



Innovation by Chemistry

Medium-Term Management Program Project AP-G 2025 (FY 2023–2025)

March 27, 2023

Toray Industries, Inc.



I. Toray's Vision

II. Reviewing the Medium-Term Management Program, Project AP-G 2022

III. Medium-Term Management Program, Project AP-G 2025

III-1. Seizing Profit Opportunities

III-2. Strengthening the Management Foundation

Human Resource Development, Risk Management, and Financial Soundness

IV. FY 2030 Sustainability Targets

Accelerating Efforts to Achieve the Toray Group Sustainability Vision

<Reference> Segment Information

I

Toray's Vision

Toray Philosophy

Corporate Philosophy

Contributing to society through the creation of new value with innovative ideas, technologies and products

Corporate Missions

For our customers:

To provide new value to our customers through high-quality products and superior services

For our employees:

To provide meaningful work and fair opportunities

For our shareholders:

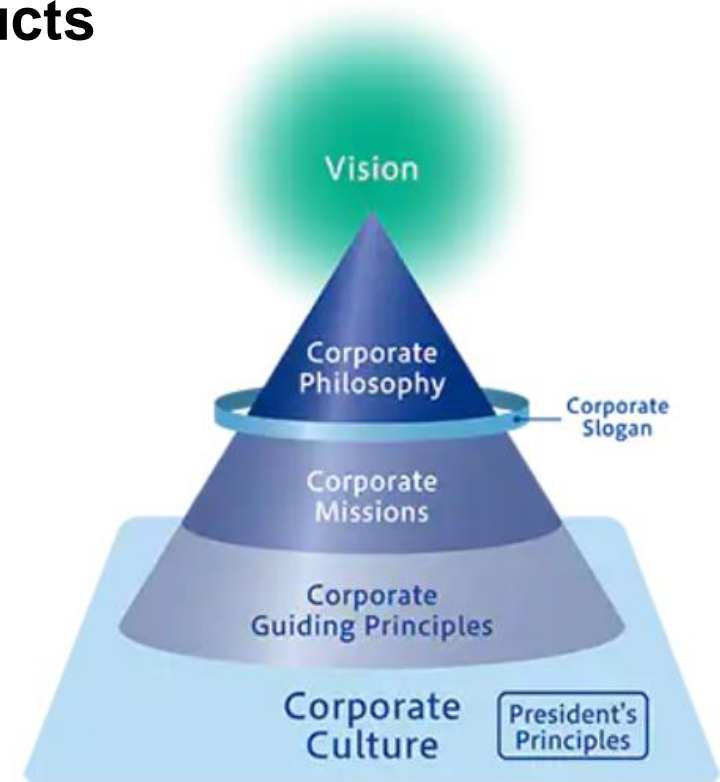
To practice sincere and trustworthy management

For society:

To establish ties and develop mutual trust as a responsible corporate citizen

Vision

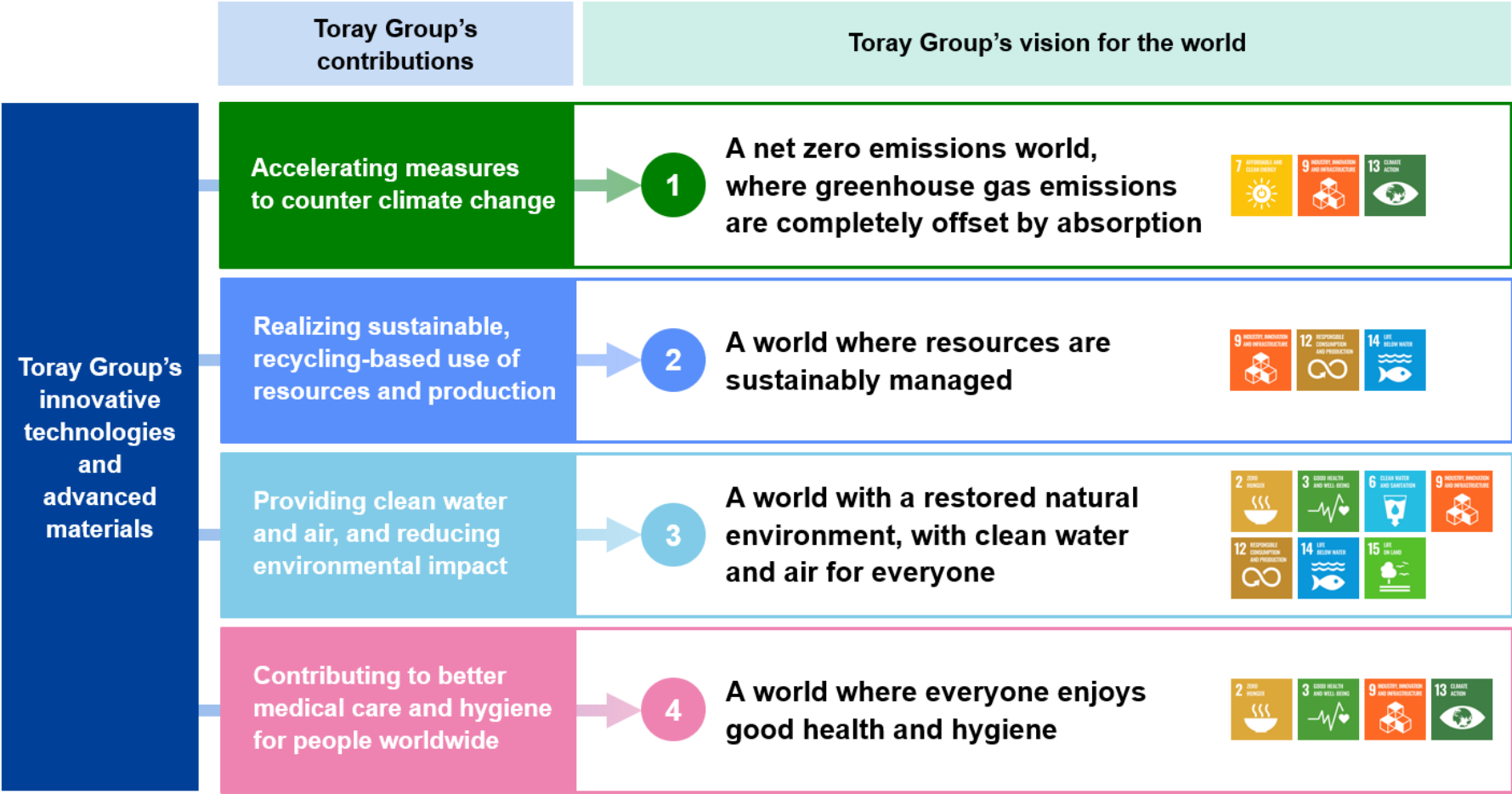
Toray Group Sustainability Vision



| Toray Philosophy |

Toray Group Sustainability Vision

We deliver innovative technologies and advanced materials that provide real solutions to the challenges the world faces with balancing development and sustainability



II

Reviewing the Medium-Term Management Program, Project AP-G 2022

Basic Strategies of Project AP-G 2022

To achieve **sound, sustainable growth** for the Toray Group by pursuing business expansion through **active investment**, while carrying out **structural reforms** and **reinforcing the financial structure** to facilitate this growth strategy

Basic Strategies of Project AP-G 2022

“Resilience and Proactive Management”
Sustainable Growth and New Development

3 Basic Strategies		Specific Initiatives
1	Global expansion in growth business fields	(1) Green Innovation business expansion (2) Life Innovation business expansion
2	Strengthening competitiveness	(1) Total cost reductions (2) Business advancement and high added value creation (3) Enhancing workplace competency in sales & marketing and production
3	Strengthening the management foundation	(1) Strengthening financial structure by improving cash efficiency (2) Business structure reform of low-growth and low-profitability businesses

Group-Wide Initiatives	New business creation	Reduction of greenhouse gas emissions in production activities
	Advanced business management by utilizing digital technology	Ensuring the Toray Philosophy is fully embraced

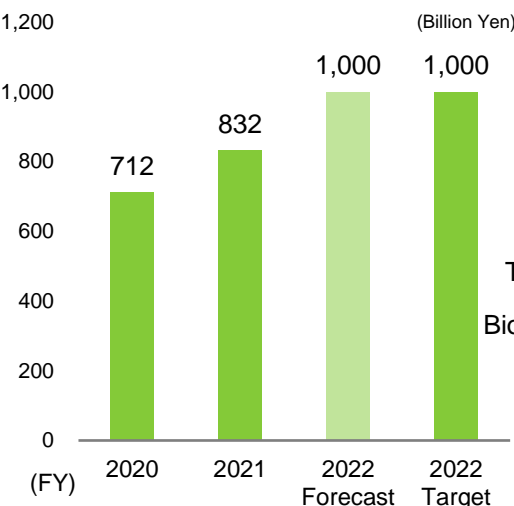
Global Expansion in Growth Business Fields

Achieved revenue targets for both the Green Innovation (GR) and Life Innovation (LI) businesses

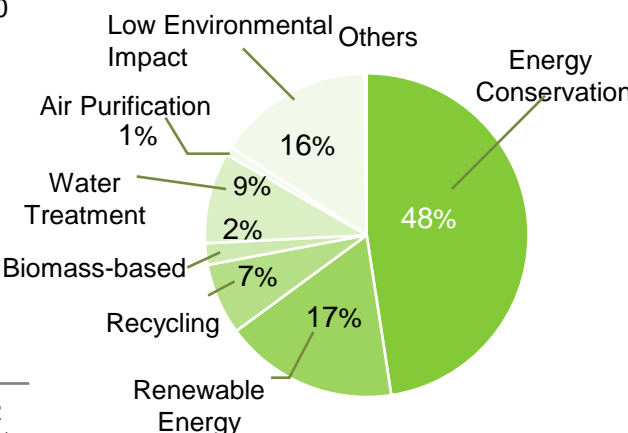
Green Innovation (GR) businesses

- Strong sales of carbon fiber for wind turbine blades, and water treatment membranes, etc.
- Achieved revenues compared to target due to recovery from the COVID-19 pandemic impact

Revenue from GR Businesses



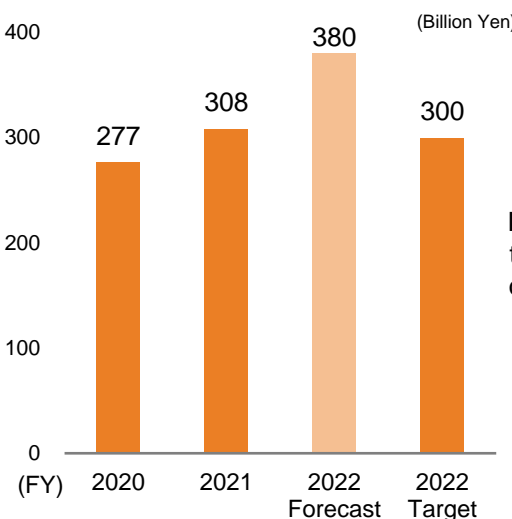
Breakdown of Revenue by Business Field, FY 2022



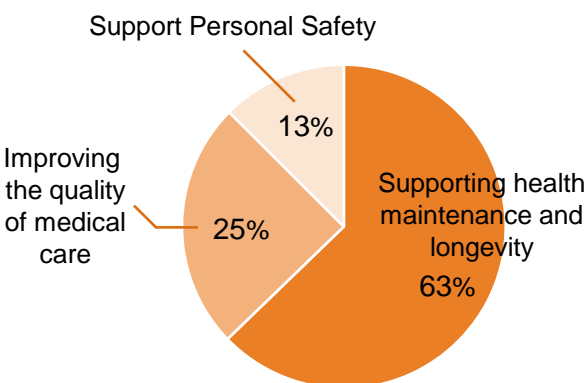
Life Innovation (LI) businesses

- Revenues exceeded target due to greater shipments of nonwoven fabrics for hygiene products and materials for sports applications

Revenue from LI Businesses



Breakdown of Revenue by Business Field, FY 2022



Progress on Reducing Greenhouse Gas Emissions and Water Usage

Achieved FY 2022 targets for greenhouse gas emissions and water usage per unit of revenue

Progress	FY 2022 Forecast	FY 2022 Target (Baseline: FY 2013)
GHG gas emissions per unit of revenue in production activities	26% Reduction	20% Reduction
Water usage per unit of revenue in production activities	27% Reduction	25% Reduction

Note: The calculation of the figure for the baseline of FY 2013 includes data for companies that joined the Toray Group in FY 2014 or later.

Examples

Regular energy-saving activities and greater cooperation,
as well as sharing and implementing successful improvement models
across the entire Toray Group

Fuel conversion

■ **Implemented elimination of coal-fired power generation in Indonesia (switched to power purchasing)**

ITS: Terminated in 2021
(250,000 tons of CO₂/year emissions reduction)

ETX: [Planned termination in 2024](#)

ITS : P.T. Indonesia Toray Synthetics
ETX : P.T. Easterntex



ITS power receiving
and transforming
equipment

Replaced coal-fired boilers with purchased electricity
and expanded the use of biomass fuel;
Promoted wastewater recycling using Toray water treatment technology

Renewable Energy

■ **Installation of renewable energy facilities**

Expanded to five Toray plants and 20 group companies worldwide.
Additionally, five companies in China plan to begin operating these facilities in 2023

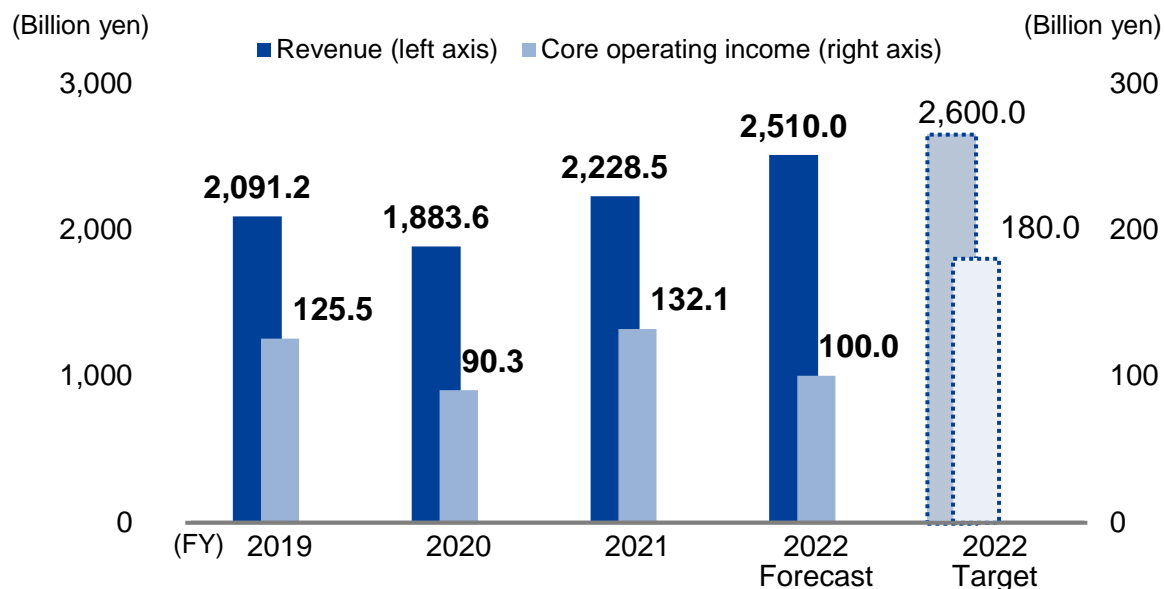
■ **Carbon-free power adoption**

Head Office in Tokyo: Adoption of 100% renewable electricity in April 2022
(1,500 tons of CO₂/year emissions reduction)

Revenue, Core Operating Income, and Cash Flow

Revenue increased, but did not reach the target. Core operating income declined considerably compared to the target. FCF and D/E ratio significantly improved compared to the target on efforts to reinforce the financial structure.

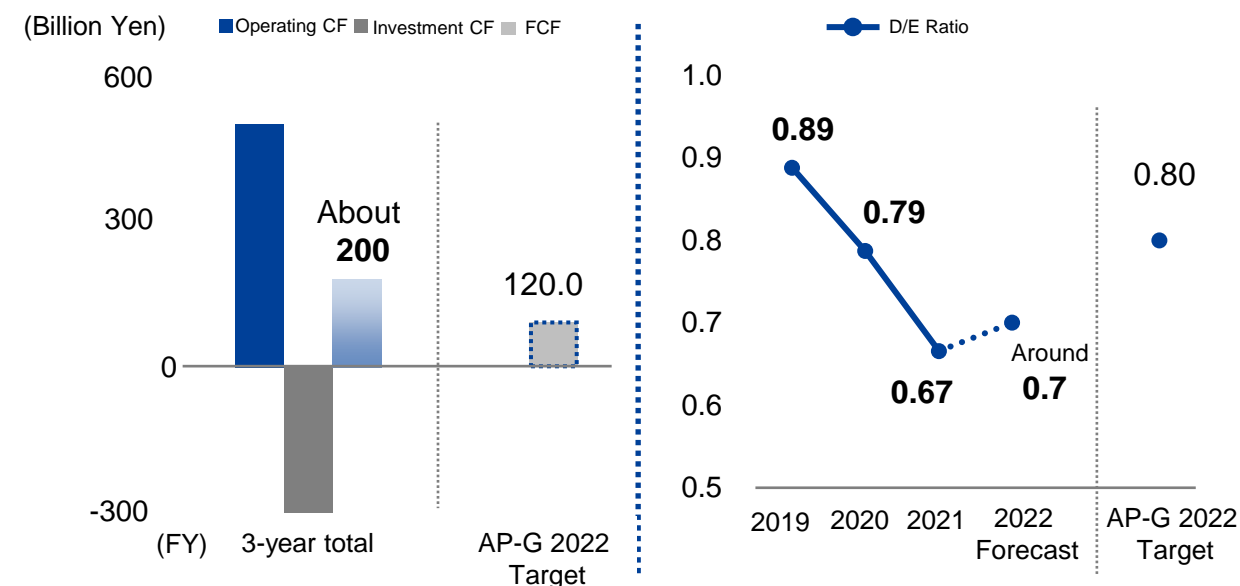
Revenue, Core Operating Income



<Revenue and Core Operating Income>

In FY 2022, revenue increased as demand, which had declined since FY 2020 due to the pandemic, recovered. Other factors were progress on passing on higher raw material and fuel costs to sales prices, as well as foreign exchange gains. However, revenue fell short of the AP-G2022 target due to a decline in sales volume. Core operating income was significantly lower than target due to the decline in sales volume and the impact of soaring raw material and fuel prices.

FCF (3-year total), D/E Ratio

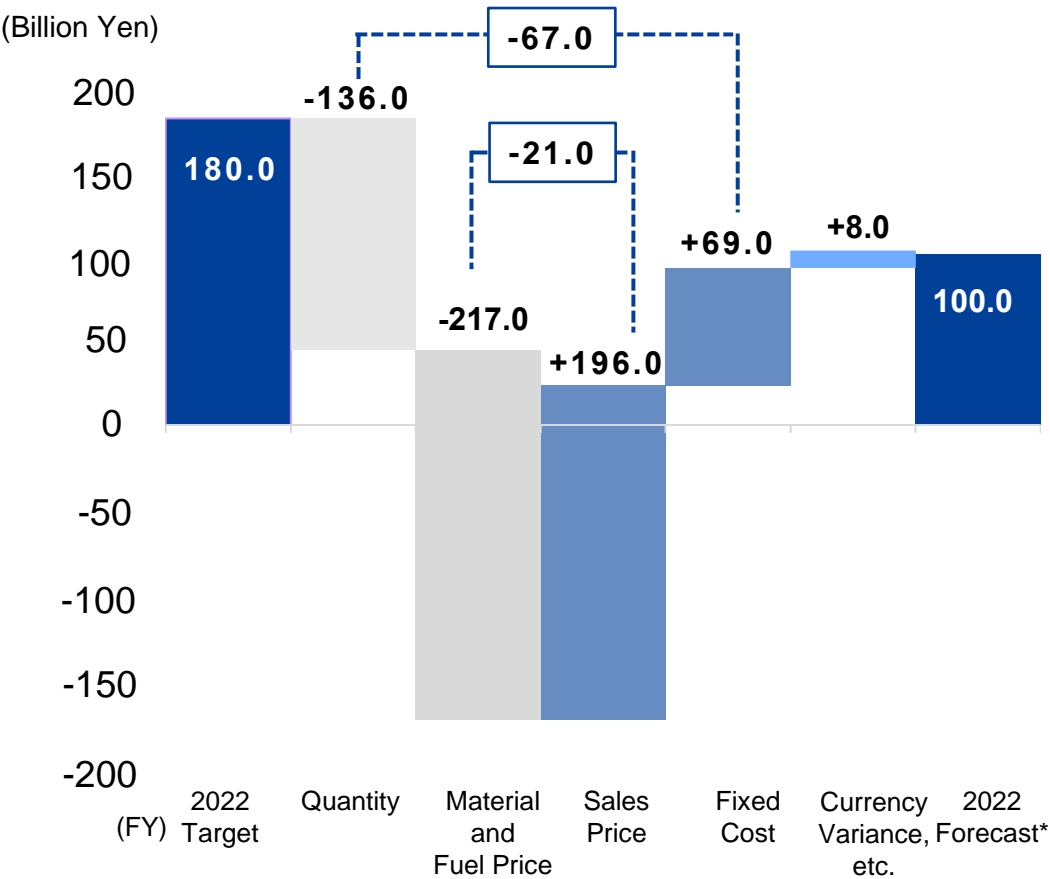


<Cash Flow>

FCF was significantly higher than planned due to careful assessment of capital investment projects during the COVID-19 pandemic. D/E ratio significantly surpassed the guideline of “around 0.8” and strengthened the management foundation.

Variance Analysis of Core Operating Income

Core operating income **did not reach the target**. The main reasons were: the change in people’s behavior due to the pandemic; the decrease in sales volume of products for aircraft and automobiles due to supply constraints; and soaring raw material and fuel prices caused by the prolonged war in Ukraine.



Segment	Difference (Billion Yen)	Factors for Increase/Decrease
Fibers & Textiles	-24.5	Income decreased due to pandemic-induced changes in the demand structure, such as a shift from formal wear to sports and outdoor apparel. Another factor include a drop in sales volume of materials for industrial applications, and the impact of soaring raw material and fuel prices.
Performance Chemicals	-55.0	Resins & Chemicals Business <ul style="list-style-type: none"> Income decreased due to a slow recovery in vehicle production volumes and a decline in sales volume caused by slow economic recovery in China. Films Business, Electronic & Information Materials Business <ul style="list-style-type: none"> Income decreased significantly due to lower sales volume. The market is currently in an adjustment phase following a period of unusually high telecommuting-driven demand for TV and smartphone display-related products and special demand for semiconductors. The sharp rise in raw material and fuel prices also had a significant impact.
Carbon Fiber Composite Materials	-9.0	Sales volume fell due to the impact of lower build rates for commercial aircraft in aerospace applications. However, higher sales of carbon fiber for wind turbine blades and pressure vessels in industrial applications helped to minimize the decline in income.
Environment & Engineering	+2.0	Income grew due to promotion of high value-added products for seawater desalination applications undertaken to expand the reverse osmosis (RO) membrane business. Another contributing factor was a net change in price due to the depreciation of the yen.
Others	+6.5	Income increased due to a reduction in fixed costs for Toray Industries, Inc.
Total	-80.0	

*As of February 8, 2023

Achievement status of Financial Targets

Billion Yen

	FY 2020 Actual	FY 2021 Actual	FY 2022 Forecast*	AP-G 2022 FY 2022 Target
Revenue	1,883.6	2,228.5	2,510.0	2,600.0
Core Operating Income	90.3	132.1	100.0	180.0
Core Operating Margin	4.8%	5.9%	4.0%	7%
ROA	3.2%	4.5%	Around 3%	Around 7%
ROE	3.9%	6.4%	Around 5%	Around 9%
Free Cash Flow	-	-	Around 200.0 (3-year total)	120.0 or more (3-year total)
D/E Ratio	0.79	0.67	Around 0.7	Around 0.8 (guideline)

Assumed exchange rate in AP-G 2022: ¥105 / US \$

*As of February 8, 2023

ROA = Core Operating Income / Total Assets

ROE = Net Profit Attributable to Owners of Parent / Average Equity Attributable to Owners of Parent

Achievement status of Sustainability Targets

	FY 2020 Actual	FY 2021 Actual	FY 2022 Forecast	AP-G 2022 FY 2022 Target
Revenue from GR Business (Billion Yen)	711.8	832.2	1,000.0	1,000.0
Revenue from LI Business (Billion Yen)	276.6	308.4	380.0	300.0
CO ₂ emissions avoided in value chain	6.4-fold	8.0-fold	9.5-fold	5.3-fold
Water filtration throughput contribution by Toray's water treatment membranes	2.0-fold	2.2-fold	2.4-fold	2.4-fold
Greenhouse gas emissions per unit of revenue in production activities	14% Reduction (290tons/100 million yen)	21% Reduction (267tons/100 million yen)	26% Reduction	20% Reduction
Water usage per unit of revenue in production activities	18% Reduction (12,520tons/ 100 million yen)	28% Reduction (10,905tons/ 100 million yen)	27% Reduction	25% Reduction

Each relative ratio is calculated in comparison to FY 2013

Summary of AP-G 2022

Basic strategies	Summary
Global expansion in growth business fields	<ul style="list-style-type: none"> • Revenues from GR and LI businesses increased even during the COVID-19 pandemic, meeting target. • Profitability decreased due to increased costs such as rising raw material and fuel prices, as well as the relative decline in the value of existing products caused by increased competition.
Strengthening competitiveness	<ul style="list-style-type: none"> • Achieved the goals of the New Total Cost Reduction Project (variable cost reduction, fixed cost reduction, and production process innovation).
Strengthening the management foundation	<ul style="list-style-type: none"> • Significantly improved free cash flow (three-year total) compared to the target due to a significant decrease in capital investment and R&D expenses for three years from the planned figures, and by controlling fixed costs. • D/E ratio improved significantly compared to the target, due to an increase in retained earnings and in equity due to foreign exchange impacts at group companies outside Japan.
Sustainability	<ul style="list-style-type: none"> • Pursued initiatives to achieve carbon neutrality and exceeded KPIs for CO₂ emissions avoided in value chain and greenhouse gas emissions, etc. • Clarified risks and opportunities and shared the information by issuing the Toray Group TCFD Report, etc.
Compliance	<ul style="list-style-type: none"> • Thoroughly investigated the root causes of inappropriate actions related to UL certification and implemented measures to prevent recurrence. • Carried out Mission BEAR initiative to instill compliance awareness “Have the integrity to do the right thing in the right way” within the Group.



New Medium-Term Management Program Challenges

- 1 **Expanding business and improving profitability (profit margin)**
- 2 **Accelerating sustainability measures**
- 3 **Improving asset efficiency (concentrating management resources on growth business fields)**
- 4 **Enhancing internal controls and promoting even greater compliance awareness**

III

Medium-Term Management Program

Project AP-G 2025

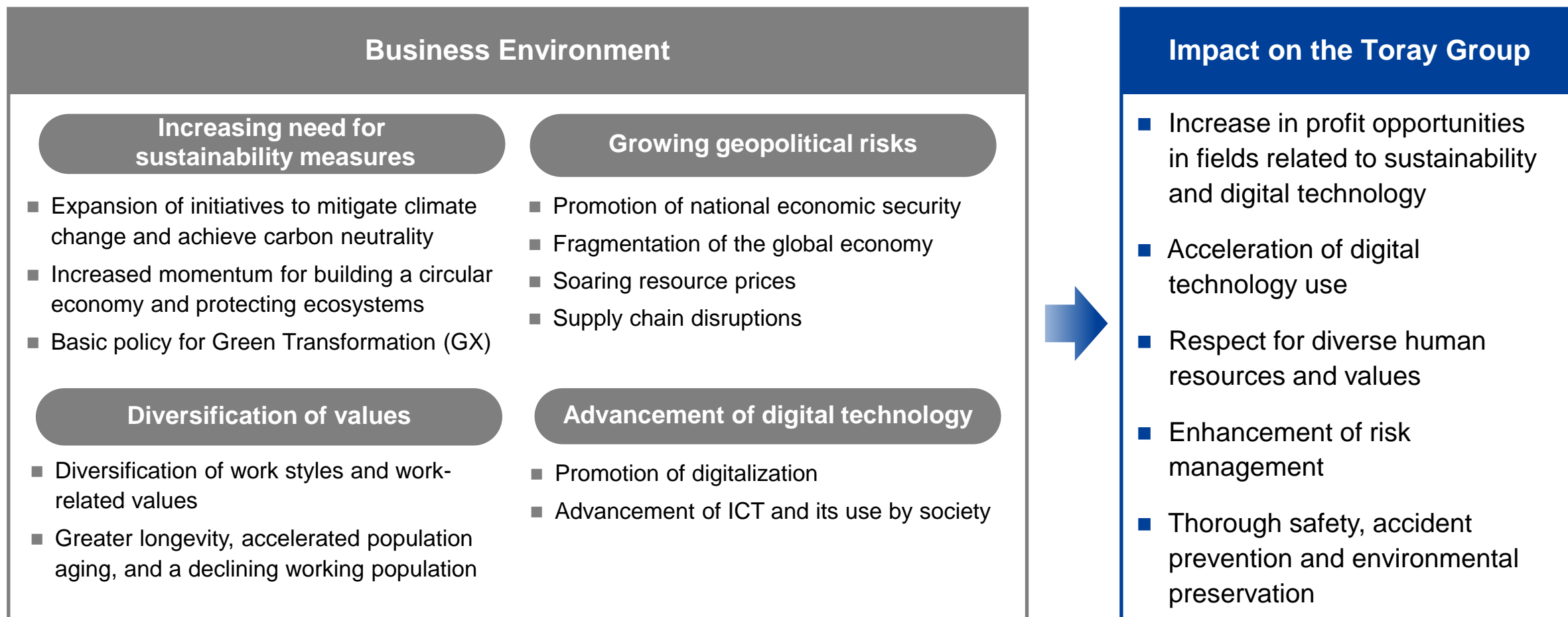
(FY 2023-2025)

“Innovation and Resilience Management”

— Value Creation for New Momentum

Toray Group's Business Environment

The business environment has been changing rapidly due to the continued spread of COVID-19 and heightened geopolitical risks. While multifaceted risk management is required, there are many social issues that the Toray Group can help solve. This will increase opportunities for the Group to create new value through its business activities.



Project AP-G 2025 “Innovation and Resilience Management”

Toray Group will achieve sustainable growth driven by the Sustainability Innovation Business and the Digital Innovation Business

Five Basic Strategies of Project AP-G 2025

Seizing Profit Opportunities

Strategy 1. Sustainable growth

Focusing management resources on Sustainability Innovation Business and Digital Innovation Business

Strategy 2. Ultimate value creation

Maximizing profitability by making the most of tangible and intangible assets, and by collaborating with external partners

Strategy 3. Product and operational excellence

Promoting cross-organizational cost reduction activities leveraging enhancement of quality strength and organizational strength, which are the sources of competitiveness

Strengthening the Management Foundation

Strategy 4. Enhancement of people-centric management

Preserving and further building upon the legacy of our corporate culture, which prioritizes developing people, while promoting individual career development, and improving job satisfaction

Strategy 5. Risk management and governance

Ensuring sound organizational management by enhancing internal controls and improving management capabilities

Financial Targets for FY 2025

	FY 2022 Forecast ^{*1}	AP-G 2025 FY 2025 Target
Revenue	2,510.0 billion yen	2,800.0 billion yen
Core Operating Income	100.0 billion yen	180.0 billion yen
Core Operating Margin	4%	6%
ROIC ^{*2}	About 3%	About 5%
ROE	About 5%	About 8%
Free Cash Flow	Around 200.0 billion Yen (3-year total)	Positive (3-year total)
D/E Ratio	Around 0.7	0.7 or lower (guideline)

Assumed exchange rate in AP-G 2025: ¥125 / US \$

*1: As of February 8, 2023

*2: ROIC = Core Operating Income after Tax / Average Invested Capital

Sustainability Targets for FY 2025

	FY 2013 Actual (Baseline) (J-GAAP)	FY 2022 Forecast (IFRS)	AP-G 2025 FY 2025 Target (IFRS)
Revenues from Sustainability Innovation Business	562.4 billion yen	1,300.0 billion yen (2.3-fold)	1,600.0 billion yen (2.8-fold)
CO ₂ emissions avoided in value chain	38 million tons	9.5-fold	15.0-fold
Water filtration throughput contribution by Toray's water treatment membranes	27.23 million tons/day	2.4-fold	2.9-fold
Greenhouse gas emissions per unit of revenue in production activities	337 tons/100 million yen	26% reduction	40% reduction
Greenhouse gas emissions of Toray Group in Japan	2.45 million tons	18% reduction	20% reduction
Water usage per unit of revenue in production activities	15,200 tons/ 100 million yen	27% reduction	40% reduction

Each relative ratio is calculated in comparison to FY 2013

III-1

Seizing Profit Opportunities

Innovation Management Focused on Value Creation

Toray Group Growth Business Fields

Basic strategy 1 Sustainable growth

Expanding revenues from businesses related to Sustainability Innovation Business and Digital Innovation Business to about 60% of total

Growth Business
Fields under
AP-G 2022

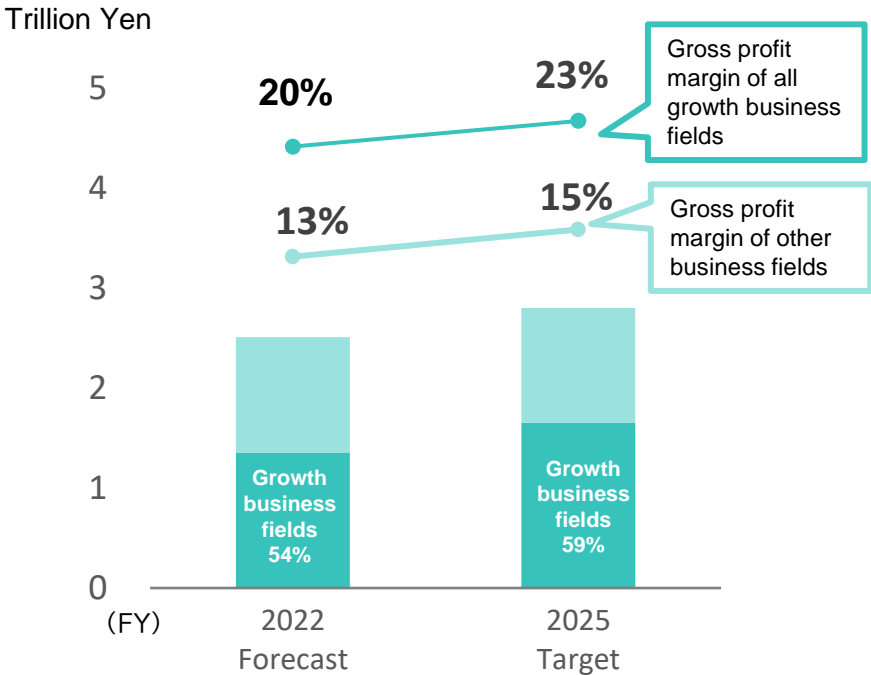
Growth Business Fields under AP-G 2025



GR Business:
Green Innovation
Business

LI Business:
Life Innovation Business

Revenue from Growth Business Fields



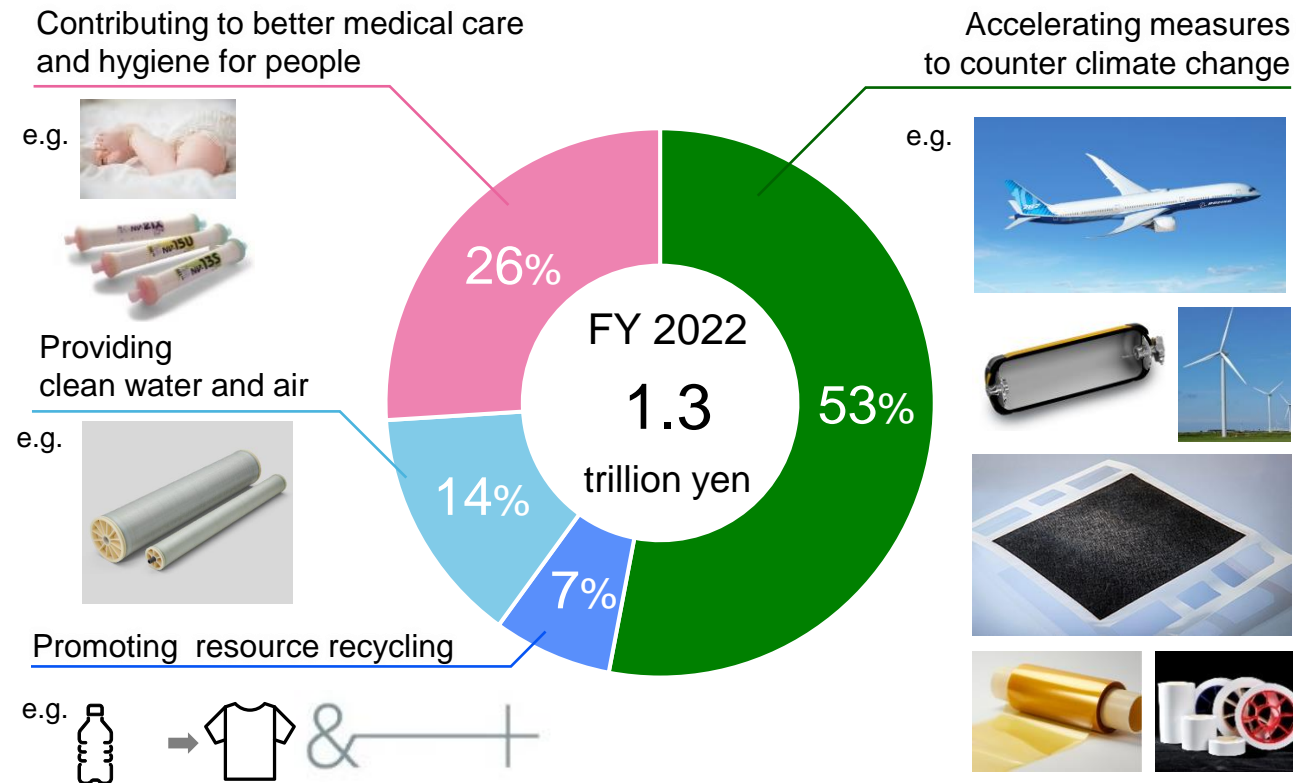
Investment in growth business fields

Investment in growth business fields	450	Billion Yen
Breakdown		
• Capital Investment	270	Billion Yen
• R&D	180	Billion Yen

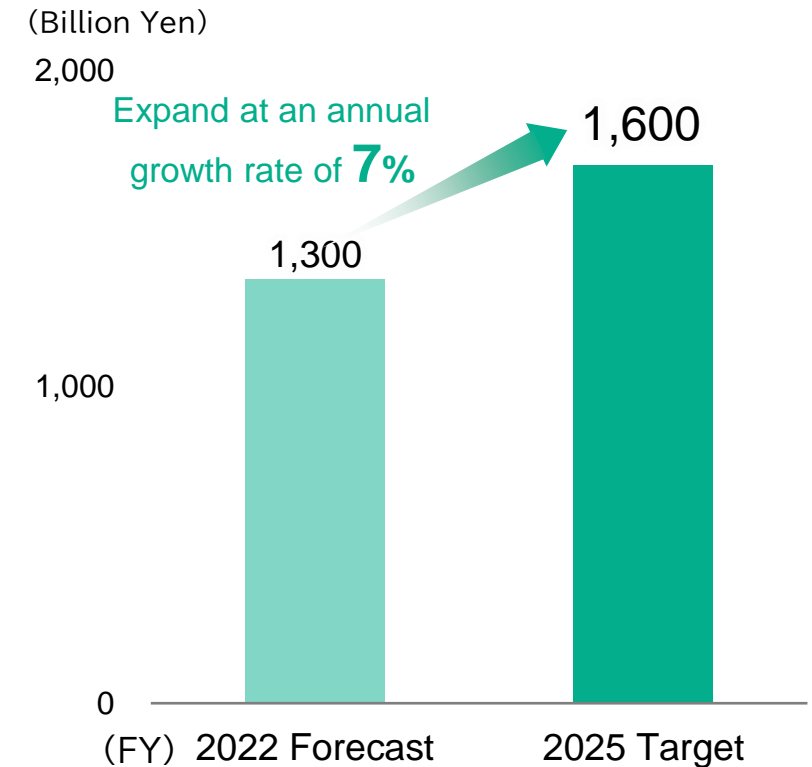
Target

FY 2025 revenues from Sustainability Innovation Business: 1.6 trillion yen

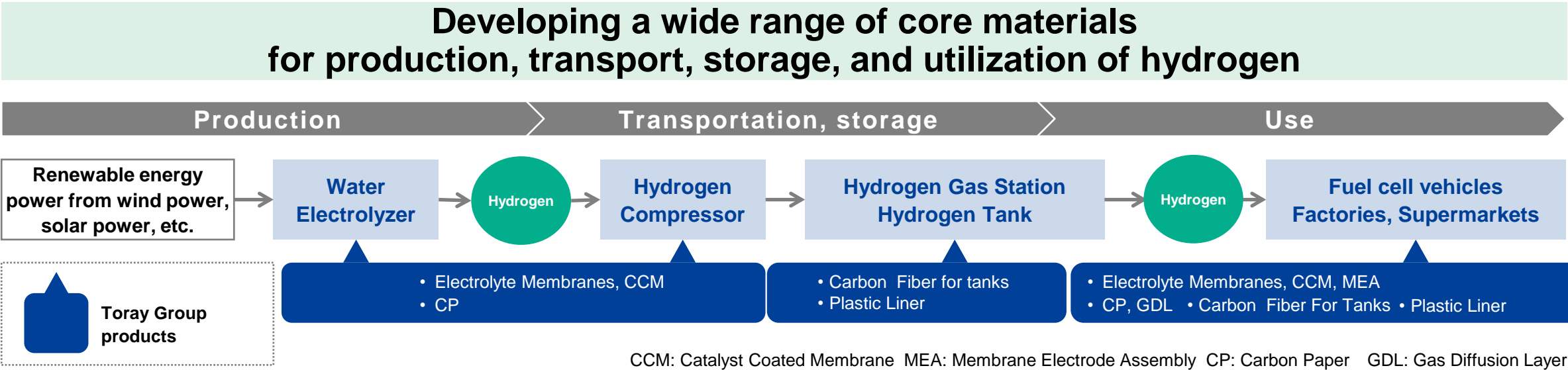
Sustainability Innovation (SI) Business



Revenue from of SI Business




Products that contribute to building a Hydrogen-Powered World




Core Materials for Water Electrolysis

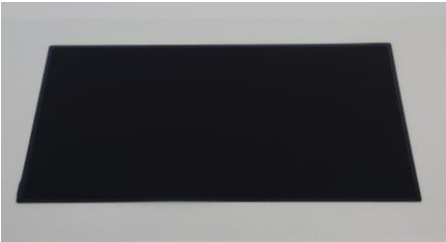
CP

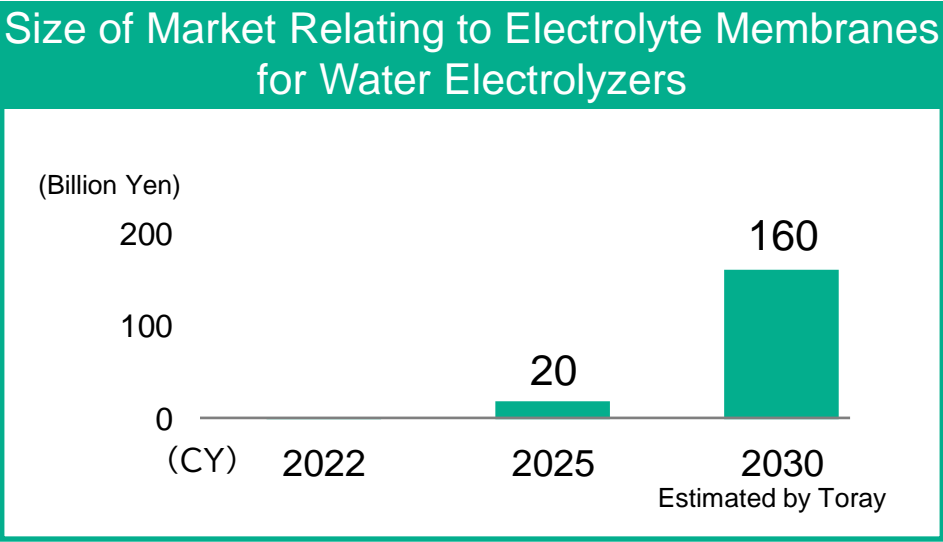


Electrolyte Membranes



CCM
(Produced in Germany by Greenerity)



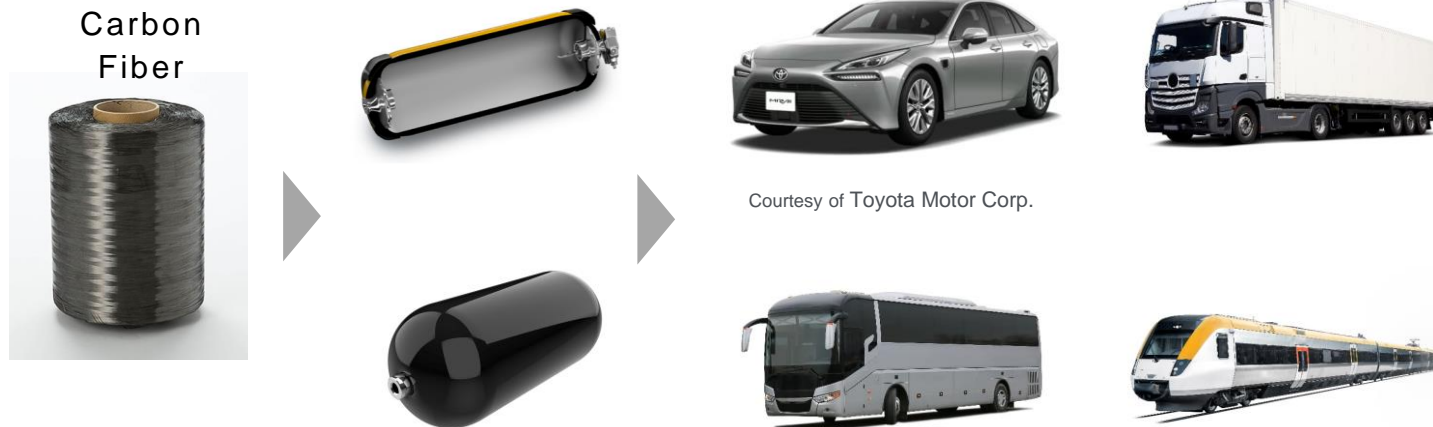


Carbon Fiber for Pressure Vessels

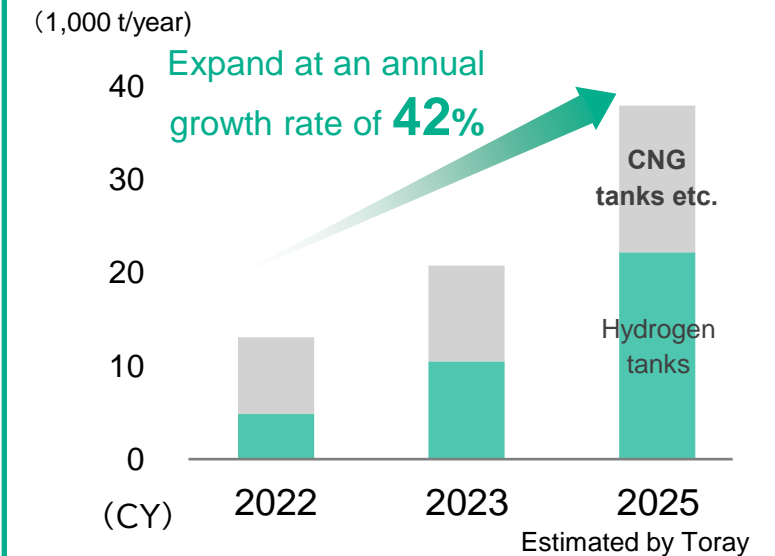
Maintaining the world's top market share for compressed natural gas (CNG) and hydrogen tanks

- Demand for CNG tanks is increasing steadily for delivery vehicles and for CNG transport
- Hydrogen tanks are increasingly being used in fuel cell vehicles, logistics trucks, railcars, and ships

Applications



Demand Forecast of Carbon Fiber for Pressure Vessels

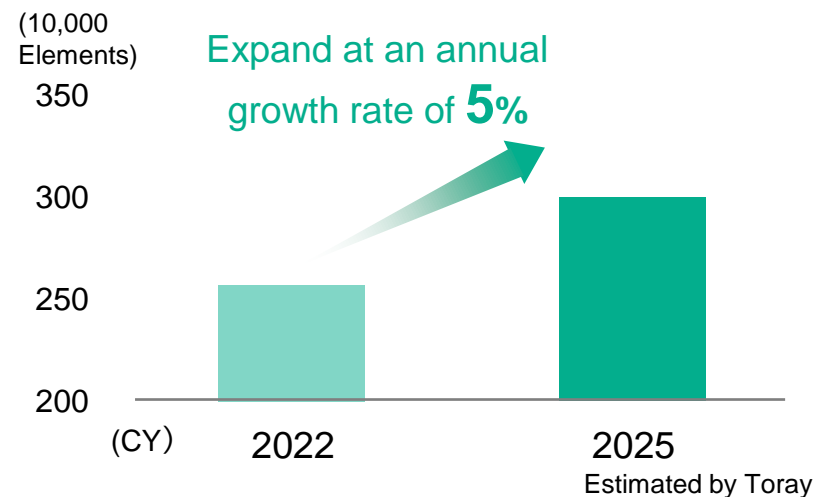


Reverse Osmosis (RO) Membranes

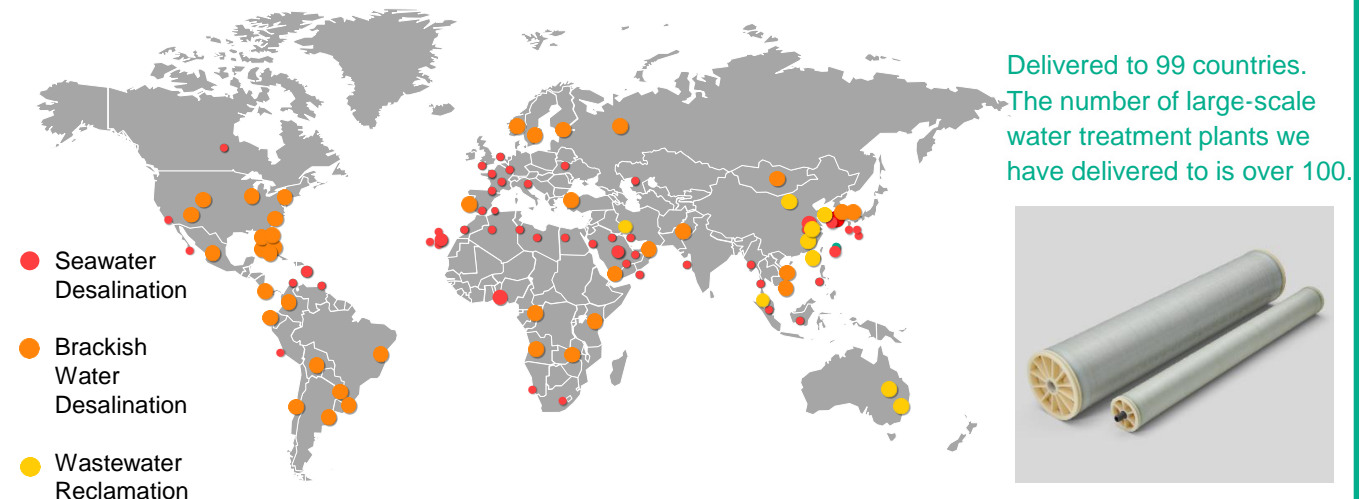
Working to secure the world's top market share through the global development of new high-performance products

- Building a local production for local consumption system to respond quickly to increased demand in RO membranes, where demand continues to expand, particularly in the Middle East and China
- Continuously improving meticulous after-sales service through global production, sales, and technical support systems
- Developing new high-performance products and driving cost reductions

Industrial RO Membrane Market Size



Global Expansion of Toray Group's RO Membrane Business (2022)



Target

Achieve 250 billion yen revenue in FY 2025 mainly for semiconductor and display applications

Digital Innovation (DI) Business



Electronic coating and mounting materials



Semiconductor manufacturing and inspection equipment



Cleaning and stripping solvents



RO membranes for ultrapure water production



Release film for semiconductor molds



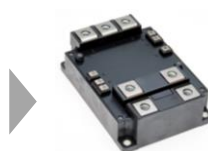
Flexible printed circuit boards



Display materials



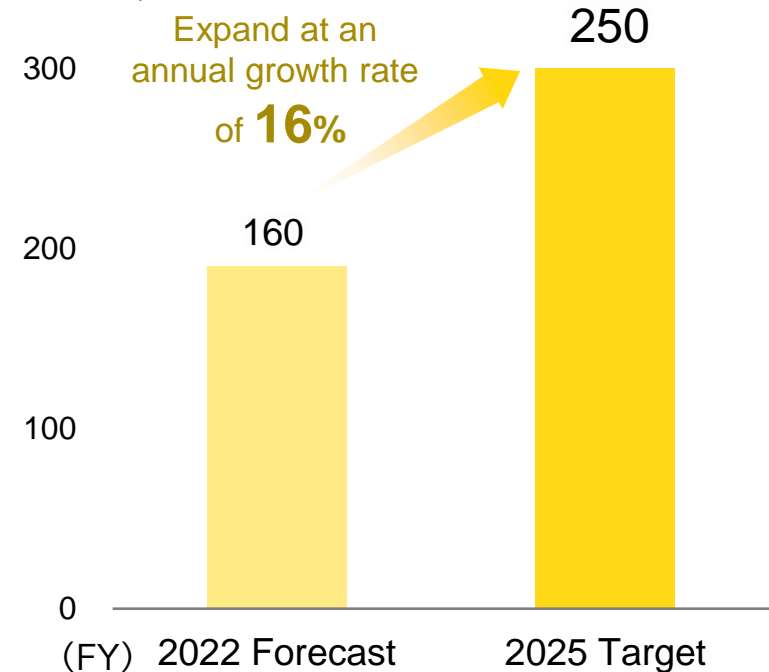
PPS resin for power modules



Courtesy of Mitsubishi Electric Corporation

Revenue from DI Business

(Billion Yen)



Application Development for Electronic Coating Materials

Expanding our achievements and technical expertise globally to become the industry's de facto standard

Market Sizes for Each Electronic Coating Material Application

Leveraging polyimide technology developed over the years to rapidly create high value-added products that meet customer needs in a timely manner

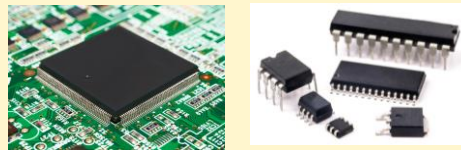
Electronic Coating Materials



Polyimide Technology

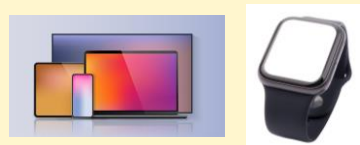
Semiconductor/electronic parts

- Memory/Logic/Power Semiconductor
- Frequency Filters, etc.

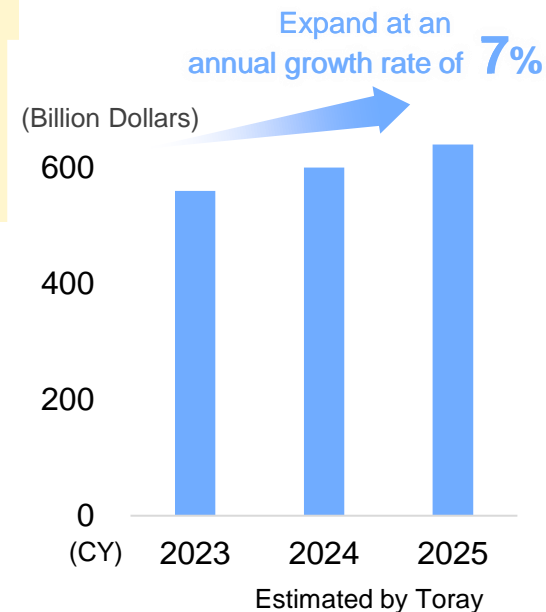


Displays

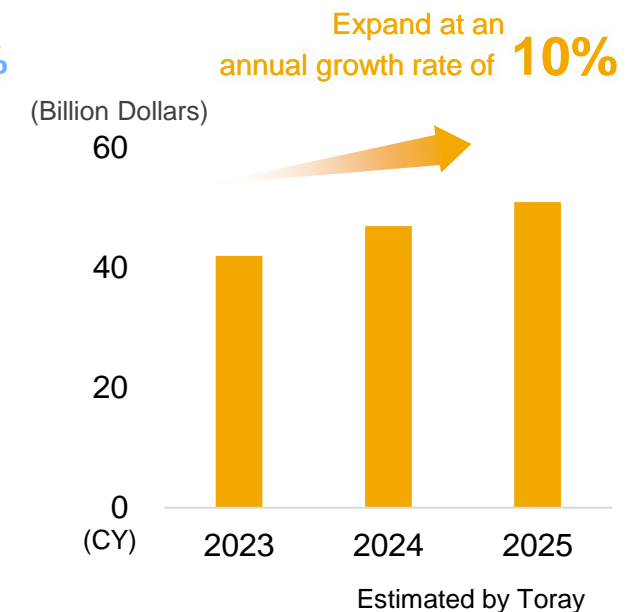
- OLED
- MicroLED Displays



Market Size of Semiconductors



Market Size of OLED



Providing Solutions for Digital-Technology Fields with Materials, Processes, and Equipment

Leveraging the Toray Group's collective strengths to expand the business globally

- Proposing packages of materials and processes, paired with manufacturing and inspection equipment, to provide total solutions

MicroLED Display

Toray Group

Materials



Manufacturing and inspection equipment



Customers

MicroLED Display



Quality improvement
Increased productivity

Power Semiconductor

Toray Group

Materials



Toray Singapore Research Center (TSRC) established (June 2022)

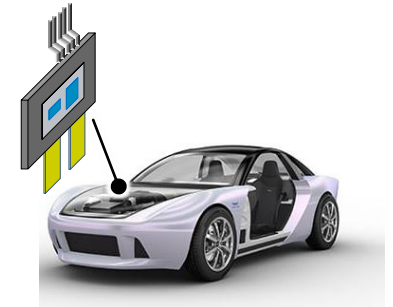
Manufacturing and inspection equipment



New company (TRENGEU) to be established in Germany (April 2023)

Customers

Power Module



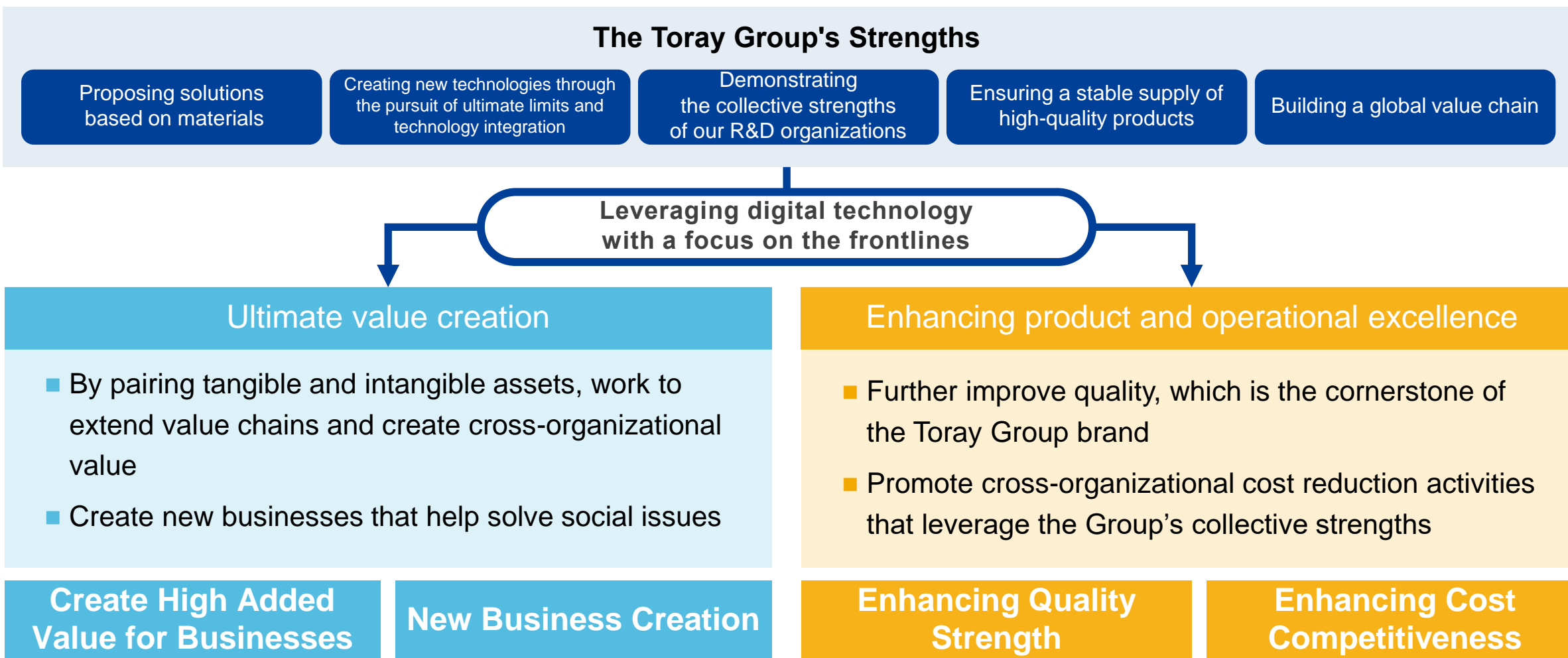
Performance improvement
Increased productivity

Two Strengths for Seizing Profit Opportunities

Ultimate value creation, Product and operational excellence

Basic Strategy 2 Ultimate value creation
Basic Strategy 3 Product and operational excellence

By making the most of the Toray Group's strengths, enhancing our ability to create value while strengthening our competitiveness to seize new profit opportunities



Marketing our added value

Film for semiconductor processes

Reducing film contaminants to support the miniaturization of semiconductor circuits

- Improving semiconductor performance
- Improving customer yields

Helping to improve the value of customer products



Appropriate pricing to reflect added value

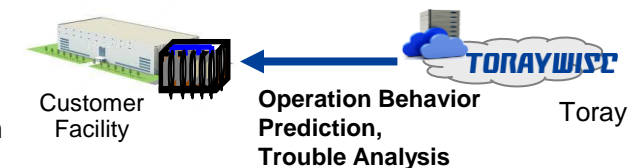
Helping to improve the value of customer products and developing win-win relationships

Extension of the Value Chains

Water treatment subscription service

Supporting operation and maintenance management using Toray's proprietary real-time monitoring system, TORAYWISE™

- Reducing burden on operation managers
- Ensuring stable facility operation



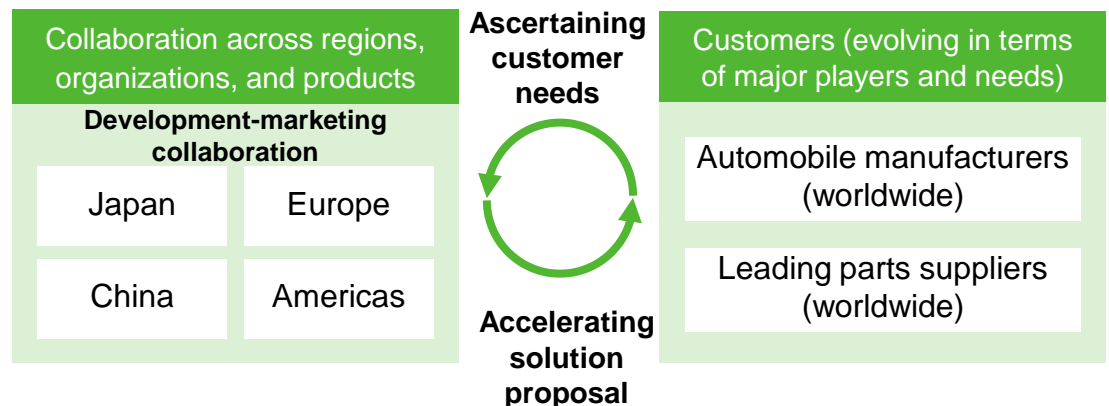
Expansion of adoption at facilities worldwide

Building a global value chain for automotive materials

Creating value by making the most of technical resources, personal networks, and expertise through collaboration across regions, organizations, and products.

- Environmental measures (for achieving carbon neutrality, and a circular economy)**
- Responding to needs for new parts and new materials associated with the shift to BEVs and FCVs**

Providing value to customers using our global development and marketing system



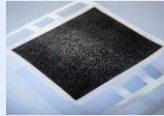
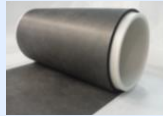

New Business Creation: Driving FT Project

Basic Strategy 2

Ultimate value creation

Aiming to generate a total of one trillion yen in sales across the target themes in the 2020s by concentrating resources on large-scale themes that can help solve social issues and become growth drivers for the Toray Group

Future TORAY-2020s Project (FT Project)

Growth Business Field	Theme			
Products that accelerate measures to counter climate change	Materials related to hydrogen and fuel cells	  	Electrolyte membranes	<ul style="list-style-type: none"> ■ Electrode base materials ■ Hydrogen tank materials ■ CCM / MEA
Products that facilitate sustainable, recycling-based use of resources and production	Products and process technologies utilizing biomass	Process technologies utilizing biomass raw materials		
Products that help provide clean water and air and reduce environmental impact	Environmentally friendly printing solutions	Environmentally friendly printing materials that contribute to CO2 emissions reduction and are VOC-free		
Products that help deliver better medical care and hygiene for people worldwide	Next-generation medical care	<ul style="list-style-type: none"> ■ Cancer drugs ■ Cancer diagnostic agents 		
Digital related products	Next-generation display solutions	Next-generation display materials and manufacturing equipment		
Phase		Long-term development	Business development	Business expansion

Quality strength is the ability to provide a stable supply of the products that customers need. In order to ensure reliable worldwide delivery of the quality that is the cornerstone of the Toray brand, we are promoting the Quality Strength Enhancement Project. The aim is to thoroughly improve quality strength through integrated control and monitoring using digital technology.

Quality Strength Enhancement Project (QE Project)

Comprehensively managing process capability for each product, utilizing **digital technology**.
Enhancing quality strength in every phase, from design and development to sales.

Measures

Design and development

Design and development that makes it easier to produce high-quality products

Production

Process capability and quality control system for each product and piece of equipment

Sales

Reflecting reliably and properly customer performance requirements to quality

Monitoring process capability control status

Effects

Reliable high quality achieved in mass production

Stable production of high- quality products

Appropriate product standards

Promoting cross-organizational cost- reduction initiatives that leverage the collective strengths of the organization

Total Cost Reduction Project

Cumulative cost reduction of 200 billion yen over 3 years

Variable cost reduction activities

Effect target

125 billion yen / 3 years

Fixed cost reduction activities

Effect target

60 billion yen / 3 years

Production process innovations

Effect target

15 billion yen / 3 years

The Group will roll out a mechanism for sharing information on inter-organizational activities and cost reduction initiatives group-wide. It will also enhance efforts to control costs and improve yields at group companies outside Japan in particular.

Strengthening value creation and competitiveness by investing in data infrastructure construction, technology integration, and development of human resources fluent in digital technologies, as well as by employing advantageous digital technologies to resolve frontline issues and create new value

Investment related to digital technology: 20 billion yen

Building a global data infrastructure	Promoting the accumulation, sharing, and visualization of data										
Combining analysis and simulation technologies	Using AI and MI* to capture benefits of digitally leveraged manufacturing										
Cooperating with value chain partners	Real-time cooperation and management										
Development of human resources fluent in digital technologies	Establishing a base of human resources fluent in digital technologies totaling 2,000 people group-wide <ul style="list-style-type: none"> Focusing on the development of senior leaders and leaders who are familiar with both the frontlines and digital technology <div> <div>Level of Digital Fluency</div> <table> <tr> <td>Expert</td> <td>Over 20 people</td> </tr> <tr> <td>Senior Leader</td> <td>Over 200 people</td> </tr> <tr> <td>Leader</td> <td>Over 600 people</td> </tr> <tr> <td>Associate</td> <td>Over 1,200 people</td> </tr> <tr> <td colspan="2">General Digital Personnel</td> </tr> </table> </div>	Expert	Over 20 people	Senior Leader	Over 200 people	Leader	Over 600 people	Associate	Over 1,200 people	General Digital Personnel	
Expert	Over 20 people										
Senior Leader	Over 200 people										
Leader	Over 600 people										
Associate	Over 1,200 people										
General Digital Personnel											

*Materials Informatics



Enhancing value creation capability and competitiveness by adopting digital technologies with a focus on the frontlines

New material and service creation

- Advancing and developing simulation and informatics technologies
- Combining material analysis, molding/chemical engineering analysis, and simulation technology

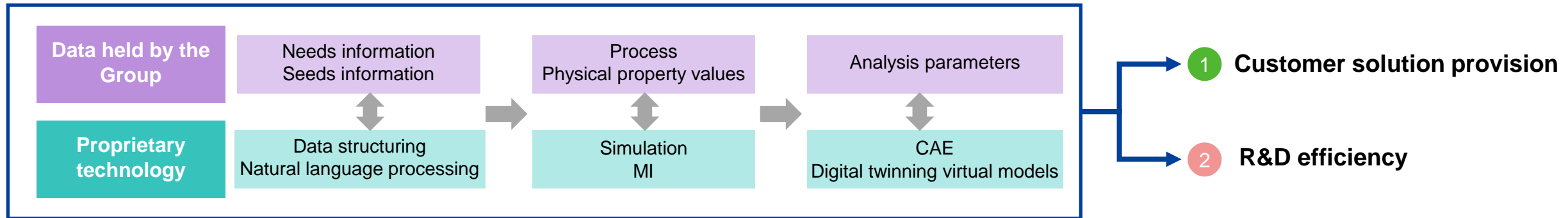
Manufacturing cost reduction, and quality improvement

- Improving production efficiency using advanced process monitoring and data analysis
- Raising the level of supply chain management using production planning simulations

Creating New Material and Services with Digital Technology

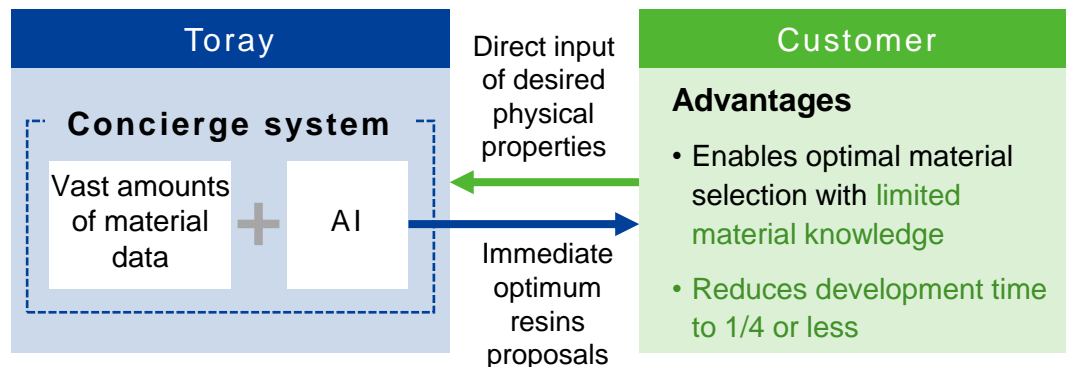
- Basic Strategy 2 Ultimate value creation
- Basic Strategy 3 Product and operational excellence

Accelerating the creation of new materials and driving business expansion by further advancing the MI, AI, and simulation technologies that Toray has developed over the years



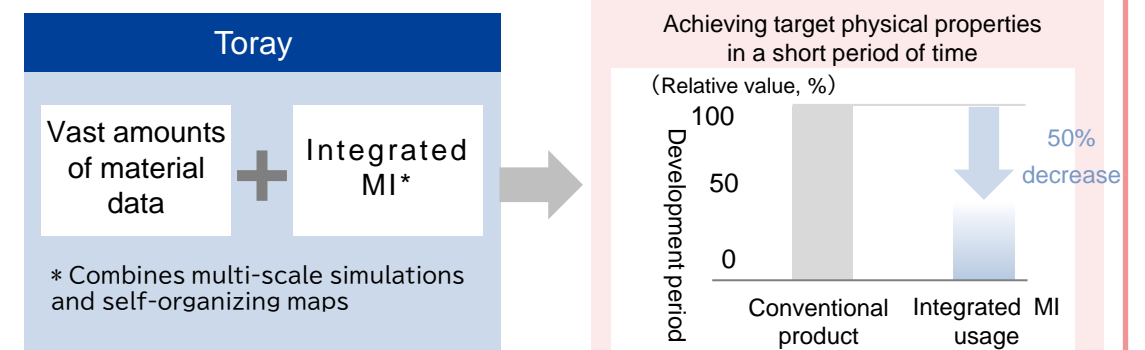
1 Customer solution provision: Material concierge service

Optimal resin selection service launched in February 2023



2 R&D efficiency: Utilization of integrated MI

Halving the conventional CFRP development period to achieve both flame resistance and mechanical properties



Strengthening the Management Foundation

Resilience Management Focused on Human Resource Development, Risk Management, and Financial Soundness

Enhancing the Toray Group's human resources base by respecting individual autonomy, enhancing expertise, and promoting career development

Enhancement of people-centric management

Securing and promoting diverse human resources

- Actively appointing young core human resources
- Planned promotion of locally hired staff to management positions at group companies outside Japan
- Developing and providing career opportunities for highly specialized human resources
- Empowering women in the workforce and supporting their networking
- Providing opportunities for senior human resources



Human resources development

- Supporting self-reliant career development based on career path worksheets used by employees and their superiors
- Developing professional human resources by supporting employee self-development and empowering them to acquire abilities and skills
- Expanding opportunities such as internal recruitment, encouraging employees to take on new challenges
- Training leaders who can develop workplace competency



Promoting job satisfaction and supportive workplaces

- Creating workplaces environments and opportunities that lead to employee pride in working for the Toray Group
- Enabling work styles that accommodate employee life stages, along with career development
- Building an organizational culture that values feedback from the frontlines



Achieving sound organizational management by improving internal controls and management capabilities

Risk Management

- Implementing risk management through a group-wide risk management system
- Enhancing the risk management system and response to national economic security needs

Internal controls

- Ensuring the effectiveness of internal controls by improving the operation and quality audit systems
- Improving internal controls by promoting operation flow digitization

Enhancing Toray Group management capabilities

- Enhancing management capabilities of group companies in each country and region

Legal affairs and compliance

Development of management
human resources

Financial risk management

Internal controls

Information security

DX promotion

Maintaining and Enhancing Financial Soundness

Improving asset efficiency in terms of cash flow and ROIC, while expanding high-growth, high-profitability businesses by achieving both business growth and greater profitability

Seizing Profit Opportunities

Growing core operating income

- Expanding businesses in growth fields(SI/DI businesses)
- Improving profitability through value creation
Improving reliable return on investment
- Investing necessary management resources to achieve targets
- Promoting M&A in areas where synergies can be expected

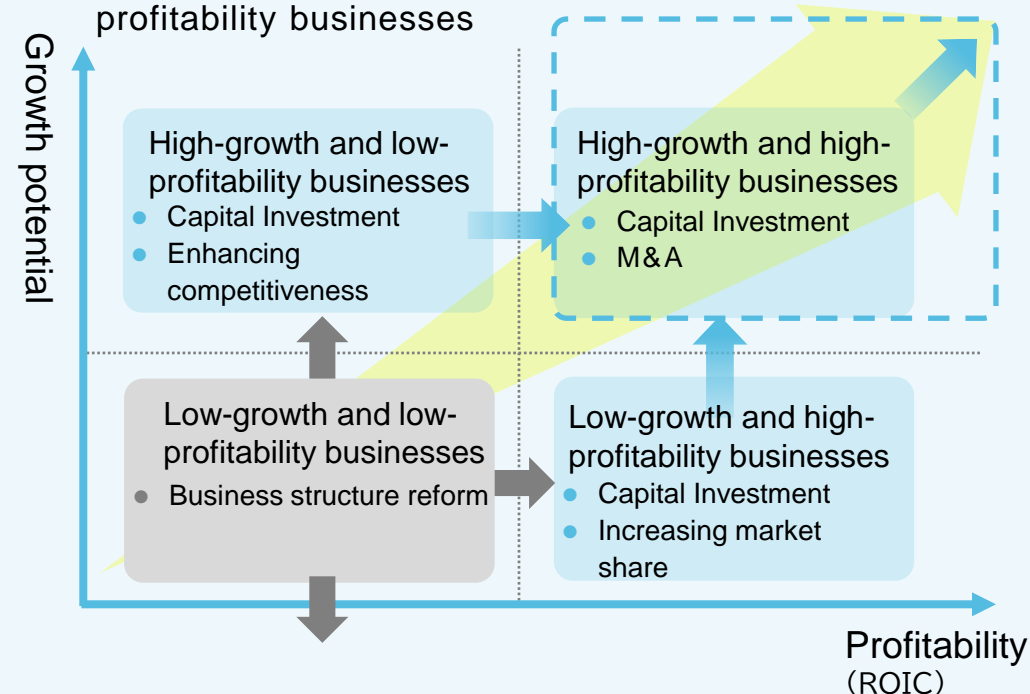
Strengthening the Management Foundation

Efficient management of invested capital

- Using a D/E ratio guideline of 0.7 or lower
- Enhancing management of free cash flow
- Reducing working capital by maintaining Cash Conversion Cycle Improvement (3C-i) activities
- Enhancing structural reforms based on Four categories for growth potential and profitability

Four categories for growth potential and profitability

- Expanding high-growth, high-profitability businesses, and increasing profitability
- Continuing structural reforms for low-growth, low-profitability businesses



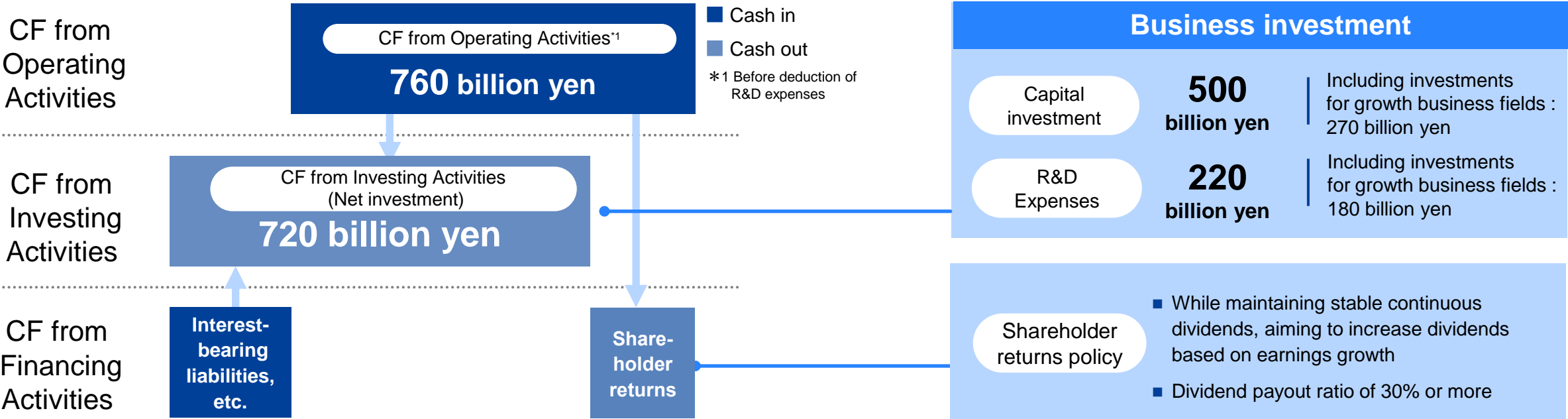
Capital Allocation

Revising the D/E ratio guideline from “about 0.8” to “**0.7 or lower**” to support **sound, sustainable growth** with a strong financial foundation

AP-G 2025 targets

- Free cash flow : Positive (3-year total)
- D/E ratio : 0.7 or lower

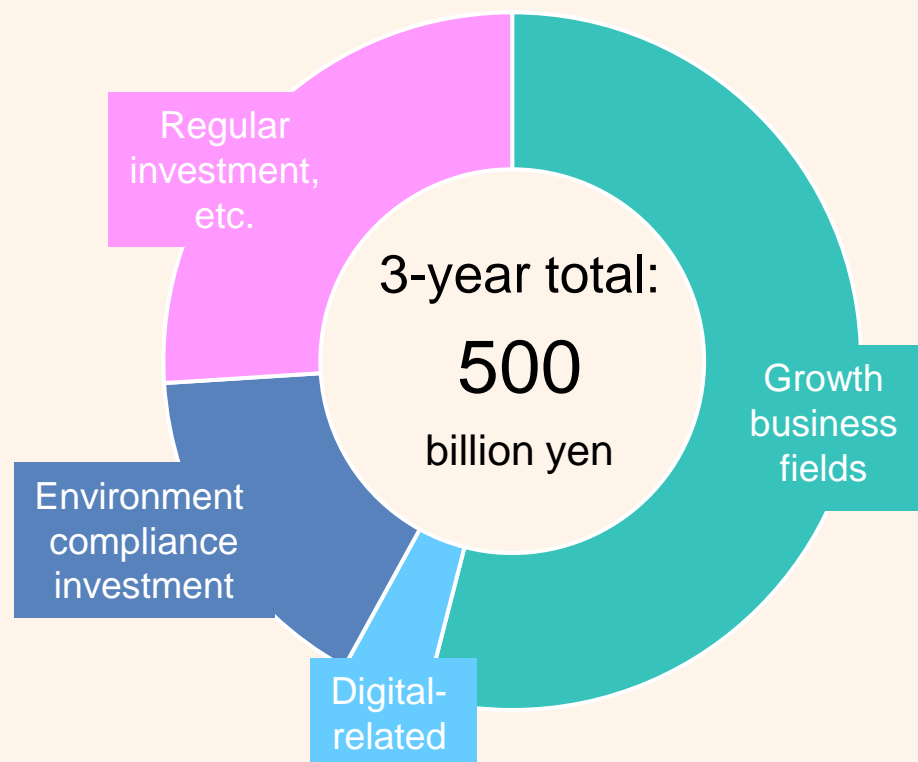
3-year total of Capital Allocation (FY 2023-2025)



Capital Investment and R&D Expenses

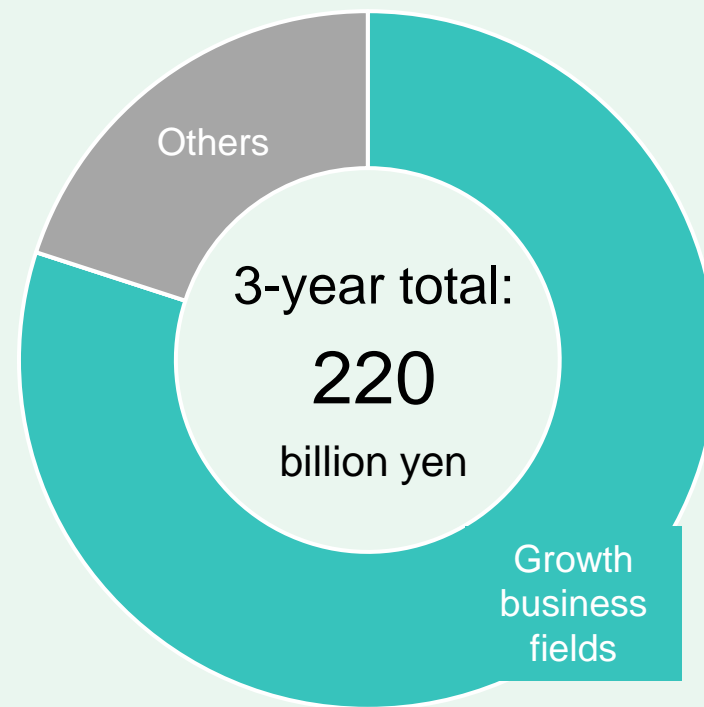
Focusing 50% of capital investment and 80% of R&D expenses on growth business fields

Breakdown of Capital Investment



For M&A, conduct strategic investments separately from capital investments

Breakdown of R&D Expenses



IV

FY 2030 Sustainability Targets

Accelerating Efforts to Achieve the Toray Group Sustainability Vision

Toray Group Sustainability Vision: FY 2030 Targets

Accelerating sustainability initiatives by setting higher targets for FY 2030

Previous Targets		
		FY 2030 Target [Baseline: FY 2013]
Supply of Green Innovation products		4-fold
Supply of Life Innovation products		6-fold
CO ₂ emissions avoided in value chain ²		8-fold
Water filtration throughput contribution by Toray's water treatment membranes ³		3-fold
GHG emissions in production activities	Per unit of revenue across the Toray Group ⁴	30% reduction
Water usage in production activities	Per unit of revenue across the Toray Group	30% reduction

Integrated

New Targets		
		FY 2030 Target [Baseline: FY 2013]
Supply of Sustainability Innovation products ¹		4.5-fold
CO ₂ emissions avoided in value chain ²		25-fold
Water filtration throughput contribution by Toray's water treatment membranes ³		3.5-fold
GHG emissions in production activities ⁴	Per unit of revenue across the Toray Group	50% or more reduction
	Greenhouse gas emissions of Toray Group in Japan ⁵	40% or more reduction
Water usage in production activities	Per unit of revenue across the Toray Group	50% or more reduction

1 (1) Products that accelerate measures to counter climate change; (2) products that facilitate sustainable, recycling-based use of resources and production; (3) products that help provide clean water and air and reduce environmental impact; and (4) products that help deliver better medical care and hygiene for people worldwide.

2 Toray calculates the CO₂ emissions reduced throughout the value chain of products in accordance with the chemical sector guidelines of the Japan Chemical Industry Association, the International Council of Chemical Associations (ICCA), and the World Business Council for Sustainable Development (WBCSD).

3 Water treated annually with Toray water treatment membranes. It is calculated by multiplying the amount of fresh water that the Toray membranes can produce per day, including reverse osmosis (RO), ultrafiltration (UF) and membrane separation bioreactors (MBR), by the number of membrane elements sold.

4 With the use of renewable energies and other zero emission power sources rising worldwide, the Toray Group aims to employ zero-emission power sources at a rate equivalent to or better than the targets in each country by fiscal 2030.

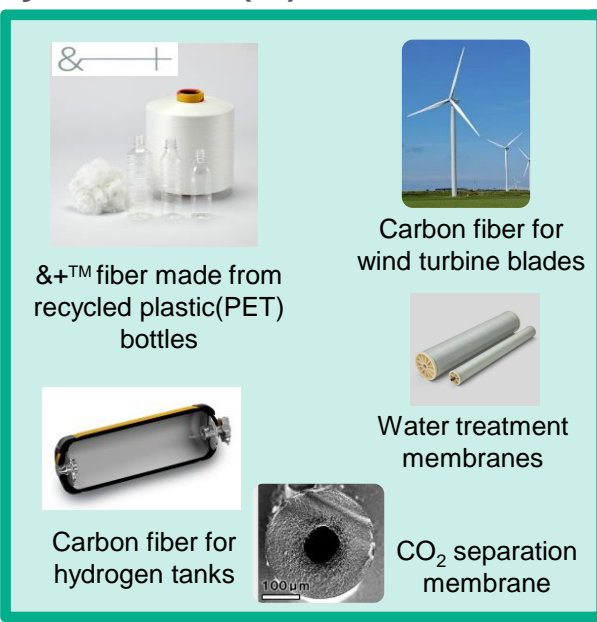
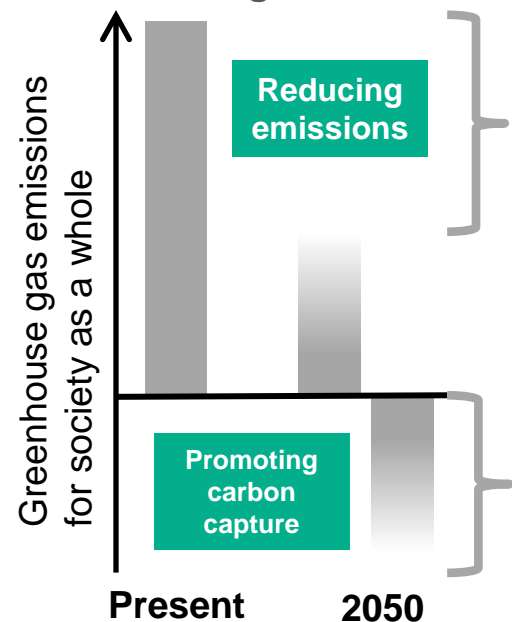
5 In Japan, Toray works to surpass the reduction target set for the industrial sector by the Japanese government (absolute emissions reduced by 38%) in its comprehensive plan (Cabinet decision on October 22, 2021) based on Japan's Act on Promotion of Global Warming Countermeasures.

Carbon Neutrality Initiatives

Helping the broader society to reduce overall greenhouse gas emissions through the Sustainability Innovation (SI) Business. Also reducing Toray Group greenhouse gas emissions* by maximizing the use of renewable electricity, hydrogen, and low carbon-footprint raw materials, based on expansion of the SI Business. (*Scope 1, 2, 3)

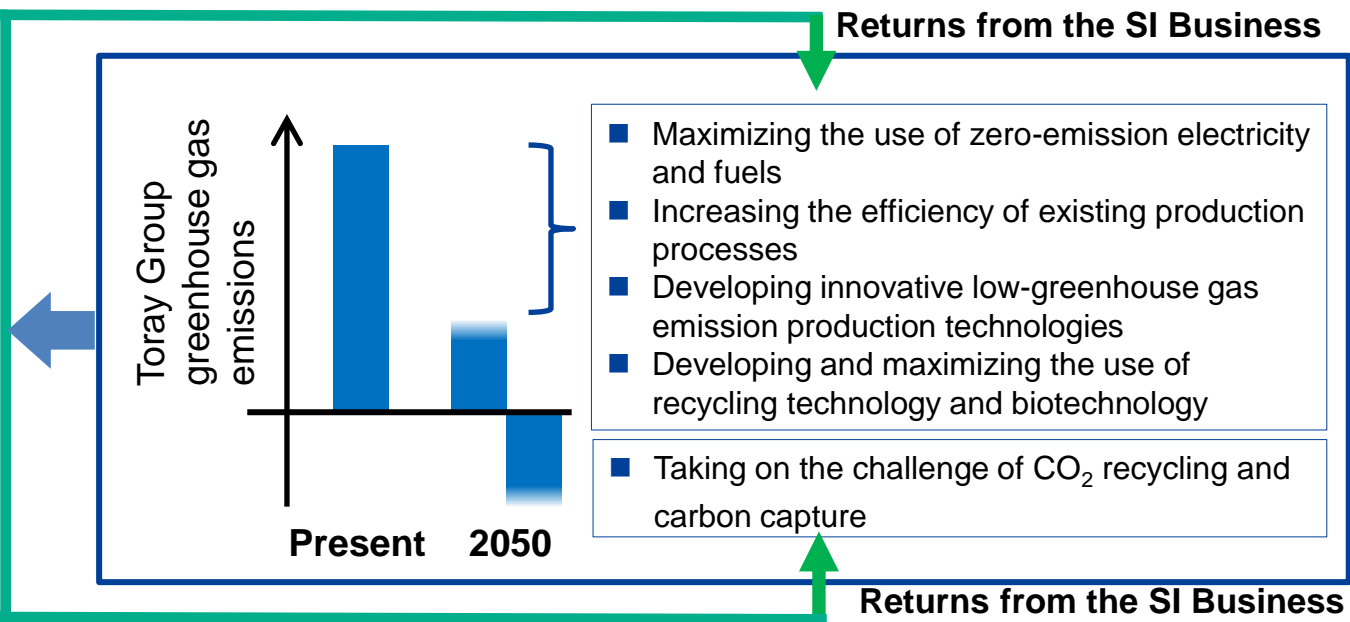
Contributing to building a carbon-neutral world

Increasing the Volume of Greenhouse Gas Emissions Avoided through the Sustainability Innovation(SI) Business



Achieving carbon neutrality for the Toray Group by 2050

Adopting greenhouse gas emissions reduction technology in business activities



(Corresponding KPIs)

	FY2030 Target [Compared to FY2013]
Supply of Sustainability Innovation products	4.5-fold
CO ₂ emissions avoided in value chain	25-fold

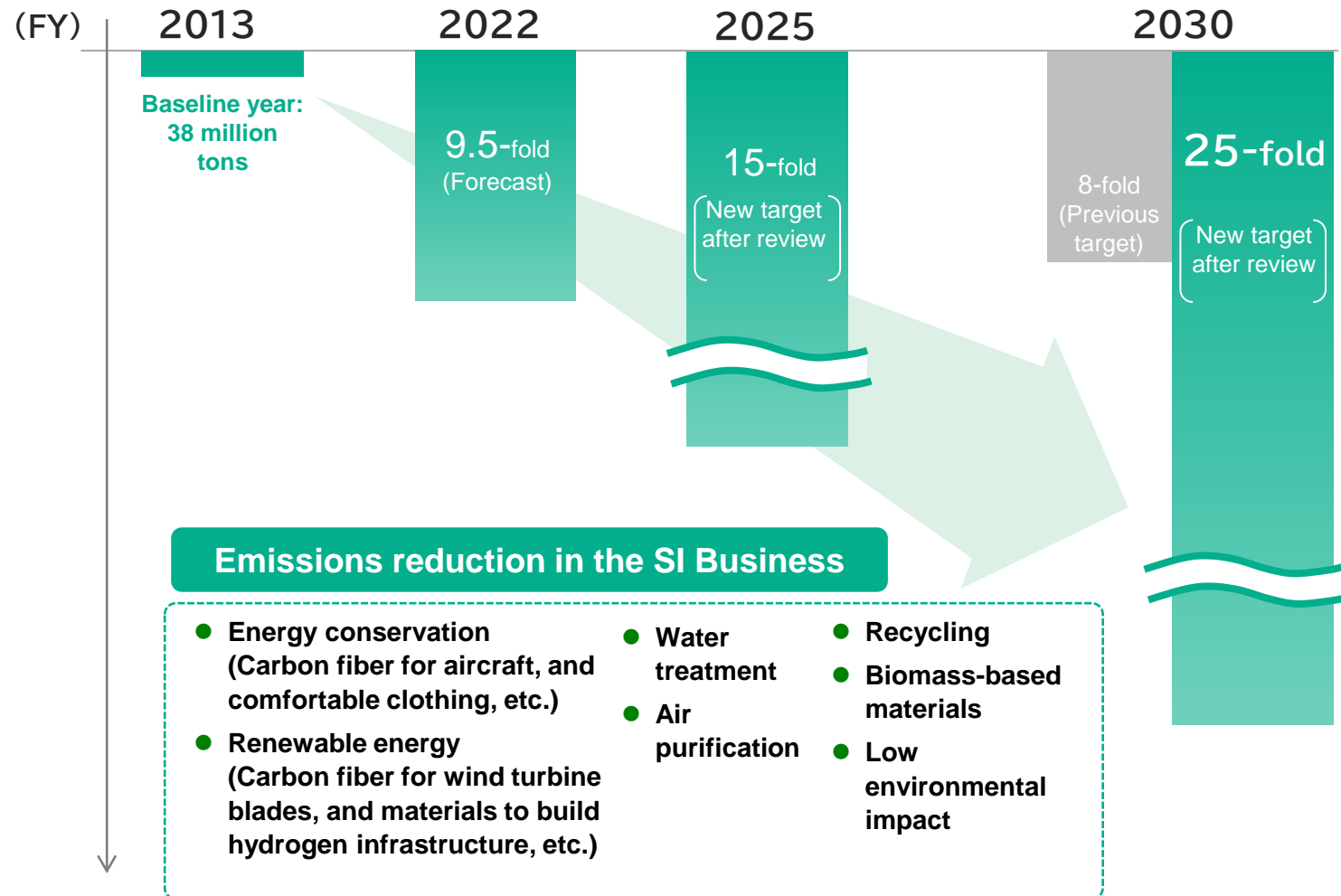
(Corresponding KPIs)

GHG emissions in production activities	GHG emissions per unit of revenue for the entire Toray Group	FY2030 Target [Compared to FY2013]
	GHG emissions of Toray Group in Japan	Over 50% reduction Over 40% reduction

Promote carbon neutrality for the planet

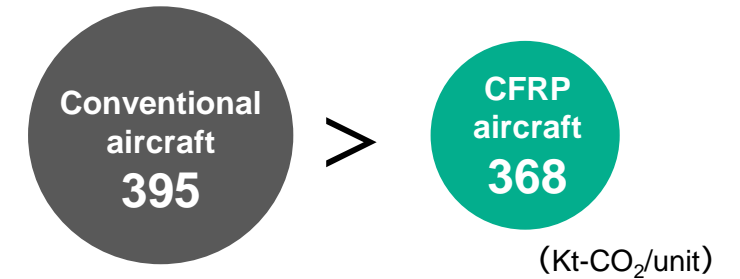
CO₂ emissions avoided in value chain

CO₂ emissions avoided in value chain (Baseline: FY 2013)

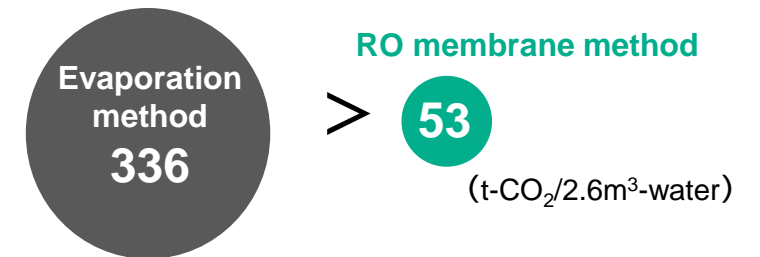


Volume of CO₂ emissions avoided through use of Toray products

- CO₂ emissions avoided by lowering life cycle emissions with materials that reduce aircraft weight*¹



- CO₂ emissions avoided by using RO membranes for seawater desalination*¹



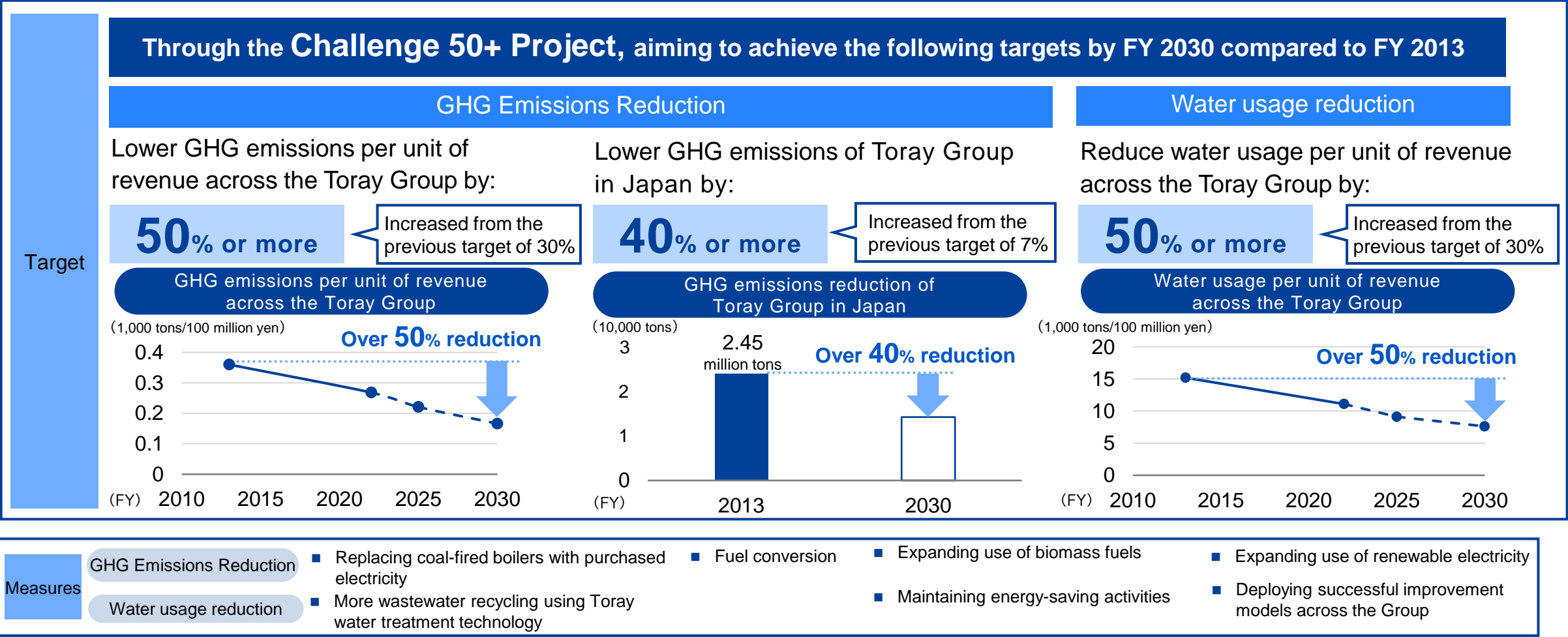
*¹ Figures in the circles above represent CO₂ emissions for the entire product life cycle

Source: *Innovations for Greenhouse Gas Reductions*, Japan Chemical Industry Association (JCIA)

Achieving Carbon Neutrality across the Toray Group

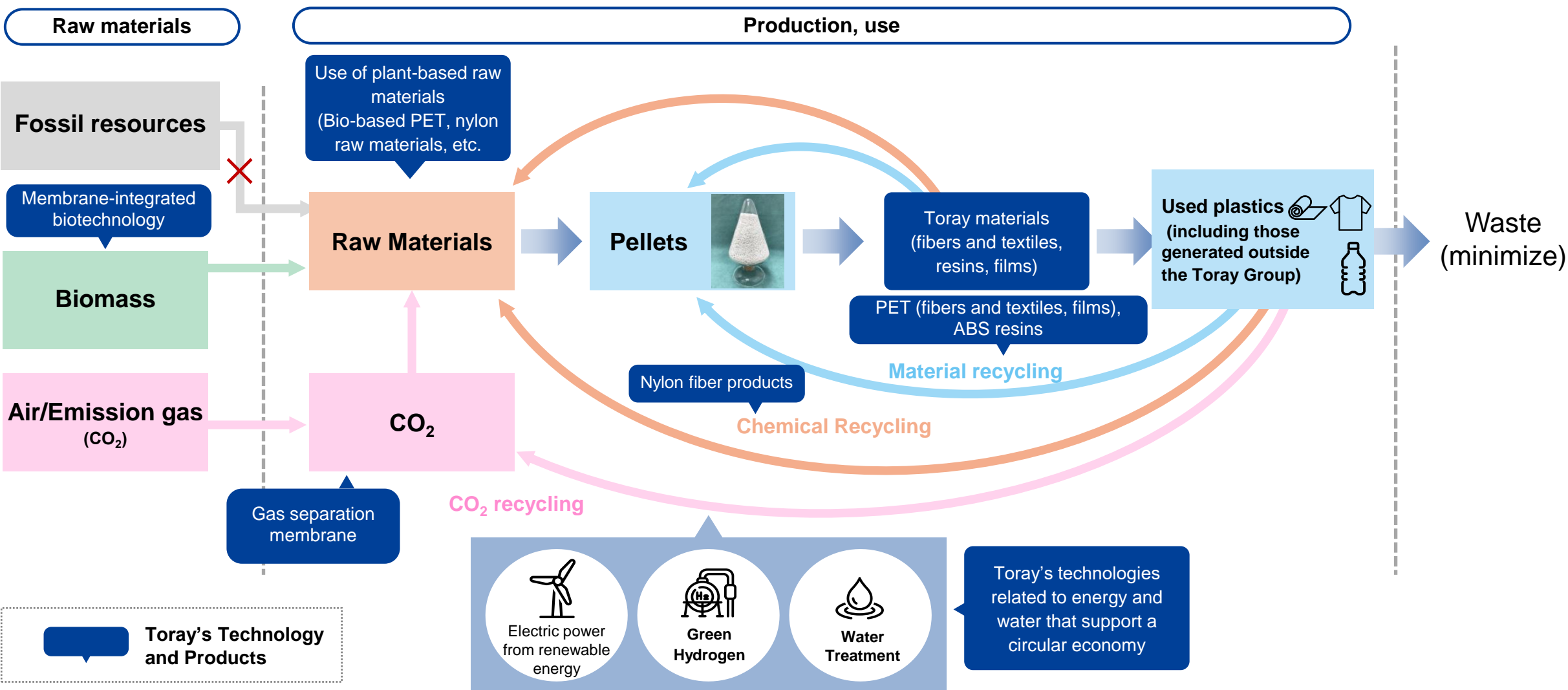
Emission Reductions in Production Activities

Toray Group will reduce greenhouse gas emissions in the production stage by switching to cleaner fuels and leveraging the Group’s proprietary knowledge and technologies. We have raised our emissions reduction target for FY 2030 because our own carbon neutralization and sustainability initiatives are progressing ahead of plan.



Initiatives to Build a Circular Economy

Accelerating initiatives for biomass-based plastic products and material/chemical recycling



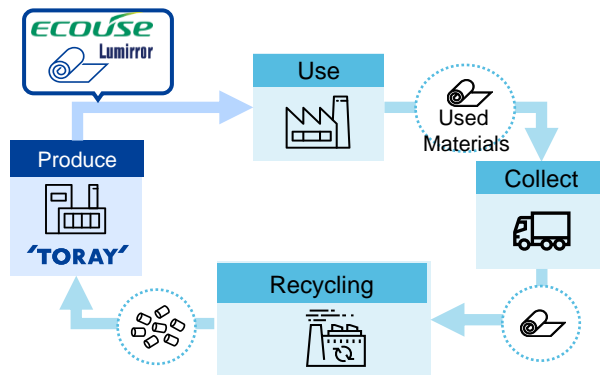
Examples of Recycling-Oriented Use of Resources

Toray Group has established proprietary recycling systems that collect and recycle surplus materials and used products and convert them into recycled raw materials. Based on new system development, recycling technology advancement and conversion to biomass-based raw materials, these systems contribute to recycling-oriented use of resources and production, while improving the value of Toray Group products and businesses.

Recycling

Recycled PET film ECOUSE™ Lumirror™

- Recycled film made from used film collected from our customers. The manufacturing process emits significantly less CO₂ than the process for conventional products.



Fiber made from recycled plastic(PET)bottles &+™

- Enabling Used plastic(PET) bottles are recycled to create the raw material for high-quality, high- performance fiber.
- verification of recycling by Toray
- Product commercialization promoted through cross-industry collaboration



Biomass

Switching to Biomass-Based Materials

- Transitioning to biomass-based materials, which will help society move away from fossil fuels and reduce greenhouse gas emissions.

Partial bio-based PET fiber (Since FY2013) Mass production
Made from non-edible sugar cane molasses
Ultrasuede™PX

100% bio-based PET fiber (Since FY2017) Pilot sales
Made from sugar cane

100% bio-based nylon 510 fiber (Since FY2022) Pilot sales
Made from Non-edible castor-oil plant
Ecodear™ N510

◆ Revenue target for products that facilitate sustainable, recycling-based use of resources and production in the SI Business in FY 2030 (P22)

400 billion yen

◆ Target for percentage of raw materials sourced from recycling, derived from biomass, or produced with CO₂ recycling used in Toray core polymers (*1) in FY 2030

20%

*1 PET and nylon polymers

Toray Group Sustainability Vision

We deliver innovative technologies and advanced materials that provide real solutions to the challenges the world faces with balancing development and sustainability.

Project AP-G 2025 “Innovation and Resilience Management” Value Creation for New Momentum

Seizing Profit Opportunities

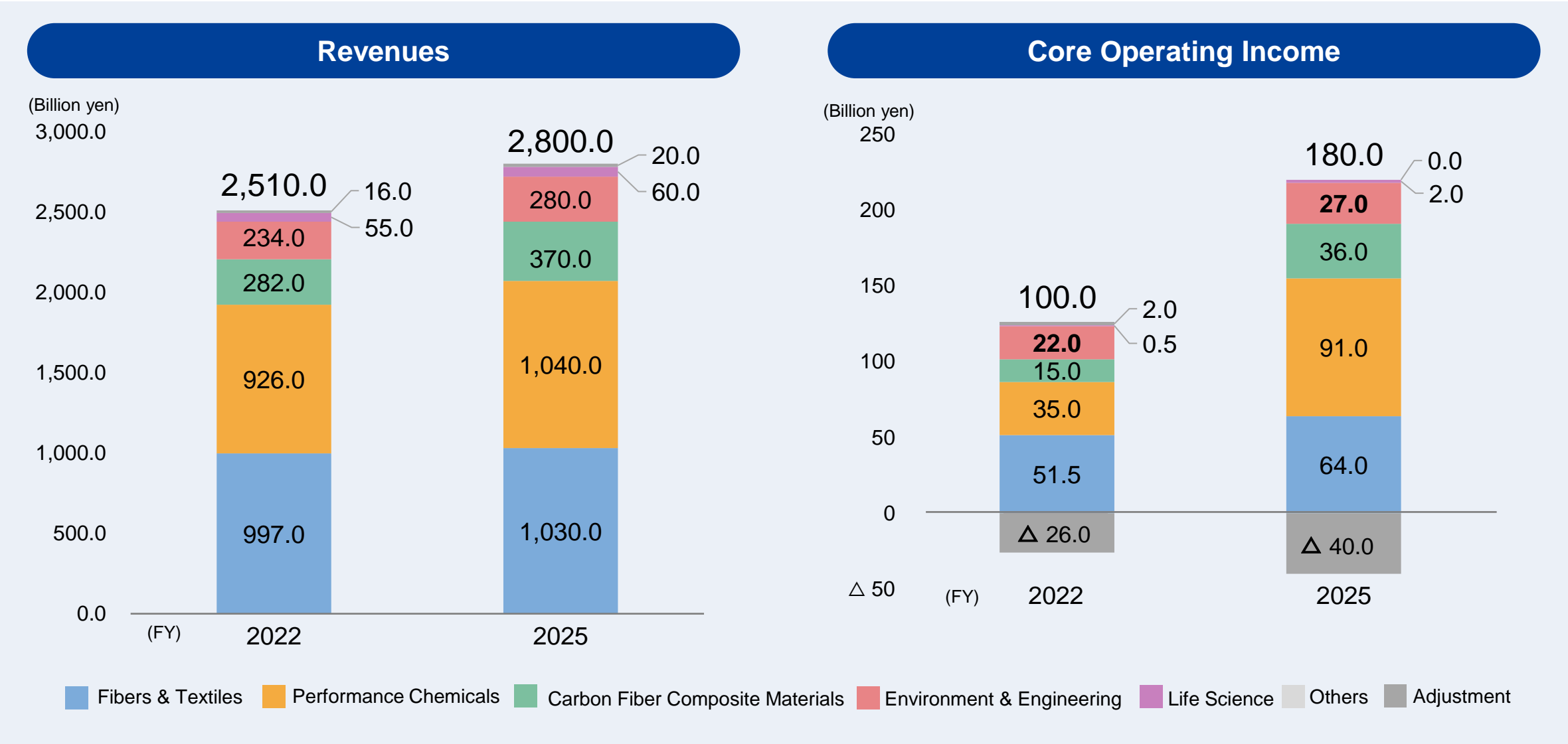
- 1 Expanding businesses related to **Sustainability Innovation** Business and **Digital Innovation** Business
- 2 **Maximizing value to the customers** by making the most of tangible and intangible assets, and by collaborating with external partners, to **improve profitability**
- 3 **Enhancing quality strength and leveraging digital technology** to promote competitiveness

Strengthening the Management Foundation

- 4 Promoting individual **career development**, while **improving job satisfaction and pleasant working environment**
- 5 **Controlling risks** on business operations **properly**

<Reference> Segment Information

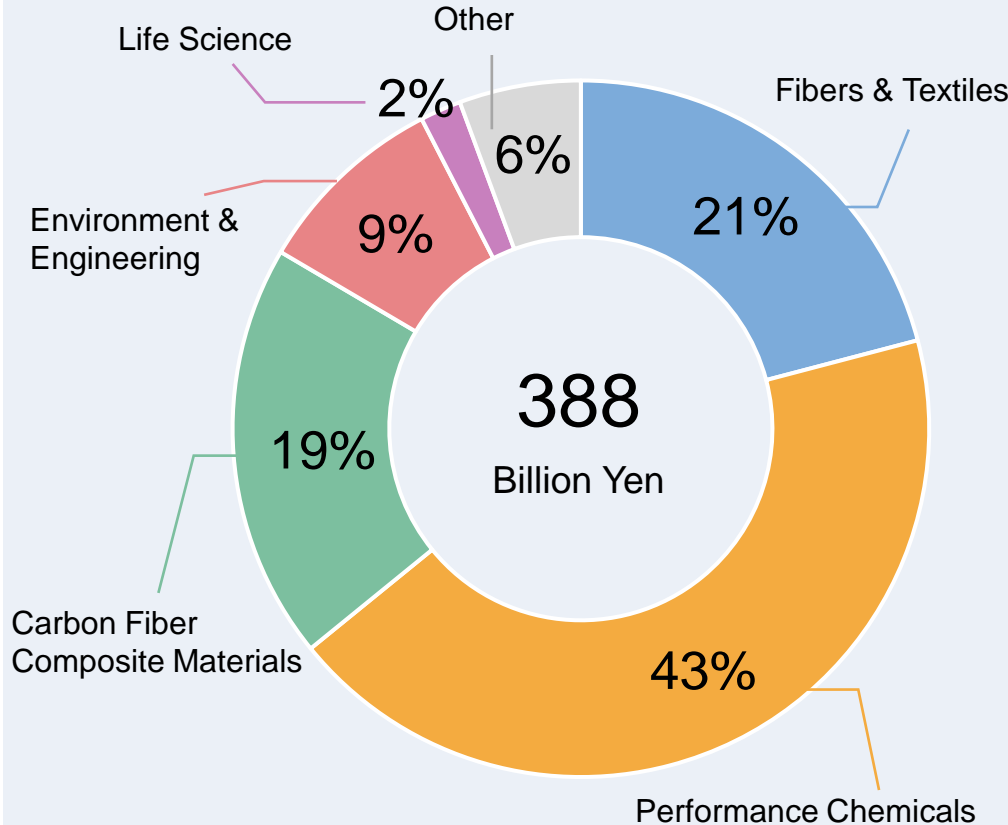
Revenues and Core Operating Income Targets by Segment



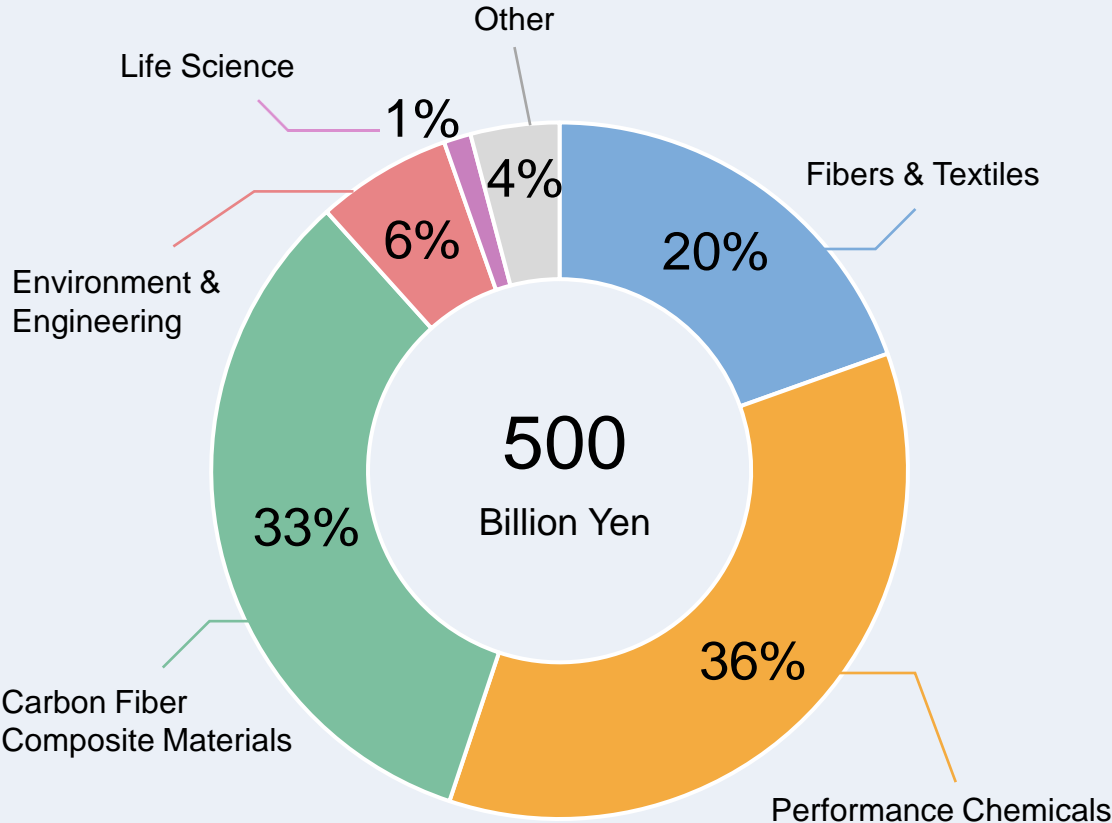
Capital Investment by Segment

AP-G 2022: 3-year Total

(FY 2020-2021 results and forecast for FY 2022)



AP-G 2025: 3-year Total





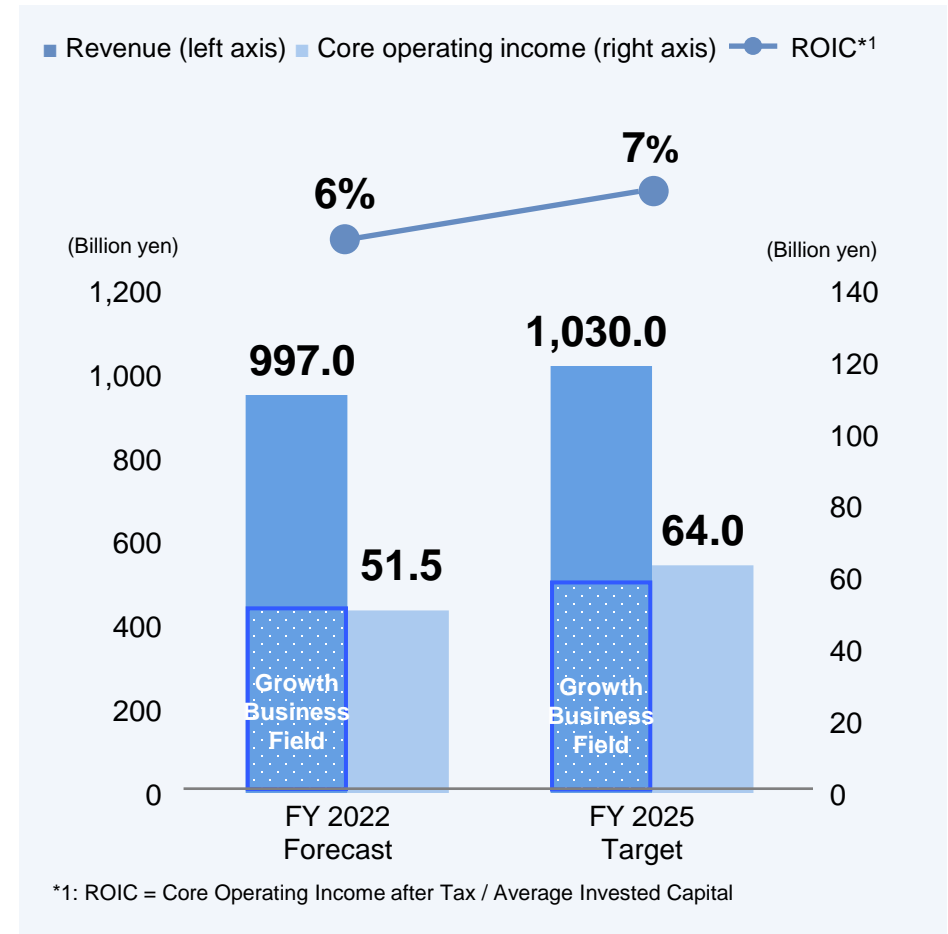
Promoting environmentally friendly materials and rebuilding recycling supply chains. Driving business expansion in growth fields and high value-added strategies with functional fibers.

Business expansion in growth fields based on high-performance, highly textured products that make use of environmentally friendly materials

- Promoting material recycling, chemical recycling, and the use of biomass-based raw materials to help build a circular economy
- To meet the needs of a circular economy, rebuilding the recycling supply chain and developing an integrated business across the entire value chain by collaborating with customers

Business expansion in growth fields, and creating high added value with proprietary technologies

- In the expanding automotive market, reaping the benefits of capital investment in ultra-microfiber nonwoven material with a suede texture and airbags
- Creating new demand and high added value with functional fibers created using NANODESIGN™ technology





Resins & Chemicals Business

Contributing to building a sustainable world by creating high value-added products

- Becoming an open organization, rebuilding the quality assurance system, and enhancing chemical substance management
- Creating high value-added businesses by developing high performance products and practicing proposal-based product development

Films Business

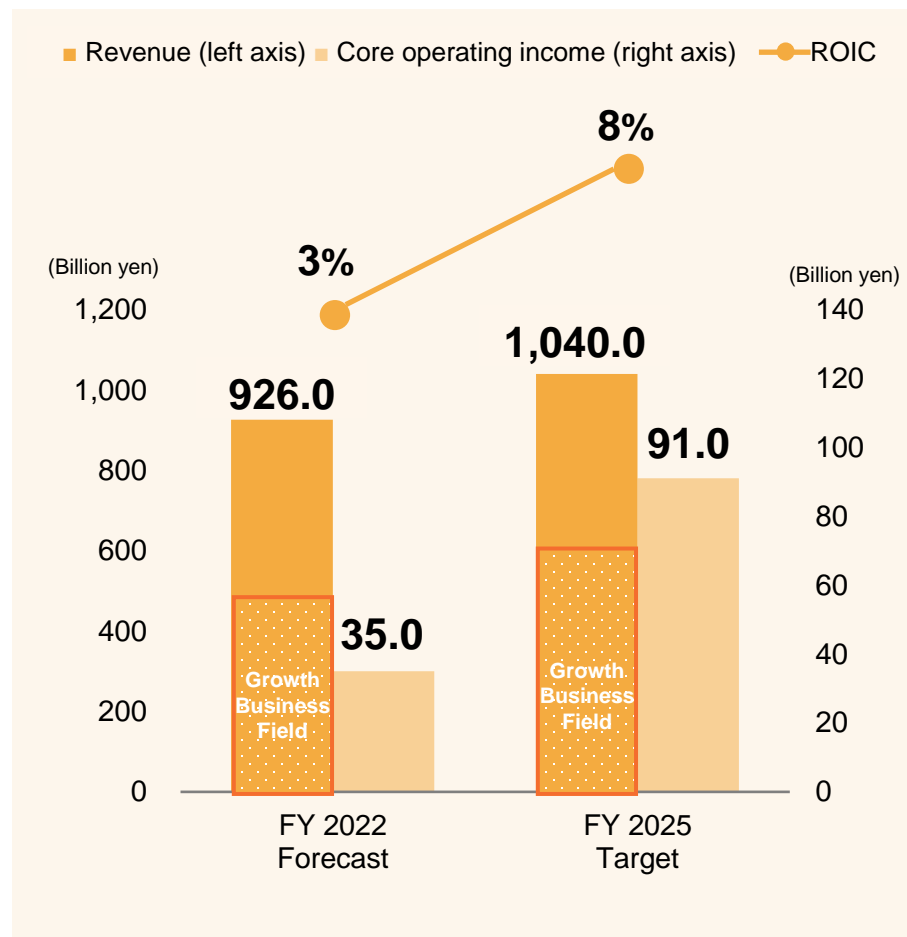
From plastic films to environmentally friendly functional films

- Expanding films for electronic component manufacturing processes (MLCC, semiconductor package, and polarizing plate applications)
- Expanding and accelerating the development of environmentally friendly products

Electronic & Information Materials Business

Expanding sales of strategic products in growth markets and regions based on “The One Strategy” set forth by the Electronic & Information Materials Business

- Expanding the Digital Innovation Business by rapidly creating high value-added electronic materials in a timely manner
- Delivering continuous business expansion by providing solutions that employ advanced materials to customers





Revenue Target by Subsegment

Billion yen

	FY 2022 Forecast	AP-G 2025 FY 2025 Target
Resins & Chemicals	427.0	550.0
Films	327.0	400.0
Electronic & Information Materials	56.0	100.0
Trading, other	553.0	590.0
Reconciliations	▲ 437.0	▲ 600.0
Total	926.0	1,040.0



Carbon Fiber Composite Materials

**Maintaining the global industry's top position by pursuing high functionality and reliability (usability).
Capturing market growth in both aviation and industrial/sports applications.**

Capturing recovering aircraft demand

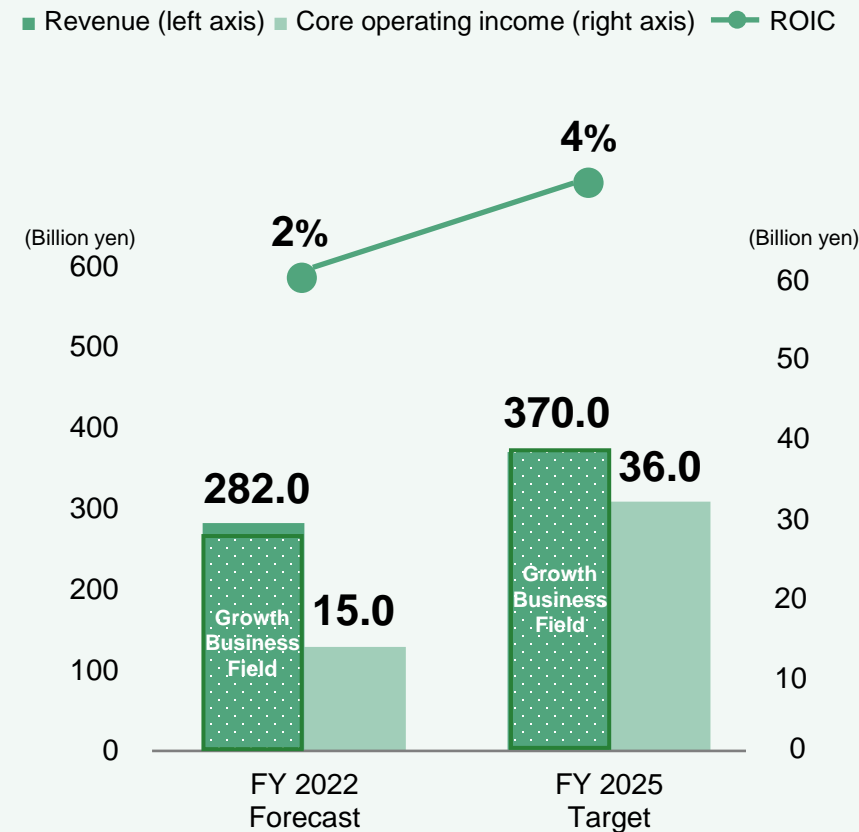
Enhancing profit structure by improving profitability in industrial applications

Capturing expanding markets based on large-scale capital investment

- Expanding business in energy fields such as wind turbine blades and fuel cell vehicles (tanks and electrode substrates)

Serving mobility fields such as urban air mobility (UAM), where growing demand is expected in the future

Improving the quality of carbon fiber products, which has a direct impact on improving the value of consumer products





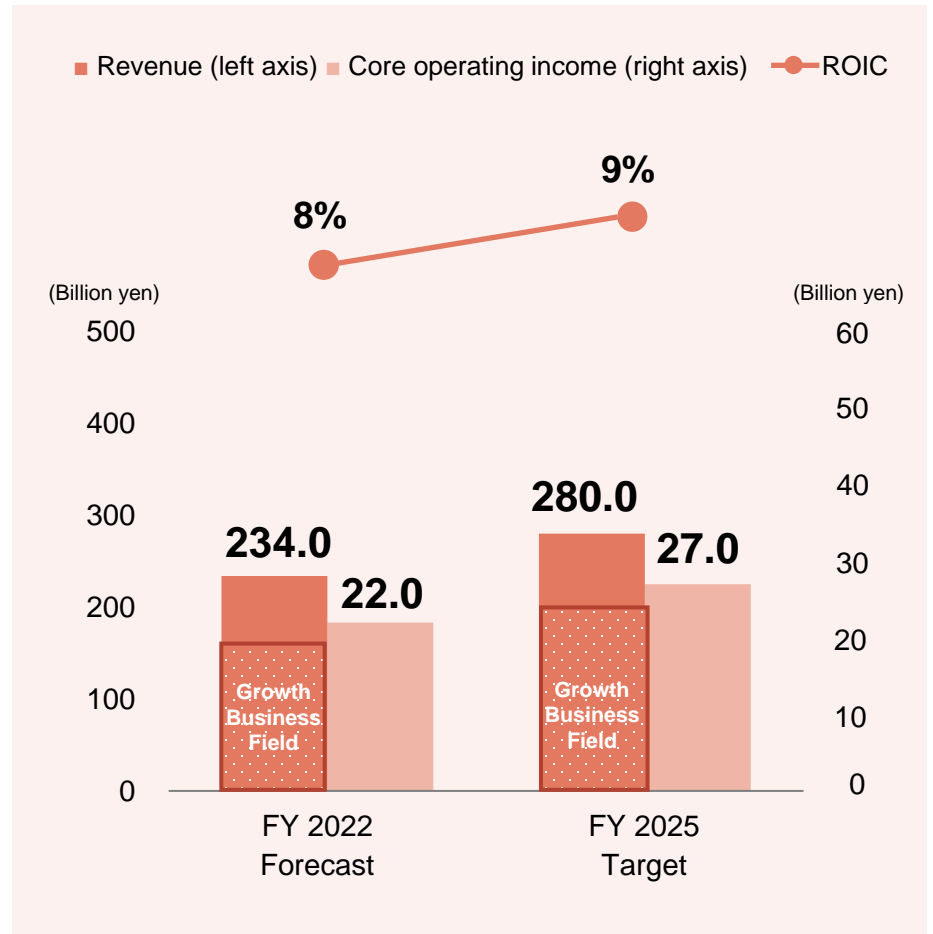
Securing top market share for reverse osmosis (RO) membranes and expanding the engineering business

Water Treatment Business

- Enhancing global production and sales systems to better achieve the principle of local production for local consumption
- Accelerating the development and launch of new products that capture the needs of growth business fields, and expanding sales
- Boosting technical service capabilities and providing a high level of value to customers

Engineering Business

- Expanding business related to manufacturing plants and equipment for pharmaceuticals, LIBs (rechargeable batteries), and electronics equipment, which are growing markets
- Improving technology and cost competitiveness by enhancing integrated Group management
- Expanding business by utilizing the Group's sites around the world (LIB coaters and power semiconductors)





Strengthening the business foundation by pursuing business development outside Japan, expanding indications, improving existing products, and ensuring thorough cost reductions

Pharmaceuticals Business

- Maintaining the business foundation and securing earnings by expanding outside Japan and augmenting indications for oral pruritus improvement drug REMITCH®*

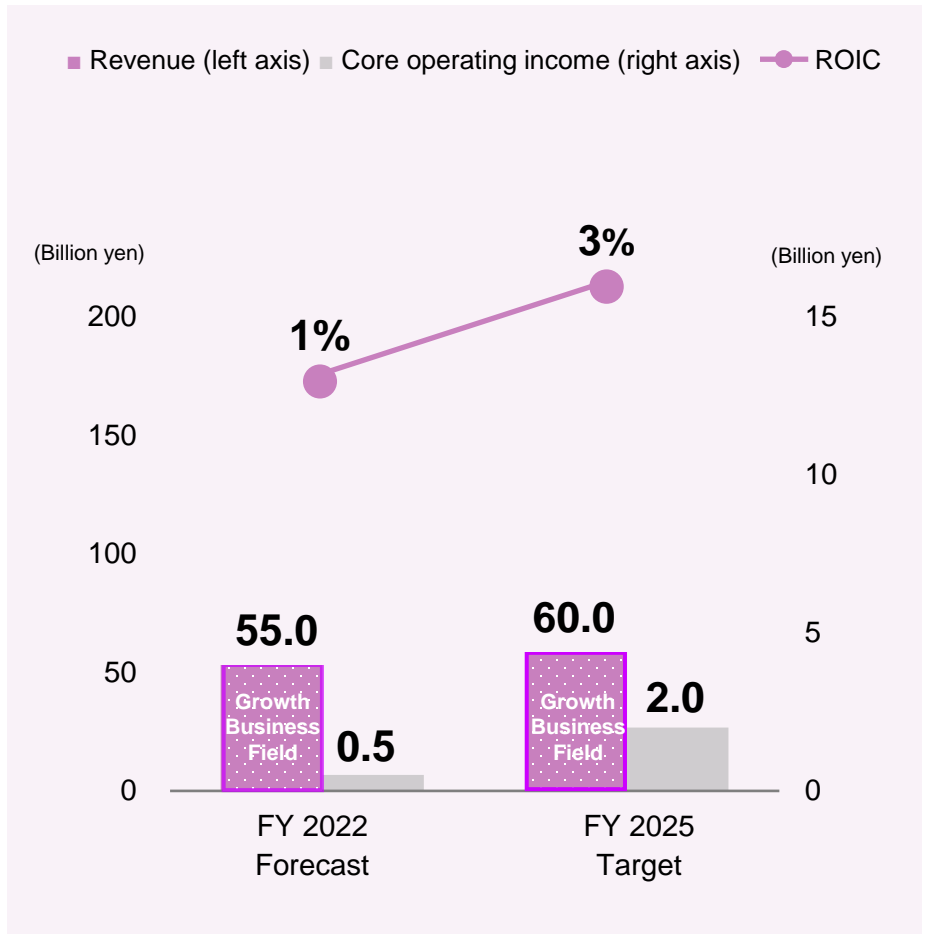
Medical Devices Business

- Expanding sales by improving existing products such as the HotBalloon™ ablation catheter and progressively releasing them on the market
- Expanding worldwide sales of dialyzers with high added value
- Expanding sales by enhancing solution proposals with new dialysis equipment products and management systems that utilize DX and AI technologies

New Businesses

- Establishing a business structure for pancreatic cancer diagnostic agents and releasing them

*REMITCH® is a registered trademark of Torii Pharmaceutical Co., Ltd.



Descriptions of predicted business results, projections and business plans contained in this material are based on assumptions and forecasts regarding the future business environment, made at the time of publication. Information provided in this material does not constitute any guarantee concerning the Toray Group's future performance.

