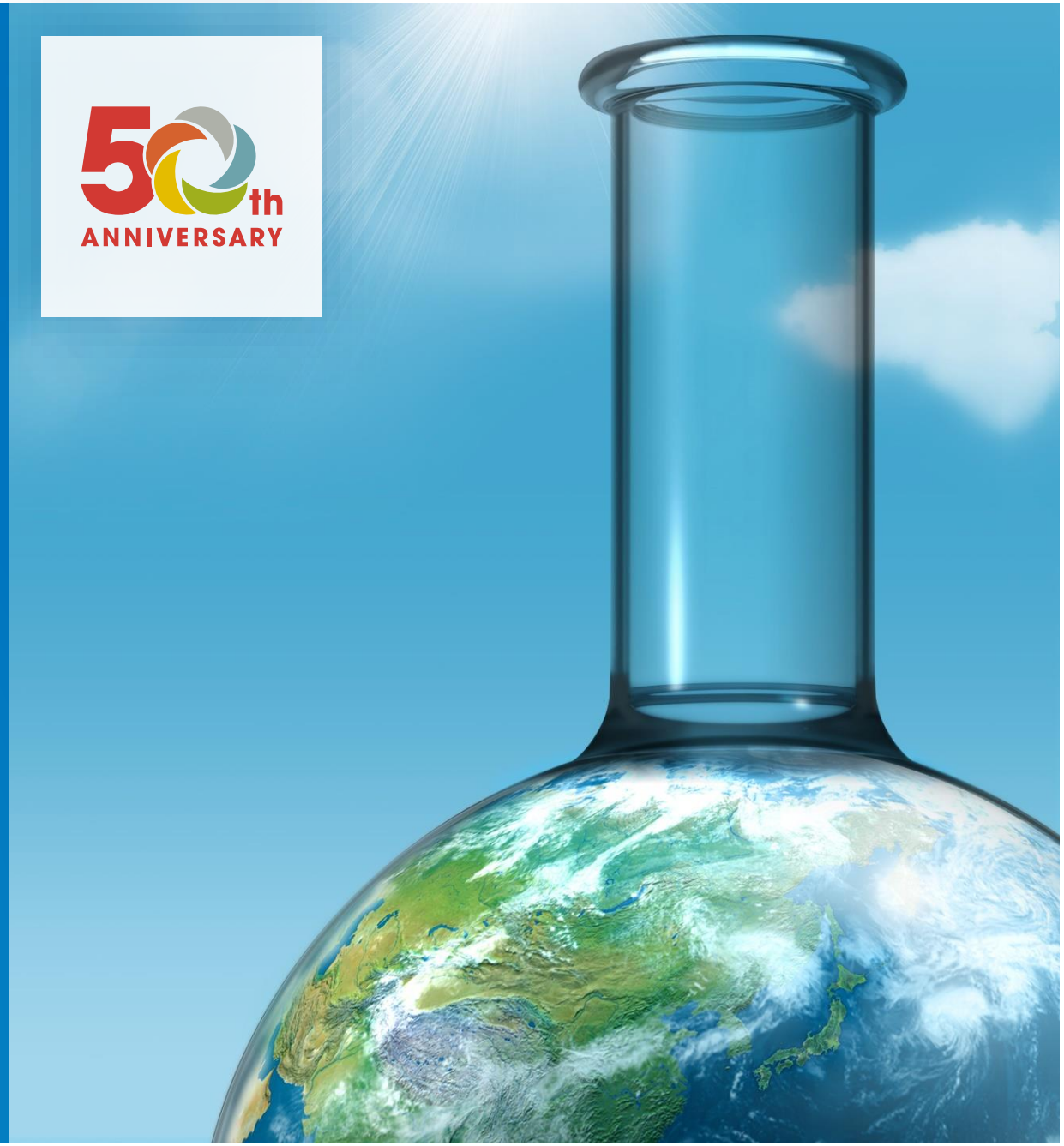
Fiscal Years 2021-2023

New Medium-Term Management Plan

Grow UP 2023



MITSUBISHI GAS CHEMICAL COMPANY, INC.

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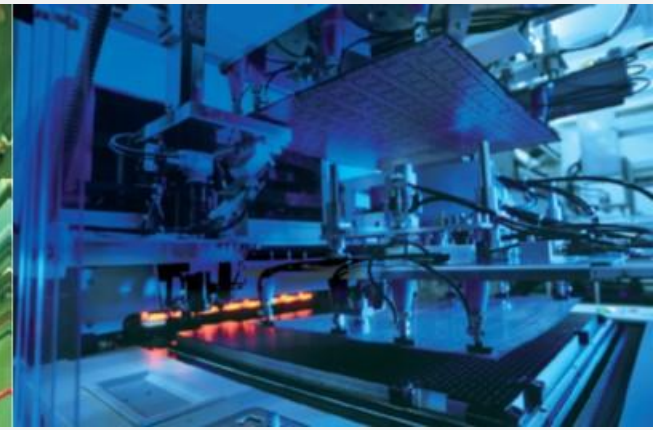
Review of Previous Medium-Term Management Plan, MGC Advance2020



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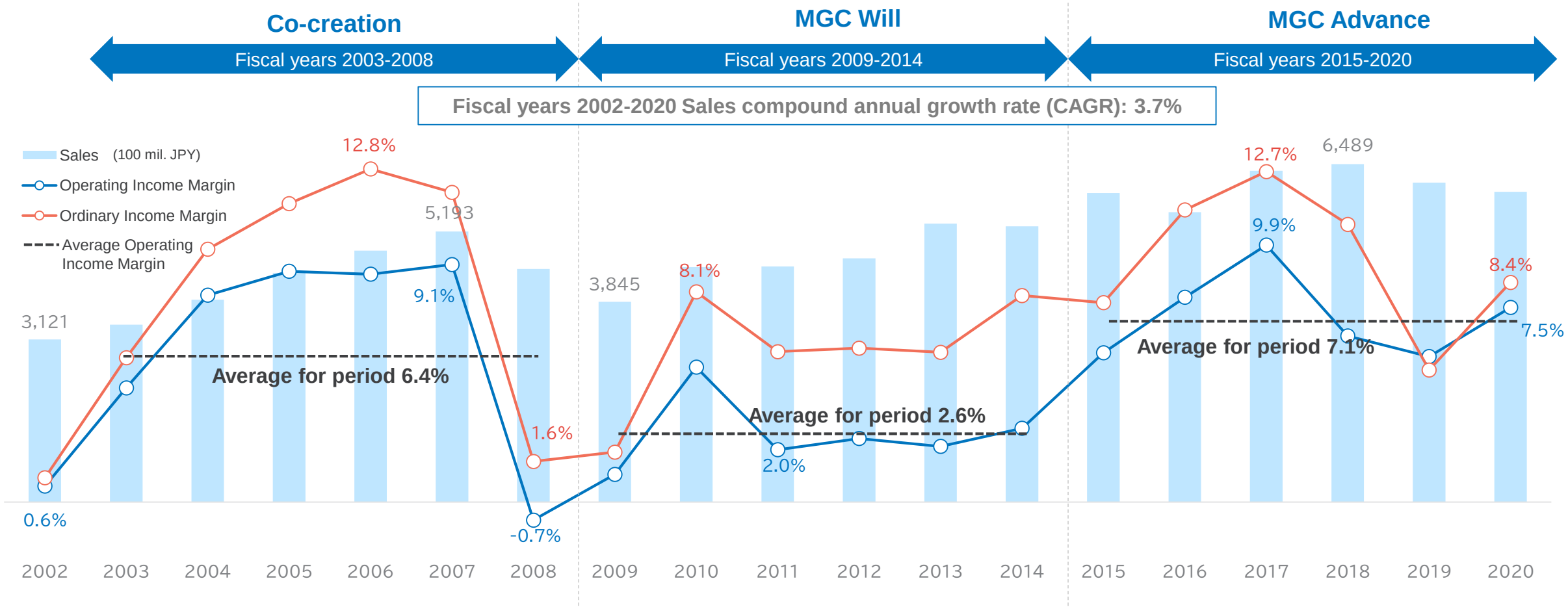
Review of Past Medium-Term Management Plans and Operating Performance

- Sales remained on a growth track, centered around themes including globalization and technology development
- While the range of fluctuation in operating income margins shrank compared to the past, volatility remained high
- Ordinary income and operating income margins approached similar levels due to a fiscal 2019 change in the scheme behind an equity method affiliate in Saudi Arabia



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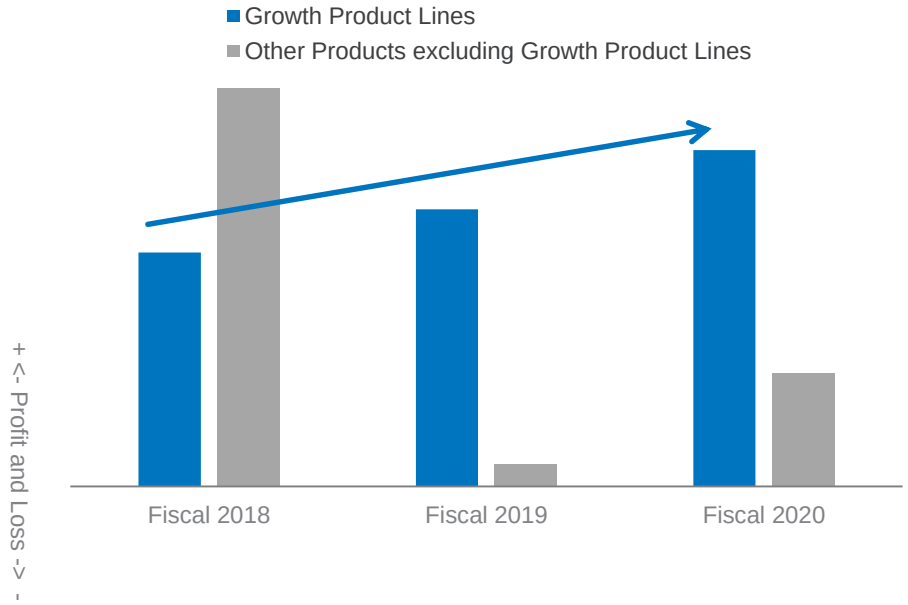
Review of Previous Medium-Term Management Plan, MGC Advance2020 (1)

- In core and semi-core businesses, steady growth in products unaffected by market conditions
- These have led to solving social issues while maintaining their competitive advantage as their markets have grown

Change in ordinary income in growth product lines and other products



Typical growth products:

Meta-xylenediamine (MXDA)
Aromatic aldehydes
MX-Nylon
Electronics chemicals
Polyacetal
Optical resin polymers
Semiconductor packaging BT material

Key initiatives

- Expansion of optical resin polymers manufacturing plant
- Expansion of super-pure hydrogen peroxide manufacturing plants in North America and South Korea
- Pursuit of leading-edge technology development, including next-generation low-loss BT materials and others
- Capturing of new markets through development of aromatic aldehyde applications

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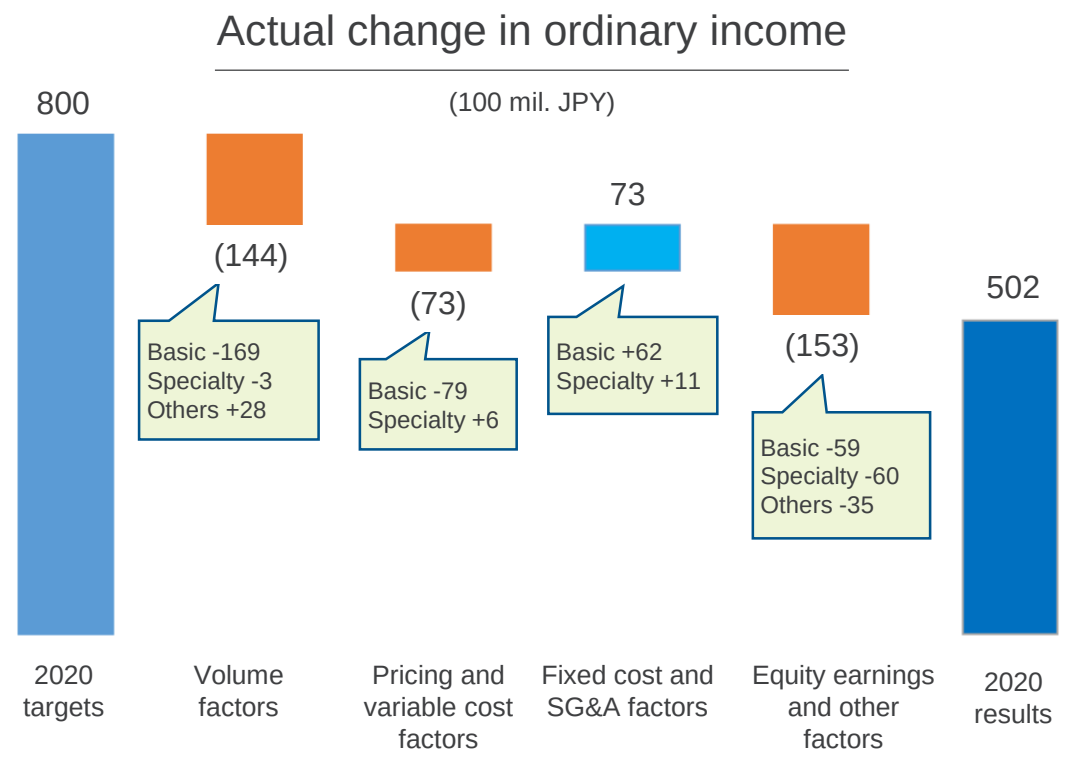
Review of Previous Medium-Term Management Plan, MGC Advance2020 (2)

- Fiscal year 2020 targets: Operating income ¥65 billion, ordinary income ¥80 billion, ROE 12% or higher. Assumes new record highs in both sales and profits
- Results: At ¥50.2 billion, ordinary income missed its target by ¥29.8 billion. Both segments fell below the scenario established under initial targets
- Primary factors include failure to reach the targeted sales volumes, and the impact of fluctuations in market conditions on commodity products such as methanol, meta-xylene, PIA and polycarbonate
- Of three-year investment target of ¥200 billion, approximately ¥140 billion invested

Consolidated Performance (100 mil. JPY)	Fiscal 2017 Results	Fiscal 2020 Targets	Fiscal 2020 Results	Targets vs. Results Difference
Sales	6,359	7,500	5,957	(1,543)
Operating income	627	650	445	(205)
Ordinary income	807	800 *	502	(298)
ROE	13.6%	12% or higher	7.1%	(4.9pp)
Exchange rate (JPY/USD)	111	110	106	
Crude oil (Dubai) (USD/bbl)	56	60	45	
Methanol (USD/MT)	339	355	256	

*Initially established target of ¥90 billion revised to ¥80 billion following consideration of the impact of the change in equity holding in the Saudi Arabia equity method affiliate under MGC Advance2020.



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Review of Previous Medium-Term Management Plan, MGC Advance2020 (3): Validation and Issues for New Medium-Term Management Plan

External Factors for Falling Short of Previous Medium-Term Management Plan

1. **Oversupply due to the rise of emerging countries, and a downturn in commodity product markets associated with US/China trade friction, etc.**
2. **Decline in demand for some products due to the impact of COVID-19**

Internal Factors for Falling Short of Previous Medium-Term Management Plan

1. **Maturation of existing business structures**
   - Large weight still placed on commodity products
2. **Delays in developing new businesses and products**
   - Still midway through development of Neopulim transparent polyimide resin, Life science business, medical packaging materials, etc.

Recognition of Issues for New Medium-Term Management Plan

Bold transformation of business portfolio is essential

- Lower dependence on market conditions and other external circumstances, accelerating expansion of new businesses and high-value-added products

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New Medium-Term Management Plan, Grow UP 2023

"**Grow UP 2023**," the title of the new Medium-Term Management Plan, reflects our expectations for **Growth** for both the MGC Group and its employees
It also incorporates our desire to grow our **Uniqueness** and **Presence** as an excellent company

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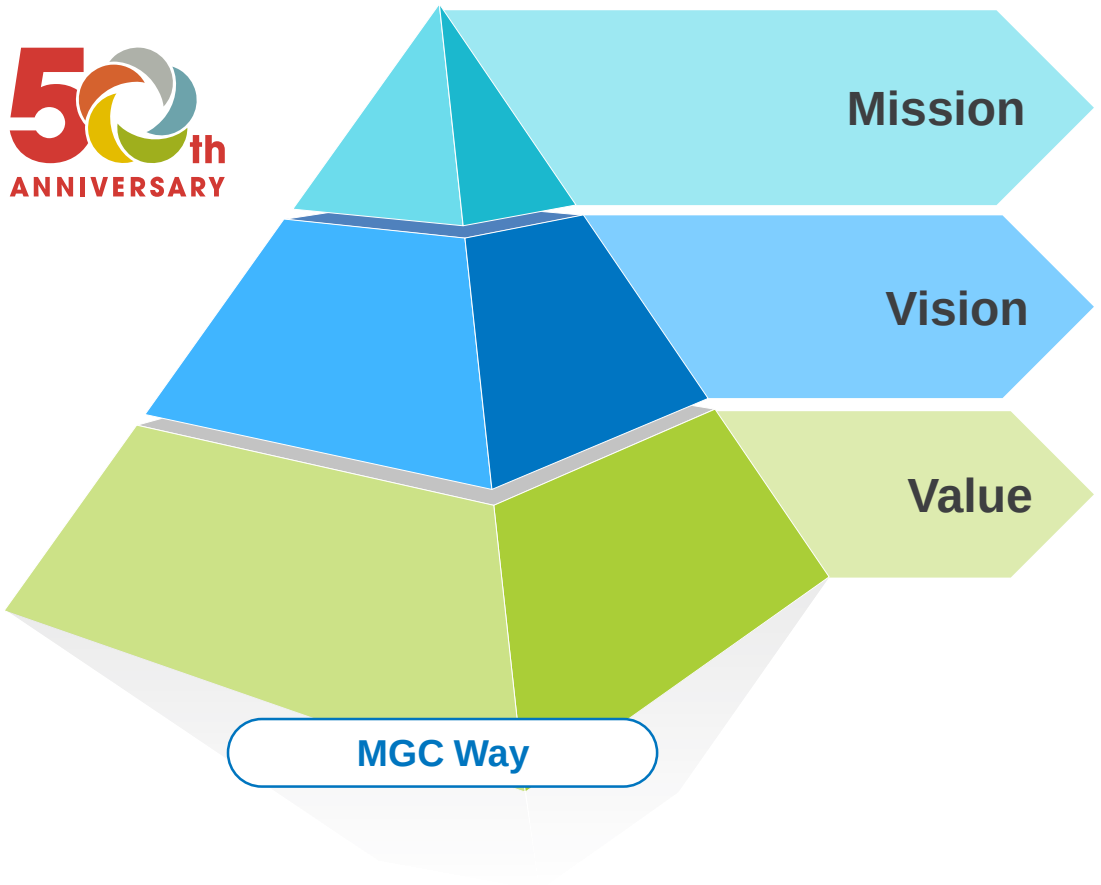
Establishing the “MGC Way”, a New Philosophy System

– Under our new philosophy system, the “**MGC Way**”, the MGC Group will work to balance economic and social value, and to contribute to realizing a sustainable society



Creating values to share with society

An excellent company with uniqueness and presence built on chemistry

Principles of Conduct

As a professional group:

1. Courage that does not shy away from change
2. Aim for lofty goals
3. Perseverance in achieving goals
4. Build team spirit with communication

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Positioning of the New Medium-Term Management Plan: A long-range view and a step closer to our vision

- The new Medium-Term Management Plan has been formulated with a long-term vision for the future in mind
- The future is not merely an extension of the status quo, and requires rapid adaptation to a “new normal” and advanced technology based on achieving discontinuous evolution

New Medium-Term Management Plan Grow UP 2023

Fiscal years 2021-2023

The backcasting approach

The future does not exist as an extension of the status quo

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MGC Group Target Areas:
Examples of Products That Will Demonstrate Our Strengths in the Expected Future

Target Area	Expected Future	Products that will demonstrate opportunities and strengths for the MGC Group
Medical/ Food	Advanced medical technology; Expanding pre-symptomatic needs; Tightened food supply and demand	・Antibody drugs to become mainstream in drug discovery field ・Diversification of allergy diagnostics ・Response to food loss problem
ICT/ Mobility	Advanced semiconductor technology; Developments in CASE; Supply chain rebuilding	・Increased demand for raw materials for components for cameras and electronic devices ・Expanded need for materials that lead to weight savings ・Expanded use of solid-state batteries
Environment/ Energy	Dealing with the environment and climate change; Circular economy	・Shift to renewable energy ・Development of CO2 recycling technology
Infrastructure	Dealing with emerging countries; Shift to smart cities	・Expanded demand for infrastructure in emerging countries ・Progress in use of IoT/AI technology


Allergy test chip


Oxygen absorbers


Contract manufacturing of antibody drugs


Carbon fiber composite material


Semiconductor packaging BT material


Optical resin polymers


Solid electrolytes


CO2-derived methanol


CO2-derived polycarbonate


Geothermal power generation


MXDA

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Pursue sustainable growth after business portfolio reforms

Objective 1

Shift to a profit structure resilient to environmental changes

Business portfolio reform

Strategies

1-1. Further strengthen competitively advantageous (“differentiating”) businesses

1-2. Accelerate creation and development of new businesses

1-3. Reevaluate and rebuild unprofitable businesses

Objective 2

Balance social and economic value

Toward sustainable growth

Strategies

2-1. Solve social issues through business

2-2. Harmonize value creation with environmental protection

2-3. Strengthen discipline and foundation supporting business activities

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Numerical Targets

	Fiscal year 2020 results	Fiscal year 2023 targets	Change between fiscal years 2020 and 2023
Sales	¥595.7 billion	**¥730.0 billion**	**+¥134.3 billion**
Operating income	¥44.5 billion	**¥70.0 billion**	**+¥25.5 billion**
Ordinary income	¥50.2 billion	**¥80.0 billion**	**+¥29.8 billion**
ROIC*	7.7%	**10% or higher**	**+2.3pp**
ROE	7.1%	**9% or higher**	**+1.9pp**

* ROIC = Ordinary income/invested capital

- Attempt to reach record-high levels of operating income
- Promote management with an awareness of capital efficiency

(Reference Indices)

	Fiscal year 2020	Fiscal year 2023	Change between fiscal years 2020 and 2023
Operating income margin	**7.5%**	**9.6%**	**+2.1pp**
Ordinary income margin	**8.4%**	**11.0%**	**+2.6pp**
EBITDA*	**¥81.7 billion**	**¥120.0 billion**	**+¥38.3 billion**
EBITDA margin**	**13.7%**	**16.4%**	**+2.7pp**

* EBITDA = Ordinary income + depreciation expense + interest paid
** EBITDA margin = EBITDA/sales

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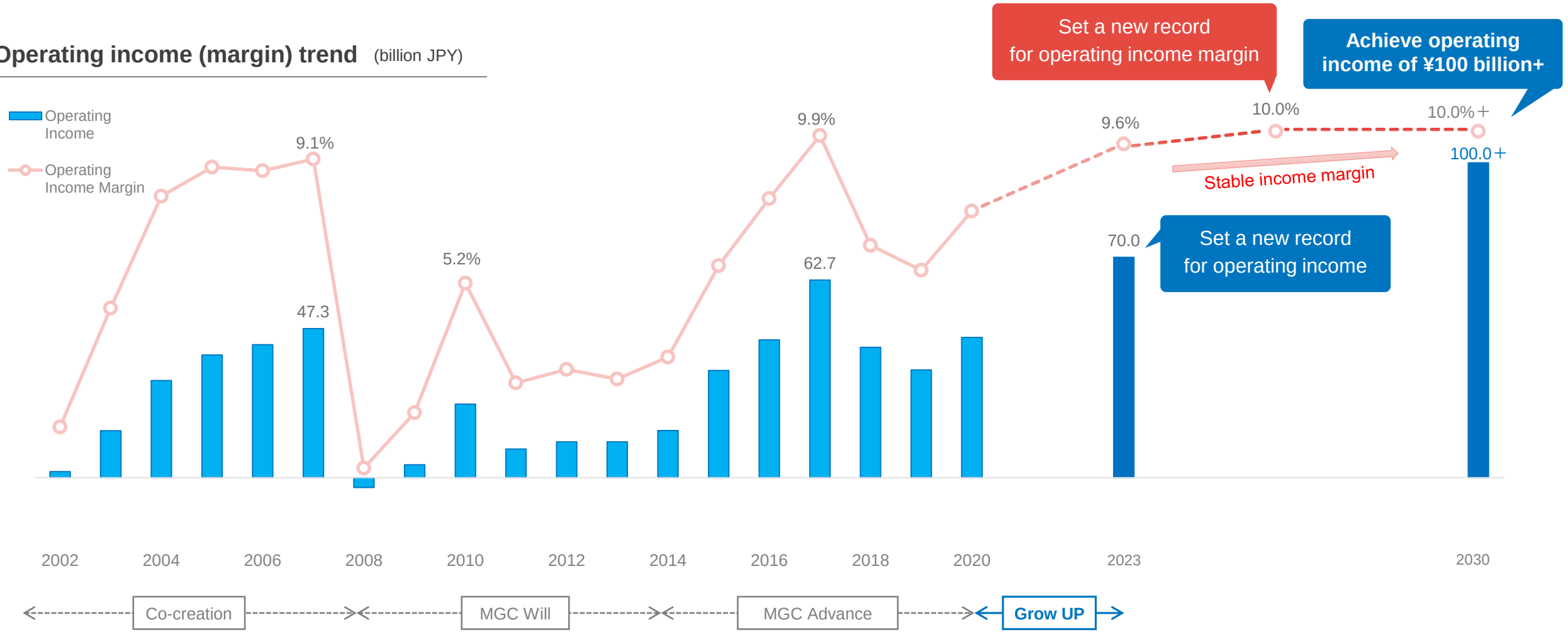
Mid- to Long-Term Objective:
Create a structure for sustainably increasing corporate value

- Set a new record for operating income in fiscal year 2023, then aim to also set a new record for operating income margin
- Have in sight achieving sales of ¥1 trillion or higher and operating income of ¥100 billion (operating income margin of 10%) or higher in 10 years, by fiscal year 2030

Operating income (margin) trend (billion JPY)



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1. Shift to a Profit Structure Resilient to Environmental Changes: Business Portfolio Reform

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Objectives of New Medium-Term Management Plan Grow UP 2023

Objective 1

Shift to a profit structure resilient to environmental changes

Business portfolio reform

1-1. Further strengthen competitively advantageous (“differentiating”) businesses

- Prioritize allocation of management resources to high-value-added products defined as differentiating businesses
- Shift foundation businesses to differentiating businesses by making them high-added-value, high-efficiency

1-2. Accelerate creation and development of new businesses

- Revise R&D organization and put in place an environment that encourages market expansion
- Proactive R&D investment, increase in research personnel

1-3. Reevaluate and rebuild unprofitable businesses

- Improve business profitability by identifying and reorganizing unprofitable businesses

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Business Portfolio Reform

Classify and define each business under four stages

	Definition	Position going forward
Differentiating businesses	Businesses that can grow and win	**Core of growth** Proactively apply management resources
New/next-generation businesses	Potential businesses	
Foundation businesses	Business generating a certain level of earnings Upstream process of differentiating businesses	**Raise earning power** Promote higher added value, higher efficiency
Unprofitable businesses or those needing rebuilding	Businesses with doubts about competitive advantage or potential for market growth	**Business rebuilding** Begin reevaluation, including withdrawal

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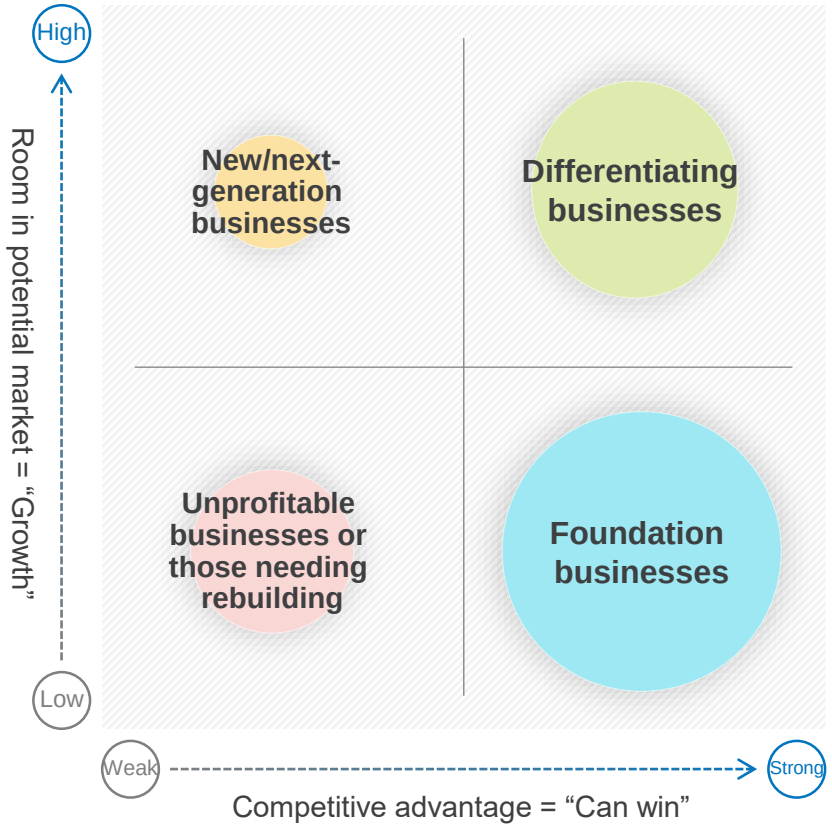
Moving Forward with Business Portfolio Reforms

STEP 1

Analysis and classification of status quo

Status quo (image)



STEP 2

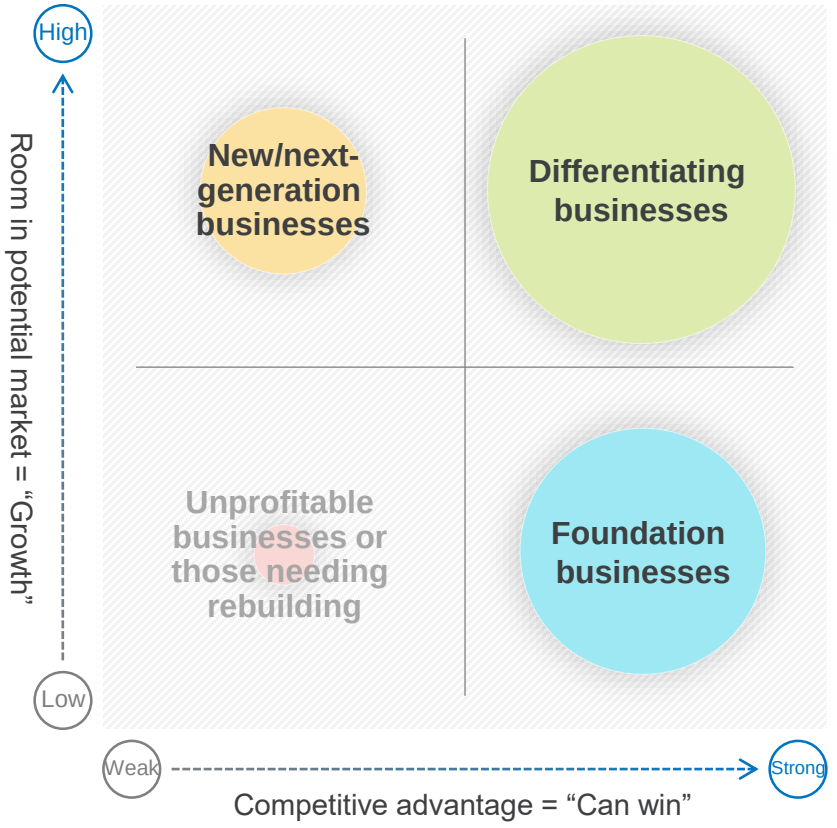
Strategy execution

- Further strengthen competitively advantageous businesses
- Accelerate creation and development of new businesses
- Identify and reorganize unprofitable businesses

STEP 3

Achieve reforms

Fiscal year 2023 (image)



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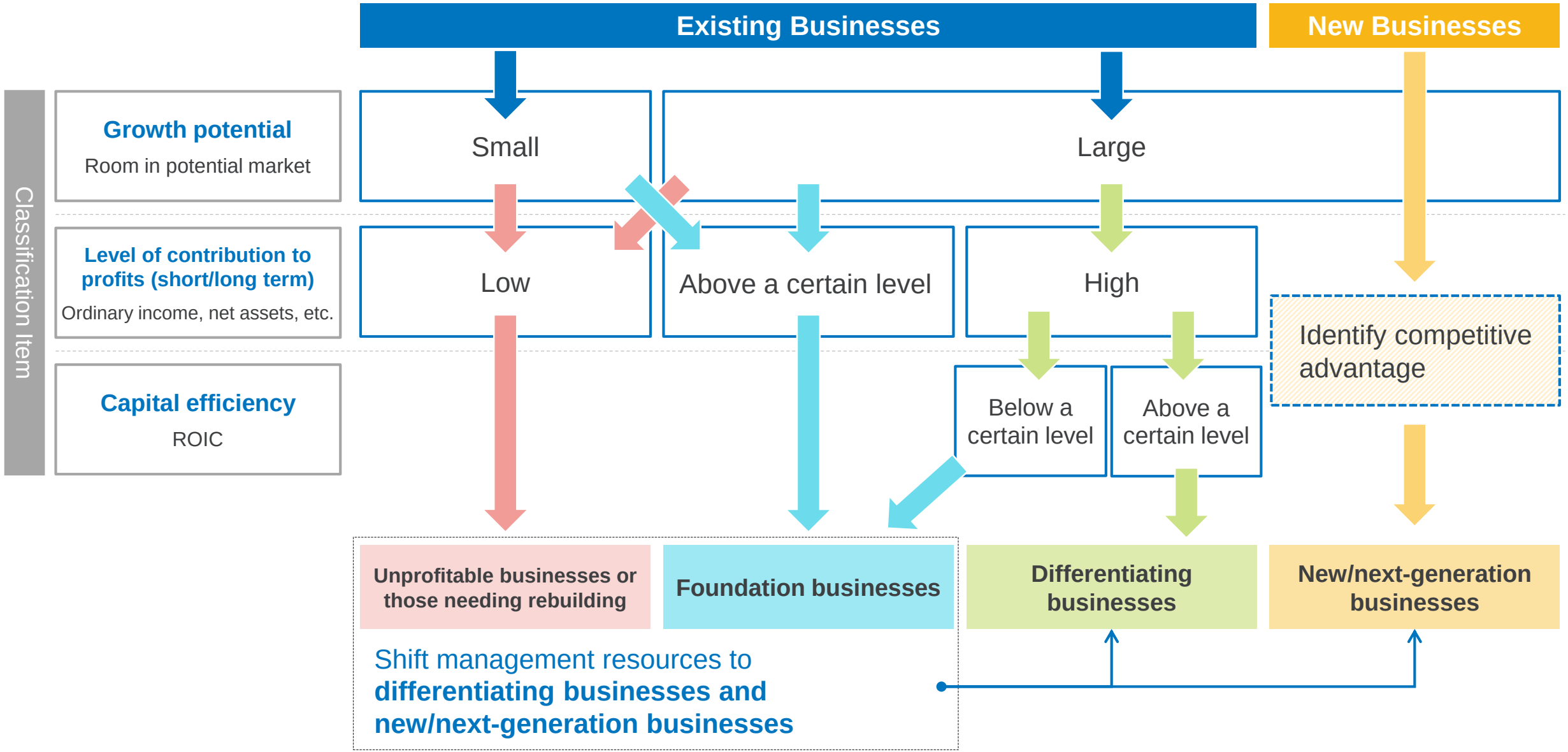
Business Portfolio Reform Classification Criteria



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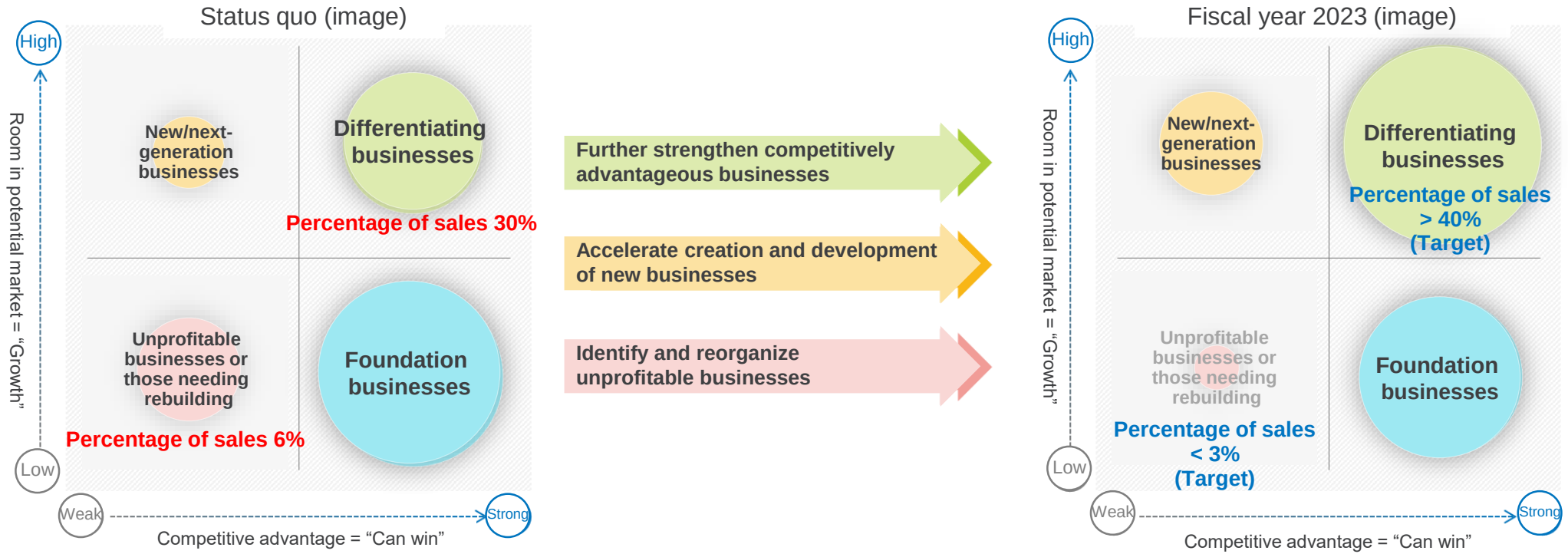
Classification of Product Lines under New Medium-Term Management Plan

Classification of Product Lines under New Medium-Term Management Plan	**Differentiating businesses**	MXDA, aromatic aldehydes, MX-Nylon, electronics chemicals, polyacetal, optical resin polymers, ultra-high refractive lens monomer, semiconductor packaging BT material...
	New/next-generation businesses (Includes products in the development stage)	Medical/Food: OXYCAPT, bio-products, contract manufacturing of antibody drugs, factory-produced vegetables ... ICT/Mobility: Solid electrolytes, cellulose fiber composite materials, Neopulim transparent polyimide resin, semiconductor-related materials... Environment/Energy: CO2-derived methanol, CO2-derived polycarbonate, methanol fuel cells...
	Foundation businesses	Methanol, ammonia and amines, MMA products, energy resources and environmental businesses (geothermal and other types of power generation, water-soluble natural gas, iodine), foamed plastic (JSP), hydrogen peroxide, polycarbonate/sheet film, oxygen absorbers…
	Unprofitable businesses or those needing rebuilding	Formalin and polyol products, xylene separators and derivatives



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Action Plan for Business Portfolio Reforms

Further strengthen competitively advantageous (“differentiating”) businesses

Electronics chemicals
Strengthen global expansion in super-pure hydrogen peroxide

Optical resin polymers
Boost production capacity and construct new raw material monomer plant

Semiconductor packaging BT material
Capture new demand as 5G progresses

MXDA
Consider establishing new MXDA production facility in Europe

Aromatic aldehydes
Boost production capacity at Mizushima Plant

MX-Nylon
Improve recyclability

Polyacetal
Enhance market presence through business restructuring

Bring higher added value and higher efficiency to foundation businesses

- Promote higher added value and higher efficiency to shift to differentiating business
- Contributions aimed at realizing a decarbonized society, including through the use of methanol and polycarbonate derived from CO2, etc.
- Foamed plastic (JSP)
  Differentiation through sales expansion of environmental products; strengthening the mobility sector

Accelerate creation and development of new businesses

Strategies for encouraging market expansion

Optimize research promotion system through integration and reorganization of R&D organization

Promote a strategic IP landscape, etc. through the establishment of a new Intellectual Infrastructure Center

Strengthen ability to generate new products

Plan to increase level of R&D investment by 20% over previous medium-term management plan

Also plan to increase research personnel

Reevaluate and rebuild unprofitable businesses

Formalin and polyol products

Build an integrated production system extending from formalin to the downstream (adhesives)

Progress with business portfolio reforms to create a base for stable earnings

Xylene separators and derivatives

Plan to rebuild business structure with the goal of stabilizing earnings from high-volatility product lines

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Further Strengthen Competitively Advantageous (“Differentiating”) Businesses

Electronics chemicals

Strengthen global expansion in super-pure hydrogen peroxide

- Further strengthen production sites that have expanded from Japan to South Korea, the U.S., Singapore and Taiwan

Establishment of new sites

--> China: Establish raw material plant
(scheduled to go on line in 2022)
Super-pure hydrogen peroxide plant
(sometime by fiscal year 2023)

Strengthening existing sites

--> Taiwan: Establish raw material plant
(scheduled to go on line in 2023)

Japan: Increase production by eliminating bottlenecks
(sometime by fiscal year 2023)

Optical resin polymers

Ensure a solid response to strong demand

- Boost production capacity at Kashima Plant (commercial operation scheduled to start in July 2022)

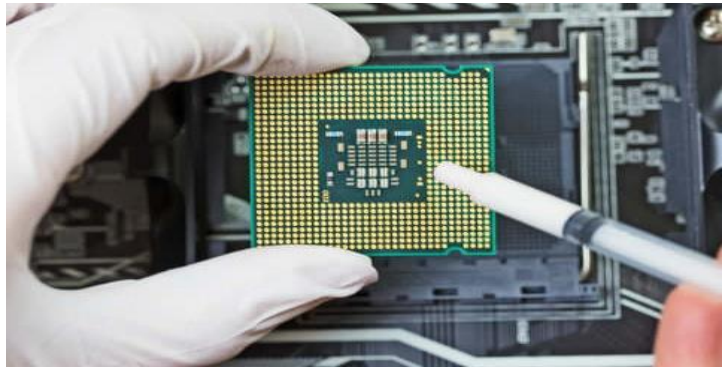
Build a strong supply chain

- Ensure the smooth launch of raw material monomer plant, a joint venture with Taoka Chemical Co., Ltd. (commercial operation scheduled for January 2023)

Promote recycling

- Reduce environmental impact by collecting and recycling residual materials generated by customers

Semiconductor packaging BT material



Capture new demand as 5G progresses

- Promote sales expansion strategies, such as by introducing new BT materials to the expanding Antenna in Package (AiP) market

Ensure a solid response to strong demand

- Boost production capacity at Thailand plant (commercial operation scheduled for April 2022)

New product and market development

- Joint development of IC substrate materials compatible with the requirements of the semiconductor market, through a joint venture with ITEQ of Taiwan

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Further Strengthen Competitively Advantageous (“Differentiating”) Businesses

MXDA

Advance Sales Expansion Strategy

- Advance expansion of sales strategy in anticipation of future new construction of production facility (Europe)

1. **Accelerate sales expansion in emerging markets**
   - Promote expansion of MXDA sales targeting in emerging countries in South America and elsewhere
2. **Development aimed at environmentally friendly products**
   - Focus on R&D and expanding sales in environmentally friendly products including wind power generator blades, water-based paints, etc.

Aromatic aldehydes

Respond to Future Increases in Demand

- Demand for aromatic aldehydes is growing at an annual rate of 4-5%
  Respond to future increases in demand

Boost production capacity at Mizushima Plant

- Plan to boost production capacity in 2022 through debottlenecking
- Consider constructing new production facilities to respond to mid- to long-term increases in demand

MX-Nylon

Expand Sales in Priority Regions

- Extend existing applications to priority regions, including Europe, the U.S., China, Southeast and South Asia, the Middle East and Central and South America.

Efforts to Reduce Environmental Impact

- Efforts aimed at enhancing recyclability
- Development of materials derived from biomass
- Contribute weight saving through metal substitutes

Polyacetal

Enhance market presence through business restructuring

- Make Korea Engineering Plastics Co., Ltd. (KEP) a manufacturing company and establish a new company in Korea to handle sales of KEP products

Develop New Grades and Expand Sales

- Continuous improvement of low-VOC grade and expand product line-up to extend sales into the mobility field

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Bring Higher Added Value and Higher Efficiency to Foundation Businesses

Methanol

- Define methanol produced from diverse raw materials including CO2 as a circular carbon product, and promote development of manufacturing technology
- Strengthen competitiveness in terms of logistics

Energy Resources and Environmental Businesses

- Achieve stable operation of low CO2-emitting geothermal power plants and investigate new promising regions
- New development of water-soluble natural gas and iodine

Ammonia, Amine and MMA-based Products

- Work with overseas joint venture companies to cooperate in investigations on CCUS* aimed at use of CO2-free ammonia, and consider preparing infrastructure in Japan to accommodate
- Strengthen sales of MMA-based derivatives and expand offering of new derivatives

Foamed Plastic (JSP)

- Increase sales of differentiating environmental products focused around the SDGs
- Position new materials and new applications as priority objectives in developing new markets in the mobility sector

Polycarbonate, Sheet Film

- Build technology for efficient mass production of environmentally friendly polycarbonate using CO2 as a raw material
- Increase the ratio of sales of high-added-value polycarbonate

Hydrogen Peroxide

- Relocation and start of commercial operation of hydrogen peroxide plant in China
- Further development of environmental chemicals such as peracetic acid and water treatment agents

Oxygen Absorbers

- Increase ratio of sales overseas and expand adoption in non-food fields
- Reduce environmental impact through more compact products and through the adoption of environmentally compatible raw materials

*CCUS (Carbon dioxide Capture, Utilization and Storage)
Technology for capturing and storing carbon dioxide emissions, and for using stored carbon dioxide as a raw material in chemical products

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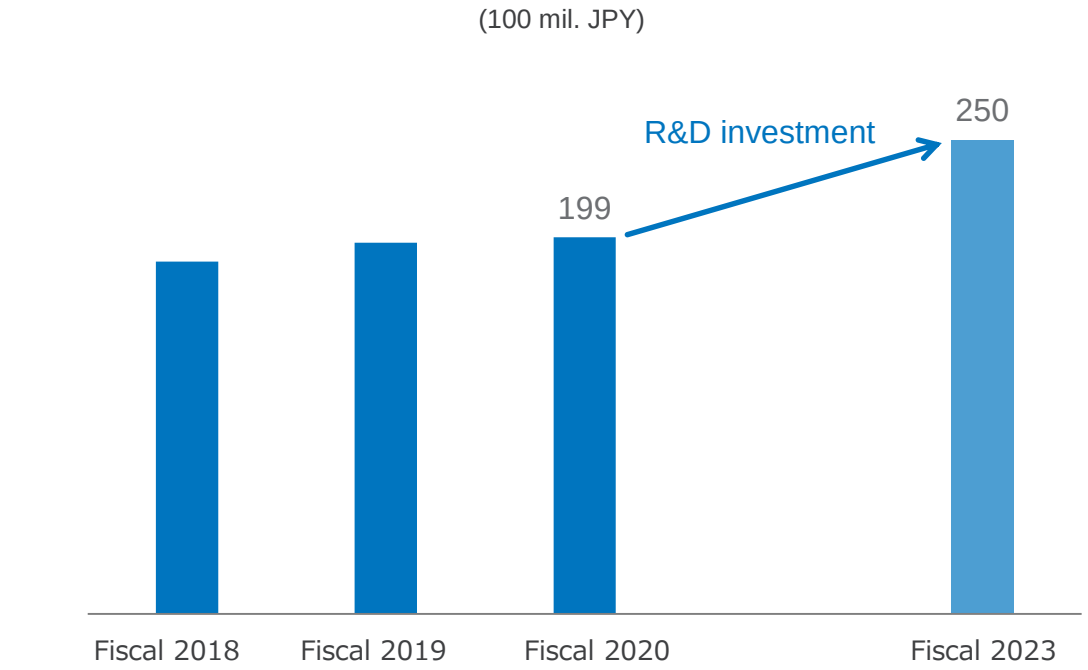
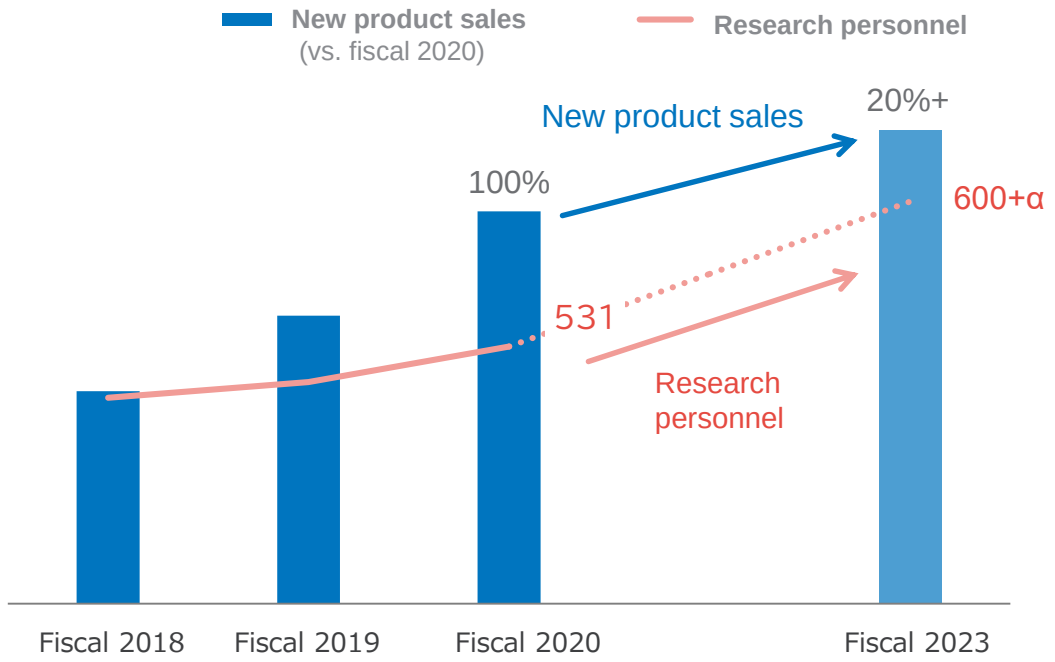
Accelerating New Product Development and Cultivation (Numerical Targets)

- Proceed with active investment in R&D, with total R&D investment of approximately ¥73.0 billion over the three years of the new Medium-Term Management Plan (Total R&D investment over the three years of MGC Advance2020: ¥58.1 billion)
- Plan to increase the Company's research personnel to over 600 (531 researchers as of the end of fiscal 2020) *Excluding Group companies
- Plan to continue introducing new products. Aim to increase sales of new products within five years of market launch by more than 20% over fiscal 2020

R&D investment



New product sales/Research personnel



New product sales: Sales of new products within five years of market launch
Ratio of sales shown using fiscal 2020 as 100%

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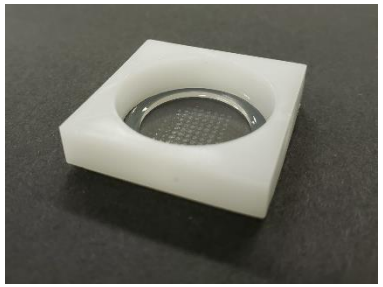
New Product Development Topics: Medical and Food

Allergy Test Chips

Developing an allergy test chip that can predict the severity of pediatric milk allergy



Efforts continue with validation by various organizations and in preparation for future construction of a mass production system

Antibody Drug Contract Manufacturing Business

Manufacturing equipment deployed at Cultivex Inc. in preparation for contract manufacturing of antibody drugs
Succeeded in mass cultivation of biosimilar producing cells for Denosumab, an antibody drug

Continue to secure commercial projects in order to expand contract manufacturing business of antibody drugs

Antibacterial Non-woven Fabric

Developed an antibacterial non-woven fabric coated with a special antibacterial ingredient

Advancing market development in sectors including hygiene and disaster preparedness as well as food packaging by leveraging the persistent antibacterial effect and the durability of non-woven fabric

OXYCAPT

In 2019, began production of OXYCAPT, plastic syringes and vials for use as an alternative to glass containers for parenteral pharmaceuticals

Working to further expand product line-up and advance market development

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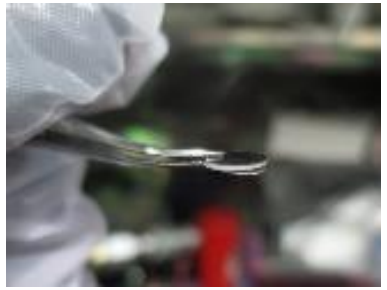
New Product Development Topics: ICT and Mobility

Solid Electrolytes

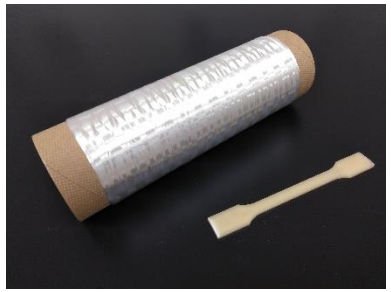
Development continues as samples are provided to customers for review and through collaboration with public research institutions



Research system expanding in anticipation of future market launch

Cellulose Fiber Composite Material

Began development of a manufacturing process for high-strength cellulose fibers and fiber-reinforced resin



Introducing prototyping equipment for fiber and resin development, and moving forward with customer sample reviews and market development

Carbon Fiber Composite Material

Developing carbon fiber composite materials that can contribute to metal substitutes and weight savings, utilizing the seeds of research from Group companies as well

Moving forward with market development through joint research with universities and through customer sample reviews

New BT Material

Capturing 5G smartphone needs through sheet products that contribute to lower dielectric constants and thinner film

Proposing sheet products without glass fiber cloth, with improved electrical properties

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New Product Development Topics

Research Promotion and Supervisory Organization Revisions

With the organizational revisions in fiscal 2020, the three research laboratories which were previously each under separate business divisions were brought together under the R&D Promotion Division.

Beginning in fiscal 2021, the R&D Promotion Division and the Advanced Business Development Division were merged under the Research & Development Division with the goal of exploring portfolio expansion and promoting the creation of new product lines. The Intellectual Infrastructure Center was also established as a new, independent division. They will utilize digital technology to systematize and standardize intellectual property and promote a strategic IP landscape.

New research building (N-SEQ) at Niigata Research Laboratory/Niigata Plant

In 2020, a new research building (N-SEQ) was completed at the Niigata Research Laboratory and Niigata Plant, integrating their R&D and the Quality Assurance Department

This will encourage interaction among researchers and the creation of new ideas

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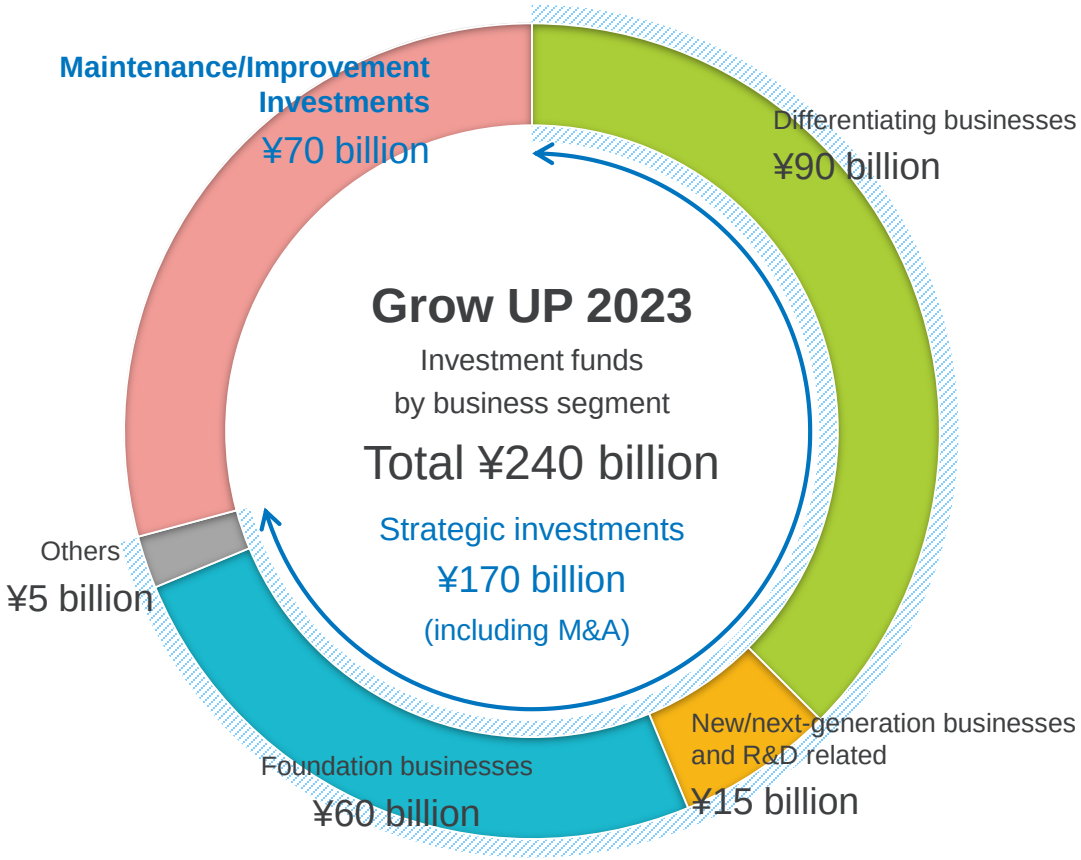
Investment Plan

- Continue high level of investment. Planning for a total of ¥240 billion over three years, with a focus on strengthening differentiating businesses and developing new and next-generation businesses
- Active investments will also be made in R&D, ESG and DX-related areas, advancing both business portfolio reforms and sustainable growth



Sample investment projects in differentiating, new and next-generation businesses and R&D

• **Aromatic aldehydes**	Boosting production capacity (Mizushima Plant)
• **Electronics chemicals**	New raw material hydrogen peroxide plant (Taiwan) New super-pure hydrogen peroxide plant (China)
• **Optical resin polymers**	Boosting production capacity (Kashima Plant) New raw material monomer plant (Niigata Plant)
• **Semiconductor packaging BT material**	Boosting production capacity (Thailand Plant)
• **Construction of MGC Commons, site for human resource development and innovation**	

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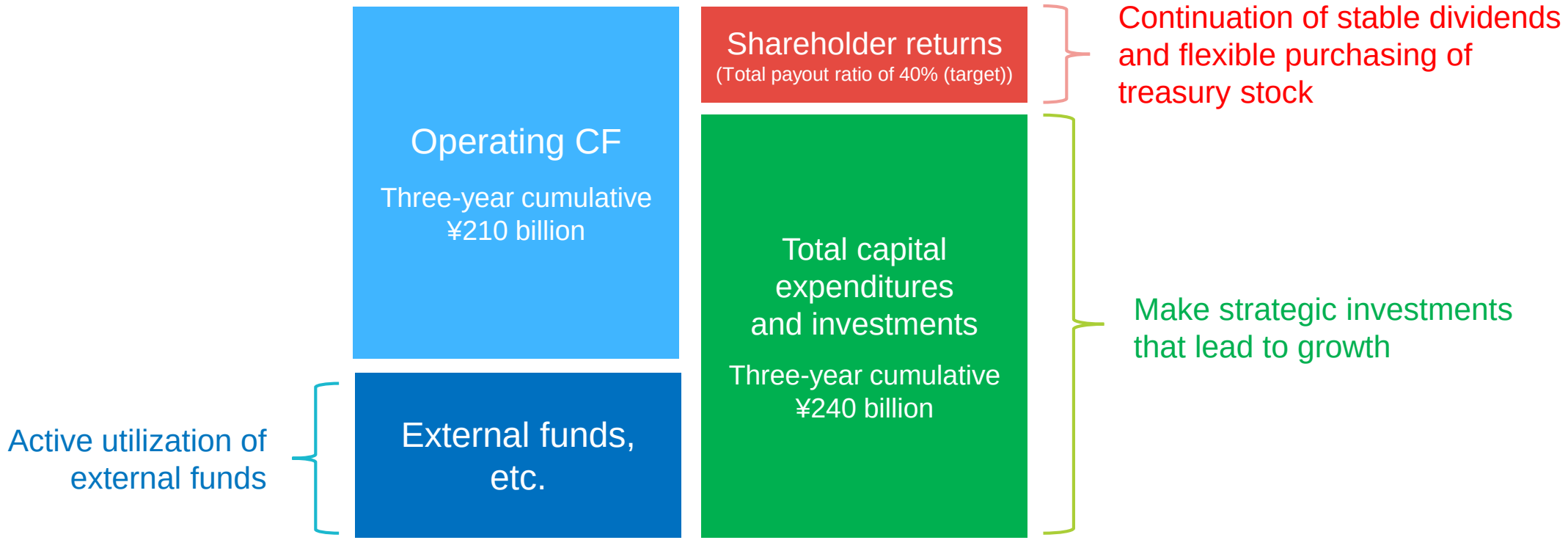
Financial and Capital Policies

- Total capital expenditures and investments expected to reach ¥240 billion under the new Medium-Term Management Plan
- Active utilization of external funds will go to strategic investments (including R&D, ESG and DX-related) that lead to growth



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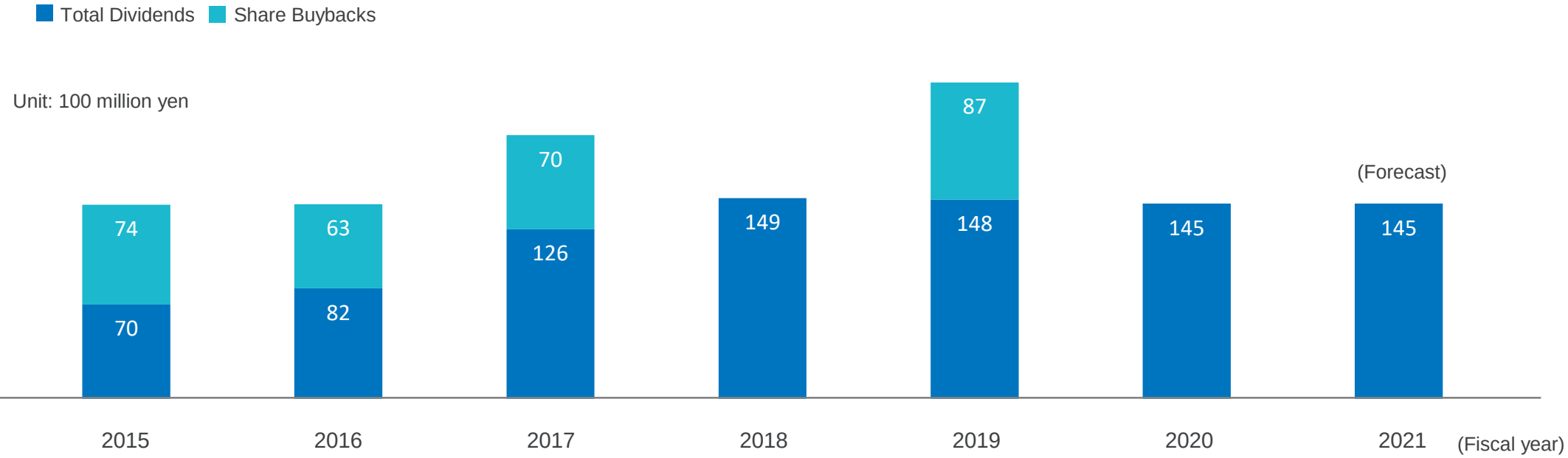
Shareholder Return Policy

– Basic policy is to continue to provide stable returns while flexibly purchasing treasury stock, with a total payout ratio* of 40% as a target for medium-term shareholder returns

*Total payout ratio against net income attributable to owners of parent, including purchases of treasury stock



	2015	2016	2017	2018	2019	2020	2021
Net income (100 mil. JPY)	341	480	605	550	211	360	410
Annual dividend (JPY/share)*	32	38	59	70	70	70	70

*The Company conducted a two-for-one reverse stock split on October 1, 2016.
Dividend figures predating the share consolidation have been adjusted to show what they would have been had the effects of the share consolidation also applied to them.

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Information by Segment

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Numerical Targets by Business Sector

Basic Chemicals Business Sector	**Overall Policy**	– Turn products and businesses that respond to societal demands into “Business” – Reduce volatility through portfolio reforms and rebuilding of unprofitable businesses
Specialty Chemicals Business Sector	**Overall Policy**	– Increase ratio of high-added-value products, strengthen cost competitiveness – Continue capital investments in growth markets

(100 million yen)	Fiscal 2017 results	Fiscal 2020 results	Fiscal 2023 targets	Fiscal 2020-2023 Key products contributing to sales increase
Sales				(Basic Chemicals) MXDA, aromatic aldehydes, MX-Nylon, methanol (Specialty Chemicals) Optical resin polymers, semiconductor packaging BT material, electronics chemicals, polycarbonate
Basic Chemicals	3,878	3,228	**4,100**	
Specialty Chemicals	2,578	2,678	**3,300**	
Operating income				Key products contributing to income increase
Basic Chemicals	311	96	**250**	(Basic Chemicals) MXDA, aromatic aldehyde, MX-Nylon, methanol, Xylene separators and derivatives (Specialty Chemicals) Optical resin polymers, semiconductor packaging BT material, electronics chemicals, polycarbonate
Specialty Chemicals	338	348	**490**	
Ordinary income				
Basic Chemicals	388	110	**310**	
Specialty Chemicals	435	375	**530**	

*Fiscal 2017 results are total of former segments

*This slide does not include businesses and adjustments outside these segments

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2. Balance Social and Economic Value: Toward Sustainable Growth

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Objectives of New Medium-Term Management Plan Grow UP 2023

Objective 2

Balance social and economic value

Toward sustainable growth

2-1. Solve social issues through business

- Contribute to development of ICT/mobility society
- Solve energy and climate change problems
- Solve medical and food problems

2-2. Harmonize shared-value creation with environmental protection

- Air quality control, water and biodiversity conservation
- Reduction of industrial waste

2-3. Strengthen discipline and foundation supporting business activities

- Cultivating a corporate culture of job satisfaction
- Occupational safety and health, process safety and disaster prevention
- Highly energy- and resource-efficient production
- Promotion of innovative R&D

Implement materiality management around these three perspectives

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Materiality Management: Toward Fiscal 2030 (1)

Solve social issues through business

Materiality	Qualitative Targets and Action Plans	KPI		
		Fiscal 2020 results	Fiscal 2023 targets	Fiscal 2030 targets
	(Qualitative Targets) Contribute through business to ICT, AI, robotics, blockchain, CASE and other digital innovations, and work to enhance corporate value (Action Plan) Turn out new products that contribute to digital innovation and lighter weight mobility	Sales from ICT/mobility applications ¥234.2 billion	**¥320.0 billion**	Create new businesses that accelerate digital innovation
	(Qualitative Targets) Contribute to solving energy and climate change problems by participating in geothermal and LNG power generation, by developing products using CO2 and biomass as raw materials, and through products that contribute to the environment, and work to enhance corporate value (Action Plan) Development of manufacturing technology using CO2 as a raw material (Ex.: CO2-derived methanol, polycarbonate)	Investment aimed at Solving problems (Three-year cumulative) ¥8.6 billion	**¥12.0 billion**	Commercialization of carbon-negative technology
	(Qualitative Targets) Contribute through business to QOL improvements, extended healthy life expectancy, anti-aging and reduction of food and beverage waste loss, and work to enhance corporate value (Action Plan) Expansion of sales of products that contribute to QOL, further development of markets in pharmaceutical and medical fields, etc.	Sales from medical and food applications ¥39.4 billion	**¥50.0 billion**	Advances in preventive and predictive medicine, enhanced healthy life expectancy Further advances in food storage technology

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Materiality Management: Toward Fiscal 2030 (2)

Harmonize shared-value creation and environmental protection

Materiality	Qualitative Targets and Action Plans	KPI		
		Fiscal 2019 results	Fiscal 2023 targets	Fiscal 2030 targets
	(Qualitative Targets) Under the principles of sustainable development, corporations have a responsibility to take care that their business activities are in harmony with protection of the global environment (Action Plan) Phased reduction of GHG (Greenhouse Gas) emissions and introduction of renewable energy, etc. aimed at achieving carbon neutrality by 2050	GHG emissions vs. fiscal 2013		
		23% reduction	**28% reduction**	**36% reduction**
		Renewable energy as a percentage of electric power purchased		
		0%	**10%**	**50%**
	(Qualitative Targets) Consider waste as useful material and energy resources, moving forward with efforts to make cyclical use of resources and reduce environmental impact, while promoting resource recycling (Action Plan) Promote zero emissions, etc.	Zero waste emission rate *1		
		0.8%	**0.3% or lower**	**0.15% or lower**

*1 Final disposal of waste/waste generated

*Above for MGC on a stand-alone basis

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Materiality Management: Toward Fiscal 2030 (3)

Strengthen discipline and foundation supporting business activities

Materiality	Qualitative Targets and Action Plans	KPI		
		Fiscal 2019 results	Fiscal 2023 targets	Fiscal 2030 targets
Cultivating a corporate culture of job satisfaction 	(Qualitative Targets) Create a highly productive organization by providing opportunities and an environment in which each employee can adapt to diverse, flexible styles of working while refining their own characters and abilities and developing their strengths (Action Plan) Promotion of work-life balance, etc.	Percentage taking fewer than 10 days of annual paid leave *1		
		7.8% *Results for fiscal 2018	**0%**	**0%**
Occupational safety and health / Process safety and disaster prevention 	(Qualitative Targets) Safety philosophy: “Safety is the basis of our business activity and ensuring safety is our duty to society” (Action Plan) Share and utilize examples of accidents and disasters, promote process risk assessments, etc.	Serious occupational accidents * Disability eligible for, or possibly eligible for disability compensation involving lost work accidents, fatal accidents and accidents resulting in permanent inability to work, and those involving four or more lost work days		
		0	**0**	**0**
		Serious accidents * Accidents and major workplace accidents which threaten third parties, including localized environmental pollution and accidents affecting local residents		
		1	**0**	**0**
Highly energy- and resource-efficient production 	(Qualitative Targets) Harmonize business activity with environmental protection by reducing emissions intensity through ultra-stable operation of production equipment, utility production through the use of highly-efficiency equipment, and process development and improvements. (Action Plan) DX advancements (SMART-MGC Project), etc.	GHG emissions intensity vs. fiscal 2013		
		14.6% reduction	**19.9% reduction**	**28.0% reduction**
Promotion of innovative R&D 	(Qualitative Targets) Engage in R&D aimed at the long-term goal of solving climate change problems through proprietary technology and collaboration via open innovation (Action Plan) Construction of a site for human resource development and creation of innovation	R&D investments devoted to solving climate change problems *2		
		3.8% of R&D expenditures	**5% or more of R&D expenditures**	**7% or more of R&D expenditures**

*1 For employees given 20 days of annual leave
*2 R&D investments in basic research, pilot plants, proof-of-concept testing, etc.

*Above for MGC on a stand-alone basis

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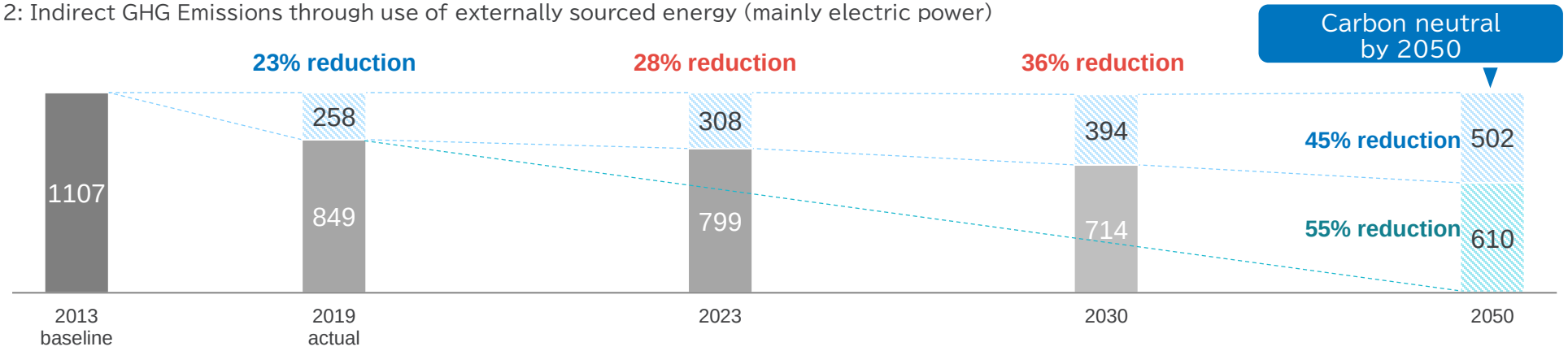
Achieving "Green-MGC":
MGC's Roadmap toward its Ultimate Goal of Carbon Neutrality by 2050

	Scope	2013 – 2019	2020 – 2023	2024 – 2030	2030 – 2050
Main initiatives (CO_2 reduction)	1	• Improve energy efficiency • Reconfigure business portfolio **258kt in total**	• Improve energy efficiency **16kt** • Stop using heavy oil **13kt**	• Improve energy efficiency **28kt**	• Improve energy efficiency **40kt**
			• Reconfigure business portfolio • Deploy new energy systems/CCUS, switch feedstocks (R&D/collaboration) **610kt in total**		
	2	–	• Source 10% of energy from renewables **14kt** • Use transitional energy **10kt**	• Source 50% of energy from renewables **55kt**	• Source 100% of energy from renewables **69kt**
Businesses & technologies		 Fukushima Gas Power Co.'s gas power plant	 Yuzawa Geothermal Power Corp's Wasabizawa Geothermal Power Plant	 Circular carbon methanol pilot plant	JAPAN HYDROGEN ASSOCIATION Collaboration	 Feedstock switching

＊ Scope 1: Direct GHG Emissions from MGC
Scope 2: Indirect GHG Emissions through use of externally sourced energy (mainly electric power)

CO2 emissions (kt/yr)



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Achieving “Green-MGC”: MGC’s Vision of Carbon-Neutral World Circa 2050

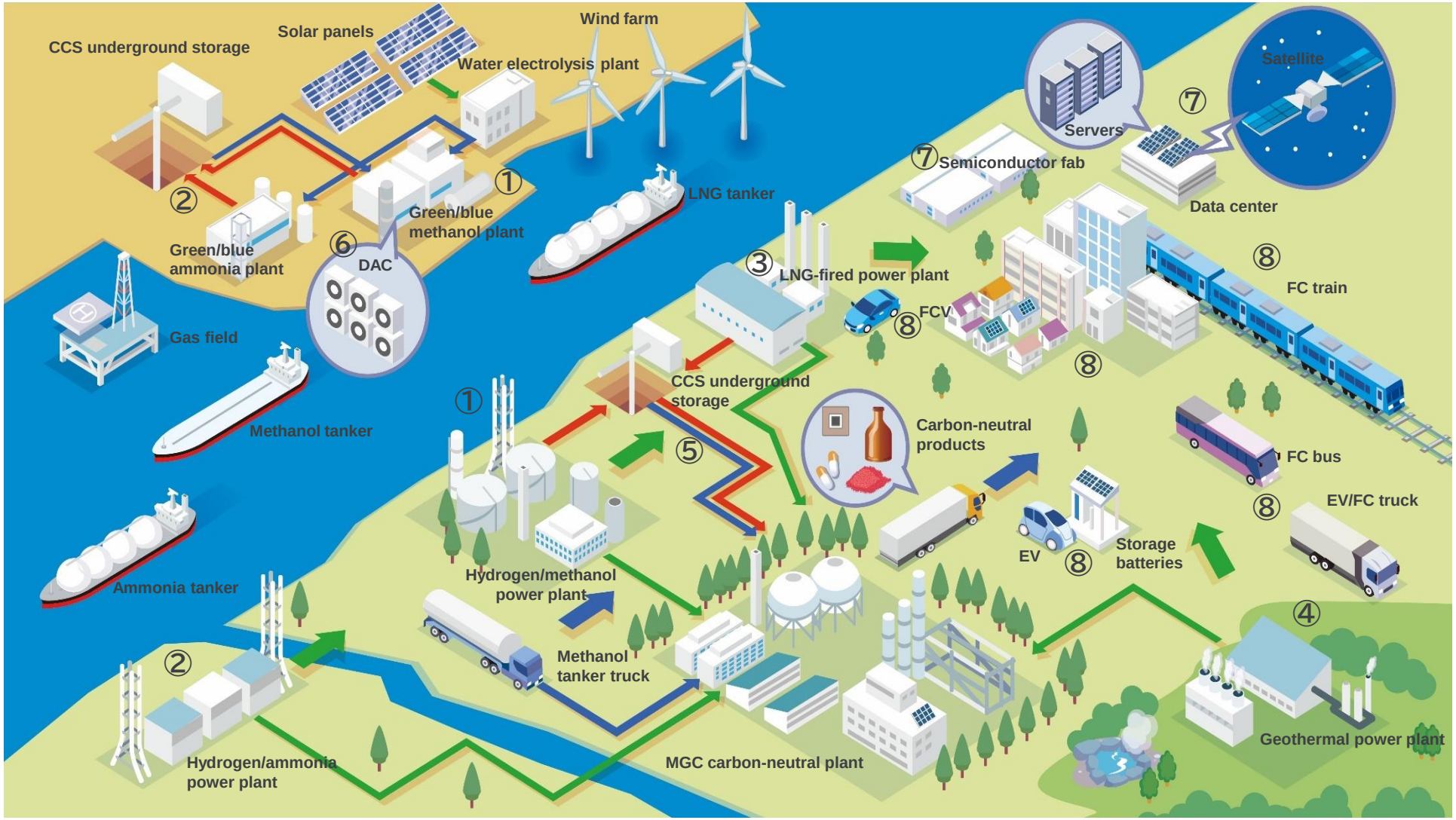
CO_2
Green energy
Feedstocks/products
Supply/benefit society

Carbon-neutral energy systems, CO_2 usage

① Methanol energy system
② Ammonia energy system
③ LNG-fired power plant + CCS
④ Geothermal power plant
⑤ Production of, e.g., polycarbonate feedstock from CO_2 (CCUS)
⑥ Specialty amines (DAC adsorbents)

Products conducive to carbon neutrality

⑦ BT materials, electronic chemicals (energy control systems)
⑧ Solid-state batteries (EVs), fuel cells (FCVs), polycarbonates/polyacetals (lighter-weight auto bodies), optical materials (better autonomous-driving sensors)



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Achieving “Green-MGC”: Examples of Business and Products Contributing to Carbon Neutrality

Geothermal Power Generation

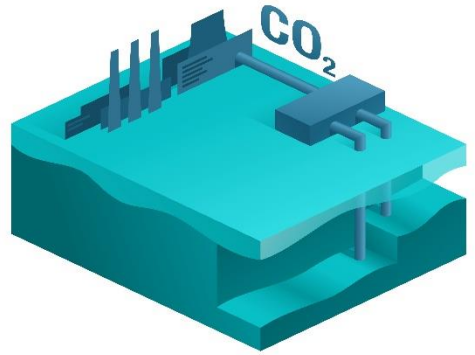
Continue stable operation of existing geothermal power plants as a source of electric power with low CO2 emissions

Move ahead with the construction of the Appi Geothermal Power Plant, scheduled for completion in 2024, while also investigating other new, promising regions

LNG Thermal Power Plant + CCS

Better control of emissions of CO2 and other pollutants compared to power generation using coal or oil

Promote technology development and investigation into underground storage of CO2 generated during power generation



CO2-derived Methanol

Work toward a decarbonized society via the concept of circular carbon methanol

Develop methods for synthesizing methanol from diverse raw materials, including use of CO2, and contribute to realization of decarbonized society

CO2-derived Polycarbonate

In fiscal 2020, engaged in a research project led by NEDO for the development of innovative technology aimed at achieving carbon neutrality

Establish new polycarbonate synthesis technology via carbonate ester applying CO2 fixation technology, and promote implementation in society

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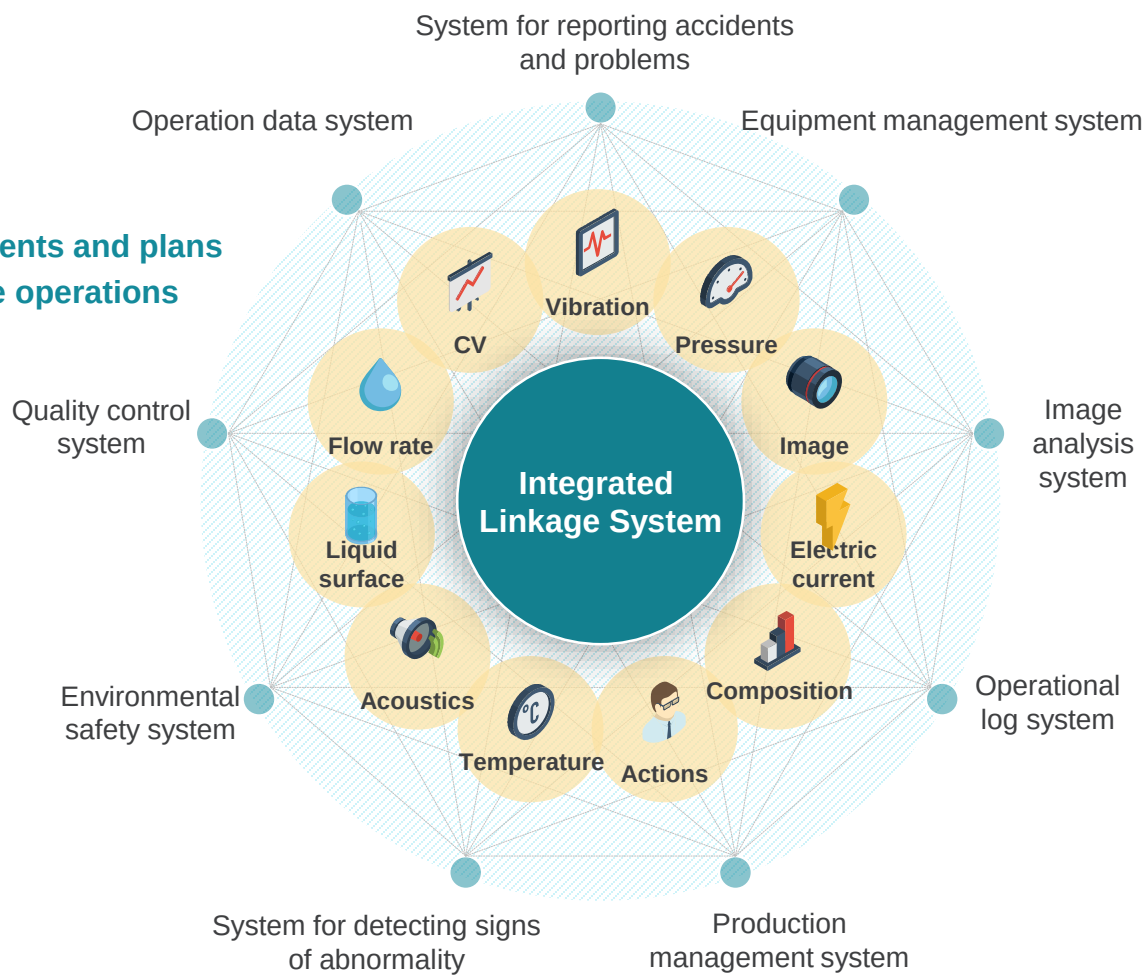
Advance “SMART-MGC” Project

– “SMART-MGC” uses digital technology to improve operational efficiency in production and back-office divisions, and to optimize operations overall

SMART-MGC

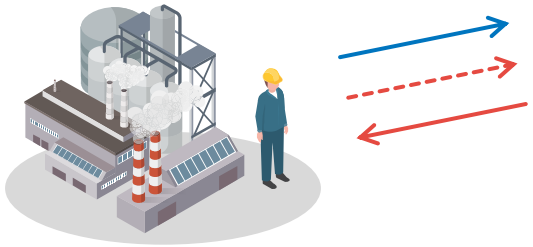
- **Utilize latest IT**
- **Link data from individual systems**
- **Automate process of creating documents and plans**
- **Generalize specialized work, optimize operations**



Human data entry operations
Electronic data
Electronic data viewing

SMART-FACTORY

Plant



SMART-OFFICE

Other offices and destinations

(Headquarters, laboratories, etc.)

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Working Toward Achieving New Value Creation

Mitsubishi Gas Chemical Innovation Center: MGC Commons

MGC Commons will be established as an innovation center, a place where diverse individuals can interact and learn from one another with the goal of achieving new value creation

Rendering of completed facility
Planned site: Kiba, Koto-ku, Tokyo

MGC Commons: Completion expected at the end of 2022

A multi-purpose facility combining the functions of an innovation center and human resource development

MGC Commons is not for the Group alone but is intended as a place for reaffirming an understanding of social issues and sharing values through dialogue and collaboration with other organizations and communities, and for developing individuals who can contribute to solving those issues, leading to the creation of new value

Main concept: Creating values to share with society

Development

A place for learning, where individuals and organizations can refine and advance their skills. A place to encounter new social issues beyond the boundaries of one's everyday work and organization

Well-Being

A pleasant, comfortable place that increases physical and mental health and the motivation to learn, and allows people to experience a way of working that maximizes intellectual productivity

Diversity

A place where a variety of people can gather, and that provides the diversity and flexibility to meet the needs of different situations

Communication & Collaboration

A place where people can interact on a daily basis without regard to the separation between inside and outside the company. A place for collaboration through contacts with a variety of players in society

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Grow UP 2023 Conceptual Diagram and Reference Materials

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Grow UP 2023 Conceptual Diagram

Social issues

Changes in international situation

Demographic changes

Advancements in ICT/Mobility

Climate change

Biodiversity crisis

Environmental impact reduction

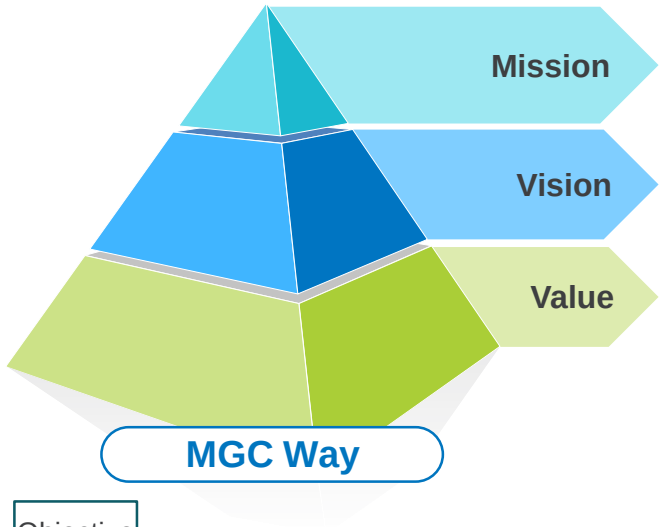
Diversity

Behavioral changes under COVID-19

Objective 1

Shift to a profit structure resilient to environmental changes

- Strengthening differentiating businesses
- Creating and nurturing new businesses
- Rebuilding unprofitable businesses



Creating values to share with society

An excellent company with uniqueness and presence built on chemistry

Principles of Conduct

Objective 2

Balance social and economic value

- Solve social issues
- Environmental protection
- Strengthen discipline and foundation

Solving social issues

Achieving sustainable growth

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[Reference Materials] Indicators (1)

	Fiscal 2018 results	Fiscal 2019 results	Fiscal 2020 results		**Fiscal 2023 assumptions**
			First half	Second half	
Exchange rate (JPY/USD)	111	109	107	105	**105**
Exchange rate (JPY/EUR)	128	121	121	126	**125**
Crude oil price (Dubai) (USD/BBL)	69	60	37	52	**60**
Methanol (USD/MT) Asia spot average price	372	261	194	319	**325**

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[Reference Materials] Indicators (2) Consolidated Basis

	Fiscal 2015 results	Fiscal 2016 results	Fiscal 2017 results	Fiscal 2018 results	Fiscal 2019 results	Fiscal 2020 results	**Fiscal 2023 assumptions**
Depreciation expense (100 million yen)	267	256	270	274	295	306	**400**
R&D expenditures (100 million yen)	189	192	189	186	196	199	**250**
Employees at fiscal year end	8,176	8,034	8,009	8,276	8,954	8,998	**10,250**

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Forward-looking Statements

These materials contain performance forecasts and other statements concerning the future. These forward-looking statements are based on information available at the time. These materials were prepared and on certain premises judged to be reasonable. None of these forward-looking statements are intended to be guarantees of future performance. Various factors may cause actual performance to differ significantly from forecasts.

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