of the Group's governance regarding its tax affairs. The Global Tax Policy's content satisfies the disclosure requirements in the countries in which Maxell Group operates businesses.

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\* Global Tax Policy: https://www2.maxell.co.jp/corporate/taxpolicy.html

### Participation in the United Nations Global Compact

Maxell Group supports the United Nations Global Compact. We support the 10 principles of human rights, labor, environment, and anti-corruption, and are engaged in activities in each field.

Please refer to the Corporate Governance Report for detailed information such as the implementation status of the Corporate Governance Code. https://www2.maxell.co.jp/ir/governance/

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# Board of Directors (as of October 1, 2023)

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### Directors

Apr. 1990 Joined the Company



(incumbent)



Jul. 2014 Executive Officer of the Company Oct. 2017 Executive Officer of Maxell, Ltd.\* Apr. 2018 President and Representative Director of Maxell, Ltd.\* Jun. 2018 Director of the Company Jun. 2020 President and Representative Director of the Company





Apr. 1983 Joined the Company Apr. 2007 General Manager, Production Engineering Division,

- Development & Technology Group of the Company
- Jan. 2013 General Manager, Corporate Strategy Division of the Company
- Jul. 2013 Deputy General Manager, Optronics Division of the Company
- Apr. 2016 Executive Managing Director, Hitachi Joei Tech Co., Ltd. (currently Maxell Frontier Co., Ltd.) Deputy General Manager, Optronics Division of the Company
- Apr. 2019 General Manager. Optronics Division of Maxell. Ltd.\*
- Oct. 2021 General Manager, Optics & Systems Division of the Company Apr. 2022 General Manager, Monozukuri Division; and General Manager,
- Quality Assurance Division of the Company Jun. 2022 Director of the Company (incumbent)
- Apr. 2023 General Manager of Monozukuri Division; General Manager, Quality Assurance Division; and General Manager, Energy Division of the Company (incumbent)



Director

\*Refers to the operating company "Maxell, Ltd." under the holding company structure in place from October 1, 2017, to September 30, 2021.

Apr. 1991 Joined the Company Dec. 2006 BtoB Sales & Marketing Manager, Maxell Corporation of America Apr. 2014 Senior Manager, Micro Battery Sales Department, Energy

Division of the Company Apr. 2016 Managing Director and General Manager, Maxell Taiwan,

Oct. 2018 President, Maxell Asia, Ltd.

Apr. 2021 General Manager. Energy Division of Maxell. Ltd.\*

Oct. 2021 General Manager, Energy Division of the Company Apr. 2023 Executive Officer of the Company

Jun. 2023 Director of the Company (incumbent)

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Apr. 1987 Joined the Company Oct. 2017 General Manager, Finance Department of the Company, and Deputy General Manager and Senior Manager, Finance & Accounting Department of Maxell, Ltd.\* Apr. 2019 Executive Officer and General Manager, Finance Department of the Company, and Director and Senior Manager, Finance & Accounting Department of Maxell, Ltd.\* Jun. 2019 Director and General Manager, Finance Department of the

Company Oct. 2019 Director of Maxell. Ltd.\* Director of the Company (incumbent)



Sep. 2008 Registered as lawyer Joined SEIWA MEITETSU LAW OFFICE Nov. 2015 Outside Audit & Supervisory Board member of BUNKYODO

- Group Holdings Co., Ltd. (incumbent) Sep. 2018 Joined Kudanzakaue Law Office (incumbent)
- Jun. 2019 Outside Audit & Supervisory Board member of NICHIAS Corporation (incumbent)
- Jun. 2020 Director of the Company (incumbent) Mar. 2021 Outside Director of Roland Corporation

Apr. 1995 Joined NICHIHA Corporation

Outside Director

Hiroyuki Ota

Director

Directors who serve as Audit and Supervisory Committee members



Hiroyuki Suzuki

Director

Noritoshi Masuda

Director

- Apr. 1983 Joined the Company Jun. 2008 Deputy General Manager, Finance & Accounting Division of
  - the Company Apr. 2018 Executive Officer of the Company and Director of Maxell, \* htl
  - Apr. 2019 Auditor of Maxell, Ltd.\*
  - Jun. 2020 Director (Full-time Audit and Supervisory Committee member) of the Company (incumbent)



Outside Director



Apr. 1990 Joined Kenwood Corporation (currently JVCKENWOOD Corporation)

- Apr. 2007 General Manager, Communications Division of Kenwood Corporation
- Jun. 2007 Managing Operating Officer of Kenwood Corporation Jun. 2008 Director of the Board and Senior Managing Operating Officer
- Kenwood Corporation
- Jun. 2010 Director of the Board and Senior Vice President & Executive
- May 2011 Director of the Board and Senior Executive Vice President &
- May 2014 Representative Director of the Board and Executive Officer, Regional CEO (Americas) of JVCKENWOOD Corporation
- Jun. 2016 Representative Director of the Board and Executive Vice President, COO (Public Service Sector and Americas) of
- JVCKENWOOD Corporation
- Jun. 2022 Director of the Company (incumbent)



- - Apr. 2018 Senior Executive Officer, General Manager of Management Planning Division, and Head of Kansai Branch, responsible for Investor and Public Relations, of Konica Minolta, Inc.

Division of Konica Minolta Holdings, Inc. (currently Konica

Administration Headquarters of Konica Minolta Medical &

Apr. 2020 Advisor of Konica Minolta, Inc.

Apr. 1981 Joined Minolta Camera Co., Ltd.

Minolta, Inc.)

Graphic, Inc.

Minolta. Inc.

Konica Minolta, Inc.

Jun. 2022 Director of the Company (incumbent)



### Kenichi Sano Noriyoshi Bito

Kazuhiro Aigami

- of Kenwood Corporation Jun. 2009 President and Representative Director of the Board of
  - Director of the Board of JVCKENWOOD Holdings, Inc.
  - Officer of JVCKENWOOD Holdings. Inc.
- Executive Officer of JVCKENWOOD Holdings. Inc.

Outside Director





# Outside Director Roundtable Discussion

# Expectations for Increased Innovation through Active Delegation of Authority to Executive Side and Rotation of Personnel



Kazuhiro Aigami Outside director Kazuyoshi Hata Outside director Sachiko Murase

### Proposal Aimed at Enhancing the Effectiveness of the Board of Directors

**Murase:** Some companies have a one-sided approach where outside directors ask questions, and inside directors provide answers during Board meetings. At Maxell, however, there is a lot of input from internal directors, and there is active exchange of opinions based on overall management considerations.

We also hold our own informal outside

director meetings once a month to engage in frank discussions about Maxell's issues from an external perspective. Even if there are outside director personnel changes, these meetings help ensure each outside director is informed to the same degree and they help to build trusting relations, and this in turn helps to invigorate Board discussions.

**Aigami:** I believe that my role as an outside director is to focus on two key areas: monitoring and strengthening governance to prevent corporate misconduct, and enhancing longterm corporate value, competitiveness, and social value. I believe that more detailed operational matters should be delegated to the executive side and discussed at meetings of the Management Committee. This would enable the Board of Directors to concentrate on monitoring to prevent misconduct and deepening its discussions relating to medium- to long-term corporate value enhancement. That approach would ultimately increase the effectiveness of the Board of Directors.

Currently, more than half of the matters discussed at Board of Directors meetings pertain to operational decisions. Reducing that to between 20% and 30% and increasing the weighting of monitoring and oversight matters to between 70% and 80% would be ideal. **Hata:** I strongly believe that providing a clear and specific long-term vision for the Group is one of the most crucial tasks for us. I'd like to engage in extensive discussions on this matter at Board of Directors meetings and we intend to provide strong backup support.

This is another reason why delegating authority from the Board of Directors to the executive side is so important. At the same time, on the executive side, delegating authority from management executives down to senior managers, and creating a system where senior managers have to carefully consider issues to make decisions and take responsibility for them, will also contribute to the development of future candidates for leadership roles. **Aigami:** Maxell is a "Company with an Audit and Supervisory Committee" which allows

and Supervisory Committee," which allows for significant delegation of authority for important executive decision-making from the Board of Directors to executive directors. This is a significant advantage. Mr. Hata and I, as Audit and Supervisory Committee members with the authority of directors, have decisionmaking powers, providing us with flexibility in strengthening monitoring processes. **Hata:** In our monitoring activities, we pay close attention to maintaining a balance between "acceleration" and "braking" within Maxell's governance. When it comes to governance and risk management, it's easy to end up focusing solely on applying the brakes. However, when moving to seize opportunities, it's crucial to take appropriate risks and step firmly on the accelerator to get ahead.

**Murase:** At Board of Directors meetings, there are discussions, decisions, and reports on a large number of topics, so the amount of time for free discussion is limited. From fiscal 2023, we've been trialing a separate forum for officers to gather and engage in open discussions on broader themes from a long-term perspective and we have high hopes for this initiative.

### Materialities, Action Plans, and KPIs

Murase: In fiscal 2021, we set seven materialities and 20 action plans, and in fiscal 2022, we set KPIs for each of them. This was a significant step, and working together towards achieving these as "One Maxell" will be crucial. While KPIs are essential for enhancing the effectiveness of efforts to address materialities, we have also received reports suggesting that some KPIs need to be revised to make them more appropriate. We aim to engage in monitoring to ensure that employees can remain actively aware of Maxell, Ltd. Integrated Report 2022

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materialities and KPIs as they go about their daily tasks. Additionally, based on regular progress reports on these initiatives, we plan to make necessary adjustments as required, with the goal of enhancing their effectiveness. **Hata:** Some of our KPIs and KGIs need a little more fine-tuning, including adjustments to their time frames, and it's crucial that we constantly review them. I think we ought to continue to make adjustments as needed.



### Expectations for Maxell Over the Medium- to Long-Term

Aigami: In terms of my expectations for management, first and foremost, I'm hoping for the construction of a system for an improvement in the agility of business execution. This will involve identifying matters for resolution that can be delegated from the Board of Directors, and setting up a system where directors with executive responsibilities and executive officers can swiftly make decisions and execute these tasks. The next step is to then further advance the delegation of authority to corporate officers and department and section managers. I would like to monitor this system to verify that it's operating smoothly.

Secondly, I believe we should deepen discussions aimed at accelerating the achievement of results in line with the growth strategy. It's crucial to encourage interaction among individuals within and across business divisions to create more synergies. While Maxell has previously engaged in M&A involving companies in other industries, I would like management to explore the potential for growth in collaboration with other companies in the same industries as our four business divisions, as this may make it easier to generate synergies.

Thirdly, I believe there are situations where top-down directives are also necessary. While respecting the decisions of our business divisions is important, there are initiatives where growth has lagged behind. Striking a balance between speed and respecting business division judgments is crucial.

**Murase:** Regarding our growth strategy, there are areas where we haven't been growing in line

with targets in our medium-term management plan MEX23, and achieving our targets in those areas won't be straightforward. We have advanced technical capabilities even from a global perspective, but these capabilities aren't necessarily all translating into profits. At Board of Directors meetings, I would like to discuss, over the medium- to long-term, how to leverage our strengths to enhance corporate value. It's vital that we address concrete issues while never losing sight of where we want the Group to be heading, and adapt to societal changes as needed, patiently cultivating areas where we ought to be pursuing further growth. Hata: Growth requires innovation. Innovation isn't just about inventing new technologies or launching new businesses; it also involves identifying the fundamental needs of customers and markets and combining the technologies we already possess to provide solutions. Innovation and the creation of new value become possible when there's cross-organizational communication and collaboration, with multiple departments working together to tackle the same challenges. While it may take time, it's essential to implement active personnel rotation, providing each employee with experience across a variety of different businesses.

I recently attended an R&D presentation event for employees held at the Kyoto Head Office. It was a great initiative that enhanced employees' understanding of the activities of other business units. I'd like to see more opportunities like that being provided in the future.

**Aigami:** We have set "Creating human resources and organizations that generate value" as a materiality. Employees can become complacent if they stay in the same department for a



long time, making it challenging to spark the chemistry between different business divisions to be catalyzed by employees. It's essential to encourage active interaction and idea-sharing between business divisions including those on the corporate side.

An issue with our overseas bases is the lack of local staff in president and director roles. Instead of issuing directives from Japan, involving local staff in management and encouraging them to contribute ideas from their perspective will lead to more global growth.

**Murase:** Enhancing cross-organizational collaboration with the involvement of our overseas operations is crucial. While we've seen some cross-organizational efforts in manufacturing and sales gradually emerging, we need to pick up the pace. We need to leverage our Analog

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Core Technologies, which are our strengths, and

combine them in order to make proposals with

higher added value. Ensuring that we live up to

the brand slogan "Within, the Future - the future

is within" is the key to realizing Maxell's medium-

to long-term value enhancement and contributing

to a sustainable society.

Their slogan is "companies and workplaces

in a wide range of different initiatives.

where everyone can thrive" and they're involved

The passion of younger employees about

their vision for Maxell 10 or 20 years from now is a source of growth for the Group. I have

great expectations for their efforts to promote

the active participation of women in Maxell's

workplaces and I would also like to contribute to

those efforts through dialogue with employees.

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### Nurturing Future Leaders

Hata: The rotation of employees is also crucial from the perspective of nurturing future candidates for executive roles. Gaining experience in different departments and overcoming challenges and difficulties leads to significant personal growth. Over the past year, the executive leader development program has been enhanced, and we'd like to monitor progress and provide recommendations to ensure that the mechanisms for nurturing executive candidates are functioning effectively. Aigami: The training of young employees to

Aigami: The training of young employees to groom future leaders is crucial, and I'd like to provide advice in this regard.

President Nakamura, Mr. Hata, Director Hiroyuki Suzuki, and I have been actively involved in discussions in the Nomination and Remuneration Committee. I would like, however, to engage in discussions with others beyond our current circle, including directors other than the president, corporate officers, and general managers, whom I haven't yet had opportunities to meet with, to hold discussions concerning future leaders.

**Murase:** Maxell is a Group that values its employees highly, and the nurturing of future leaders is positioned as an important management issue. We intend to monitor the executive leader development program to ensure its effectiveness in nurturing future leaders, along with other personnel development strategies.

What's important is that employees who've participated in the executive leader development program can feel their growth and are actively and vibrantly contributing. When other employees

are inspired by their progress, aspire to reach the same stage, and also seek out a career path towards leadership, that in turn contributes to the sustainable growth of the Group. Aigami: It appears in general that younger employees have recently tended to be less eager to advance up the ladder after witnessing the struggles of older employees. However, I'm expecting Maxell to become a pioneer with a positive culture where younger employees can see that dreams can come true. When I visit Maxell's workplaces, I encounter a lot of diligent and optimistic employees. Providing more opportunities for young employees to voice their opinions would be a good way to draw on their energy.

Hata: I've heard that the president also visits workplaces around Japan to engage in dialogue with employees. I think that is a great approach that enables the president to share the company's policies and mission with employees, gain a better understanding of how younger employees feel about their work, and give employees opportunities to get closer to the president and talk directly with him.

It would also be good if employees, in turn, eagerly create their own visions for the future and management actively incorporates their ideas. While there's already a diligent work culture in place, if employees start thinking a lot more innovatively and dare to provide stimulus to management in positive ways, that would bring extra vitality to the entire Group. **Murase:** Hearing from members of the "M-Wing" project team brought a new strength of Maxell to my attention. M-Wing is a project aimed at promoting diversity and the team is composed of members selected from each business division.



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### Kev Financial Data

Key Financial Data					(Millions of yer
	2018	2019 <sup>*1</sup>	2020	2021 <sup>*2</sup>	2022
Net sales	150,584	145,041	139,055	138,215	132,776
Operating profit (loss)	5,424	(137)	3,806	9,332	5,638
Operating profit (loss) to net sales (%)	3.60	(0.09)	2.74	6.75	4.25
EBITDA*3	10,073	5,738	9,252	13,874	10,375
EBITDA margin*4 (%)	6.69	3.96	6.65	10.04	7.81
Net profit (loss) attributable to owners of parent	5,311	(10,487)	(9,373)	(3,659)	5,193
Net profit (loss) to net sales (%)	3.53	(7.23)	(6.74)	(2.65)	3.91
Depreciation	4,649	5,875	5,446	4,542	4,737
Capital investment	7,973	5,148	8,092	3,960	3,825
R&D expenses	9,729	8,864	7,934	6,379	6,397
Net profit (loss) per share (yen)	100.51	(205.23)	(189.51)	(73.98)	109.33
Net assets per share (yen)	2,328.41	1,828.68	1,640.98	1,647.78	1,807.25
Annual dividend per share (yen)	36.00	268.00*5	0.00	40.00	40.00
Dividend payout ratio (%)	35.8				36.6
Average number of shares during the term (excluding treasury shares) (thousand shares)	52,840	51,099	49,459	49,459	47,500
Number of shares issued at the end of period (including treasury shares) (thousand shares)	53,341	53,341	53,341	53,341	49,695
ROE (%)	4.35	(9.82)	(10.92)	(4.50)	6.32
ROA (%)*6	3.59	0.04	2.16	5.58	3.89
ROIC (%)*7	2.81	(0.07)	1.90	5.51	3.48
Receivables turnover (times)*8	4.38	4.14	4.59	4.57	4.38
Inventory turnover (times)*9	5.91	5.32	5.82	6.02	5.03
Shareholders' equity ratio (%)	61.7	50.6	45.9	45.9	49.2
D/E ratio (times)*10	0.31	0.78	0.51	0.51	0.34
Current ratio (%)	177.0	209.9	174.3	172.3	170.9
Working capital*11	36,441	32,310	8,809	5,105	10,992

Net Sales by Region (Millions of yen					
(FY)	2018	2019	2020	2021 <sup>*2</sup>	2022
Americas	15,314	11,865	11,778	13,890	14,075
Europe	12,855	11,657	9,507	11,500	12,577
Asia and other	42,154	33,684	30,692	33,057	29,367
Japan	80,261	87,835	87,078	79,768	76,757
Average foreign exchange rate over the year					
JPY/USD (yen)	111	109	106	112	135

### Year-end Stock Price Indicators

(FY)	2018	2019	2020	2021	2022
EV/EBITDA (times)*12	8.6	13.7	8.6	3.9	6.4
Year-end stock price (yen)	1,570	1,064	1,399	1,202	1,539
Year-end market capitalization (millions of yen)	83,746	56,755	74,625	64,116	76,482
Year's high (yen)	2,228	1,971	1,516	1,531	1,691
Year's low (yen)	1,310	882	836	1,055	1,110

\*1 In FY2019, the Company acquired its own shares through the trust relating to the "performance-linked share-based remuneration system." The shares of the Company held by the trust are recorded as treasury shares in the consolidated balance sheets, and included in the treasury shares deducted in the calculation of the number of shares at the end of period used in the calculation of "net assets per share." The shares of the Company held by the trust are also included in the treasury shares deducted in the calculation of the average number of the shares

during the term used in the calculation of "net profit (loss) per share."

\*2 From the beginning of FY2021, the Company has applied the "Accounting Standard for Revenue Recognition" (ASBJ Statement No. 29 of March 31, 2020), etc. The numbers relating to FY2021 onwards are after application of the accounting standard, etc.

- \*3 Operating profit + depreciation
- \*4 EBITDA / Net Sales x 100
- \*5 Ordinary dividend: 18 yen Special dividend: 250 yen
- \*6 Ordinary profit / Average total assets (average of the beginning and end of the period) x 100

\*7 Net operating profit after income tax / Average invested capital (average of the beginning and end of the period) Net operating profit after income tax = Operating profit x (1 - 0.31), Invested capital = Net assets - Non-controlling interests + Short-term and Long-term borrowings (excluding interest-free borrowings) + Lease obligations + Other interest-bearing debts

- \*8 Net sales / Average accounts receivable-trade (average of the beginning and end of the period)
- \*9 Cost of sales / Average inventories (average of the beginning and end of the period)
- \*10 Interest-bearing debts / Year-end shareholders' equity (Year-end market capitalization) Interest-bearing debts = Short-term and Long-term borrowings + Lease obligations
- \*11 (Current assets Cash and cash equivalents) (Current liabilities Short-term interest-bearing debts)
- \*12 (Year-end market capitalization + Interest-bearing debts Cash and cash equivalents) / EBITDA

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### Segment Information

	2018	2019	2020	(FY)
Net sales	150,584	145,041	139,055	Net sa
Energy	38,265	38,203	37,811	Ene
Industrial Materials	52,398	54,413	50,843	Fur
Electronic Appliances & Consumer Products	59,921	52,425	50,401	Opt Life
Operating profit (loss)	5,424	(137)	3,806	Opera
Energy	2,299	2,498	3,309	Ene
Industrial Materials	2,652	887	1,432	Fur
Electronic Appliances & Consumer Products	473	(3,522)	(935)	Opt Life
Operating profit (loss) to net sales (%)	3.60	(0.09)	2.74	Opera to net
Energy	6.00	6.54	8.75	Ene
Industrial Materials	5.06	1.63	2.82	Fur
Electronic Appliances & Consumer Products	0.79	(6.72)	(1.86)	Opt Life
Total assets	199,385	178,873	176,807	Total
Energy	38,339	30,771	33,269	Ene
Industrial Materials	57,464	54,955	52,888	Fur
Electronic Appliances & Consumer Products	70,045	54,797	42,555	Opt Life
Other	33,537	38,350	48,095	Oth
Capital expenditure	26,042	5,638	8,343	Capita
Energy	2,954	1,046	1,506	Ene
Industrial Materials	6,801	3,450	2,843	Fur
Electronic Appliances & Consumer Products	16,287	1,142	3,994	Opt Life
Depreciation	4,649	5,875	5,446	Depre
Energy	1,287	1,402	1,428	Ene
Industrial Materials	1,918	2,515	2,579	Fur
Electronic Appliances & Consumer Products	1,444	1,958	1,439	Opt Life
R&D expenses	9,729	8,864	7,934	R&D e
Energy	2,165	1,908	1,473	Ene
Industrial Materials	2,296	2,394	2,638	Fur
Electronic Appliances & Consumer Products	5,268	4,562	3,823	Opt Life
Year-end number of employees	5,263	5,108	4,555	Year-e
Energy	1,014	959	862	Ene
Industrial Materials	2,165	2,073	1,980	Fur
Electronic Appliances & Consumer Products	1,853	1,844	1,780	Opt
Other (employees who cannot be categorized into specific segments)	231	232	236	Oth can into

	_	(Millions of yen
	2021 <sup>•</sup>	2022
Net sales	138,215	132,776
Energy	38,631	36,774
Functional Materials	28,018	29,286
Optics & Systems	39,540	37,476
Life Solution	32,026	29,240
Operating profit (loss)	9,332	5,638
Energy	4,050	2,359
Functional Materials	1,861	863
Optics & Systems	3,338	3,889
Life Solution	83	(1,473)
Operating profit (loss) to net sales (%)	6.75	4.25
Energy	10.48	6.41
Functional Materials	6.64	2.95
Optics & Systems	8.44	10.38
Life Solution	0.26	(5.04)
Total assets	177,535	168,177
Energy	34,923	37,594
Functional Materials	31,471	32,996
Optics & Systems	35,662	37,384
Life Solution	29,955	22,529
Other	45,524	37,674
Capital expenditure	4.183	5,131
Energy	845	1,883
Functional Materials	889	635
Optics & Systems	1.867	1.928
Life Solution	582	685
Depreciation cost	4,542	4,737
Energy	1,376	1,459
Functional Materials	723	745
Optics & Systems	1,710	1.758
Life Solution	733	775
R&D expenses	6,379	6,397
Energy	1,173	1,412
Functional Materials	1,527	1,310
Optics & Systems	2,961	2,797
Life Solution	718	878
Year-end number of		
employees	4,180	4,111
Energy	793	785
Functional Materials	786	803
Optics & Systems	1,280	1,333
Life Solution	1,021	945
Other (employees who cannot be categorized	300	245

(Millions of ven)

\* From the beginning of FY2021, the Company has applied the "Accounting Standard for Revenue Recognition" (ASBJ Statement No. 29 of March 31, 2020), etc. The numbers relating to FY2021 onwards are after application of the accounting standard, etc.

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### Business segments have been changed from fiscal 2021

New business segments / major products from fiscal 2021 onwards

	Energy	Lithium-ion batteries, micro batteries
	Functional Materials	Adhesive tapes, coated separators
	Optics & Systems	Optical components, semiconductor-related embedded systems
	Life Solution	Consumer products, health and beauty care products, hydraulic tools

### Former business segments / major products up to fiscal 2020

Energy	Lithium-ion batteries, micro batteries	
Industrial Materials	Adhesive tapes, optical components, semiconductor-related embedded systems, coated separators	
Electronic Appliances & Consumer Products	Consumer products, projectors, health and beauty care products, hydraulic tools	

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Consolidated Balance Sheets (Summary)

Consolidated Balance Sheets (Summary)					(Millions of y
	2018	2019	2020	2021 <sup>•</sup>	2022
Total current assets	95,116	84,657	85,369	99,469	94,837
Principal items included in the above:					
Cash and deposits	22,907	22,636	33,016	45,552	38,170
Notes and accounts receivable – trade	39,658	30,328	30,295	30,160	30,439
Inventories	22,848	21,431	16,034	18,378	22,476
Total non-current assets	104,269	94,216	91,438	78,066	73,340
Total property, plant and equipment	61,213	62,063	55,280	55,507	51,544
Total intangible assets	15,796	6,265	5,359	5,031	4,697
Total investments and other assets	27,260	25,888	30,799	17,528	17,099
Principal items included in the above:					
Investment securities	23,194	21,626	24,168	9,672	9,503
Net defined benefit assets	1,327	1,878	3,861	4,550	4,881
Deferred tax assets	1,521	1,457	1,732	2,152	1,780
Total assets	199,385	178,873	176,807	177,535	168,177
Total current liabilities	53,750	40,335	48,975	57,719	55,494
Principal items included in the above:					
Notes and accounts payable – trade	19,982	16,668	17,851	19,606	18,421
Accounts payable – other and accrued expenses	12,832	10,158	21,527	13,403	13,178
Short-term borrowings, current portion of long-term borrowings and lease obligations	17,760	10,406	5,210	6,692	8,218
Total non-current liabilities	20,130	45,626	44,235	35,200	26,743
Principal items included in the above:					
Long-term borrowings and lease obligations	8,025	34,004	32,856	26,170	17,776
Deferred tax liabilities	4,035	4,183	4,175	2,512	2,849
Net defined benefit liabilities	7,914	7,249	6,700	5,705	5,372
Total liabilities	73,880	85,961	93,210	92,919	82,237
Total shareholders' equity	134,079	103,571	88,864	84,215	82,487
Total accumulated other comprehensive income	(11,044)	(13,127)	(7,702)	(2,717)	329
Non-controlling interests	2,470	2,468	2,435	3,118	3,124
Total net assets	125,505	92,912	83,597	84,616	85,940
Total liabilities and net assets	199,385	178,873	176,807	177,535	168,177

### Consolidated Statements of Income (Summary)

Consolidated Statements of Income (Summary)					(Millions of ye
	2018	2019	2020	2021	2022
Net sales	150,584	145,041	139,055	138,215	132,776
Gross profit	31,167	27,331	30,063	34,602	30,098
Total selling, general and administrative expenses	25,743	27,468	26,257	25,270	24,460
Operating profit (loss)	5,424	(137)	3,806	9,332	5,638
Total non-operating income/expenses (net)	1,167	213	40	556	1,089
Principal items included in the above:					
Interest income and dividend expenses	495	359	461	280	327
Interest expenses and sales discounts	(235)	(295)	(285)	(153)	(126)
Foreign exchange gains/losses	273	94	(230)	164	778
Share of profit/loss of entities accounted for using equity method	546	164	(30)	138	(152)
Ordinary profit	6,591	76	3,846	9,888	6,727
Extraordinary income/losses (net)	1,074	(9,502)	(11,544)	(11,437)	538
Principal items included in the above:					
Gains on sale of non-current assets	17	6	6,610	13	1,625
Compensation for forced relocation			1,339		
Loss on sale and retirement of non-current assets	(297)	(314)	(271)	(446)	(228)
Impairment losses	(19)	(7,782)	(4,742)	(131)	(461)
Extra retirement payments				(635)	(407)
Loss on valuation of investment securities				(10,312)	-
Business restructuring expenses		(1,587)	(7,319)		
Litigation expenses			(7,067)		
Profit (loss) before income taxes	7,665	(9,426)	(7,698)	(1,549)	7,265
Total income taxes	2,170	736	1,799	1,718	2,009
Profit (loss) attributable to non-controlling interests	184	325	(124)	392	63
Profit (loss) attributable to owners of parent	5,311	(10,487)	(9,373)	(3,659)	5,193

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\* From the beginning of FY2021, the Company has applied the "Accounting Standard for Revenue Recognition" (ASBJ Statement No. 29 of March 31, 2020), etc. The numbers relating to FY2021 onwards are after application of the accounting standard, etc.

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### Consolidated Financial Information

Consolidated Statement of Cash Flows (Summary)

Consolidated Statement of Cash Flows (Summary)					(Millions of yen
	2018	2019	2020	2021	2022
Net cash provided by (used in) operating activities	573	14,226	13,029	18,442	4,001
Principal items included in the above:					
Profit (loss) before income taxes	7,665	(9,426)	(7,698)	(1,549)	7,265
Depreciation	4,649	5,875	5,446	4,542	4,737
Impairment loss	19	7,782	4,742	131	461
Amortization of goodwill	923	1,231	590	590	48
Loss (gain) on sale and retirement of non-current assets	280	308	(6,339)	433	(1,397)
Decrease (increase) in trade receivables	(4,336)	9,441	464	1,004	384
Decrease (increase) in inventories	(1,344)	2,707	4,530	(1,338)	(3,868)
Increase (decrease) in trade payables	(3,229)	(3,004)	852	1,251	(1,320)
Net cash provided by (used in) investing activities	(46,326)	(12,098)	8,039	(3,908)	1,713
Principal items included in the above:					
Purchase of investment securities	(10,252)	(130)	(31)	(7)	(6)
Proceeds from sale of investment securities	274	332	37	2,403	985
Payments for construction of rental properties	(3,487)	(2,360)			
Purchase of property, plant and equipment	(9,074)	(7,898)	(6,268)	(4,030)	(4,931)
Proceeds from sale of property, plant and equipment	15	6	14,784	832	5,649
Purchase of shares of subsidiaries resulting in change in scope of consolidation	(16,683)				-
Purchase of shares of subsidiaries and associates	(4,200)				-
Net cash provided by (used in) financing activities	22,608	(1,791)	(11,888)	(6,211)	(13,985)
Principal items included in the above:					
Net increase (decrease) in borrowings	20,027	18,637	(6,388)	(5,098)	(6,844)
Purchase of treasury shares	(0)	(5,039)			(5,000)
Purchase of shares of subsidiaries not resulting in change in scope of consolidation			(5,335)		_
Proceeds from share issuance to non-controlling interests	5,029				-
Dividends paid to non-controlling interests	(16)	(38)	(64)	(9)	(128)
Dividends paid	(2,325)	(15,081)		(990)	(1,938)
Repayments of lease liabilities	(107)	(166)	(101)	(114)	(92)
Effect of exchange rate change on cash and cash equivalents	291	(604)	1,197	2,219	1,503
Net increase (decrease) in cash and cash equivalents	(22,854)	(267)	10,377	10,542	(6,768)
Cash and cash equivalents at beginning of period	45,539	22,685	22,418	32,795	43,337
Cash and cash equivalents at end of period	22,685	22,418	32,795	43,337	36,569
Free cash flow	(45,753)	2,128	21,068	14,534	5,714

(Millions of yen) 43,337 36,569 32,795 22,418 22,608 18,442 13,029 22,685 8,039 4,001 1,713 573 14.226 -1.791 -3,908 -6,211 -12,098 -11,888 -13.985 -46,326 2018 2019 2020 2021 2022 (FY)

Net cash provided by (used in) operating activities
 Net cash provided by (used in) investing activities
 Net cash provided by (used in) financing activities
 Cash and cash equivalents at end of period

Free Cash Flow

Cash Flow Changes



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\* Net cash flow provided by (used in) operating activities + Net cash provided by (used in) investing activities

# Maxell Group Network (as of September 1, 2023)

Maxell has been actively expanding its overseas operations since 1969.

From here on also, Maxell will work to further enhance its competitiveness within the rapidly changing global market, based on its quality, and the trust customers place in that quality.



Japan	
Maxell, Ltd.	
Tokyo Headquarters, Tokyo Office	Minato-ku, Tokyo
Kyoto Headquarters, Kyoto Office/Works	Oyamazaki-cho, Otokuni-gun, Kyoto Pref.
Miyagi Works	Watari-cho, Watari-gun, Miyagi Pref.
Kawasaki Office/Works	Kawasaki-shi, Kanagawa Pref.
Yokohama Office	Yokohama-shi, Kanagawa Pref.
Kobuchizawa Works	Hokuto-shi, Yamanashi Pref.
Ono Works	Ono-shi, Hyogo Pref.
Kyushu Works	Fukuchi-machi, Tagawa-gun, Fukuoka Pref.
Kanto and Tohoku Sales Office	Kasukabe-shi, Saitama Pref.
Nagoya Sales Office	Nagoya-shi, Aichi Pref.
Kansai Office	Osaka-shi, Osaka Pref.
Kyushu Sales Office	Fukuoka-shi, Fukuoka Pref.

Maxell Frontier Co., Ltd.	
Head Office, Yokohama Works	Yokohama-shi, Kanagawa Pref.
Tokyo Sales Office	Minato-ku, Tokyo
Gifu Works	Minokamo-shi, Gifu Pref.
Yonezawa Works	Yonezawa-shi, Yamagata Pref.
Miyagi Works	Watari-cho, Watari-gun, Miyagi Pref.
Maxell Izumi Co., Ltd.	
Head Office	Matsumoto-shi, Nagano Pref.
Kyushu Works	Fukuchi-machi, Tagawa-gun, Fukuoka Pref.
Tokyo Sales Office	Shibuya-ku, Tokyo
Osaka Sales Office	Osaka-shi, Osaka Pref.
Nagoya Sales Office	Nagoya-shi, Aichi Pref.
Fukuoka Sales Office	Fukuoka-shi, Fukuoka Pref.
Sendai Sales Office	Sendai-shi, Miyagi Pref.
Ube Maxell Kyoto Co., Ltd.	
Head Office	Oyamazaki-cho, Otokuni- gun, Kyoto Pref.

### Maxell Kureha Co., Ltd.

o-ku, Tokyo Joya-shi, Aichi Pref. Ikyushu-shi, Fukuoka
ikyushu-shi, Fukuoka
f.
-shi, Mie Pref.
neyama-shi, Mie Pref.

Maxell Corporation of America	USA
Maxell Corporation of America, Canada Branch	Canada
Maxell Research and Development America, LLC	USA
Maxell Latin America, S.A.	Panama
Maxell Europe Ltd.	UK
Maxell Europe Ltd. German Branch	Germany

Maxell Europe Ltd. Munich Office	Germany
Maxell Europe Ltd. Hungarian Branch	Hungary
Maxell Asia, Ltd.	Hong Kong, China
Maxell Asia, Ltd. Chennai Office	India
Maxell Asia, Ltd. Bangkok Office	Thailand
Maxell Asia, Ltd. Vietnam Office	Vietnam
Maxell (Shanghai) Trading Co., Ltd.	Shanghai, China
Maxell (Shenzhen) Trading Co., Ltd.	Shenzhen, China
Maxell Taiwan, Ltd.	Taiwan
Maxell Asia (Singapore) Pte. Ltd.	Singapore
Maxell Joei Tech (Thailand) Co., Ltd.	Thailand
Maxell Tohshin (Malaysia) Sdn. Bhd.	Malaysia
PT. Sliontec Ekadharma Indonesia	Indonesia
Wuxi Maxell Energy Co., Ltd.	Wuxi, China
Maxell Digital Products China Co., Ltd.	Fuzhou, China
Izumi Products HK Limited	Hong Kong, China
Gangquan Precision (Shenzhen) Co., Ltd.	Shenzhen, China

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### Corporate Data (As of September 1, 2023)

### Corporate Data

Company Name	Maxell, Ltd. https://www2.maxell.co.jp/	
Tokyo Headquarters	21F, Taiyo Life Shinagawa Building, 2-16-2 Konan, Minato-ku, Tokyo 108-8248, Japan	
Kyoto Headquarters	1 Koizumi, Oyamazaki, Oyamazaki-cho, Otokuni-gun, Kyoto 618-8525, Japan	
Established	September 1960	
Capital	12.203 billion yen	
President and Representative Director	Keiji Nakamura	
Number of Employees	Consolidated: 4,111*	
Shareholder Registry Administrator	Sumitomo Mitsui Trust Bank, Limited	
Accounting Auditor	Ernst & Young ShinNihon LLC	
* As of March 31, 2023		

Organization Chart of Maxell, Ltd. (As of September 1, 2023)

	Meeting of eholders	of		
t & S Con	f Director Superviso mittee ative Direc	Nomination & Remuneration Committee		
	Co	rporate Strategy Division		Sales & Marketing Division
	Co	rporate Communications Division		New Business Producing Division
	Ch	ina Strategy Division	_	Energy Division
	Mo	onozukuri Division		Functional Materials Division
	Qu	ality Assurance Division	_	Optics & Systems Division
	Pri	ocurement & SCM Division	_	Life Solution Division
	IP	Innovation Division		
		IT Management Department		
		Asset Facilities Department	]	
		Finance & Accounting Department		
		Human Resources & General Affairs Department		
		Export Control Department	]	
		Legal Department		
		Internal Auditing Office		
		Project for P/L Improvement by Model	]	
		V Project		
	L			



### Status of Major Shareholders

	Name of Shareholder	Number of Shares Held (Thousand Shares)	Shareholding Ratio (%)
1	The Master Trust Bank of Japan, Ltd.	6,506	14.19
2	Custody Bank of Japan, Ltd.	3,199	6.98
3	TAIYO FUND, L.P.	2,568	5.60
4	SSBTC CLIENT OMNIBUS ACCOUNT	2,369	5.17
5	Nichia Corporation	2,001	4.37
6	TAIYO HANEI FUND, L.P.	1,672	3.65
7	GOVERNMENT OF NORWAY	1,604	3.50
8	Zeon Corporation	1,311	2.86
9	STATE STREET BANK AND TRUST COMPANY 505227	1,276	2.78
10	STATE STREET BANK WEST CLIENT - TREATY 505234	770	1.68

Notes: 1. The numbers for the shares held by The Master Trust Bank of Japan, Ltd. and Custody Bank of Japan, Ltd. represent the numbers of shares they hold in connection to their trust duties. 2. When calculating the shareholding ratios, treasury shares (3,854,567 shares) are excluded.

Obtained a Rank A assessment in

(Fluorocarbon Emissions Control

in place at each of its plants

Act). Maxell Group had frameworks

prior to the entry into force of the

Fluorocarbon Emissions Control Act

in 2015, and it carries out estimates of the amount of CFC leaked by

equipment used, as well as basic

inspections and regular inspections,



Breakdown of Shares

External Recognition Awarded a three-star rating for second year running in the "Fourth Nikkei SDGs Management Survey" This survey, which is carried out by Nikkei Inc., evaluates how companies are contributing to the United Nations Sustainable Development Goals (SDGs) via their businesses. Maxell, Ltd.'s SDGs management was appraised based on a survey covering four categories - "SGDs Strategy/Economic Value," "Social Value," "Environmental Value," and "Governance" - as well as public data and other information.



the "Second JRECO CFC Control Health & Productivity Management Measure Rating" Organization" Obtained a Rank A assessment Maxell, Ltd. and Maxell Frontier in the Japan Refrigerants and Co., Ltd. were recognized as "2023 Certified Health & Productivity Environment Conservation Organization (JRECO)'s assessment Management Organizations" of companies' efforts regarding the (large enterprise category), as Act on Rational Use and Proper organizations that consider and Management of Fluorocarbons

Recognized as a "2023 Certified

diversity and inclusion. Maxell was evaluated as a company that has spearheaded D&I, driven the make strategic efforts to advance advancement of D&I in Japan employees' health management as a role model, and nurtured a from managerial perspective. corporate culture in which each and every employee respects D&I, and which is engaging in further reform. 🗖 D&I AWARD 🖞 \_\_\_\_ 2023 健康経営優良法人 Health and productivity

business operators

12.386.889 (24.9%)

Obtained an "Advanced" certification

Obtained an "Advanced" certification in JobRainbow Co., Ltd.'s "D&I

Award 2022," which recognizes

companies that are addressing

in the "D&I Award 2022"



Sompo Sustainability Index

Individuals and others

12,716,553 (25.6%)

Selected as a constituent of the

"Sompo Sustainability Index" for

In recognition of Maxell Group's

ESG efforts, it has been selected

as a constituent of Sompo Asset

Management Co., Ltd.'s "Sompo

Sustainability Index" for 7

consecutive years since 2017.

seven consecutive years

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Tagline of Maxell

Origin of Company Name

The company name Maxell originates

### any Name

### Notes about Statements about the Future

Within, the Future

"Within, the Future" contains the idea that we remain close to people at all times.

from the brand name "Maxell" (Maximum Capacity Dry Cell = dry cell with the highest performance) created decided our corporate color will be New Maxell Red—a color that evokes the future. Maxell Red—a color that evokes the future.

Statements made in this report with respect to our performance outlook, plans, strategies, and other statements that are not historical facts are our predictions based on information available to the Company as of March 31, 2023 and are subject to risks and uncertainties. Accordingly, please do not rely solely on these predictions in making investment decisions.