



*Change and Innovation 3.0  
For a Sustainable Future*

FY2019-FY2021  
**Corporate  
Business Plan**

March 12, 2019

 **SUMITOMO CHEMICAL**

**Masakazu Tokura**  
President

# Contents

Change & Innovation 3.0 For a Sustainable Future

**I**

**Progress Review for  
Current Corporate Business Plan**

**3**

**II**

**New Corporate Business Plan**

**12**

**III**

**Business Strategy by Sector**

**49**

**IV**

**Initiatives for Sustainability**

**69**


# I

FY2016-FY2018

## Progress Review for Current Corporate Business Plan



# Change and Innovation **Create New Value**



**Generate more  
cash flow**



**Further improve  
business portfolio**



**Accelerate the launch of  
next-generation businesses**

**Promote globally integrated management**

**Ensure full and strict compliance**

**Establish and maintain safe and stable operations**

## Energy & Functional Materials

- Expanded separator production capacity
- Entered cathode materials business

Petrochemicals  
& Plastics

General

## Pharmaceuticals

- Acquired Parkinson's disease treatment
- Acquired a leukemia treatment, among others

Estimated Capital  
Expenditure and Investment  
for FY2016-FY2018  
(decision-making basis)

approx.

**¥670bn**

Specialty  
chemicals  
account for:  
**75%**

## IT-related Chemicals

- Expanded touchscreen panel production capacity
- Built and expanded semiconductor materials production capacity
- Flexible display materials

## Health & Crop Sciences

- Increased methionine production capacity
- Acquired Indian agrochemicals company, Excel Crop Care Ltd.
- Acquired insecticidal compounds manufacturer Botanical Resource Australia Group
- Expanded R&D

## Energy & Functional Materials

- Battery materials

Petrochemicals  
& Plastics

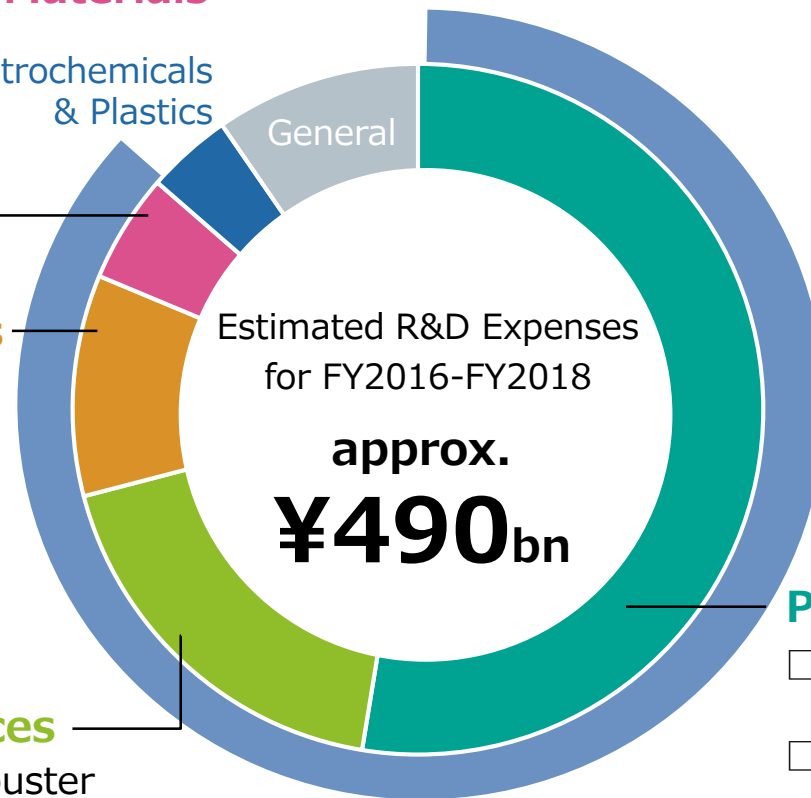
General

## IT-related Chemicals

- Flexible display materials
- Compound semiconductors

## Health & Crop Sciences

- Next-generation blockbuster crop protection chemicals
- New rice varieties
- Active ingredients for nucleic acid medicines



Specialty  
chemicals  
account for:

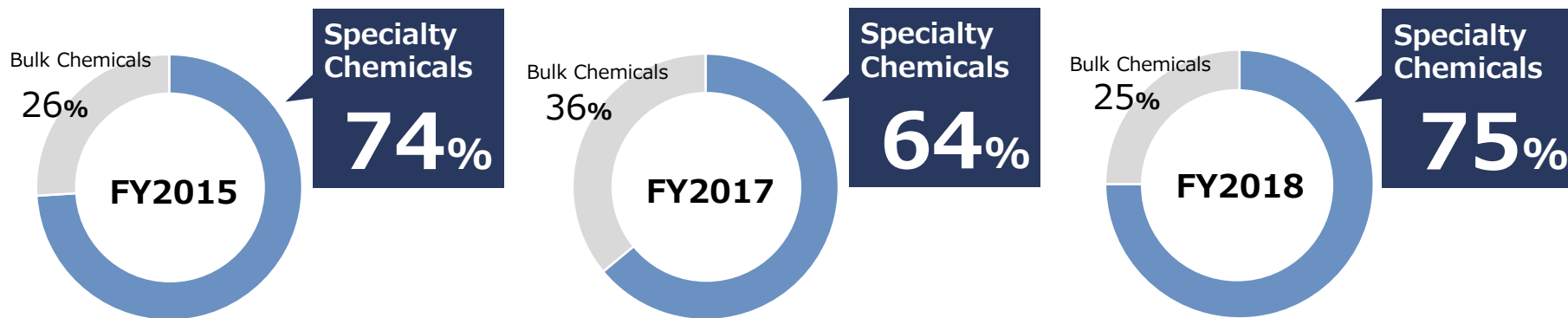
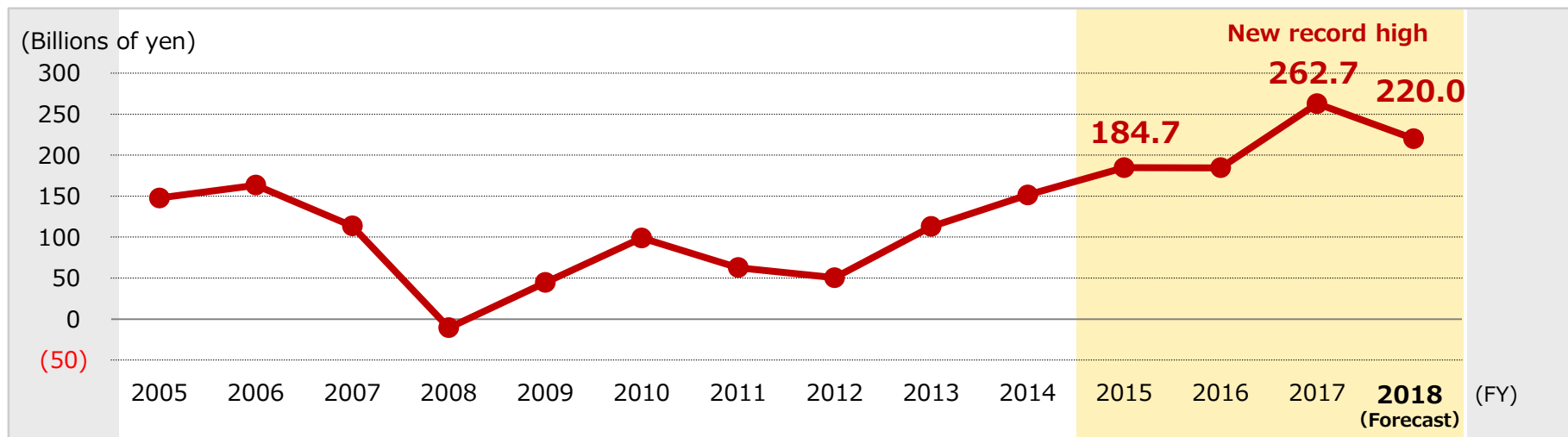
**90%**

## Pharmaceuticals

- Napabucasin / Amcasertib  
(Cancer stemness inhibitor)
- Dasotraline  
(Treatment for attention-deficit hyperactivity disorder (ADHD)/ binge eating disorder (BED))
- LONHALA<sup>®</sup> MAGNAIR<sup>®</sup>  
(Treatment for chronic obstructive pulmonary disease (COPD))

## Change in core operating income and its composition

\* Through FY2015: sum of operating income and equity in earnings of affiliates under J-GAAP.



**Steady increase in profitability of specialty chemicals business**

# Current Corporate Business Plan: FY2018 Target vs. Forecast

Change & Innovation 3.0 For a Sustainable Future

(Billions of yen)

	FY2018 Forecast	FY2018 Target	Change
Sales Revenue	2,410.0	2,540.0	-130.0
Core Operating Income	220.0	240.0	-20.0
Operating Income (IFRS)	190.0	190.0	±0
Net Income attributable to owners of the parent	120.0	110.0	+10.0
Naphtha Price	¥49,900/kl	¥45,000/kl	
Exchange Rate	¥110.86/\$	¥120.00/\$	

\* Forecast and target both based on IFRS



# Current Corporate Business Plan: Core Operating Income by Sector

Change & Innovation 3.0 For a Sustainable Future

(Billions of yen)

	FY2018 Forecast	FY2018 Target	Change	Reason for Change
<b>Specialty Chemicals</b>	171.0	206.0	-35.0	
Energy & Functional Materials	22.0	18.0	+4.0	
IT-related Chemicals	26.0	34.0	-8.0	Yen appreciation
Health & Crop Sciences	42.0	89.0	-47.0	Lower methionine price and yen appreciation
Pharmaceuticals	81.0	65.0	+16.0	Increase in LATUDA sales
<b>Bulk Chemicals</b>	57.0	39.0	+18.0	
Petrochemicals & Plastics	57.0	39.0	+18.0	Improved margins of petrochemicals
Others	-8.0	-5.0	-3.0	
<b>Total</b>	<b>220.0</b>	<b>240.0</b>	<b>-20.0</b>	

## Change in Cash Flows and Interest-Bearing Debt

(Billions of yen)

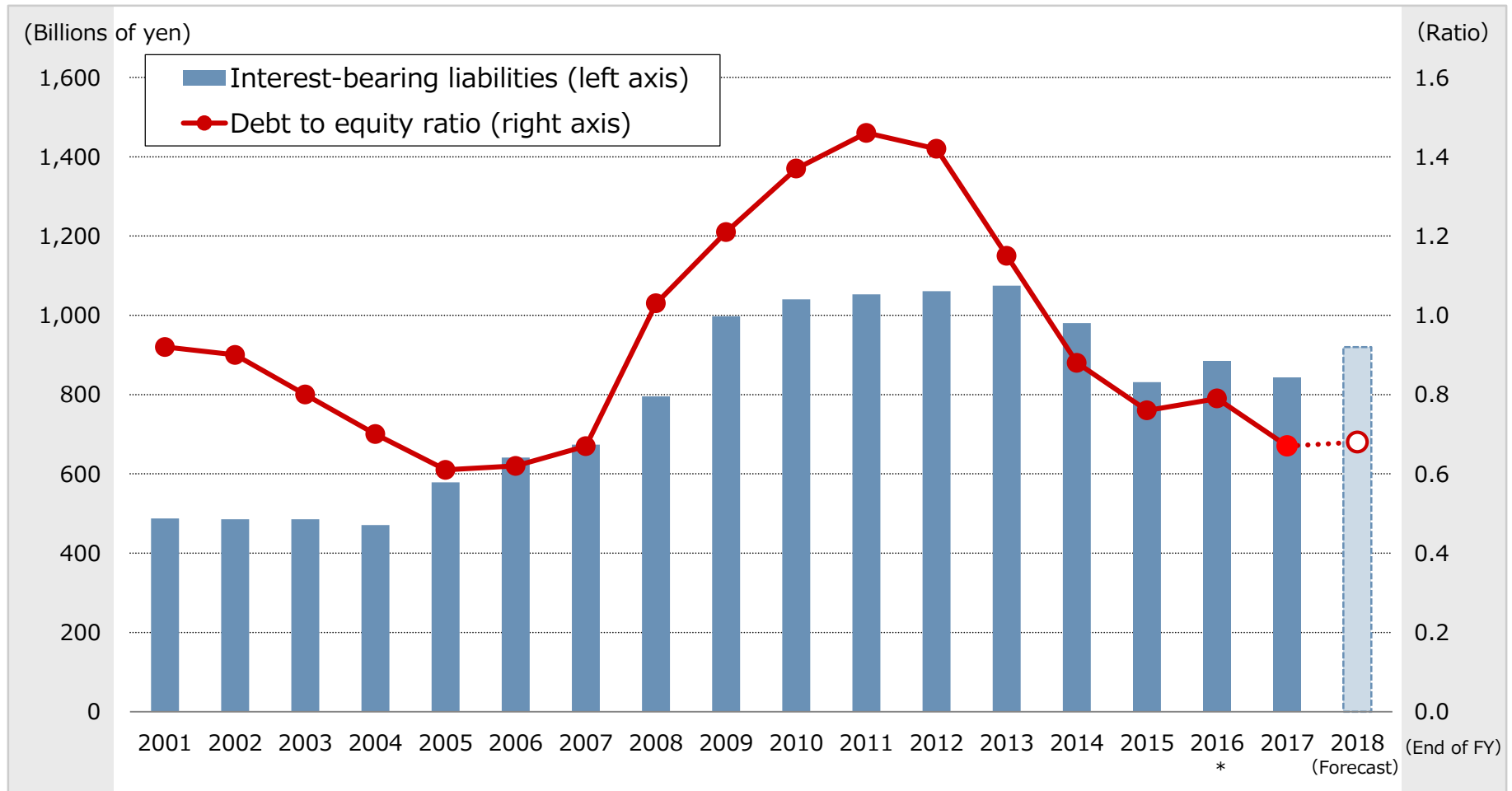
	FY2013-2015	FY2016-2018 (Target)	FY2016-2018 (Forecast)
Cash flows from operating activities	716.4	680.0	670.0
Cash flows from investing activities	-245.5	* -800.0	-550.0
Free cash flows	470.9	-120.0	120.0

\* Including investment in Rabigh Phase II project

(Billions of yen)

	End of FY2015	End of FY2018 (Target)	End of FY2018 (Forecast)
Interest-bearing liabilities	831.5	1,000.0	920.0

## Interest-Bearing Liabilities and D/E Ratio



\* J-GAAP used through FY2016, IFRS adopted from FY2017.  
Information for FY2016 restated in accordance with IFRS.

# II

FY2019-FY2021

## New Corporate Business Plan

1. Business Environment
2. Basic Policy
3. Performance Targets
4. Major Action Plan



## II New Corporate Business Plan 12

### 1 Business Environment 14

### 2 Basic Policy 17

### 3 Performance Targets 21

### 4 Major Action Plan 30

## Global economy and risk factors

**Growth continues at  
an annual rate of approx. 3%**  
**Increased volatility and  
uncertainty**

**Increased  
financial risk in  
emerging  
countries**

**Trade slowdown  
due to the rise of  
protectionism**

**Impact of  
US-China  
competition for  
hegemony on  
the global  
economic  
system**

**Realization of  
potential  
geopolitical  
risks**

**Increasing  
national debt,  
low birthrate  
and aging  
society  
(Japan)**

## Trend

- Create new value through **digital innovation**
- Solve issues facing society and contribute to **sustainability** through **innovation**



## II New Corporate Business Plan 12

1 Business Environment 14

**2 Basic Policy 17**

3 Performance Targets 21

4 Major Action Plan 30



Slogan of the next medium-term management plan

*Change & Innovation 3.0*  
***For a Sustainable Future***

In view of the advent of Society 5.0 (super-smart society)

- Accelerate **innovation**
- Promote **digital innovation** to improve productivity significantly
- ▶ Contribute to building a **sustainable society**

1

Accelerating the development of next-generation businesses

2

Improve productivity through digital innovation

3

Further improve business portfolio

4

Build a more robust financial structure



*Change & Innovation 3.0*  
***For a Sustainable Future***

5

Employ, develop and leverage human resources for sustainable growth

6

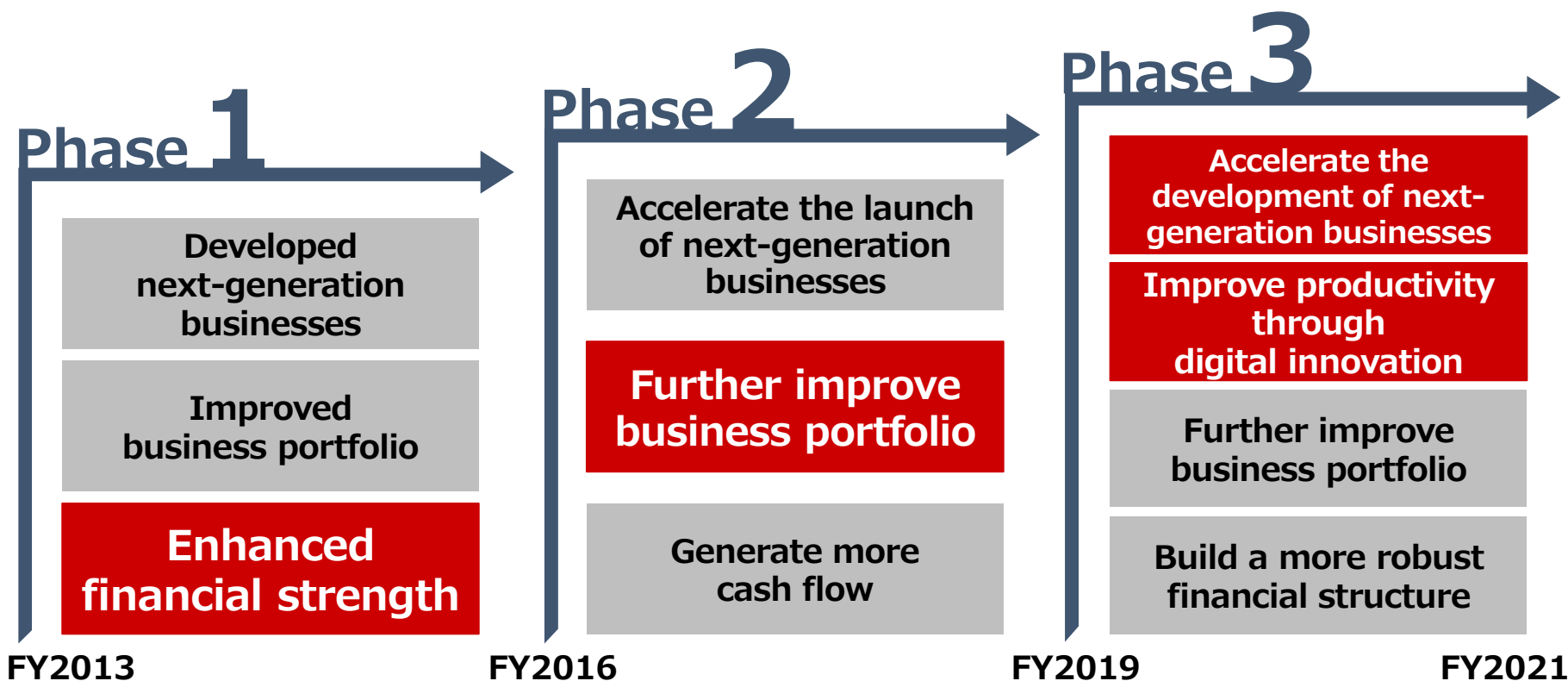
Ensure full and strict compliance and maintain safe and stable operations

# Change & Innovation

For the next hundredth anniversary

Create New Value

For a Sustainable Future



## II

## New Corporate Business Plan 12

1

Business Environment

14

2

Basic Policy

17

3

**Performance Targets**

21

4

Major Action Plan

30

### 3. Performance Targets

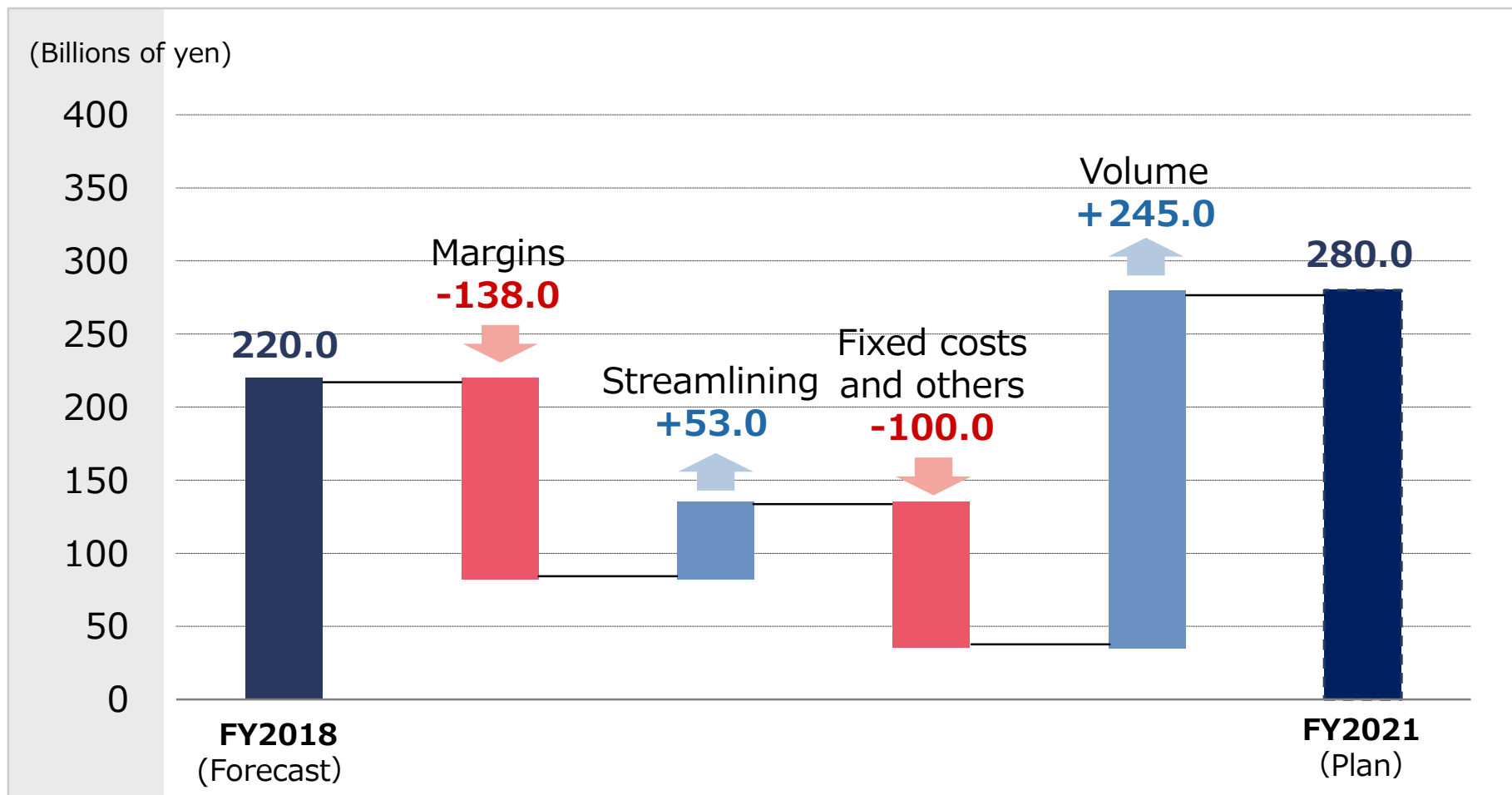
Change & Innovation 3.0 For a Sustainable Future

(Billions of yen)

	FY2018 Forecast	FY2021 Target	Change
Sales Revenue	2,410.0	2,950.0	+540.0
Core Operating Income	220.0	280.0	+60.0
Operating Income (IFRS)	190.0	260.0	+70.0
Net Income attributable to owners of the parent	120.0	150.0	+30.0

Naphtha Price	¥49,900/kl	¥51,000/kl
Exchange Rate	¥110.86/\$	¥110.00/\$

## Change In Core Operating Income (FY2018 VS FY2021)



### 3. Performance Targets :

## Sales Revenue by Sector

Change &amp; Innovation 3.0 For a Sustainable Future

(Billions of yen)

	FY2018 Forecast	FY2021 Plan	Change	Reason for Change
<b>Specialty Chemicals</b>	1,585.0	1,980.0	+395.0	
Energy & Functional Materials	285.0	390.0	+105.0	Increase in battery materials sales volume
IT-related Chemicals	405.0	520.0	+115.0	Increase in OLED materials sales volume
Health & Crop Sciences	380.0	480.0	+100.0	Increase in sales volume of crop protection products and methionine
Pharmaceuticals	515.0	590.0	+75.0	Increase in sales volume of pharmaceuticals in North America
<b>Bulk Chemicals</b>	770.0	910.0	+140.0	
Petrochemicals & Plastics	770.0	910.0	+140.0	Increase in sales volume of products of PRC phase II
Others	55.0	60.0	+5.0	
<b>Total</b>	2,410.0	2,950.0	+540.0	

### 3. Performance Targets: Core Operating Income by Sector

Change &amp; Innovation 3.0 For a Sustainable Future

(Billions of yen)

	FY2018 Forecast	FY2021 Plan	Change	Reason for Change
<b>Specialty Chemicals</b>	171.0	235.0	+64.0	
Energy & Functional Materials	22.0	31.0	+9.0	Increase in battery materials sales volume
IT-related Chemicals	26.0	35.0	+9.0	Increase in OLED materials sales volume
Health & Crop Sciences	42.0	75.0	+33.0	Increase in sales volume of crop protection products and methionine
Pharmaceuticals	81.0	94.0	+13.0	Increase in sales volume of pharmaceuticals in North America
<b>Bulk Chemicals</b>	57.0	49.0	-8.0	
Petrochemicals & Plastics	57.0	49.0	-8.0	Lower margins for MMA
Others	-8.0	-4.0	+4.0	
<b>Total</b>	220.0	280.0	+60.0	



### 3. Performance Targets: Financial Metrics

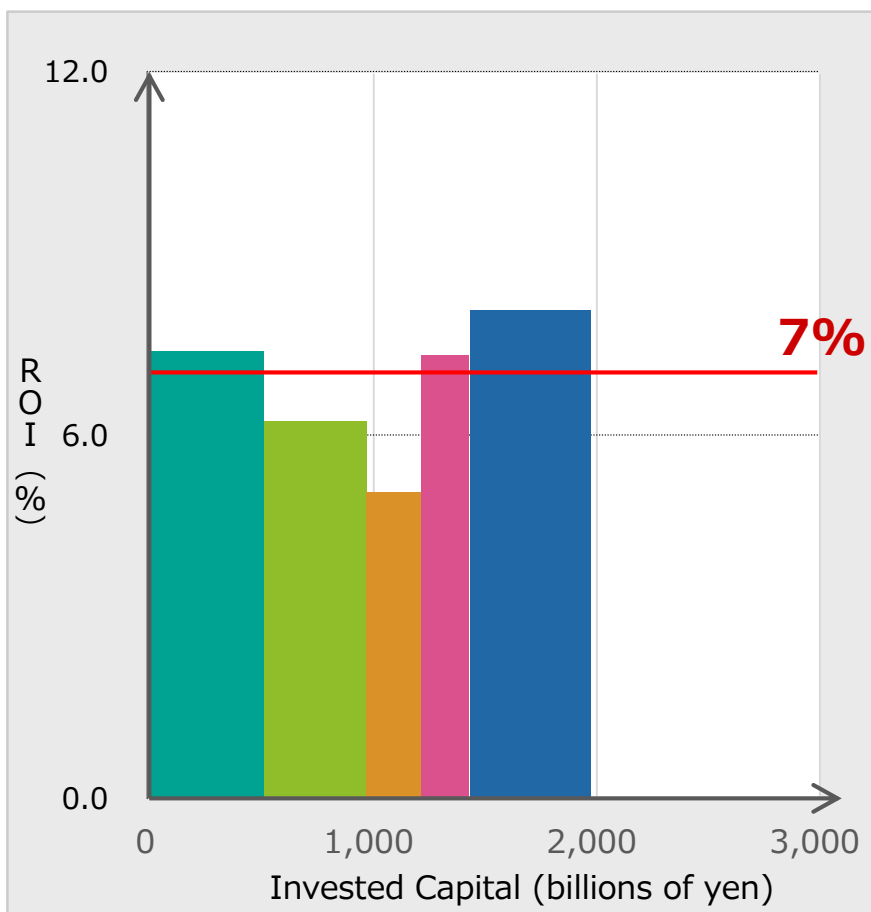
Change & Innovation 3.0 For a Sustainable Future

	FY2015	FY2018 Forecast	2021 Target	Medium- to Long-term Targets
ROE	9.6%	12.4%	12.5%	Consistently achieve the following targets: <b>Over 10%</b>
ROI	5.6%	7.1%	7.1%	<b>Over 7%</b>
D/E ratio	0.8	0.7	0.7	approx. <b>0.7</b>
Dividend payout ratio	31%	30%	—	approx. <b>30%</b>
Profit growth*	—	—	13%	over <b>7%</b> per year

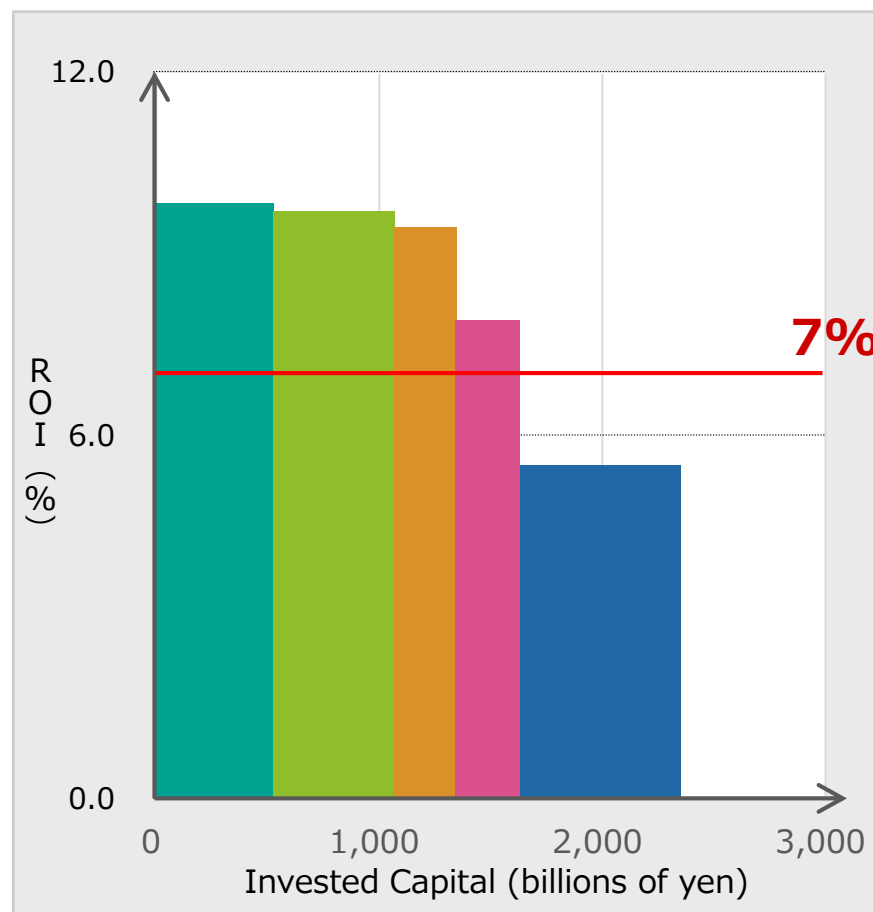
\* Compounded annual growth rate of Net Income attributable to owners of the parent from FY2015

## Invested Capital and ROI by Sector

### Forecast for FY 2018

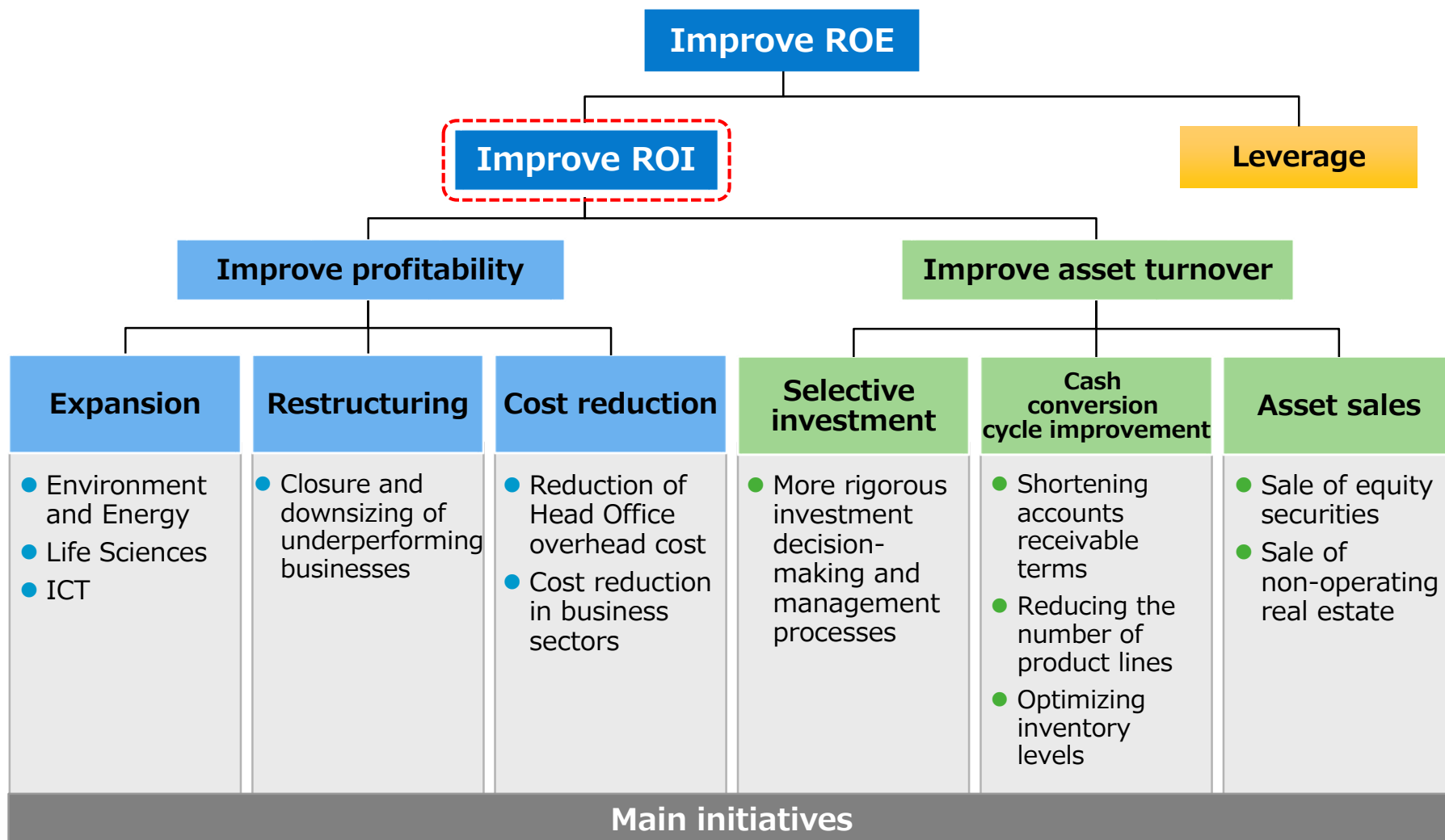


### Forecast for FY2021



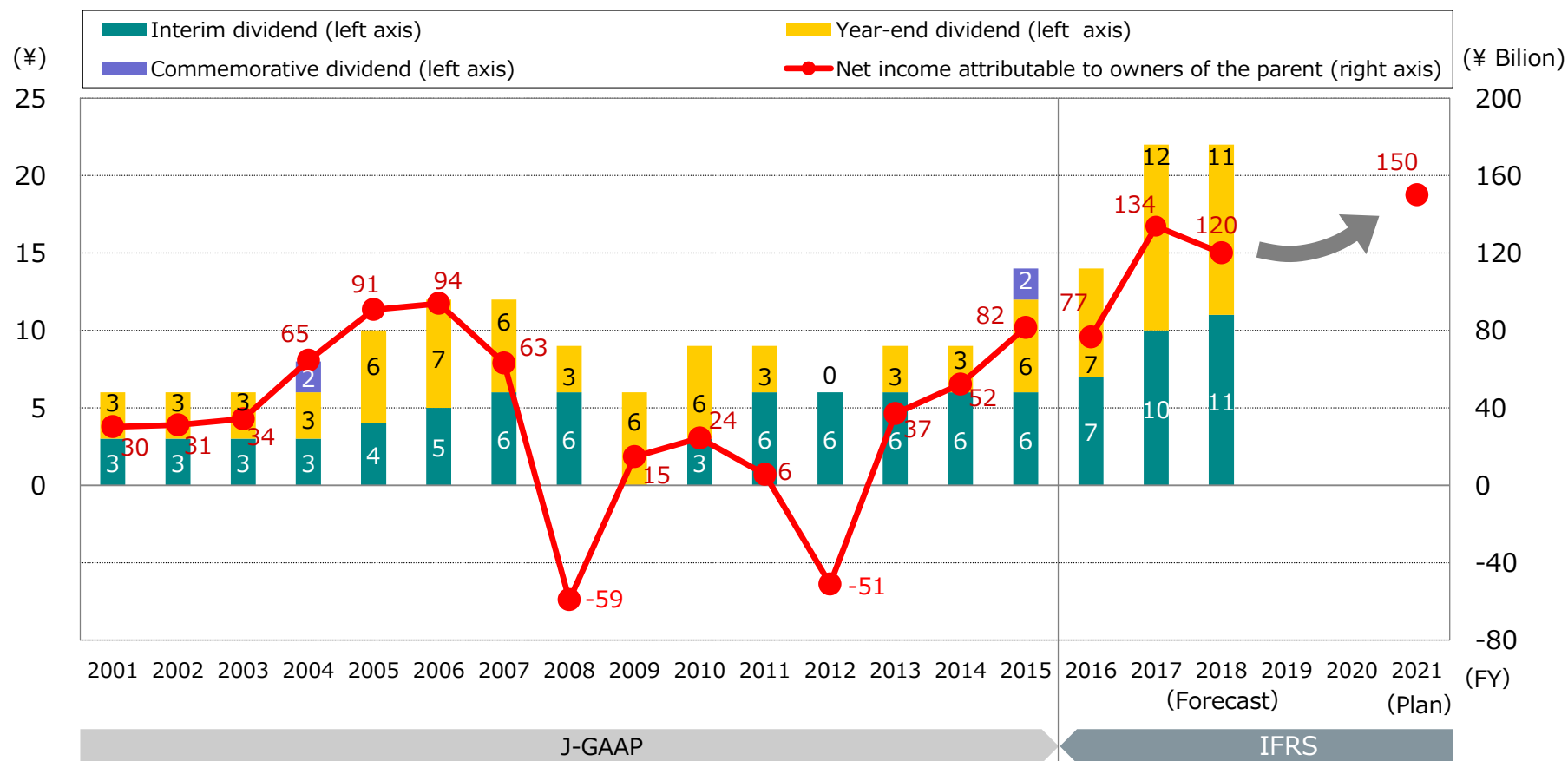
■ Pharmaceuticals   
 ■ Health & Crop Sciences   
 ■ IT-related Chemical   
 ■ Energy & Functional Materials  
■ Petrochemicals & Plastics

## Initiatives for improving ROI and ROE



### 3. Performance Targets: Dividend Policy

We consider **shareholder return as one of our priority management issues** and have made it a **policy to maintain stable dividend payment**, giving due consideration to our business performance and a dividend payout ratio for each fiscal period, the level of retained earnings necessary for future growth, and other relevant factors. We aim to maintain a **dividend payout ratio of around 30%** over the medium to long term.



## II

## New Corporate Business Plan 12

1 Business Environment 14

2 Basic Policy 17

3 Performance Targets 21

4 Major Action Plan 30

1 Accelerate the Development of Next-Generation Businesses 30

2 Improve Productivity through Digital Innovation 36

3 Further Improve Business Portfolio 41

4 Build a More Robust Financial Structure 45

Accelerate the development of  
**next-generation technologies** and  
**create new businesses**  
for a sustainable society



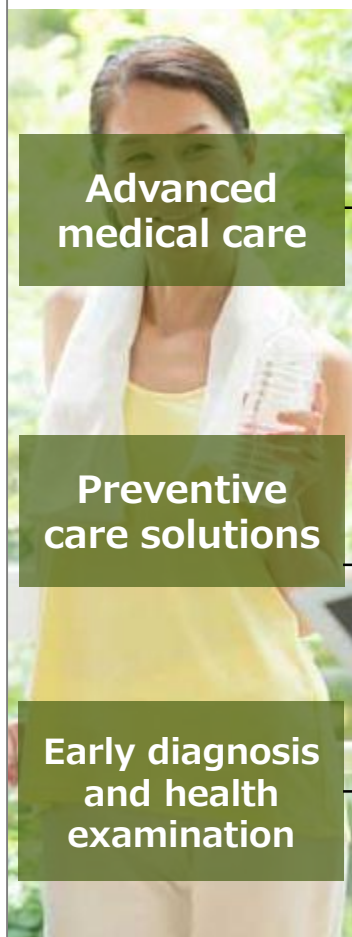
**Build innovation ecosystem**

# Accelerate the Development of Next-Generation Businesses: Focus Domains in the Four Priority Areas

Change & Innovation 3.0 For a Sustainable Future

## Health care

### Focus domains



Advanced  
medical care

Preventive  
care solutions

Early diagnosis  
and health  
examination

### Major projects

Nucleic Acid Medicine

Cell Therapy

Theranostics

Frontier businesses  
(Healthcare solutions  
not limited to  
pharmaceuticals)

Nutraceuticals  
(functional food)

Physical condition  
visualization sensor

## Food

### Focus domains



Precision  
agriculture

Food sensing

Breeding

### Major projects

Precision agriculture,  
including data  
collection, analysis,  
and prediction

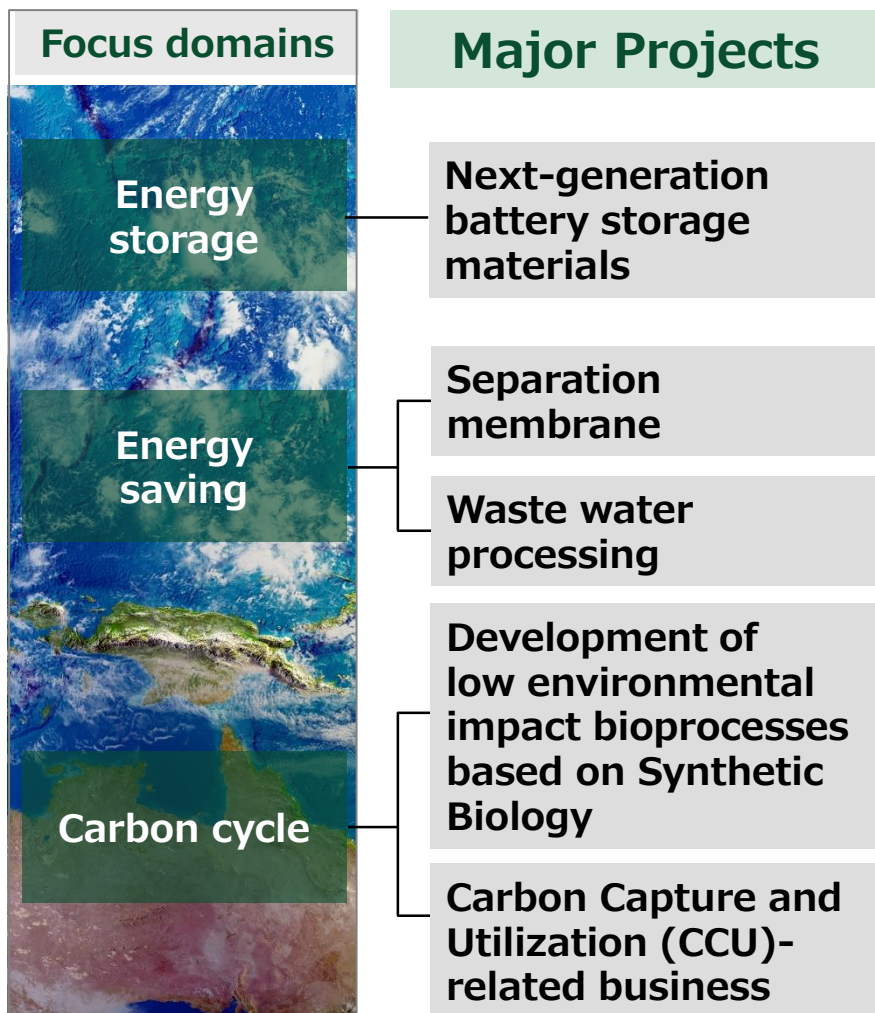
On-site food  
inspection

Breeding using  
genome editing  
technology

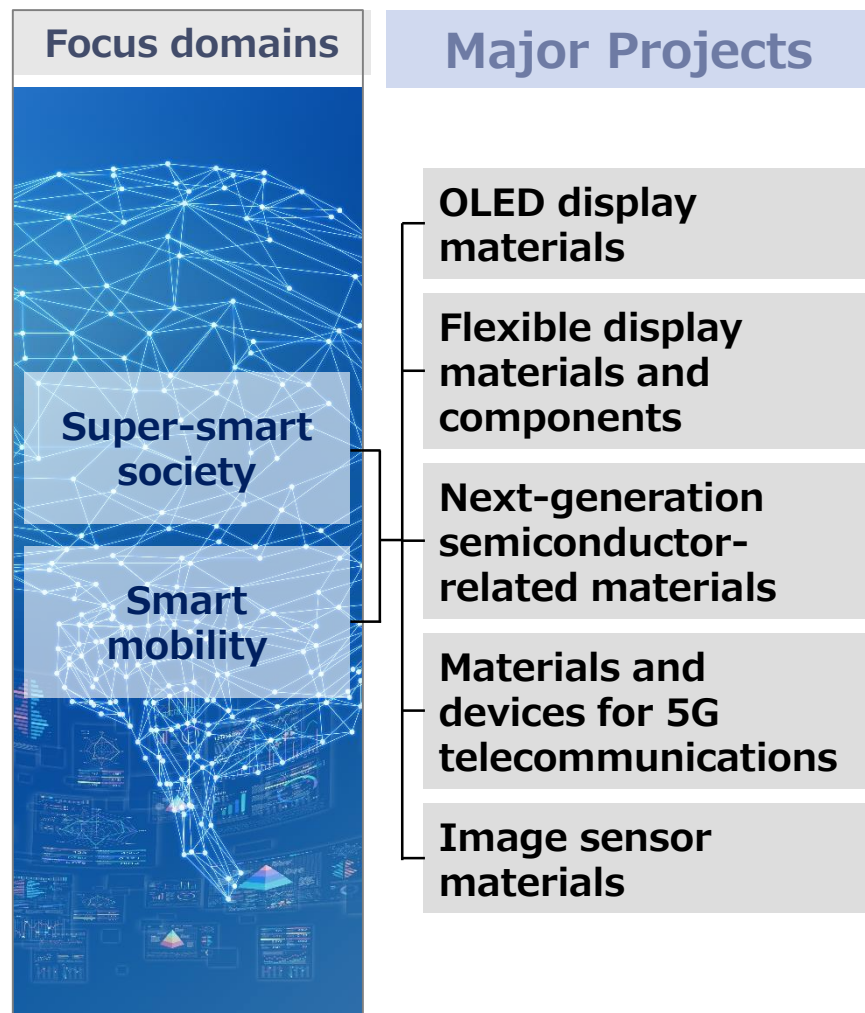
# Accelerate the Development of Next-Generation Businesses: Focus Domains in the Four Priority Areas

Change & Innovation 3.0 For a Sustainable Future

## Reducing Environmental Impact

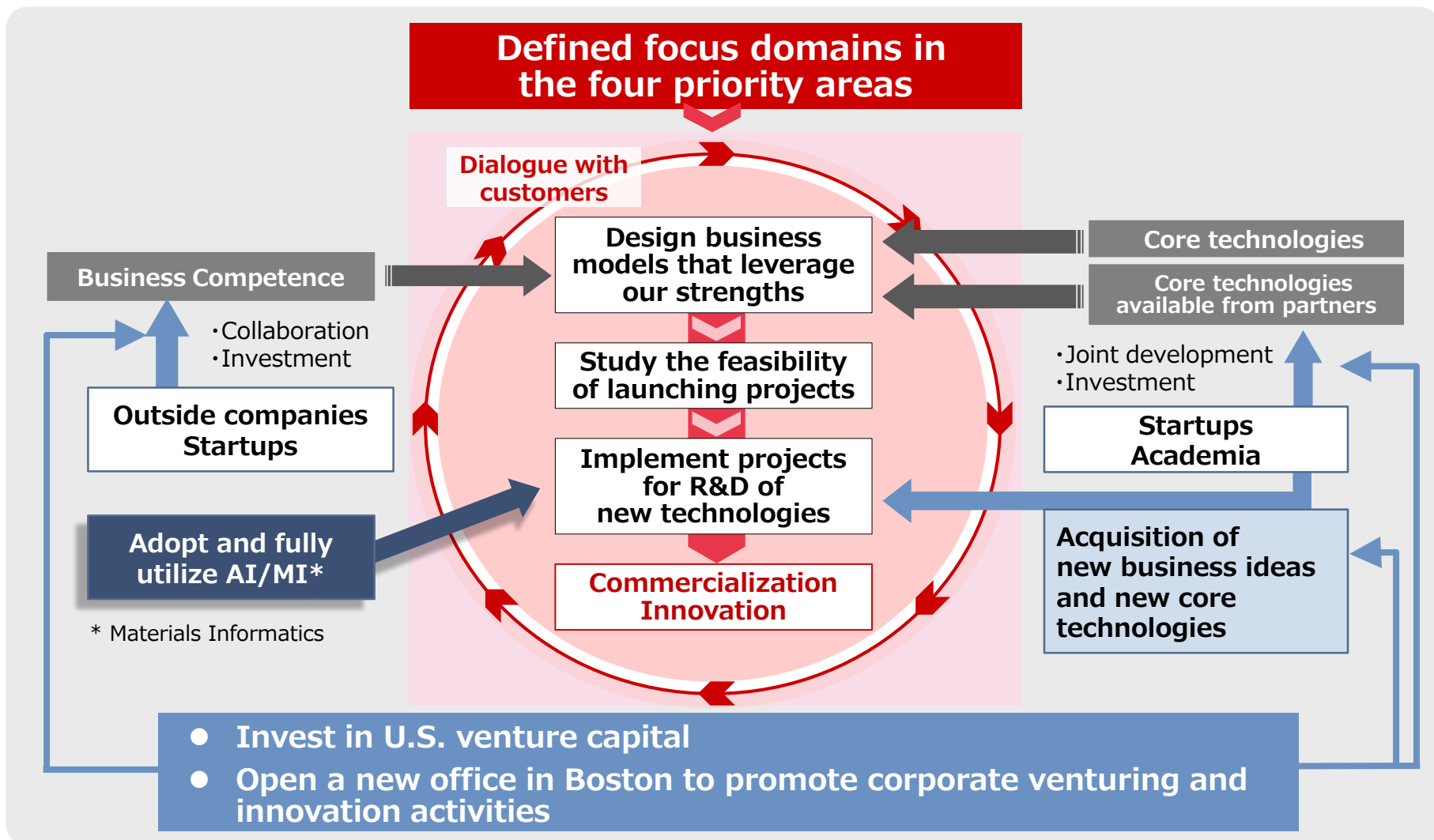


## ICT





## Innovation Ecosystem



## Relocate our corporate venturing and innovation office in U.S. to the Boston/Cambridge area

### CVI

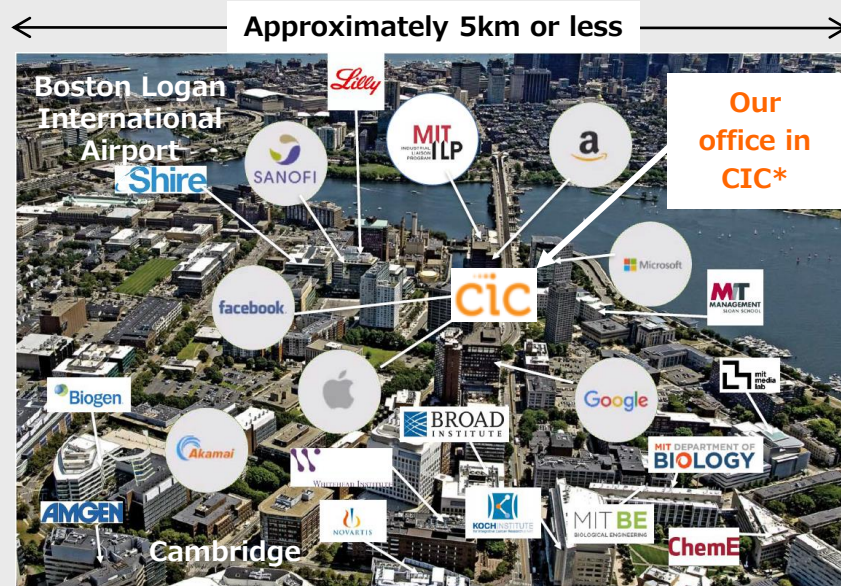
(Corporate Venturing &  
Innovation Office)

Accelerate collaboration with startups and academia and exploration of new business opportunities

#### Advantages of Boston/Cambridge area

- One of the World's largest innovation hubs
- Highest level of concentration of top universities and startups
- Focus on innovative technologies that require long-term commitment, such as drug discovery, biotechnology, materials, and robotics

\*CIC : Cambridge Innovation Center



**Building truly valuable partnership through  
strengthening access to the U.S. innovation ecosystem**

## II

## New Corporate Business Plan 12

1 Business Environment 14

2 Basic Policy 17

3 Performance Targets 21

**4 Major Action Plan 30**

1 Accelerate the Development of Next-Generation Businesses 30

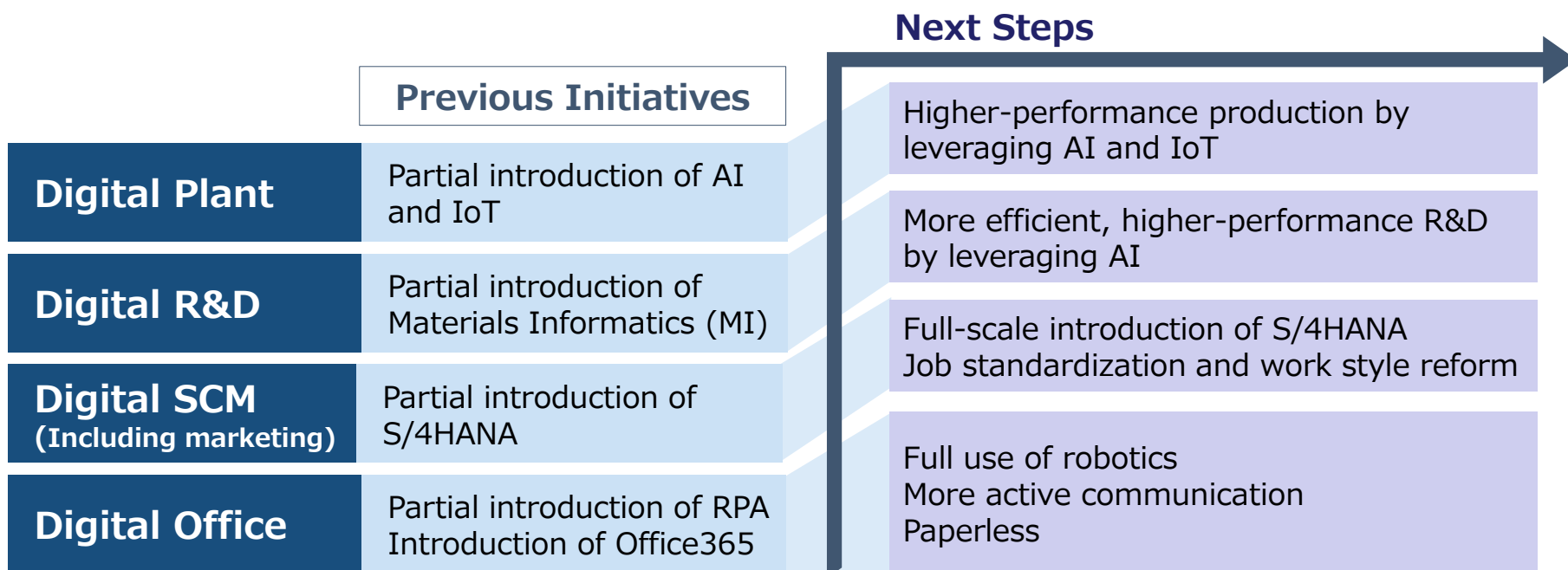
**2 Improve Productivity through Digital Innovation 36**

3 Further Improve Business Portfolio 41

4 Build a More Robust Financial Structure 45

## Significant improvement in efficiency and quality

in production, R&D, supply chain management and administration



**IT-related investment during the next corporate business plan period : ¥60bn**

By 2065, Japan's labor force will decrease to approximately 60% of 2016\*

Urgently requires the development of plant operation systems that help achieve high labor productivity

### Necessary elements

#### Human Resources

- Data scientists
- Data engineers

#### Software and AI

- Technology for detecting signs of malfunction
- Software sensing technology

#### IoT Technology

- Development of data platforms
- Workflow optimization

### Output

- Support decision making
- Streamline work flows
- Monitor the operation of equipment for signs of malfunction
- Stabilize and automate operations
- Optimize production operations

### Vision

Significant improvement in labor productivity

\* (Source) Mizuho Research Institute Ltd.

Significant changes in the social environment  
provide opportunities to create new businesses

In order not to miss out on these opportunities

Essential to improve the efficiency and  
effectiveness of R&D activity

## Necessary elements

### Human Resource

- Data scientists
- Data engineers

### Database (using big data)

- Development of data platforms
- Use of electronic laboratory notebooks

### Data Analysis (using AI)

- Development of predictive technology
- Development of Materials informatics platform

## Output

- Drastically shorten the time used for searching and designing materials
- New discoveries that cannot be achieved through experimental development

## Vision

Improved  
productivity in R&D  
(accelerate innovation)

Materials  
Informatics for  
all researchers

## Established a Digital Innovation Department

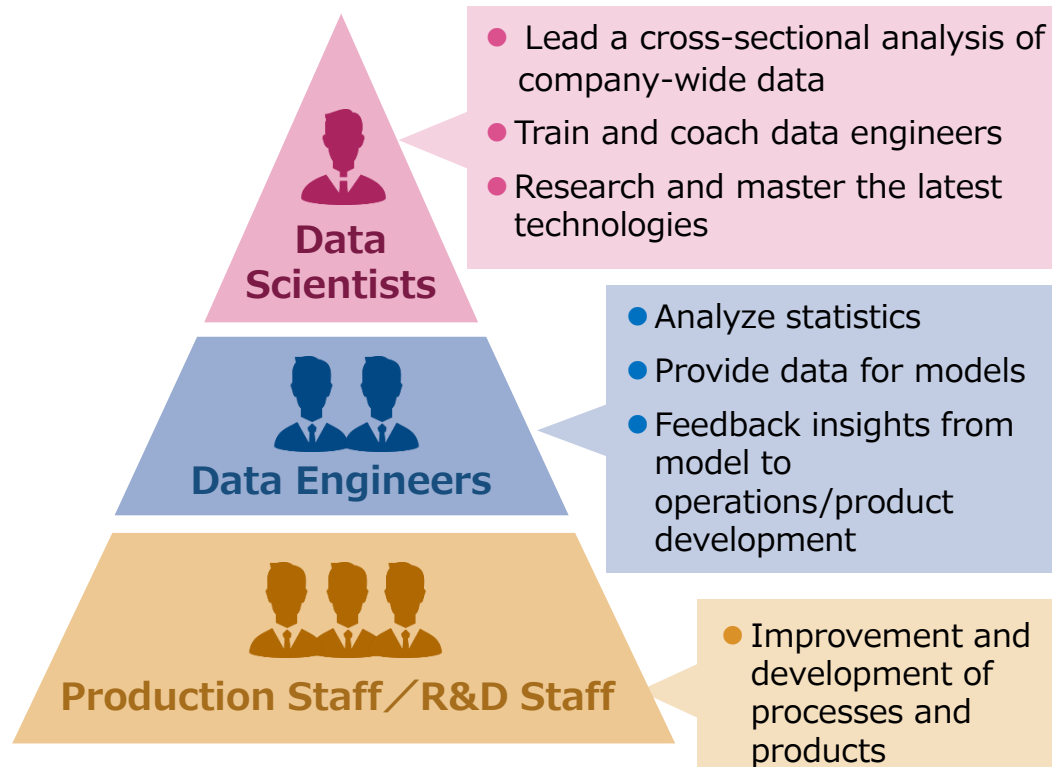
### Target

Promote advanced use of large-scale data to improve the effectiveness of production, R&D, sales and other activities

### Mission

- Recruit and train **data scientists and data engineers**
- **Develop advanced analytical technologies** for production and R&D data
- Promote advanced **use of large-scale data** through database development

## Role of digital human resources



**Further digital innovation through full-scale adoption of IT technology**

## II

## New Corporate Business Plan 12

1 Business Environment 14

2 Basic Policy 17

3 Performance Targets 21

**4 Major Action Plan 30**

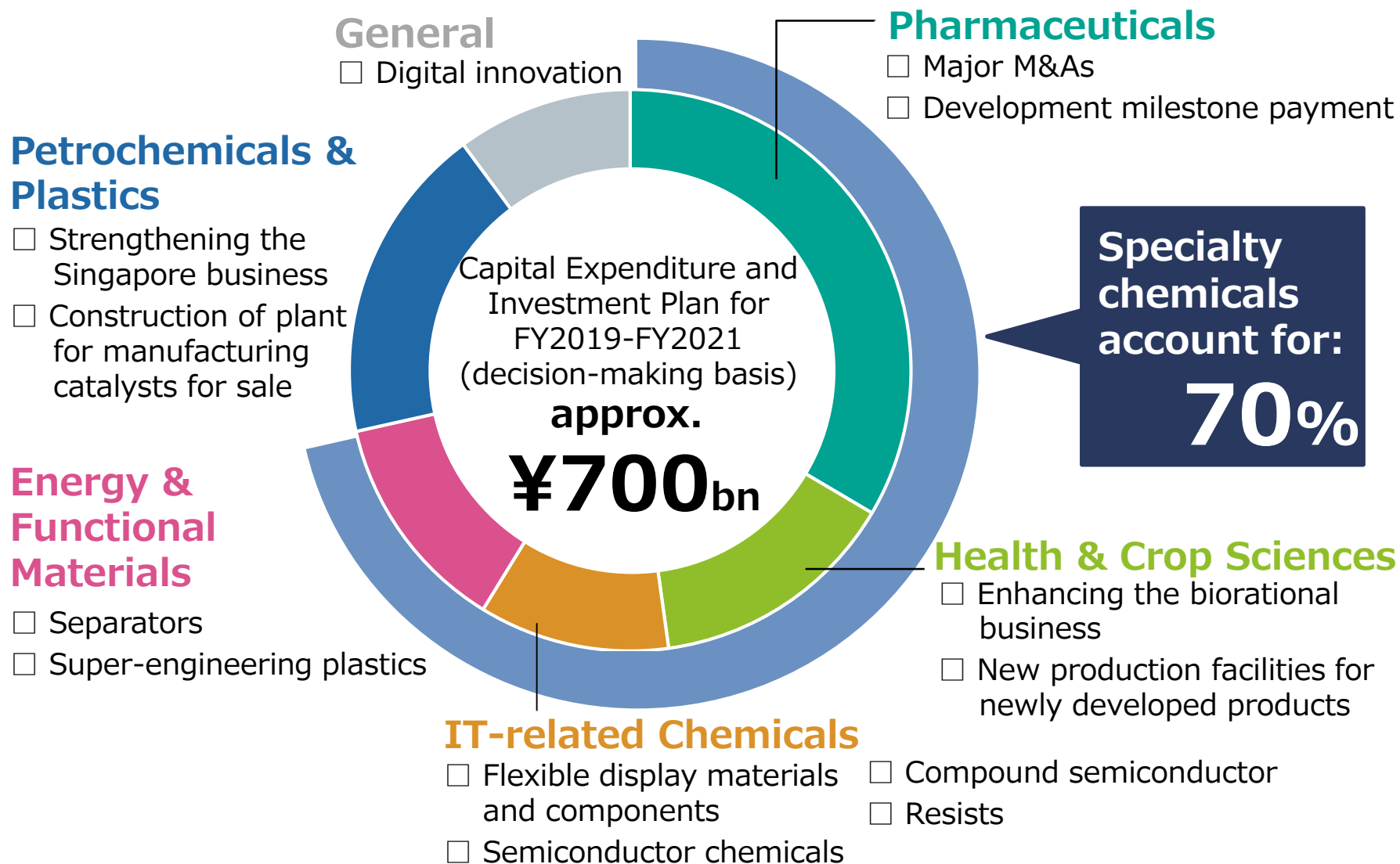
1 Accelerate the Development of Next-Generation Businesses 30

2 Improve Productivity through Digital Innovation 36

**3 Further Improve Business Portfolio 41**

4 Build a More Robust Financial Structure 45





## Energy & Functional Materials

- Separators
- Cathode materials
- Super-engineering plastics

## IT-related Chemicals

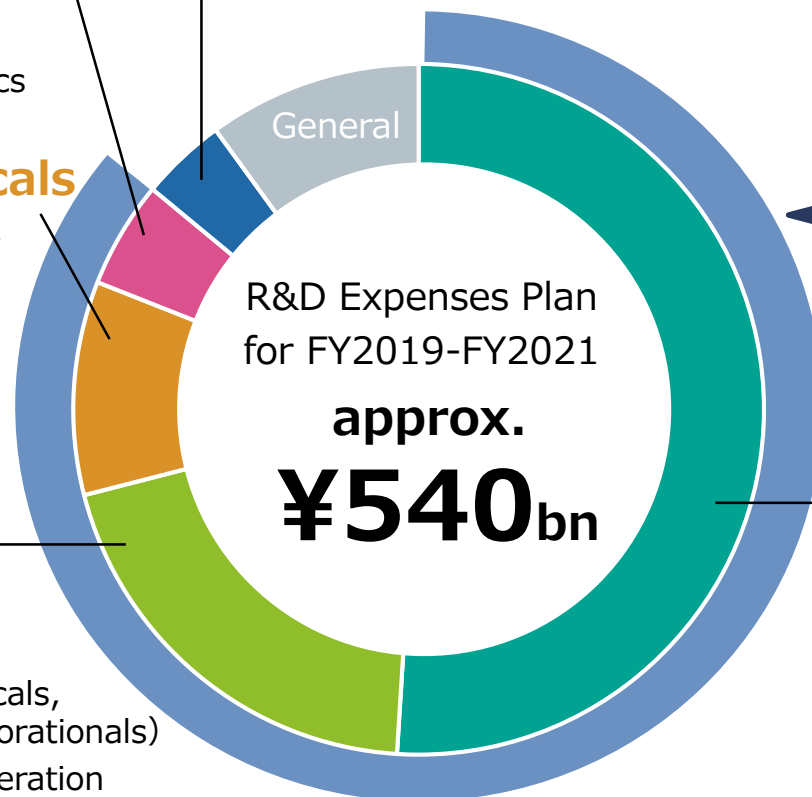
- Flexible display materials and components
- Next-generation semiconductor materials
- New touchscreen panels

## Health & Crop Sciences

- Launch of new products (crop protection chemicals, botanical insecticides, biorationals)
- Creation of the next-generation development pipeline (crop protection chemicals, biorationals)
- Development of the next-generation technologies (precision agriculture, utilization of Bio-IoT technology)

## Petrochemicals & Plastics

- Carbon cycle chemistry including carbon capture and utilization (CCU)



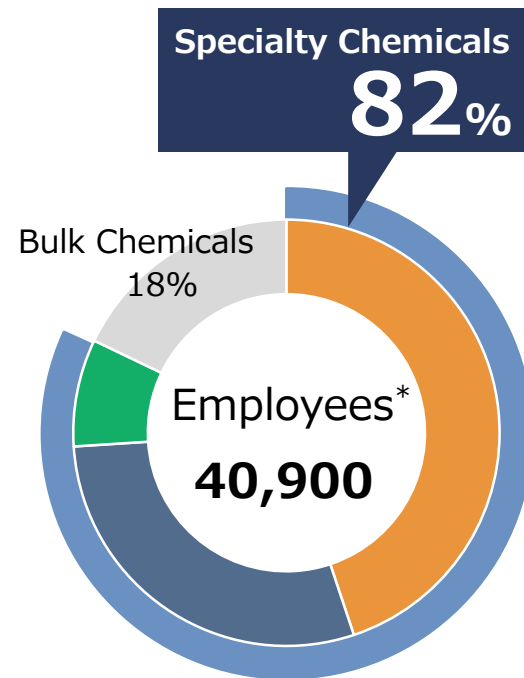
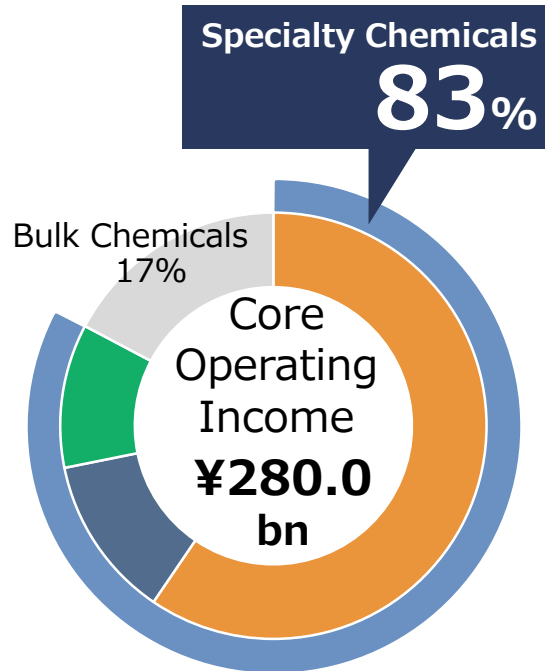
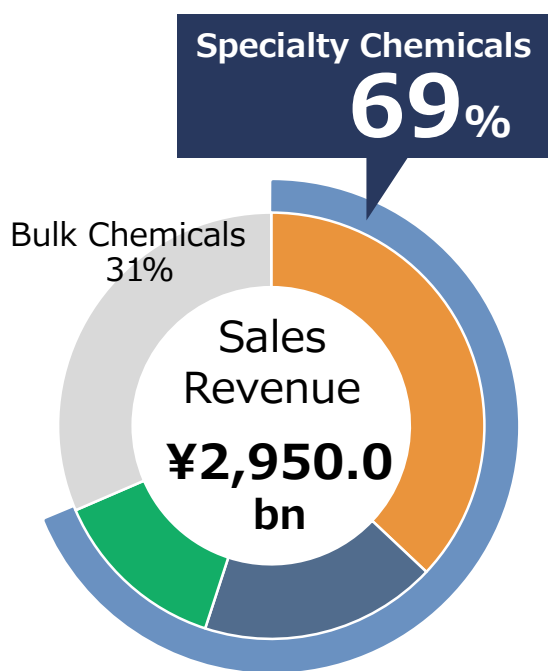
Specialty chemicals account for:

**90%**

## Pharmaceuticals

- APL-130277 (treatment for off episodes associated with Parkinson's disease)
- Napabucasin (cancer stem-cell inhibitor)
- Alvocidib (anticancer drug)
- Regenerative medicine and cell therapy

## Forecast for FY2021



\* Including contract employees and part-time and temporary staff

## Specialty Chemicals

## Life sciences



## ICT



## Environment and energy



## Bulk Chemicals



## II

## New Corporate Business Plan 12

1 Business Environment 14

2 Basic Policy 17

3 Performance Targets 21

**4 Major Action Plan 30**

1 Accelerate the Development of Next-Generation Businesses 30

2 Improve Productivity through Digital Innovation 36

3 Further Improve Business Portfolio 41

**4 Build a More Robust Financial Structure 45**

## Policy

- 1 Generate cash flow from the implemented capital expenditures and investments as planned
- 2 Manage costs and assets through disciplined financial operations

Improve cash flow

Rationalization,  
shorten cash  
conversion cycle

Reorganize and exit  
under-performing  
businesses

## Financial Discipline

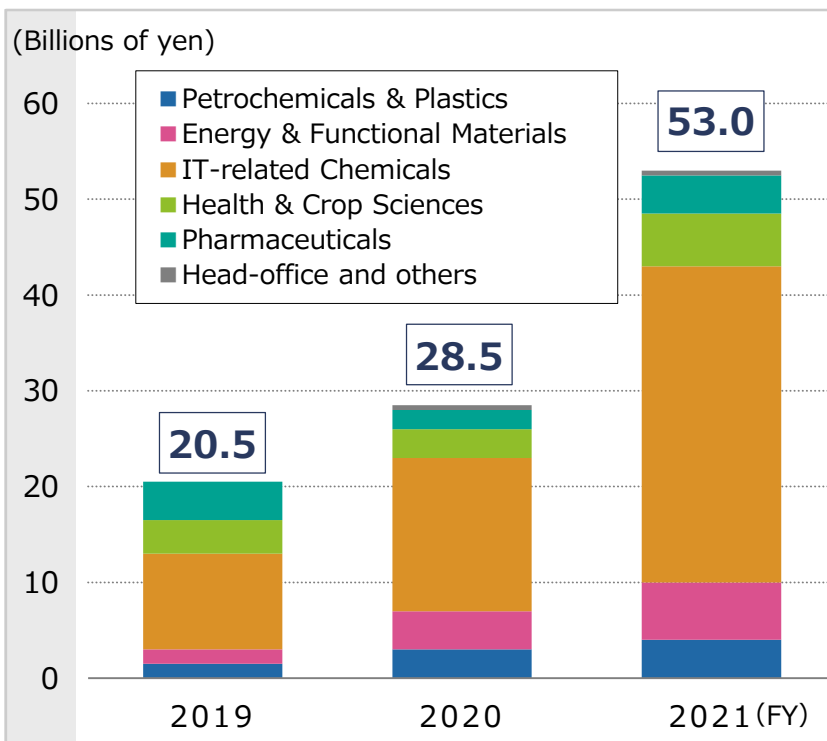
Indicators	Targets
Debt to equity ratio	approx. 0.7
Interest-bearing liabilities	Less than 1.1 trillion yen

### Major initiatives

- Total investment over the three years: **less than 700 billion yen**
- **Timely review of capital expenditures and investment plans**
- Thoroughly **utilize cash surplus of the group companies**

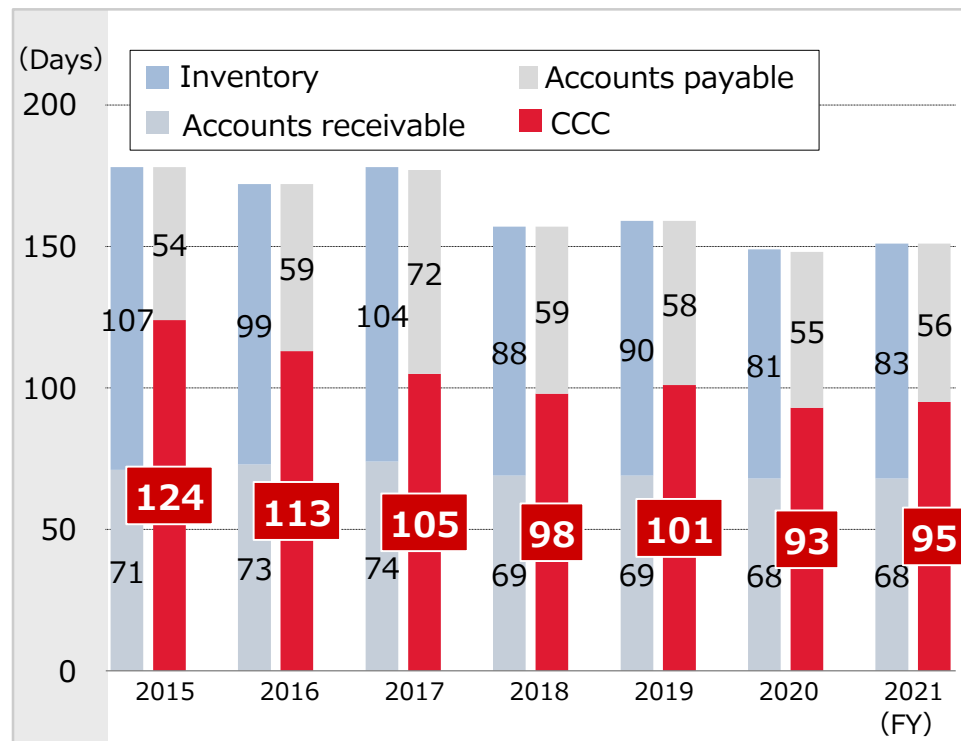
## Rationalization

**¥53 billion in FY2021**  
through initiatives such as  
reducing purchasing costs and  
improving yields



## Improve Cash Conversion Cycle (CCC)

Improve CCC by **23%** in FY2021  
compared with FY2015 by  
continuing and strengthening  
our initiatives



# Build a More Robust Financial Structure: Cash Flow Targets

Change &amp; Innovation 3.0 For a Sustainable Future

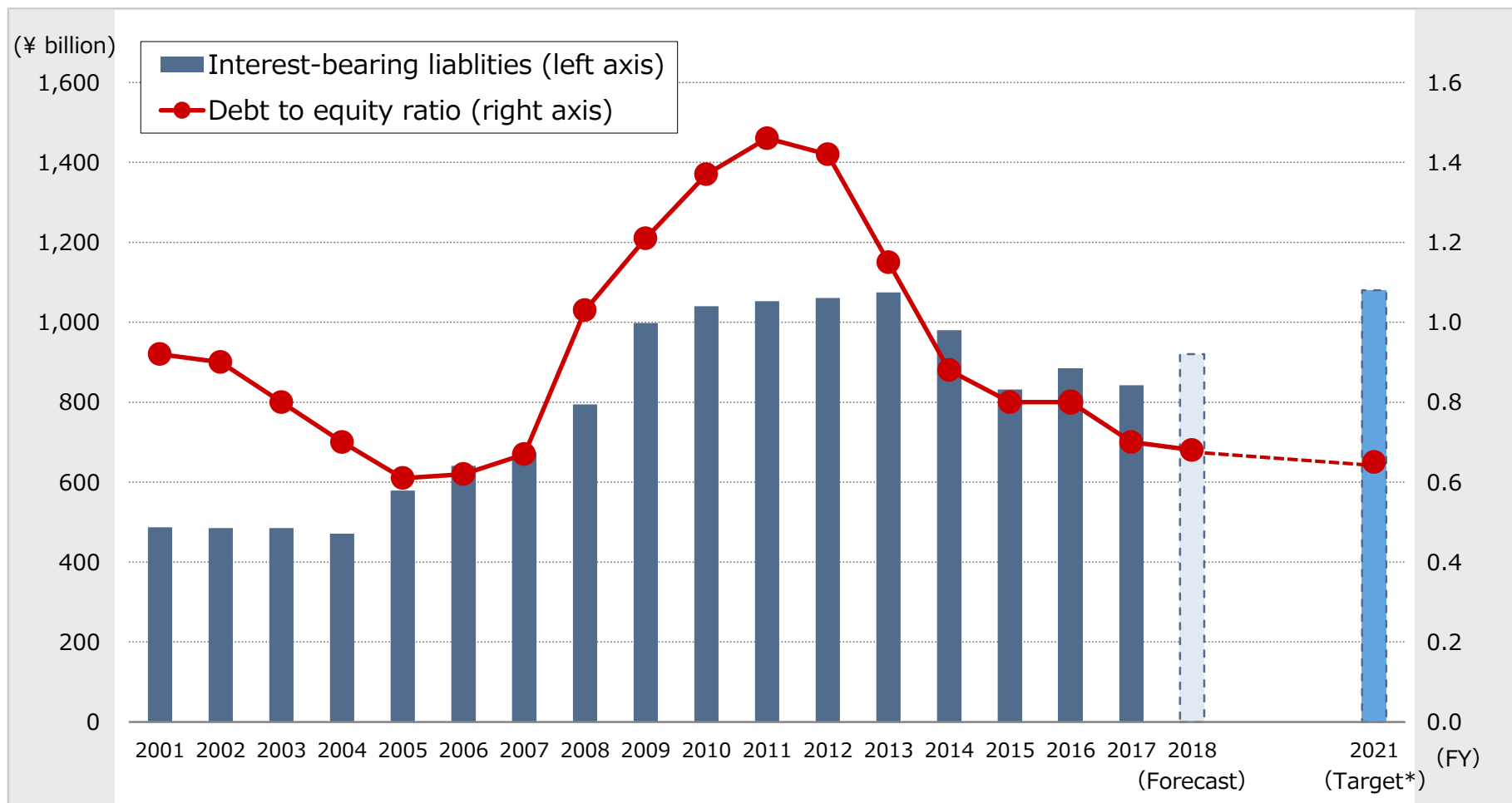
(Billions of yen)

	FY2013-FY2015	FY2016-FY2018 (Forecast)	FY2019-FY2021 (Target)
Cash flows from operating activities	716.4	670.0	740.0
Cash flows from investing activities	-245.5	-550.0	*-815.0
Free cash flows	470.9	120.0	-75.0

\* Including investment in Rabigh Phase II project

(Billions of yen)

	End of FY2015	End of FY2018 (Forecast)	End of FY2021 (Target)
Interest-bearing liabilities	831.5	920.0	1,080.0



\* Including investment in Rabigh Phase II project



# III

## Business Strategy by Sector



## Long-term goal

**Provide customers with new solutions based on high value-added products**

### Strengths

- Global operation by leveraging the competitive advantages of the three bases in Japan, Singapore and Saudi Arabia
- Strong relations with prominent customers in the Asian market
- Access to low-cost ethane feedstock
- Capabilities to develop high value-added products

### Weaknesses

- Relatively small business size compared to the global majors
- Dependence on naphtha, a more expensive feedstock than ethane/shale gas

### Opportunities

- Large and deep markets
- Steady growth in demand

### Status of the major businesses

### Threats

- Establishment of more cost-competitive new plants
- Cyclical business environment
- Country risks

## Action plan

- Strengthen domestic business
- Expand capacity and enhance profitability of Singapore business
- Maintain stable operations at PRC phase I and make PRC phase II into a business that constantly contributes to the sector's performance
- Strengthen technology licensing business

## Major issues

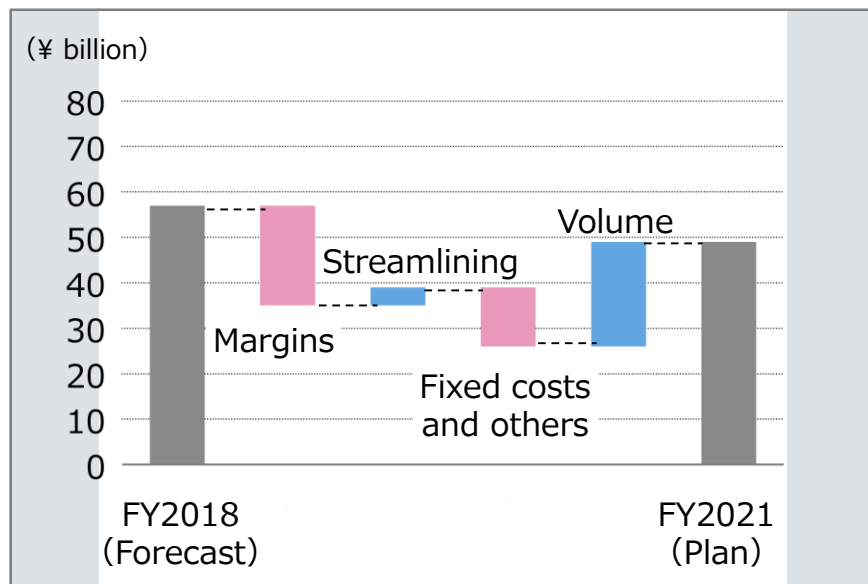
- Restructuring of underperforming businesses
- R&D into carbon cycle chemistry, including carbon capture and utilization technologies, to create a sustainable society

## FY2021 Target

**Sales Revenue**    **¥910.0** billion

**Core Operating Income**    **¥49.0** billion

## Core operating income variance analysis (FY2018 v/s FY2021)



## R&amp;D focus

R&D of plastics products that contribute to 3R's (reduce, reuse, recycle)



Lighter packaging

Longer product life

Promotion of reusable products



Refill pouches

• Returnable boxes  
• Insect-resistant cereal bags

Sheeting for agriculture

## Refill Pouch



## Returnable Box



	Bottle (HDPE)	Large Refill Pouch (EPPE+LLDPE)
Weight of packaging materials(g) per 100g of contents	19	1.8
Transportation efficiency	△	○
Bag drop strength	△	○

	Cardboard paper box	Returnable box (Expanded PP sheet)
Consumption of packaging materials (kg/year)	24.9	1.4
Reusability	×	○
Number of usable times (per year)	1	50
Water resistance Load bearing Cleanness	×	○

Environmental aptitude    Utility value

Further enhance environmental friendliness and utilization value of plastics products contributing to 3R's

## Long-term goal

**Contribute to solving environmental and energy issues through research and development with a long-term perspective and the resulting innovative technologies**

### Strengths

- Superior product performance using differentiated technologies
- Reliability of products proved in use by customers

### Weaknesses

- Relatively small business
- Cost competitiveness

### Opportunities

- Sophistication of performance requirements against the backdrop of increasing battery capacity
- Expansion of the environment- and energy-related markets

### Threats

- Market decline due to change in EV promotion policies
- Paradigm shift in secondary batteries

Status of the major businesses

## Action plan

- Expand sales of core products (battery materials, super engineering plastics, etc.), accelerate R&D
- Shift to high value-added products
- Improve profitability in underperforming businesses and products

## Major issues

- Create new businesses in the fields of environment and energy and high-performance materials (CO<sub>2</sub> separation membranes, etc.)

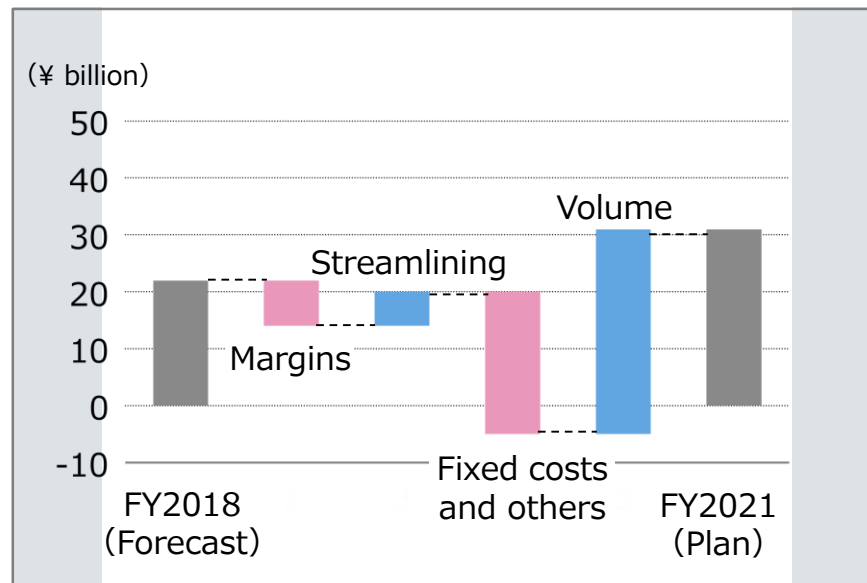
## FY2021 Target

**Sales Revenue** **¥390.0** billion

---

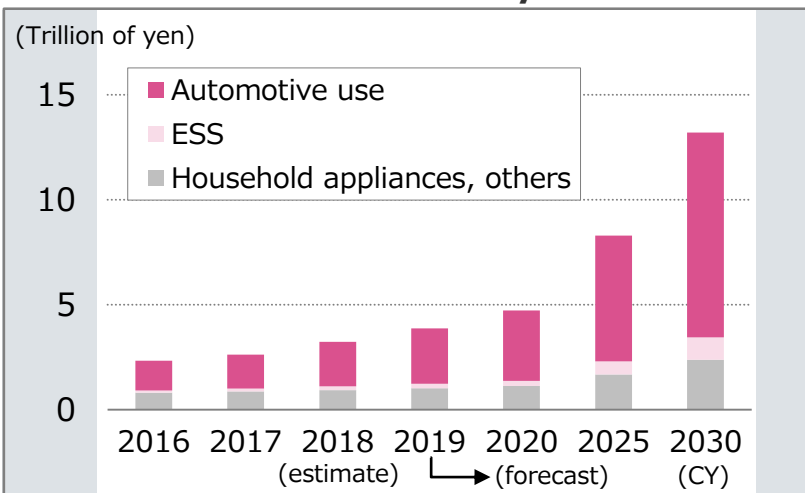
**Core Operating Income** **¥31.0** billion

### Core operating income variance analysis (FY2018 v/s FY2021)



## Increasing demand for high-capacity batteries

### Market Outlook for Lithium-ion Secondary Batteries



(Source) "Future Outlook of Energy, Large Scale Secondary Battery, and Materials 2018; Energy Devices" by Fuji Keizai



SSLM Co., Ltd.

## Initiatives to expand lithium-ion secondary battery separator business

### 1 Expand production capacity

Timely decision-making for investment in response to growing demand

### 2 Deep cost reduction

Increase coating speed; adopt low-cost materials; reduce coating volume, etc.

### 3 Development of new substrates

Meet the requirements for high-capacity batteries

## New Corporate Business Plan Targets

	FY2018	FY2021
Volume	300 million m <sup>2</sup>	600 million m <sup>2</sup>
(Ratio of in-house developed substrate)	<25%	>30%

## Long-term goal

**Deliver new value that responds to the changes in the ICT industry by leveraging our material development capabilities in collaborative development with customers**

### Strengths

- Offering a wide range of display materials
- Established market needs-driven supply chains
- Material development capabilities as a diversified chemical company
- Nano-level micro surface analysis technology

### Opportunities

- Fast-growing organic LED displays market
- Rising demand for flexible displays
- Expanding Chinese semiconductor market

### Status of the major businesses

### Weaknesses

- Heavy reliance on some specific products
- High sensitivity to exchange rate movements

### Threats

- Intensifying competition in the maturing LCD market



## Action plan

- Structural reform of polarizing film business
- Secure returns from the investment in the semiconductor materials business
- Expand touchscreen panel product portfolio

## Major issues

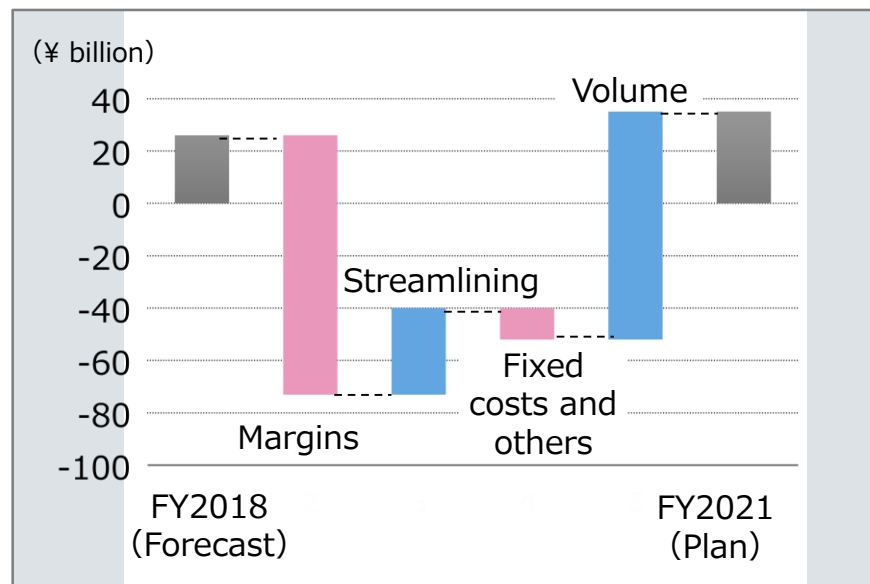
- Develop next-generation businesses
  - ▣ Smart mobility
  - ▣ Next-generation handsets
  - ▣ Sensor material

## FY2021 Target

**Sales Revenue** **¥520.0** billion

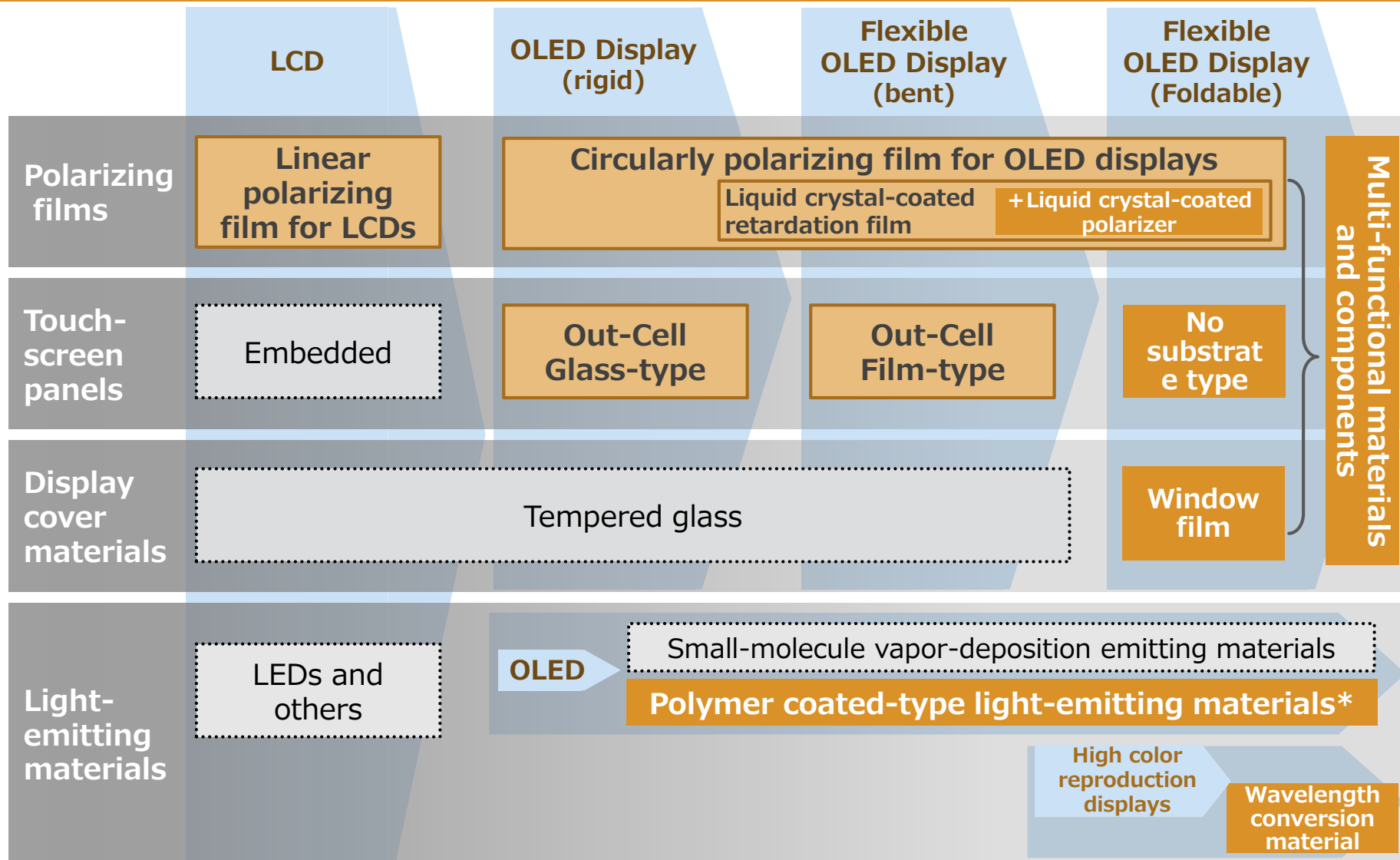
**Core Operating Income** **¥35.0** billion

## Core operating income variance analysis (FY2018 v/s FY2021)



# Advance in Display Technology and Our Product Lineup

Change & Innovation 3.0 For a Sustainable Future



Products from other companies

Existing products developed in-house

New Products developed in-house

\* For medium and large display

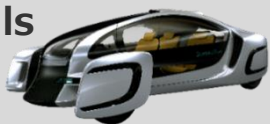
# Focusing on developing components and materials to support the automotive industry's transformation with an eye toward the CASE (connected, autonomous, shared, electric) era

## Petrochemicals & Plastics Sector

### Resins

- PMMA
- GFPP\*

### Windscreen, roof materials



Developed PMMA-based transparent resin



## Functional Materials Sector

### Super Engineering Plastics

- PES
- LCP

### Lithium-ion Battery Materials

- Separators
- Cathode materials
- High purity alumina

## IT-related Chemicals Sector

### Sensor

- Epiwafers for VCSEL

### Display materials

- High-durability polarizing films
- High-durability touchscreen panels
- Polymer OLED materials

\* Glass fiber reinforced polypropylene

## Characteristics of 5G communications

High speed, large capacity

Low delay

Multiple simultaneous connections

**Not only to bring a significant improvement in mobile phone services, but to open up new business opportunities in areas such as autonomous driving and telemedicine.**

## Our 5G-related materials

- **LCP**  
(High frequency substrate materials for 5G communications)
- **GaN epiwafers**  
(5G communication wireless base station)
- **GaAs epiwafers** (5G devices)

### Battery and display-related materials

- Polarizing films for OLED
- Touchscreen panels
- Flexible display materials
- GaAs epiwafers for VCSEL
- Separators
- Cathode materials
- Alumina



## Long-term goal

**Contribute to solving global issues related to food, health, hygiene and the environment by leveraging our excellent research and development capabilities**

### Strengths

- Excellent R&D capabilities and the robust development pipeline of crop protection chemicals and biorationals
- Differentiated technologies and products in niche areas
- Products with high market share
- Alliances with major overseas agrochemical companies
- Offering total solutions

### Weaknesses

- Relatively small business size compared to the competing majors
- Need to establish global sales channels

### Opportunities

- Increasing food demand due to the growing global population
- Growing agriculture-related businesses
- Opportunities in peripheral and downstream segments of the household insecticide business

### Status of the major businesses

### Threats

- Tightening of the regulations on crop protection chemicals
- Increased competition with off-patent crop protection chemicals
- Consolidation in the major agrochemical companies

## Action plan

- Strengthen and expand biorationals business
- Develop and launch new crop protection chemicals steadily
- Expand methionine sales and strengthen earnings power
- Accelerate the global expansion of the environmental health business
- Develop the nucleic acid medicine business and expand the application of the technology

## Major issues

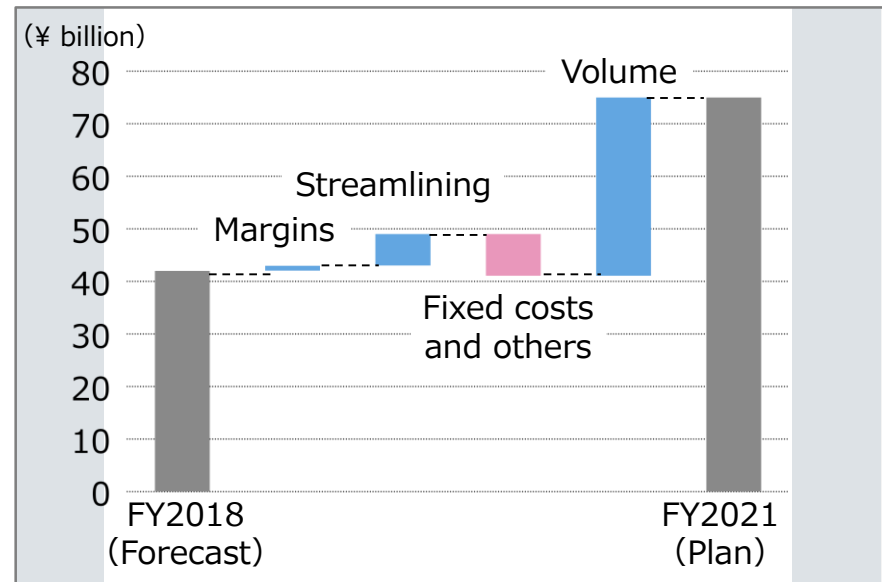
- Establish a global footprint in the crop protection business
- Further strengthen the crop protection business (agriculture-related supplies, precision agriculture)

## FY2021 Target

Sales Revenue **¥480.0** billion

Core Operating Income **¥75.0** billion

## Core operating income variance analysis (FY2018 v/s FY2021)

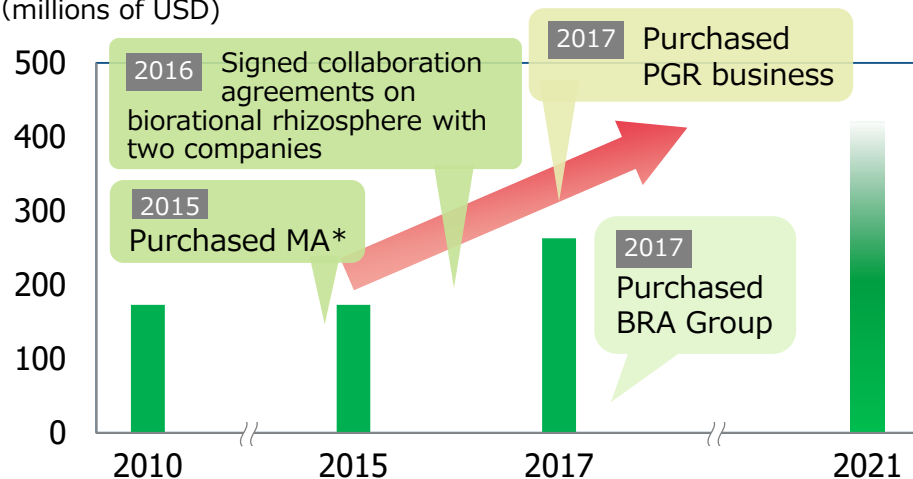


## Global Sales of Biorational-related Products (for Agriculture)

	Market size	Annual growth rate
Microbial pesticides	¥50 billion	8-10%
Plant growth regulators (PGR)	¥33 billion	3-5%
Biorational rhizosphere	¥28 billion	10%
Botanicals	¥10 billion	5-7%

## Our Sales for Biorational Business

(millions of USD)



\* Mycorrhizal Applications LLC.

## Botanicals (Plant-derived)

- Growing reputation for organic agriculture and natural products
- Synergies through acquisition of Botanical Resources Australia (Technologies for improving pyrethrum seeds and extracting natural substances)



Expand from household and public hygiene fields to agriculture

Develop new botanical insecticides

## Biorational rhizosphere (mycorrhizal fungi/ rhizobium/ soil microorganism etc.)

- Sales expansion of mycorrhizal fungal products from MA, and launch of its mixture products
- Launch of other rhizobium products
- Sales expansion of biological nematocide for seed treatment



## Long-term goal

**Contribute to the improvement of people's quality of life through the development of innovative medical and healthcare solutions**

### Strengths

- Drug development platform in the areas of psychiatric and neurological disorders and cancer
- Development capabilities and manufacturing know-how for cellular medicine derived from allogeneic iPS cells
- Network with academia and biotech companies
- Pipeline in development for psychiatry & neurology, oncology, and regenerative medicine and cell therapy
- Strong development and manufacturing capabilities for radioactive isotope labeling agents

### Weaknesses

- Limited capabilities to bear the burden of R&D costs
- Emergence of generic drugs due to the loss of exclusivity for major products

### Opportunities

- Innovation in healthcare technology
- Increasing health awareness

### Status of the major businesses

### Threats

- Accelerated implementation of medical expense control measures in Japan
- Changes in the health insurance systems overseas
- Consolidation in the pharmaceutical industry



## Action plan

- Strengthen innovation through new drug discovery approaches
- Launch new products in oncology
- Explore frontier fields
- Develop Theranostics business and strengthen the competitiveness of existing radioactive diagnostics business

## Major issues

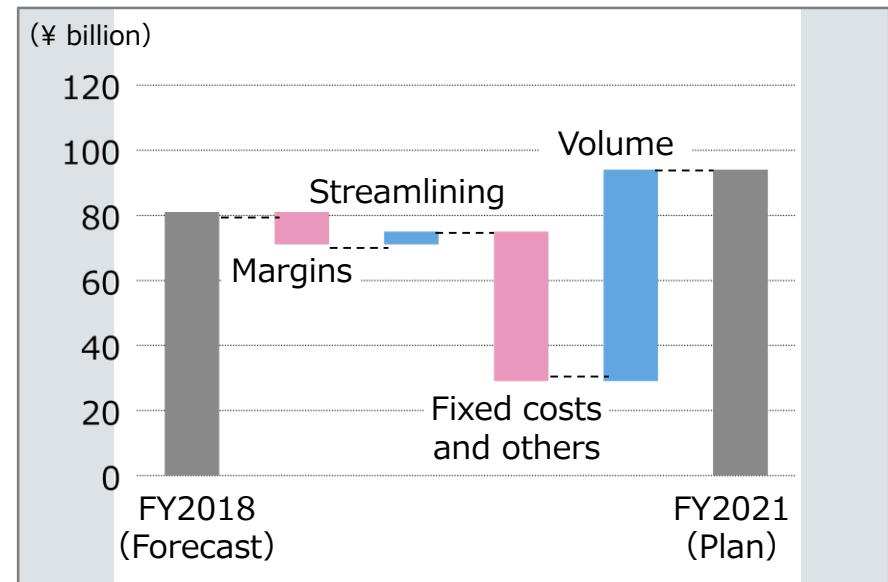
- Enhance drug development capabilities and improve the success rate in R&D
- Maintain earnings power after Latuda's loss of exclusivity

## FY2021 Target

Sales Revenue **¥590.0** billion

Core Operating Income **¥94.0** billion

## Core operating income variance analysis (FY2018 v/s FY2021)



## Initiatives in Regenerative Medicine & Cell Therapy Business

Proposed indication, etc.	Partnering	Region (planned)	Clinical research/ Clinical study
Chronic stroke (SB623)	SanBio	North America	Phase 2b study in progress Primary endpoints not achieved; the results are under close analysis
AMD (age-related macular degeneration)	Healios RIKEN	Japan	Preparing for clinical study
Parkinson's disease (Designated as a "SAKIGAKE")	Kyoto Univ CiRA	Global	Clinical study started August 2018
Retinitis pigmentosa	RIKEN	Global	Preparing for clinical research
Spinal cord injury	Keio Univ Osaka National Hospital	Global	Preparing for clinical research

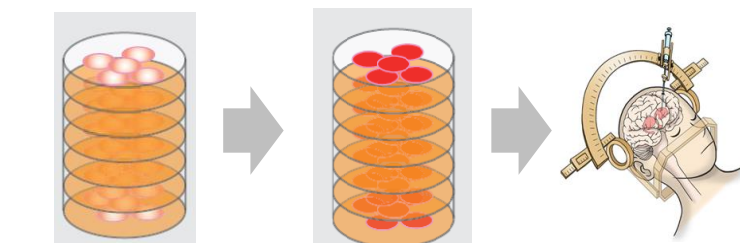
\*1 PET Image Source (Neurotherapeutics (2011) 8:549-561)

\*2 Launch schedule is based on our plan and not agreed on by partners.

Kyoto University Hospital and CiRA are conducting investigator-initiated trials for treatment of Parkinson's disease using iPS cells.

### Our cooperation in clinical study

Treatment process with cellular medicine using iPS cells



iPS cell bank

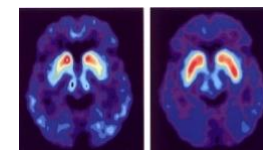


Therapeutic cell (CiRA)

Administer to a patient

Contract production of PET reagents\*1

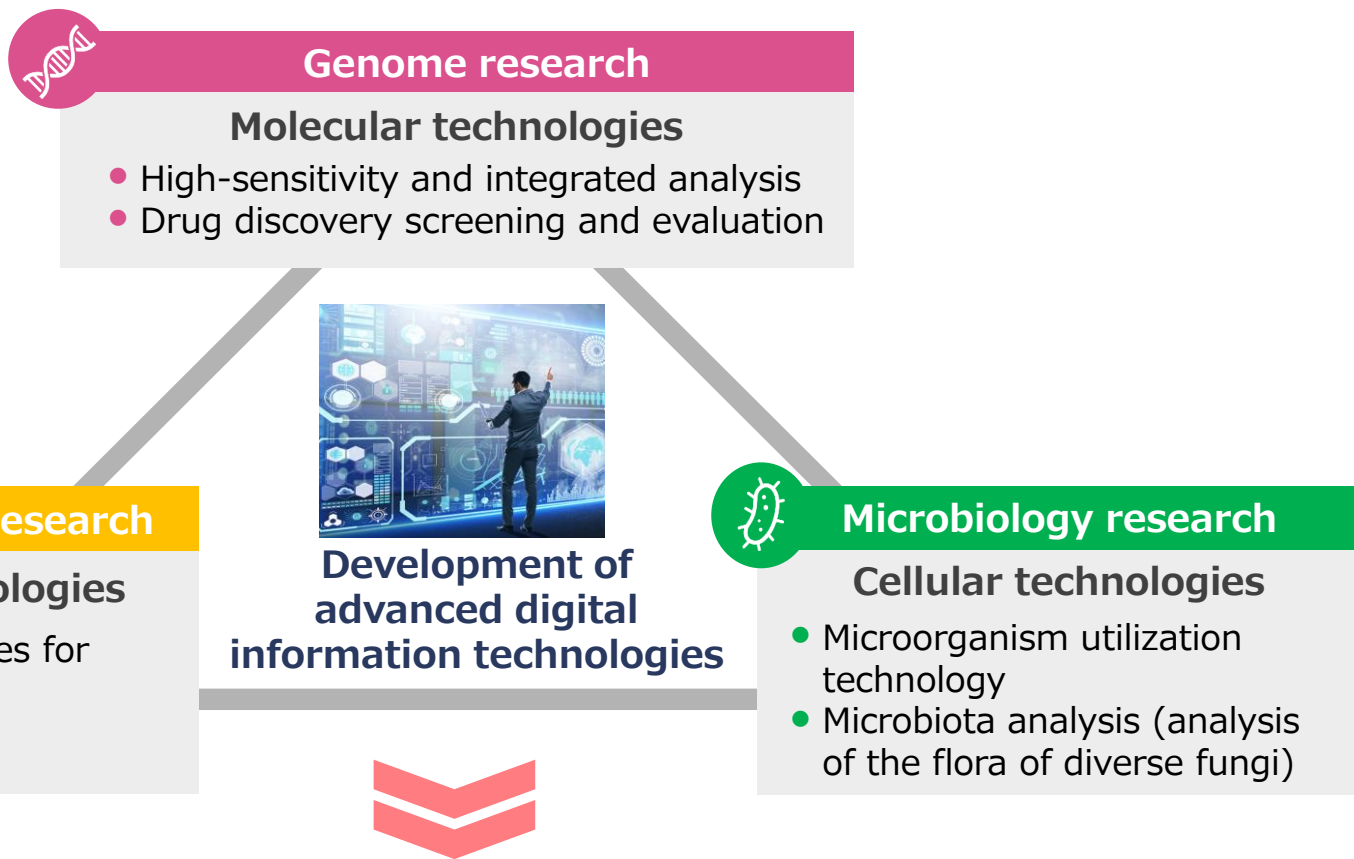
日本メジフジックス株式会社



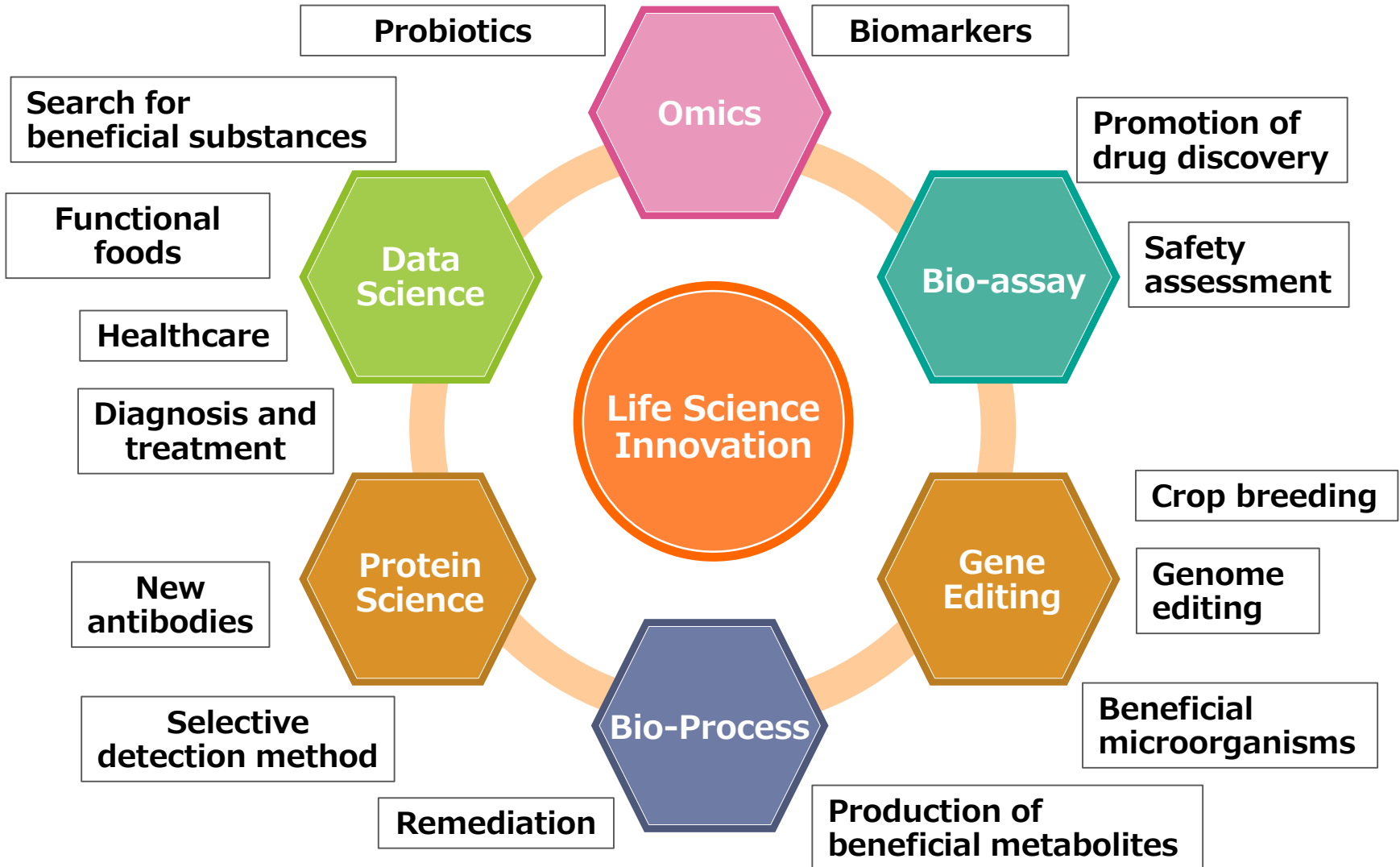
Dainippon Sumitomo Pharma will file an application for approval based on the data from the trials, aiming to launch this product in FY2022\*2

**Expected to grow into a core business for the Pharmaceuticals sector by 2030**

Applying our advanced technologies related to the development of pharmaceuticals, crop protection chemicals and other chemicals, microbial engineering, and chemicals safety assessment to a broad range of research activities.

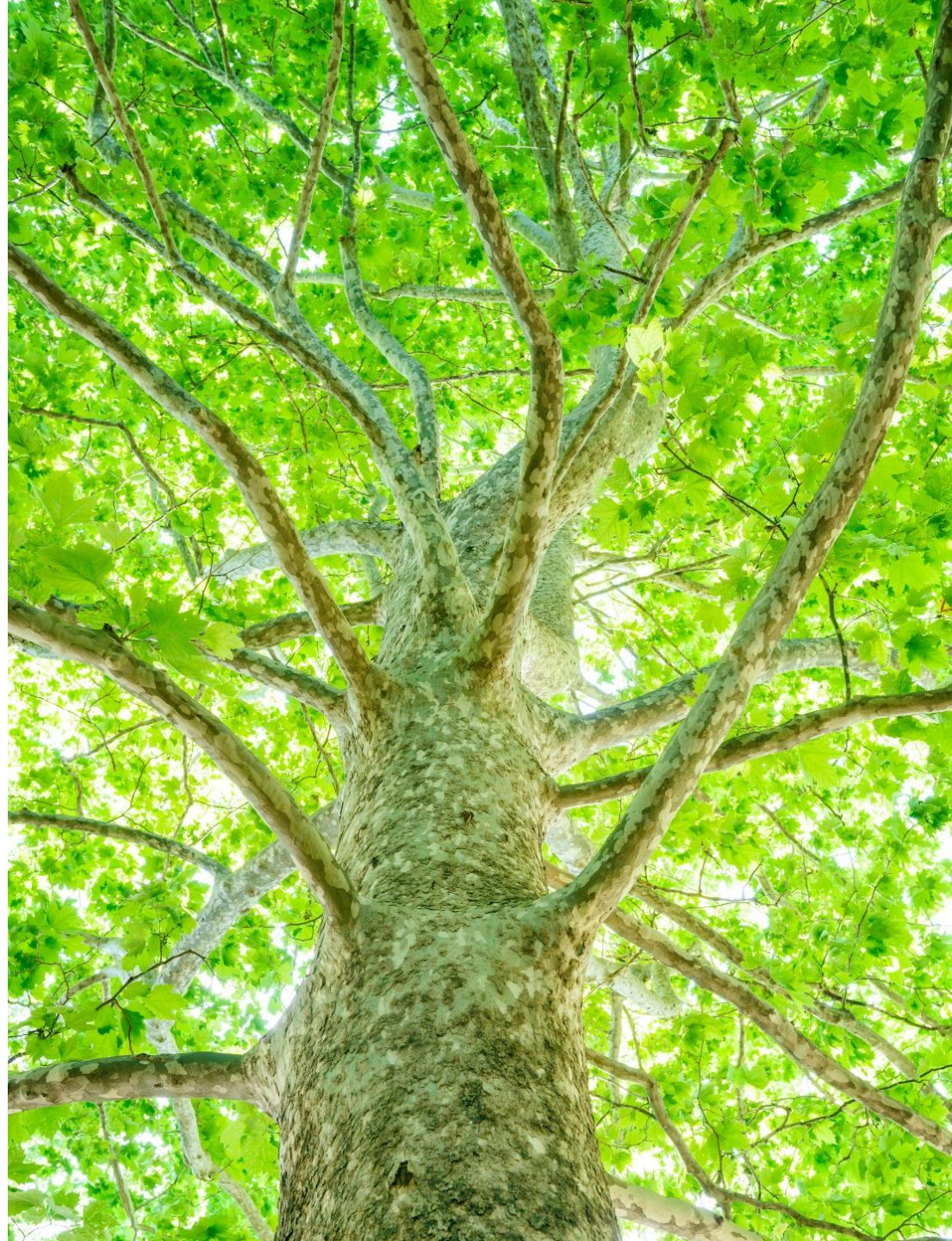


**Bioscience Research Laboratory Established**



# IV

## Initiatives for Sustainability



## Basic Principles for Promoting Sustainability

**Principle 1** Creating economic value which helps create social value

---

**Principle 2** Contribution to solving globally vital issues

---

**Principle 3** Active participation in global initiatives

---

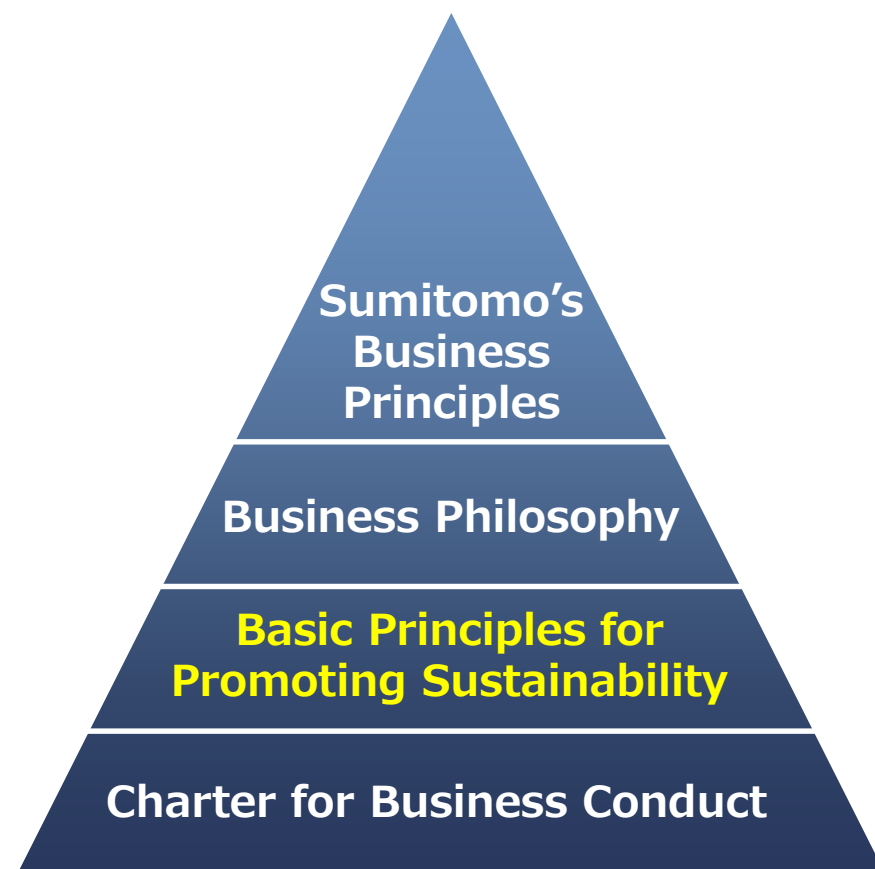
**Principle 4** Collaboration with stakeholders

---

**Principle 5** Top management commitment and participation by all

---

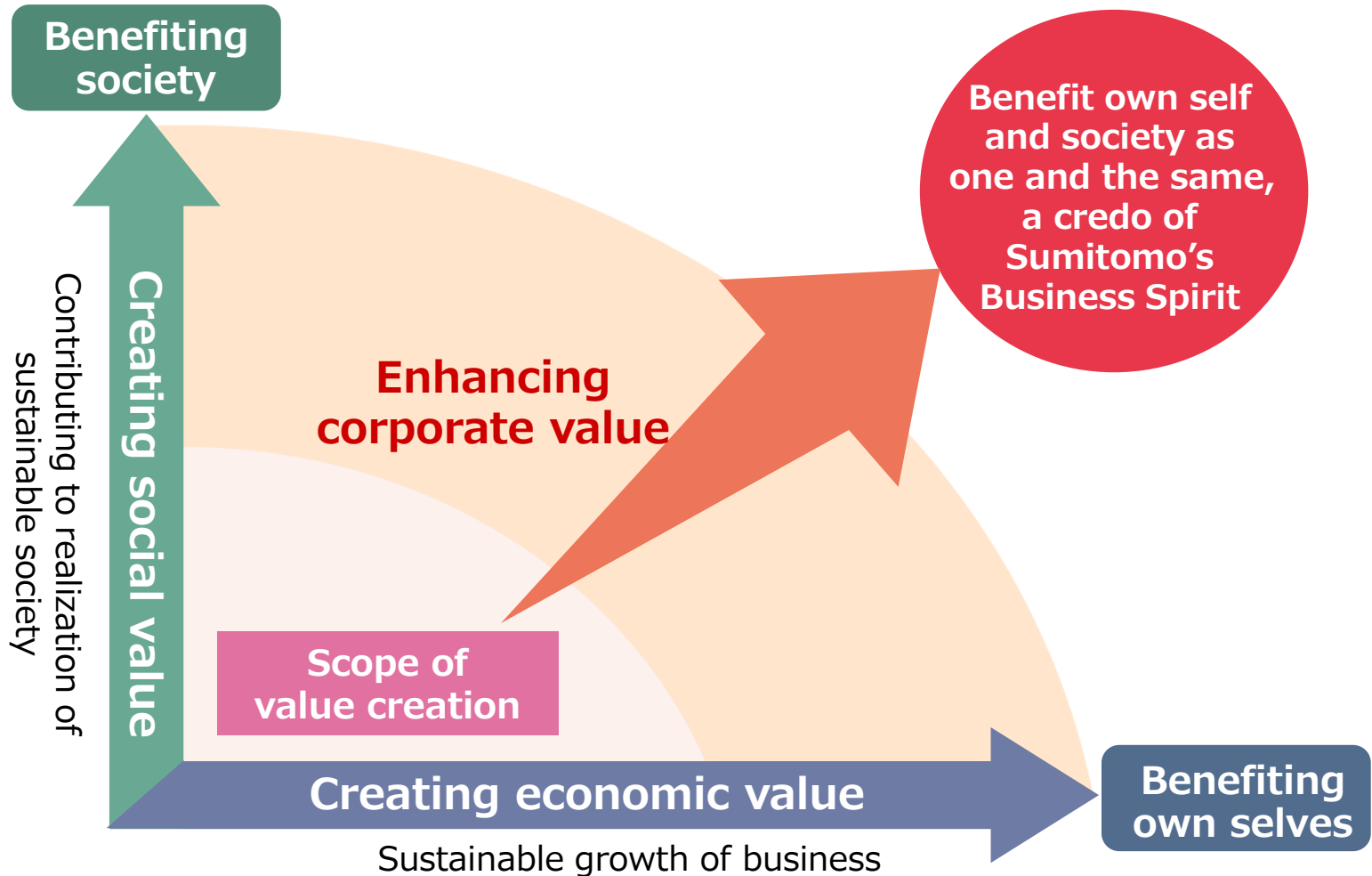
**Principle 6** Enhancing corporate governance



**Credo constituting the Sumitomo Spirit**

“Our business must benefit own self and society as one and the same”

Our business must benefit ourselves and at the same time serve the interests of the nation and society.



## Our Seven Material Issues

### Material issues for social value creation

#### Contribution to reducing environmental impact

- Mitigation of climate change
- Contribution through products and technologies
- Efficient use of energy and resources
- Contribution to the recycling of plastic resources

#### Contribution to solving food issues

#### Contribution to solving healthcare issues

#### Contribution to ICT innovation

### Material issues for value creation in the future

#### Promotion of technology innovation and research and development

#### Initiatives for digital innovation

#### Promotion of diversity and inclusion

**Achieve sustainable value creation by working on material issues**



## Participation in external initiatives



Since August 2018: Joined in the "TCFD Study Group," led by the Ministry of Economy, Trade and Industry for mobilizing green finance through proactive corporate disclosure

December 2018:

**METI Issued TCFD guidance**

December 2018~: Joined WBCSD Chemical Sector's project to formulate TCFD guidance

### Our Efforts

#### Risk Management

**Certified by SBT**



October 2018,  
first certified  
among  
diversified  
chemical  
companies

Fuel conversion

Technology  
development

#### Expanding Opportunities (Contributing through own business)

##### Sales of environmentally friendly products

Sumika Sustainable Solutions  
Expand sales of the products  
designated as SSS

Reduction of emissions throughout  
the product life cycle

**Reduction of emissions from our own operations + Contribution through environmentally friendly products**



Selected as  
**Climate  
Change  
A List  
2018**

Disclosed information

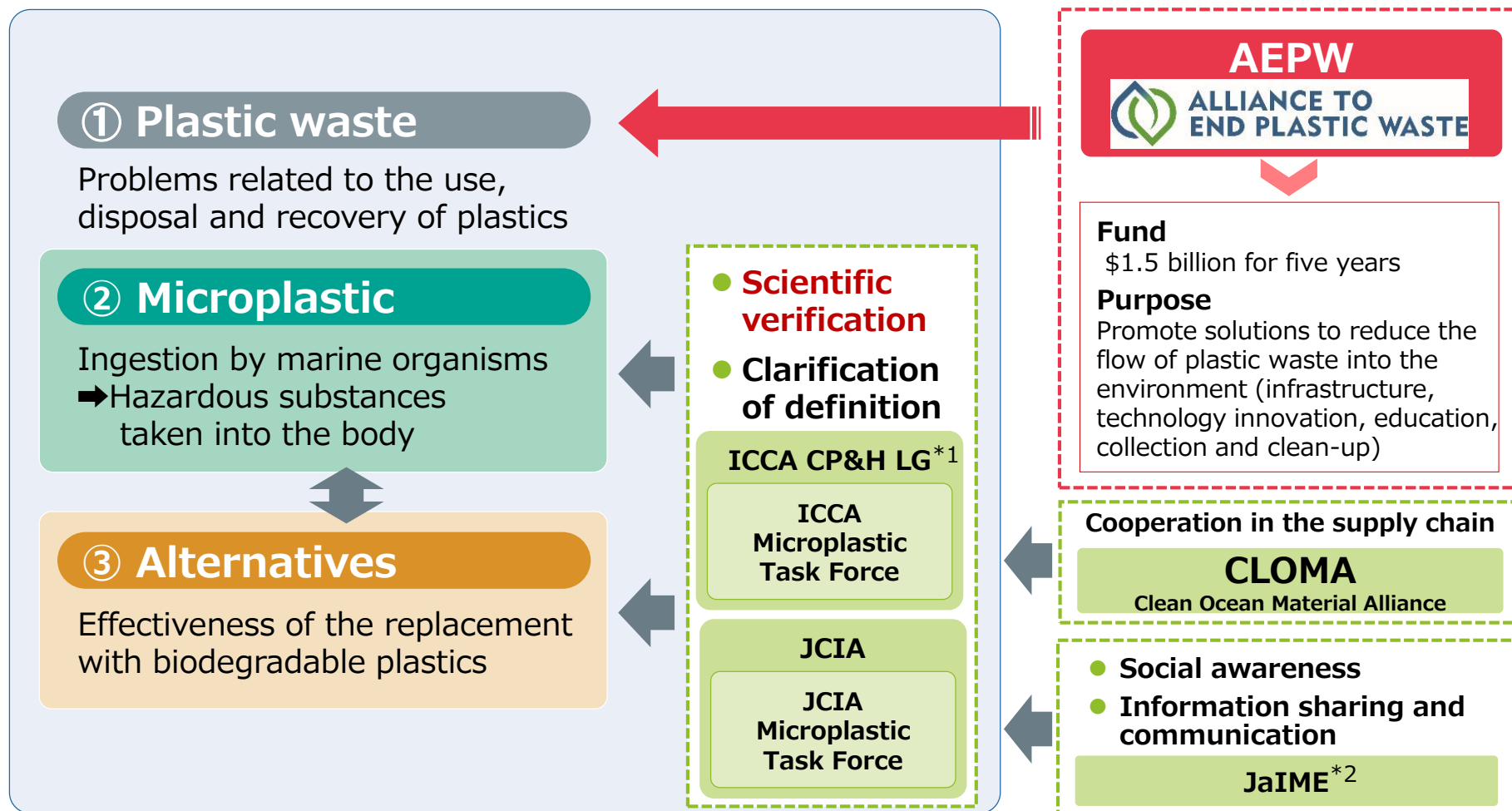
approx.  
**7,000**  
companies

A List

**126**

(including 20 Japanese  
companies)

## Our efforts through participation in external initiatives

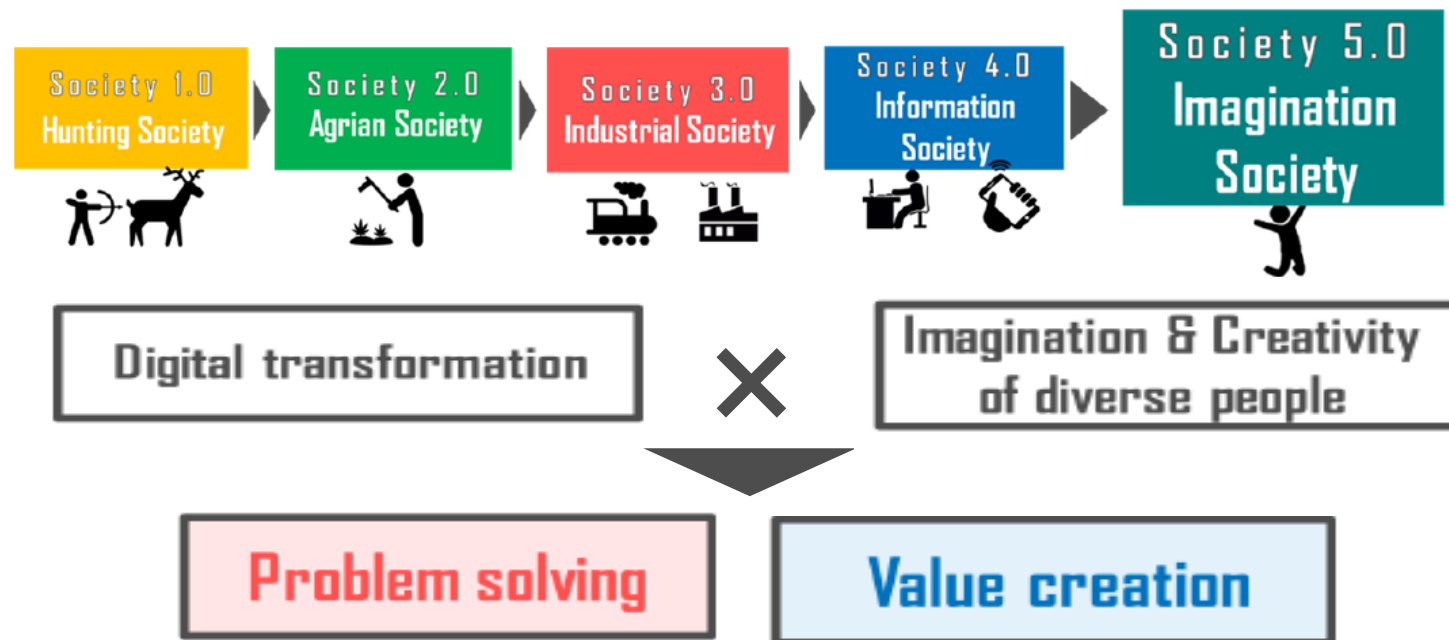


\*1 International Council of Chemical Associations, Chemical Policy &amp; Health Leadership Group

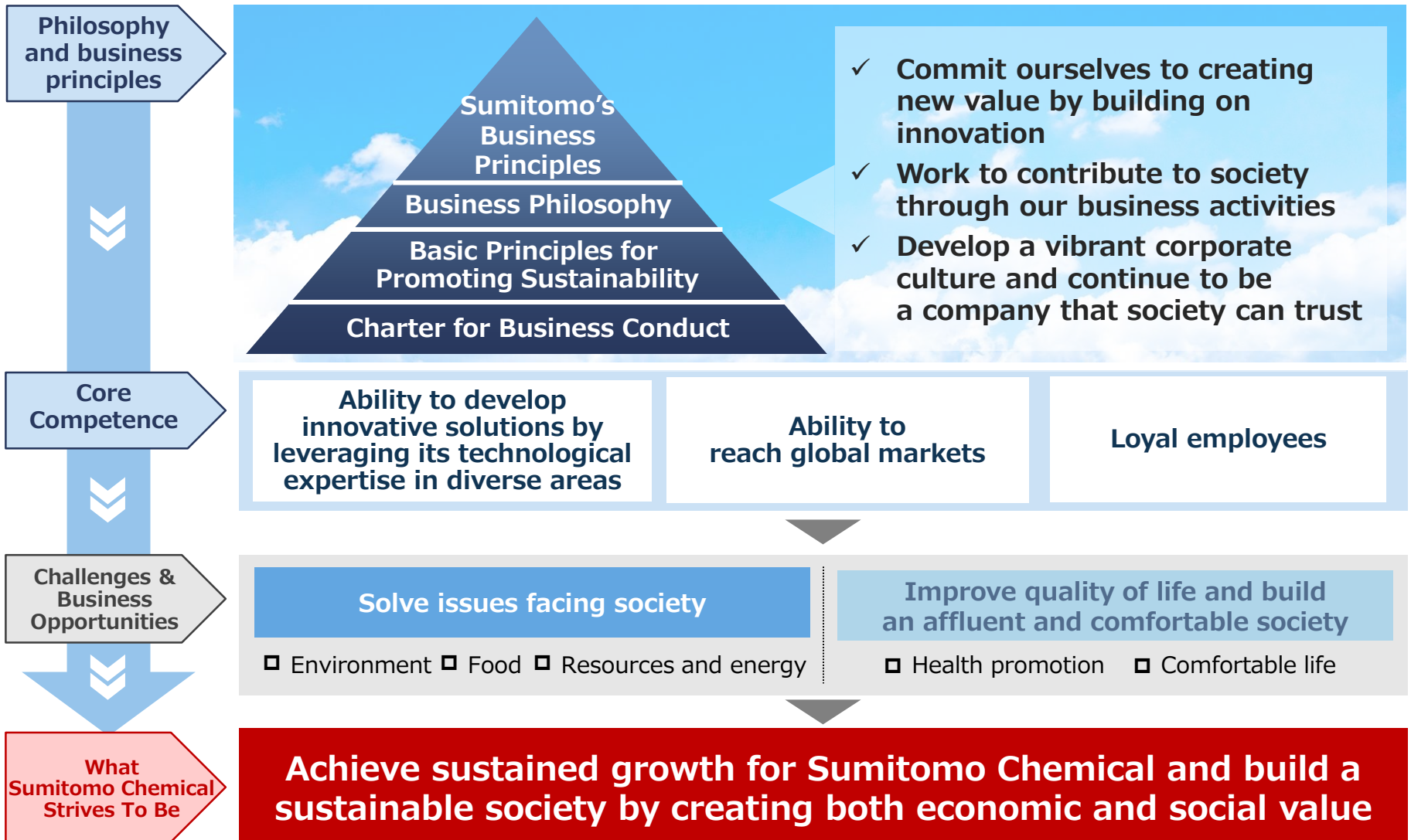
\*2 Japan Initiative for Marine Environment

Society 5.0 will be an Imagination Society, where digital transformation combines with the imagination and creativity of diverse people to solve social problems and create value.

# Society 5.0



(Source) "Society 5.0 -Co-creating the future" by Keidanren



### Cautionary Statement

Statements made in this document with respect to Sumitomo Chemical's current plans, estimates, strategies and beliefs that are not historical facts are forward-looking statements about the future performance of Sumitomo Chemical. These statements are based on management's assumptions and beliefs in light of the information currently available to it, and involve risks and uncertainties.

The important factors that could cause actual results to differ materially from those discussed in the forward-looking statements include, but are not limited to, general economic conditions in Sumitomo Chemical's markets; demand for, and competitive pricing pressure on, Sumitomo Chemical's products in the marketplace; Sumitomo Chemical's ability to continue to win acceptance for its products in these highly competitive markets; and movements of currency exchange rates.