

# FY18-2

# CEO Explanation

Creating New Customer Value through Innovations



淡輪 敏

Tsutomu Tannowa

Mitsui Chemicals Inc.  
President & CEO

Nov. 15, 2018

# Contents

- ▶ **Business Performance**
- ▶ Topics on Targeted Business Domains
- ▶ Topics on Sustainability
- ▶ Financial Overview
- ▶ Management Target for Sustainable Growth

## 0→1 MAKE IT HAPPEN

One-and-a-half years have now passed since Mitsui Chemicals put its long-term business plan, VISION 2025, into action.

Even in this short time, the business environment has gone through major changes. Just recently, trends such as the rising prices of crude oil and naphtha, as well as trade friction between the U.S. and China, have brought the possibility of impact on business. But we have responded to this by carrying out drastic business restructuring, reforming our portfolio to be more resistant to influence from changes in business conditions and market fluctuation.

We currently stand before a tall wave in the form of environmental, social and governance (ESG) management. While fair and transparent governance is of course a must, society is now also seeking a greater role for corporations to bring about a sustainable society that is in harmony with the environment.

The chemical industry holds unlimited potential to bring new raw materials into the world. These materials are then put to use in all sorts of other industries, serving as a starting point for each one's innovations. In other words, the chemical industry has the unique ability to offer tangible solutions to a wide range of social issues – the power of chemicals is critical to accomplishing a sustainable society.

In the face of various social issues around the world, I feel a strong sense of responsibility in ensuring Mitsui Chemicals meet the high hopes as the solutions provider that is able to help lead innovation. I will therefore strive even further in the future to help solve social issues through our business activities.

Nov. 15, 2018  
Tsutomu Tannowa

淡輪 敏

## Profits expected to reach a record high in FY18 for three consecutive years

(JPY bn)

△ Denotes a minus

Items	FY2016	FY2017	FY2018		Increase (Decrease)	
	Results	Results	1H Results	Outlook	FY16→FY17	FY17→FY18
Sales	1,212	1,329	721	1,540	116	212
Operating income	102.1	103.5	49.7	106.0	1.4	2.5
Non-operating income	△ 4.9	6.7	8.7	11.0	11.6	4.3
Ordinary income	97.2	110.2	58.4	117.0	13.0	6.8
Extraordinary gains/losses	△ 11.4	△ 16.0	△ 2.7	△ 9.0	△ 4.6	7.0
Net income*	64.8	71.6	41.8	80.0	6.8	8.4
Exchange rate(JPY/US \$)	108	111	110	110	3	△ 1
Domestic standard naphtha price(JPY/KL)	34,700	41,900	51,100	54,600	7,200	12,700

\*Net income refers to Profit attributable to owners of parent

(JPY bn)

△Denotes a minus

Segment	FY2016	FY2017	FY2018	
	Results	Results	1H Results	Outlook
Mobility	40.7	42.3	20.1	42.5
Health Care	10.1	10.8	6.3	13.0
Food&Packaging	20.6	19.9	8.8	21.5
Basic Materials	38.5	38.9	18.4	37.0
Others	△7.8	△8.4	△3.9	△8.0
<b>Total</b>	<b>102.1</b>	<b>103.5</b>	<b>49.7</b>	<b>106.0</b>

Increase (Decrease)	
FY16→FY17	FY17→FY18
1.6	0.2
0.7	2.2
△0.7	1.6
0.4	△1.9
△0.6	0.4
1.4	2.5

**Expect to achieve a highest record for three consecutive years despite the accident at Osaka Works (△3.5 bn yen)**

## FY18 Outlook

Operating Income

**106** billion yen

Sales

**1,540** billion yen

ROS

**6.9%**

ROE

**14.8%**

Net D/E

**0.70**

Shareholders Return

Dividends\*

Interim **50** yen/share, Year-end **50** yen/share

Acquisition of treasury stock

**10** billion yen

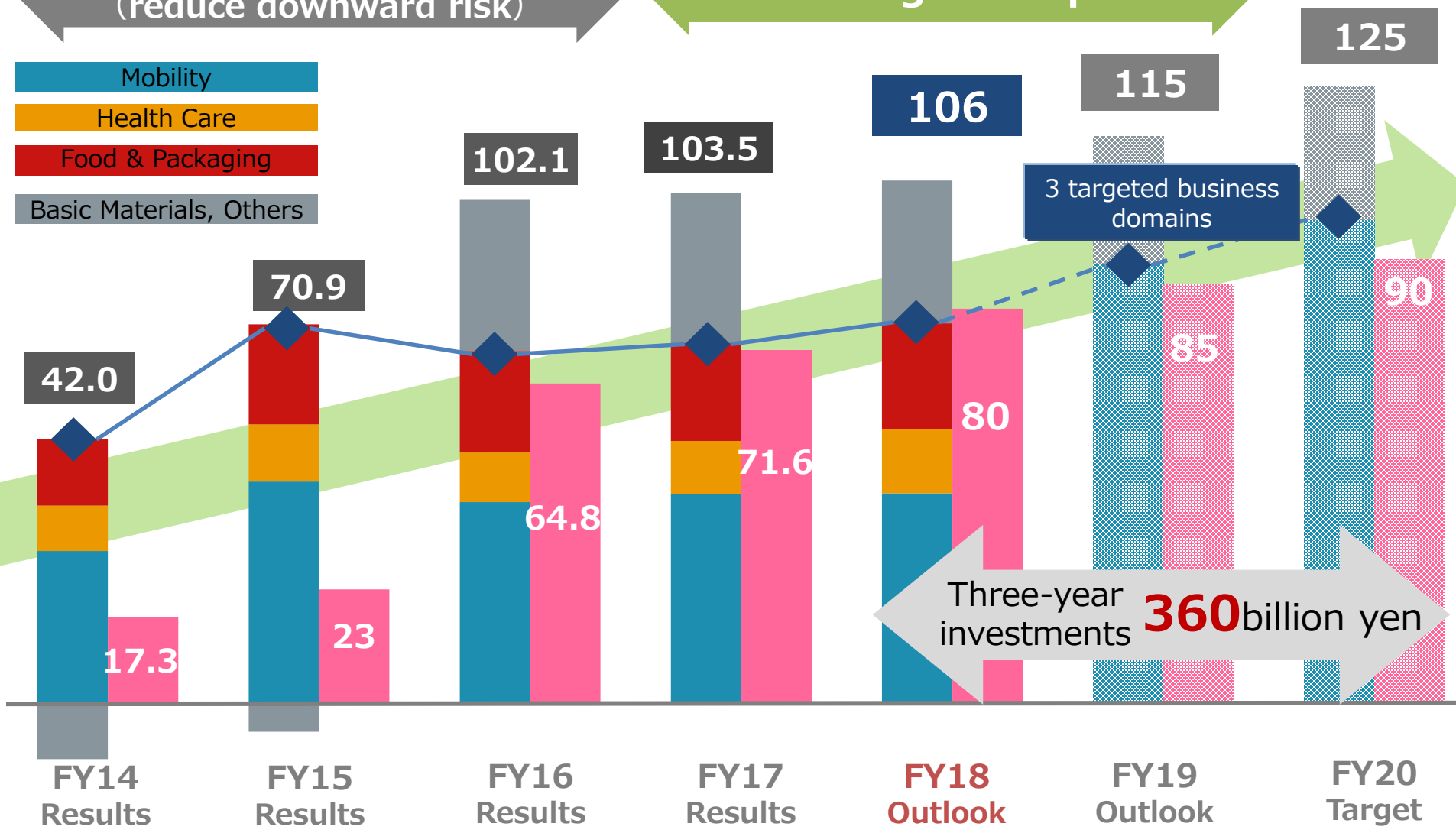
\*On Oct, 2017, Mitsui Chemicals conducted the 5-to-1 share consolidation.

## Expand investments for further growth

Secure stable profit  
(reduce downward risk)

Ensure growth path

(JPY bn)



## 7 ISSUES in FY18

## Business Strategy

**① Expansion in 3 targeted business domains**

- Increase in investment themes
- Including peripheral business area
- Secure production capacity corresponding to demands

**② Accelerate development of new next generation businesses and create new products****③ Further strengthen competitiveness of Basic Materials**

## Manufacturing

**④ Enhance manufacturing bases by utilizing advanced technologies****⑤ Improve safety technologies and enhance manufacturing site capabilities**

## Management

**⑥ Enhance group-global management****⑦ Promote ESG management**



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- ▶ **Topics on Targeted Business Domains**
- ▶ Topics on Sustainability
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## Mobility

Elastomers, Performance polymers,  
Performance compounds,  
Engineering plastics

# 01

3 Targeted  
Business Domains

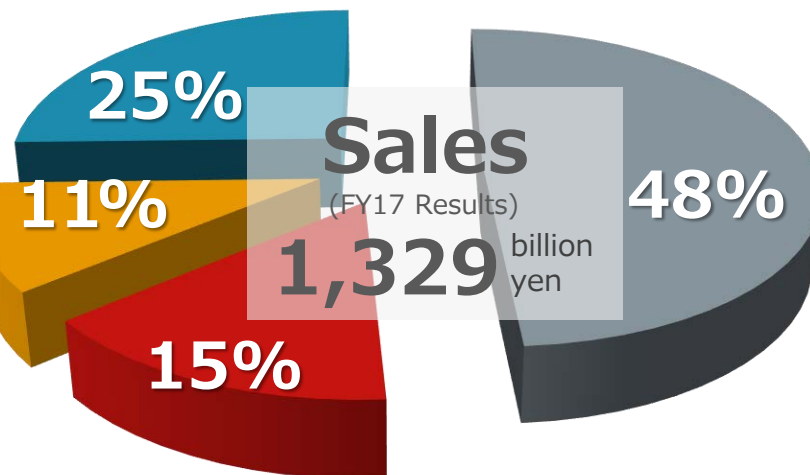


## Health Care

Ophthalmic lens material,  
Nonwovens, Dental materials,  
Personal care materials

# 02

3 Targeted  
Business Domains



## Next Generation

Energy, Medical, Agri-system, and  
IoT Solution

# 04

Creation &  
Development



## Food & Packaging

Packaging material, Coatings  
Agrochemicals, Seeds

# 03

3 Targeted  
Business Domains



## Basic Materials

Phenol, PTA/PET  
Polyolefin, Polyurethane, and others

# 05

Strengthen  
Competitiveness





# Mobility

Provide solutions making full use of comprehensive strengths


 Strengthen production capacity  
 – Expand strong derivatives –

# Large-scale investment of 20 billion yen

## Additives for lubricant Lucant™ new plant (Ichihara)

New plant in Ichihara  
after ten years

Iwakuni-Ohtake

20  
KTA

Ichihara  
(Feb.2021)

Background

Global rising needs for **fuel efficiency**

Application

Gear oil for differentials and  
transmission



**Expand global sales** by strategic alliance with  
world's largest lubricant additives  
manufacturer,

## Polyolefin elastomer De-bottlenecking of Tafmer™

Japan  
50KTA

Singapore

200 → 225KTA  
(Jul.2020)  
+25  
KTA

Background

Global rising needs for **light-weight solution**

Application

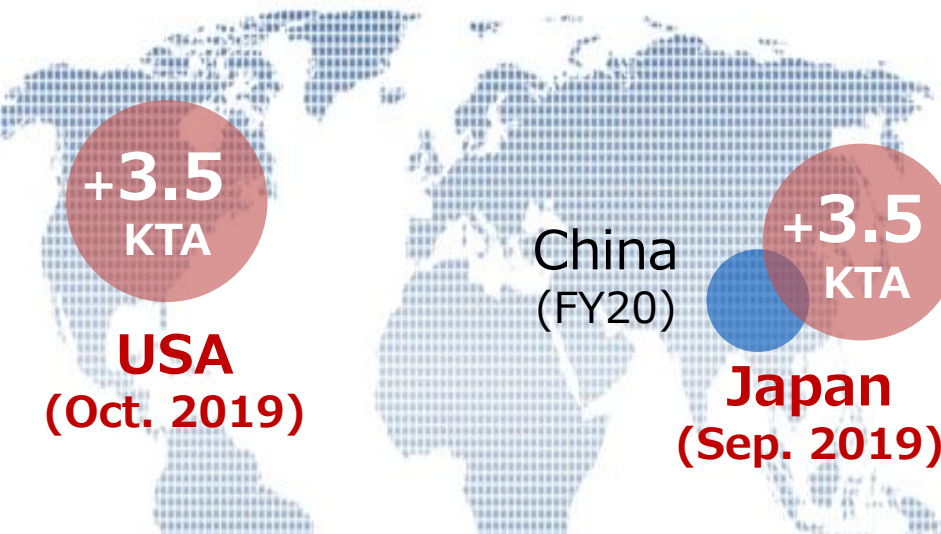
Bumpers and instrument panels of auto parts,  
packaging and shoes mid-sole

**Under feasibility study for  
further large-scale investment**





Long glass fiber reinforced PP (Mostron™-L)  
**Establish new base in Japan and US**



Background

Global rising needs for **light-weight solution**

Application

Metal substitution

**Under feasibility study for new base in China**  
(Total production capacity to 10KTA)

PP Compounds in India  
**Under feasibility study for capacity increase**



Background

Global rising needs for **light-weight solution**  
Capture growing demand in Asia

Application

Automotive inner/outer parts

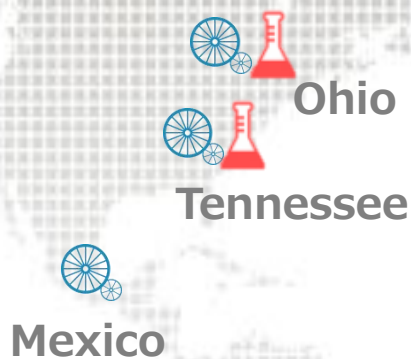
**Continue production increases at eight global bases**



Global deployment of "local production for local consumption" which is resilient to changes in trade policies

# America

## 440 KTA



# Europe

## 50 KTA

(Including outsourced production capacity)



New base  
in Netherlands  
**30 KTA**  
(Jun.2020)

Production Capacity  
(FY20)

## 1,110 KTA

# Asia

## 620 KTA



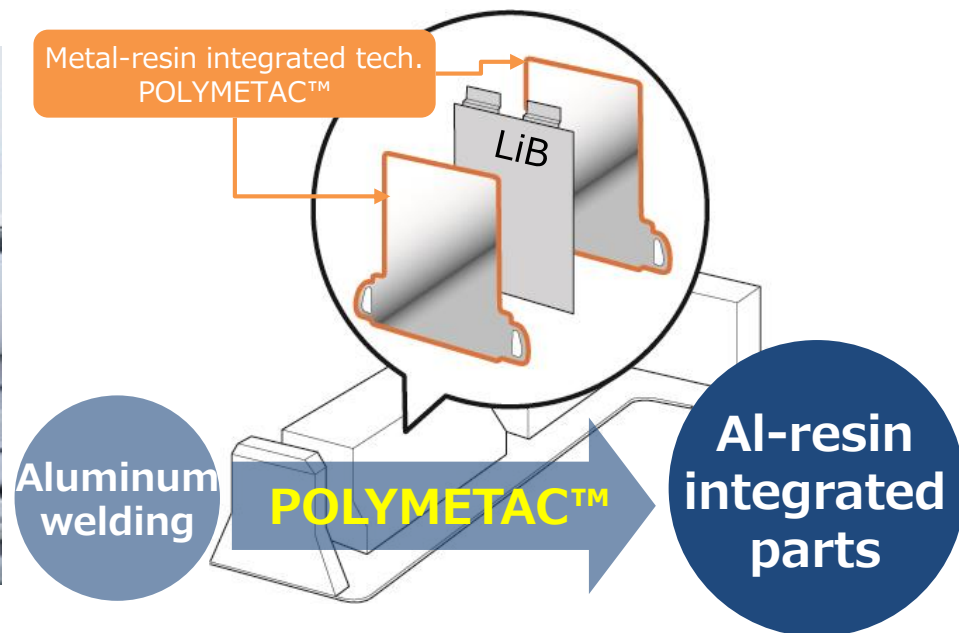
India  
**+14 KTA**  
(FY20)





## Water-cooled LiB module parts using POLYMETAC™

Capacity and output increases in LiBs make water cooling mainstream



- ✓ **Increased airtightness** to reduce risk of leaks
- ✓ Parts with **simpler production processes, lighter weight**
- ✓ Combined with analysis of coolant flow to **provide optimal parts design**

**Adopted by European OEMs for 2019 model**



# Health Care

**Provide products & services  
contributing to Quality of Life  
through chemical innovations**





## E-focus glasses Official launch for TouchFocus™

1

LINE-UP

### Expand Line-up

- ✓ **Titanium frame** sales launched (Oct.2018)
- ✓ **Four series, 61 types**



2

DESIGN

### Well-Designed GOOD DESIGN AWARD 2018 BEST 100

- ✓ **Good Design Award Best 100**

3

SALES

### More Outlets

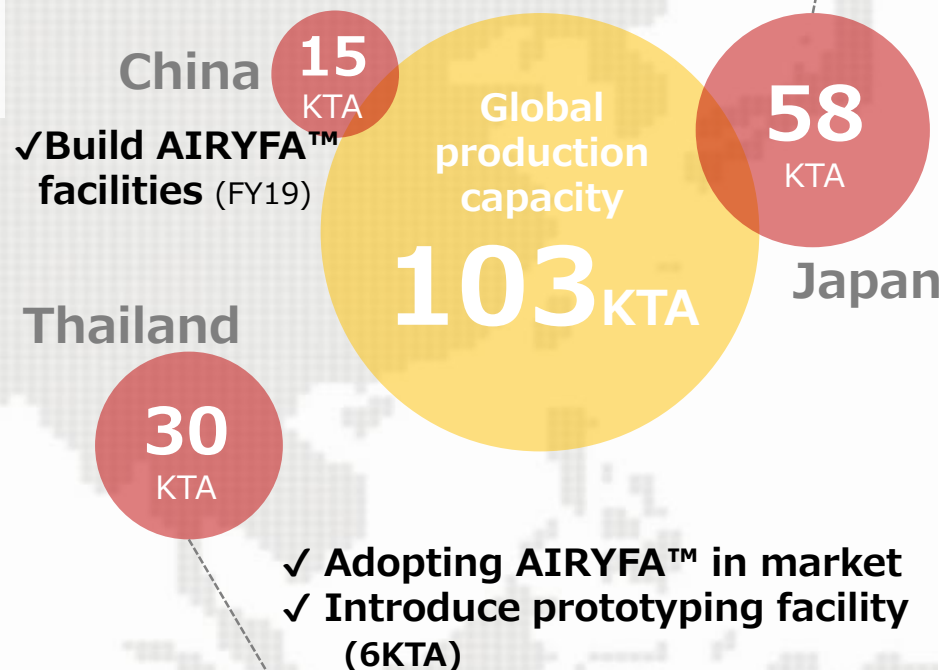


- ✓ 20 stores in Japan (as of Nov. 2018)
- ✓ Target: 100 stores (FY2019)

FY22 Target  
**50,000** pair in Asia, US and EU

## Reduce wastes & CO<sub>2</sub> emissions by highly functional nonwovens

- ✓ Nagoya/New base (15KTA, Oct.2018)
- ✓ Yokkaichi/increase capacity (+6KTA, Oct.2018)



- ✓ **Expand AIRYFA™ in Asia** (light-weight, high flexibility and strength nonwovens)
- ✓ Under feasibility study for **further new base**



## Grow licensing business for bio-process acryl amid production

- ✓ **Water treatment needs**
- ✓ **Prevent water pollution to rivers and seas**

### Bio-catalyst

Commercializing genetically modified  
**E. Coli**



### Original process

Simplify production

**Reacts at normal temperature and pressure**

(Compared with copper catalyst method)

- ✓ **High polymerization control, safety**
- ✓ **High product quality**
- ✓ **Reduce CO<sub>2</sub> emissions by 40%**

Contribute to society by **water purification and CO<sub>2</sub> reduction**

## Biodegradable detergent builders

Polyaspartic acid

- ✓ Improve cleaning power for liquid detergent
- ✓ **Make laundry drainage biodegradable**

### Bio-degradable

**Metallic ions trapping ability (+30%)**

**Prevent dirt re-attaching during wash with low concentration**

- ✓ **Started sales in Japan**

**Social needs drive efforts to speed up marketing in Europe**



# Food &

# Packaging

Provide solutions for world food problems and seizes new business opportunities

**Fungicide**

"Tolprocarb"

Sales for rice paddy started in Japan (FY15)

**Herbicide**

"Cyclopyrimorate"

Registration submission for rice paddy completed

**Insecticide**

"Broflanilide"

**Long-term commercialization contract with BASF**

\*Insecticide Resistance Action Committee

- ✓ **Registered new category in IRAC\***
- ✓ Global expansion using both companies' strengths
- ✓ Registrations in-progress in target countries

**Fungicide**

"Quinofumelin"

**Global licensing contract with BAYER**

- ✓ New efficacy is highly-valued
- ✓ Global collaboration and expansion

**Animal Health****Global licensing contract with BAH\***

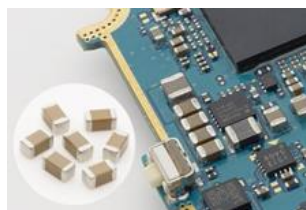
\*Bayel Animal Health GmbH

- ✓ New efficacy is highly-valued
- ✓ Global rollout in the growing pet market

**FY25 Sales Target****100 billion yen by expanding five new active ingredients**

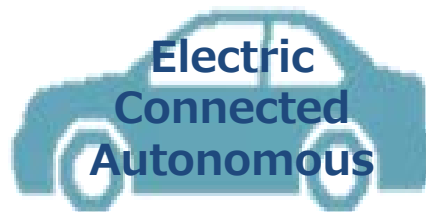


## Film used in ceramic capacitors Expansion for SP-PET



Rapid market growth  
for ceramic capacitors

**+10%**



MLCC\* manufacturers  
boosting production

\*Multi-layer ceramic capacitors

- ✓ Re-starting operations in dormant facility (FY2018)
- ✓ Under feasibility study for next expansion

**Double capacity to  
increase market share**

## Sheet used in bottle caps Expansion for Hi-Sheet

Growth in cosmetics market **+10%**



- ✓ Strong domestic demand
- ✓ Strong tourists demand
- ✓ Increase exports

Cosmetics manufacturers  
increase production

- ✓ Increase capacity 50%  
(autumn of FY2019)

**No.1 market share in Japan**





## Reduce food loss & waste with an expanded line-up of freshness-preserving packaging

### Heavyweight

**Pal Fresh™**

FDA-certified

**Extends commercial shelf life**

For cut or processed vegetables, apples etc.



New product

**AdFresh™**  
アドフレッシュ

**Long-term storage, imports & exports, long-distance transport**

For grapes, apples, persimmon, citrus, ornamental plants

**Duration:**

**1 to several months\***

**Duration:**

**~1 week**

**SPASH**  
スパッシュ



**Extends shelf life at stores**

For cut or leafy vegetables, legumes etc.

**“Time Shift Bag”**

- ✓ Controllable freshness period
- ✓ Adjustable for shipment timings
- ✓ Allows for change from air freight to sea freight

### Light-weight

\*Varies depending on product

**Offer complete solutions** by combining packaging materials with scientific preservation designs



# Next Generation Business

Create solution & system businesses  
at the boundary or peripheral areas



## Energy Solution



### Power generation and diagnosis business of photovoltaic Plant

- ✓ Diagnosis accounts over 2.5GW
- ✓ Enter the certification business in India

## Medical Solution



### Rapid diagnosis system for bacterial identification

- ✓ Provide re-agent for research
- ✓ Overseas deployment (Singapore, EU)

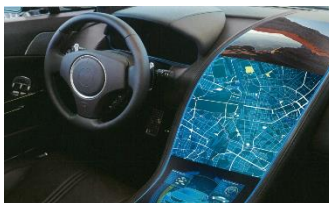
## Agri Solution



### Advanced cultivation system (iCAST™)

- ✓ Good fields test results and good evaluation at large-scale farmers in US and Australia

## IoT Solution



### Piezo-electric material for next generation display sensor

- ✓ Collaborate with MURATA for Piezo-electric film
- ✓ Application development for Piezo-electric line
- ✓ Customer evaluation on transparent-PI for OLED

## Corporate Venturing



### Open innovation Corporate Venture Capital

- ✓ Collaborate with Chitose Group





## Entering the BIS\* certification business for solar panels in India (August 2019)

\*BIS = Bureau of Indian Standards

India government's  
target for 2022:

**100GW**

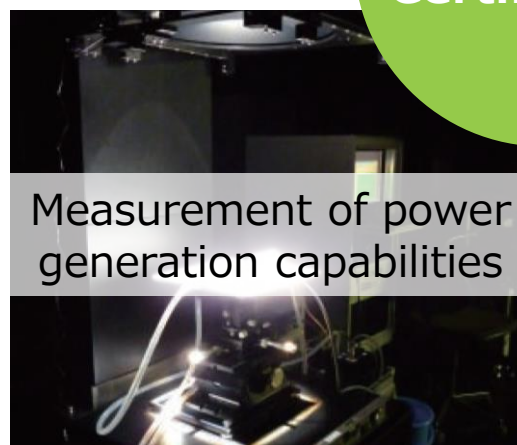


Long-term  
environmental tests



Load-bearing tests

**BIS  
Certification**



Measurement of power  
generation capabilities



Safety tests

- ✓ Require **BIS-certification for all solar projects** to stop low-quality products
- ✓ **MCI establish a BIS certification lab in Ahmedabad (Aug.2019)**

Gather results BIS certification lab and  
**enter photovoltaic plants diagnostic business**



## Joint projects with the Chitose Group, a group of biotech startups

PHYT  
Renaissance

Phyto Renaissance,  
Inc.  
Utilization of plant cell  
culture technology



Technology

- ✓ Plant cell culture technology from MCI-Group
- ✓ **Produce functional components from small sections of rare plants**

Application

- ✓ Medical supplies, cosmetics, supplements etc.

Meaning

- ✓ Utilize functional components extracted from rare plants
- ✓ **Protect ecosystem** by avoiding excessive harvesting

Tierraponica

Tierraponica, Inc.  
Microbiota-activated  
solution for cultivation



Technology

- ✓ **Hydroponic cultivation using organic produce** previously impossible

Application

- ✓ Consulting of hydroponic cultivation using microbiota

Meaning

- ✓ Produce high-quality vegetables everywhere
- ✓ Cultivation using food scraps
- ✓ Produce vegetables with particular tastes



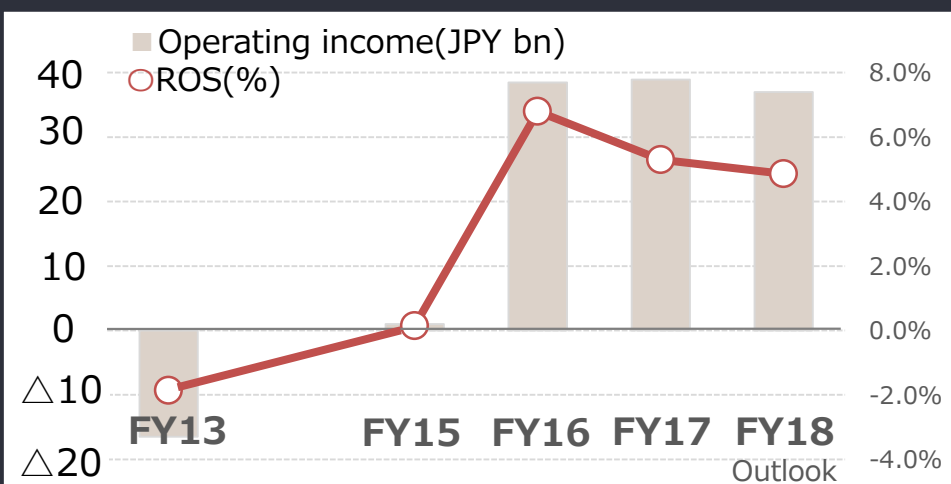


# Basic Materials

Provide materials for  
the basis of society and industry

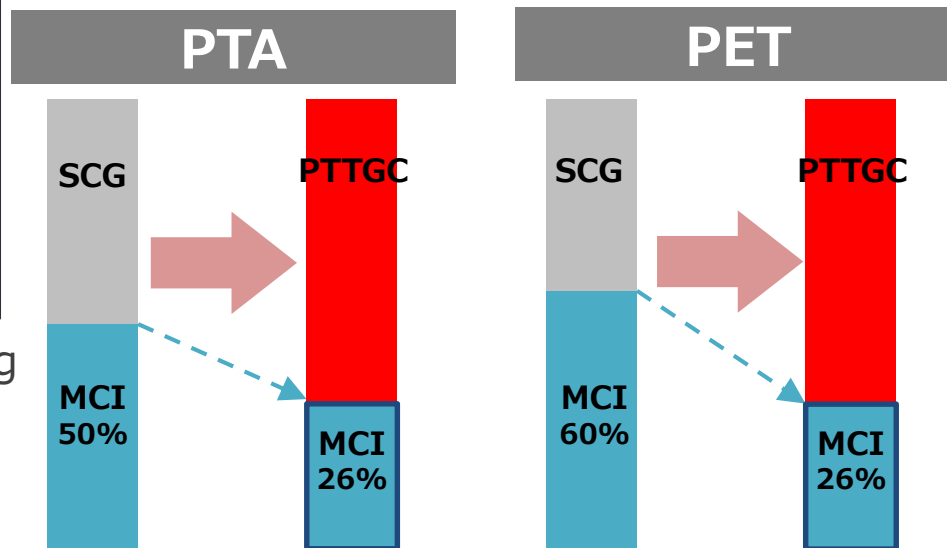


## Establish stable business structure



## Restructuring PTA/PET business in Thailand

### Moving to JVs with PTTGC (Dec, 2018 tentative)



MCI; Mitsui Chemicals, SCG; SCG Chemicals, PTTGC; PTT Global Chemical

- ✓ **Profitability restored in all 3 restructuring businesses**  
(Phenol, PTA/PET, Polyurethanes)
- ✓ **Large-scale businesses in overseas**  
(Prime Evolve Singapore, Nghi Son project)
- ✓ **Further competitiveness**  
(New gas turbine in Osaka, High-purity C3, Increase capacity of derivatives, PP B&S)
- ✓ **Strengthen high value-added products**

- ✓ **Strengthen competitiveness by integrating production system** from raw materials such as PX and MEG
- ✓ **New partnership framework with PTTGC**

Secure steady profits over **30 billion yen** through safe and stable operation, maximize sales and cost reduction



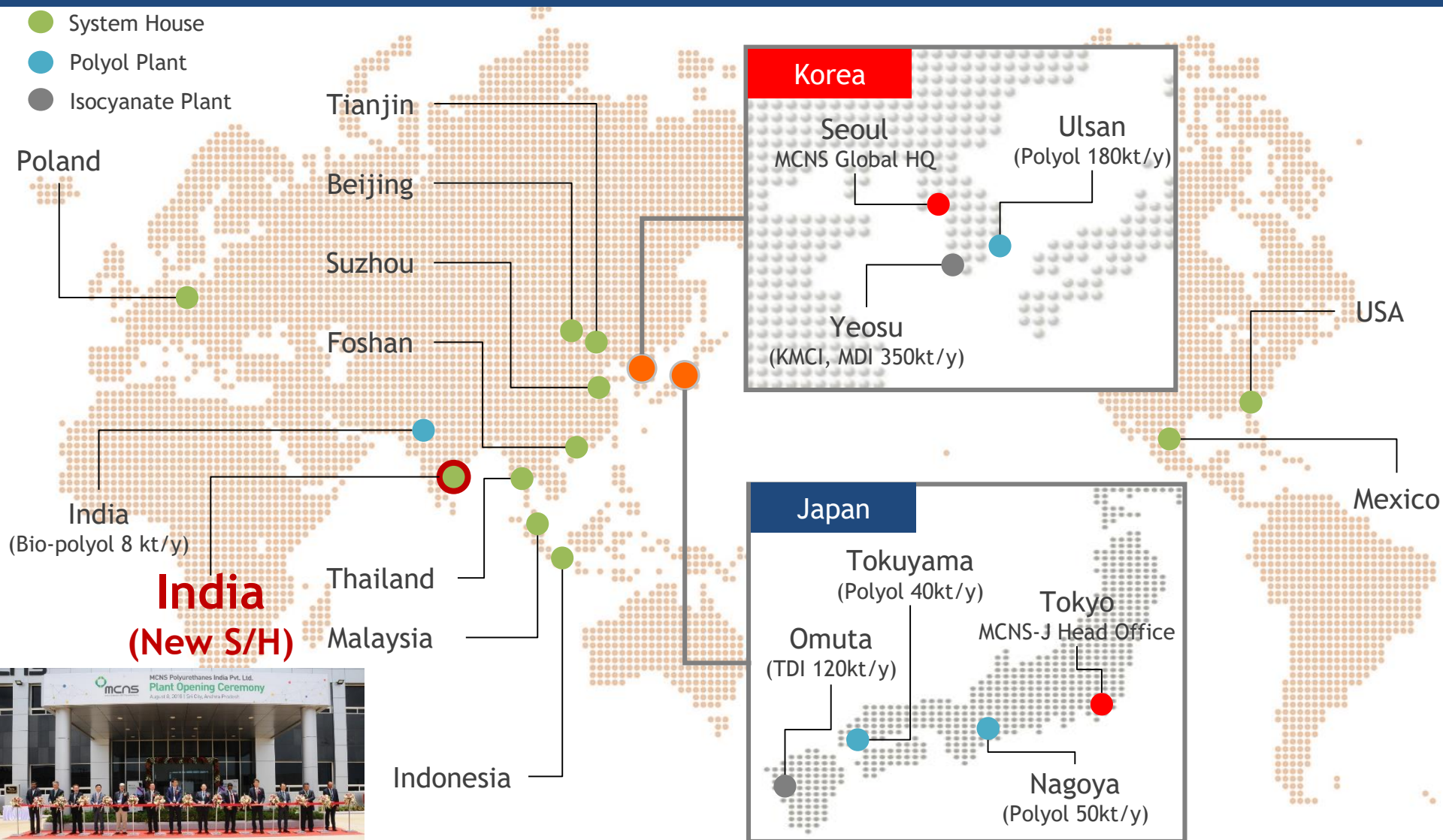


- ✓ Started operations in India at an 11<sup>th</sup> sites
- ✓ Enhance global capacity based on local production for local consumption policy
- ✓ Under feasibility study to establish new bases





● System House

● Polyol Plant

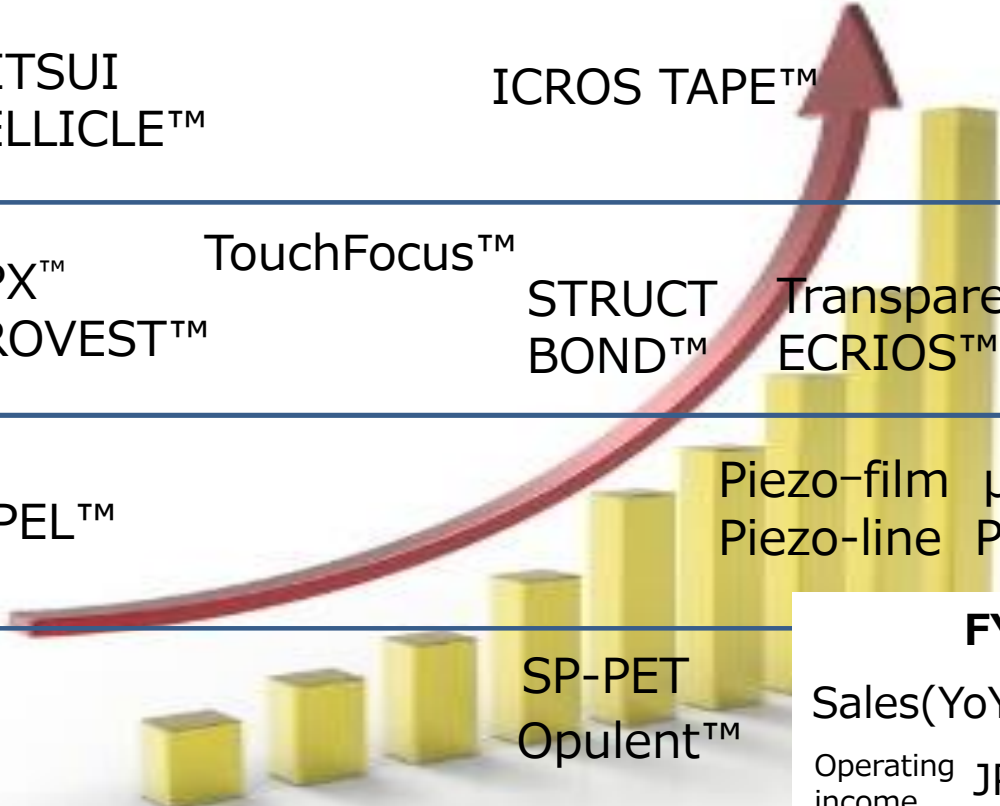
● Isocyanate Plant



## Strengthen cross-domain of ICT materials and expand existing businesses

Cross-domain of ICT related businesses		Mobility	Health care	F&P	Next Generation	Basic Materials	
	 <b>Semi conductor</b>	MITSUI PELLICLE™			ICROS TAPE™		Specialty gas
	 <b>Display</b>	TPX™ PROVEST™	TouchFocus™	STRUCT BOND™	Transparent PI ECRIOS™		
	 <b>Sensing</b>	APEL™			Piezo-film Piezo-line	μ-FLEX™ PIEZOLA™	
	 <b>Electronics</b>			SP-PET Opulent™			

**FY17**  
 Sales(YoY) **7%**  
 Operating income JPY **15** bn



**Create new ICT material businesses** in response to new needs  
 (Semiconductor, IoT-sensors, Imaging-sensors)

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## Preventing beach erosion **Geo-tube DS**

### New solution to sandy beach erosion



During construction

After refilling

(Comparing to concrete river dikes)

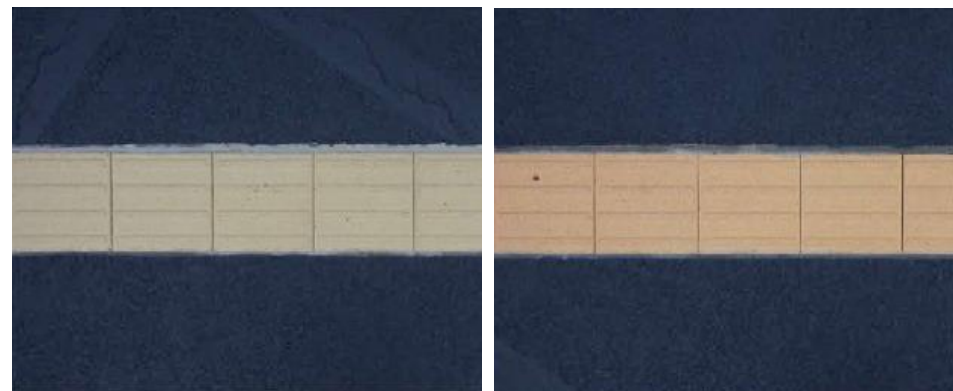
- ✓ **Natural appearance**
- ✓ **Easy to construct**  
One-quarter of the construction time  
Requires only a small construction area
- ✓ **Protects ecosystems**  
Support sea turtle egg-laying,  
crab conservation

**Expand eco-friendly construction**  
(Miyazaki, Kagoshima, Tottori)



## Creating barrier-free environment **Tactile paving**

### Joint development led by the University of Tokyo



### Design-oriented approach

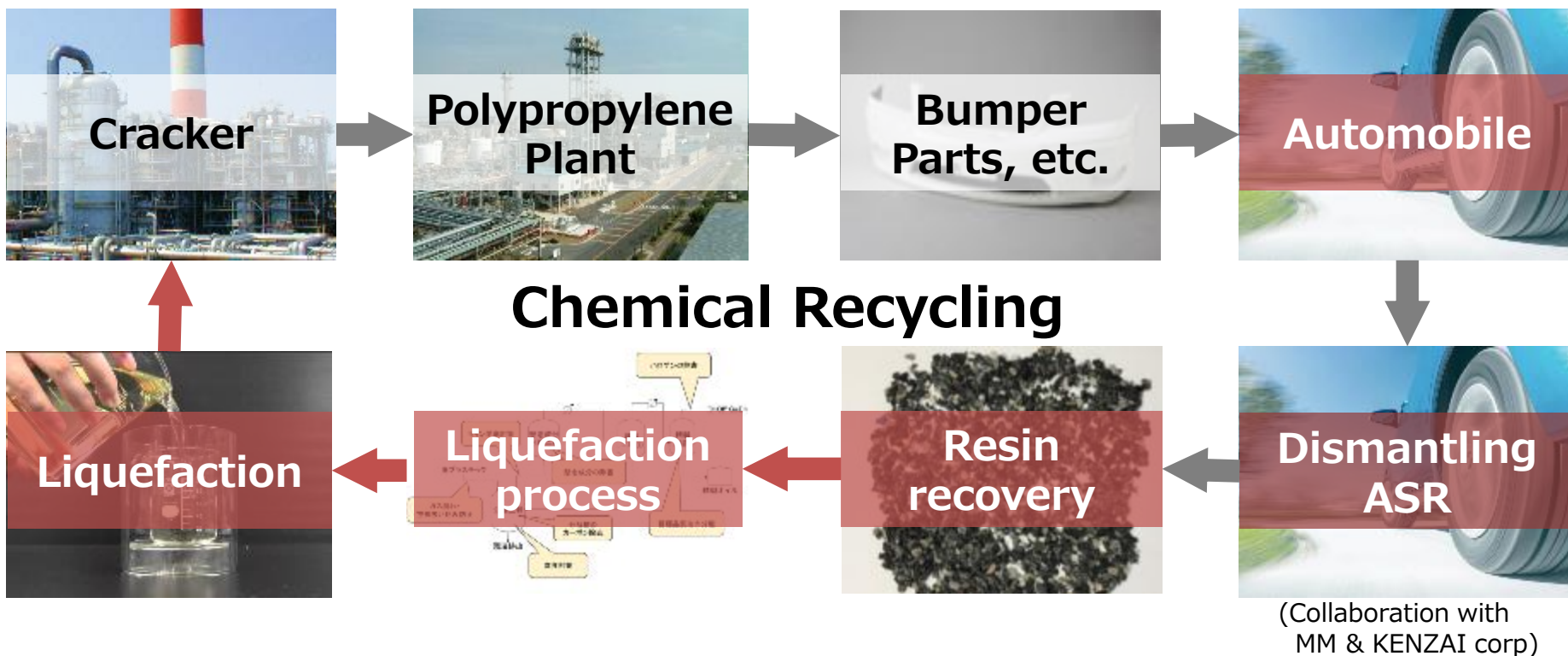
- ✓ Optimal brightness and colour saturation
- ✓ Improved gap width
- ✓ Improved bump shape

**Launching trial sales in  
2018 in lead-up to 2020**



## Developing technologies to chemical recycling chain for automotive waste plastics

Aiming to actualize “Car-to-Car Recycling” making use of 600KTA of automotive shredder residue (ASR) in Japan



Study liquefaction process using small-scale test and bench test facilities

# Improving recyclability by **mono-material packaging**



(Replacements for NY/(AL)/LLDPE)

Nylon
Adhesive
Printing
T.U.X™ Deposited- T.U.X™



L-Smart™
WPB™
Printing
T.U.X™ Deposited- T.U.X™

- = **Ultra puncture-resistant** LLDPE film
- = **Water-based coating with gas barrier properties** (non-chlorine)
- = Japan's No. 1 LLDPE sealant film

**Actualizing the concept through cross-organizational marketing**

## Establish Japan Initiative of Marine Environment

(JaIME; Sep.2018)

(bureau)

The Japan Chemical Industry Association,  
 The Japan Plastics Industry Federation,  
 The Plastic Waste Management Institute,  
 The Japan Petrochemical Industry Association,  
 The Vinyl Environmental Council

1 Organize and share information

2 Correspond to national trends

3 Influence Asia on issue

4 Accumulate scientific knowledge

Plastic industry **come together**  
 to solve the ocean plastic waste  
 issue with society

## Study session of ocean plastic waste with JEAN

(Nov.2018)



X



Mitsui Chemicals



\*JEAN; Japan Environmental Action Network

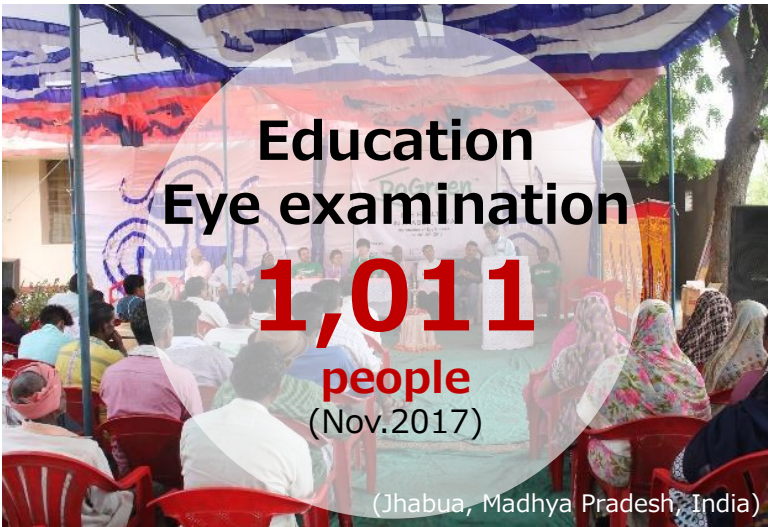
- ✓ Hold study session with JEAN\*, a pioneer for ocean waste issues in Japan
- ✓ Event opened to public

Mitsui Chemicals has been supporting JEAN's work since 2015 as a joint CSR program between the company and employees

**Individual ownership**  
 to tackle issue



# Third round of DoGreen™ initiative in India



Prescriptions



- ✓ Joint effort between Japan and India NPOs, doctors, Korean lens manufacturer CHEMILENS
- ✓ Eye examinations carried out by doctors
- ✓ Distributed individually prescribed glasses (to 81 students, 160 local residents)

Contributing to improve the environment for work and study

Provide solutions to social issues under the concept of "Quality of View"

## Newly selected as Dow Jones Sustainability Index (DJSI) SRI indexes evaluate our ESG & triple bottom line management

MEMBER OF

# Dow Jones Sustainability Indices

In Collaboration with RobecoSAM 

## Selected as an index component of DJSI Asia Pacific



FTSE4Good

**FTSE4Good**  
FTSE's socially  
responsible  
investment index



FTSE Blossom

**FTSE Blossom  
Japan Index**

**MSCI** 

2018 Constituent  
MSCI Japan ESG  
Select Leaders Index

**MSCI** 

2018 Constituent  
MSCI Japan Empowering  
Women Index (WIN)



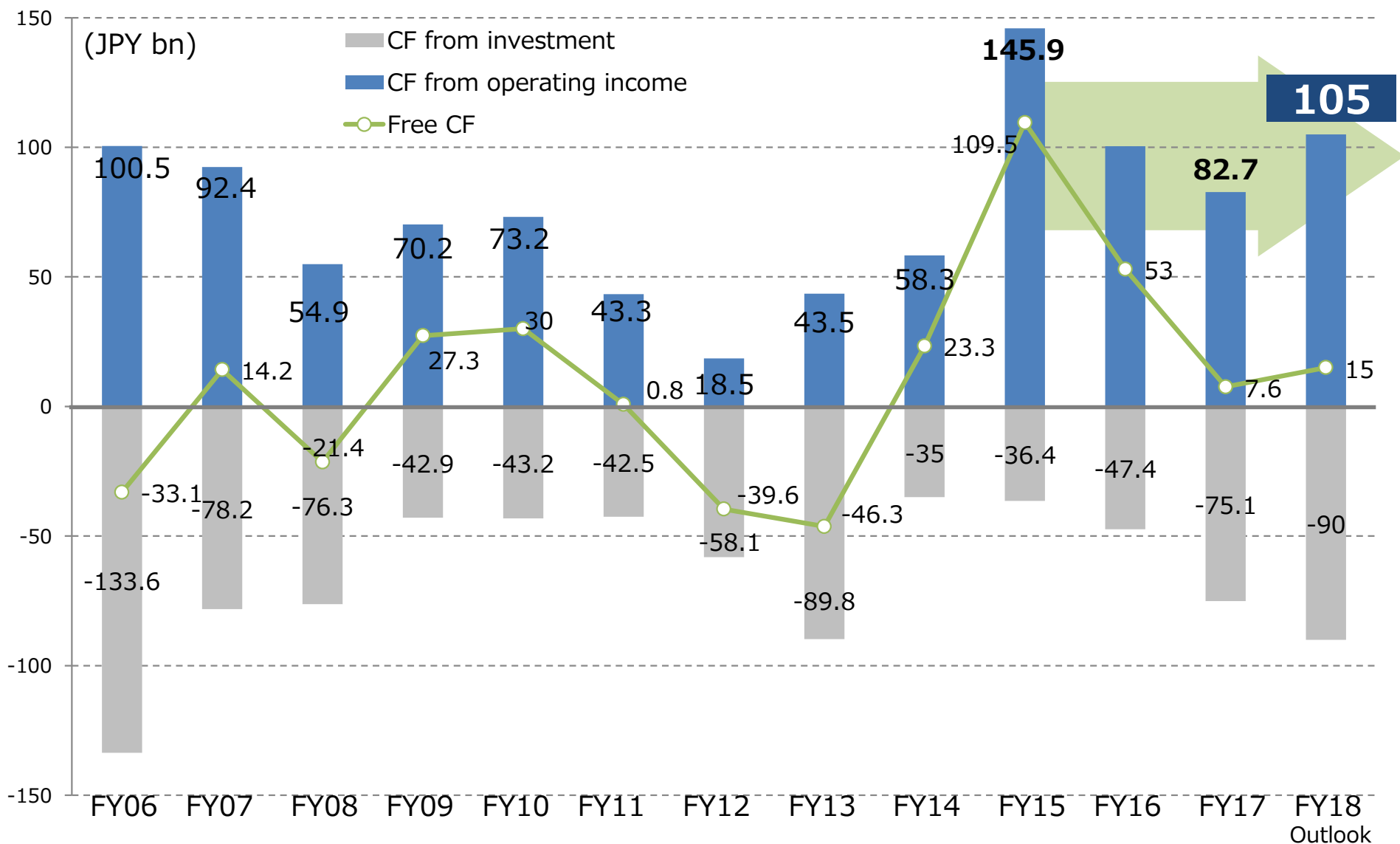
**SNAM**  
SNAM sustainability  
index

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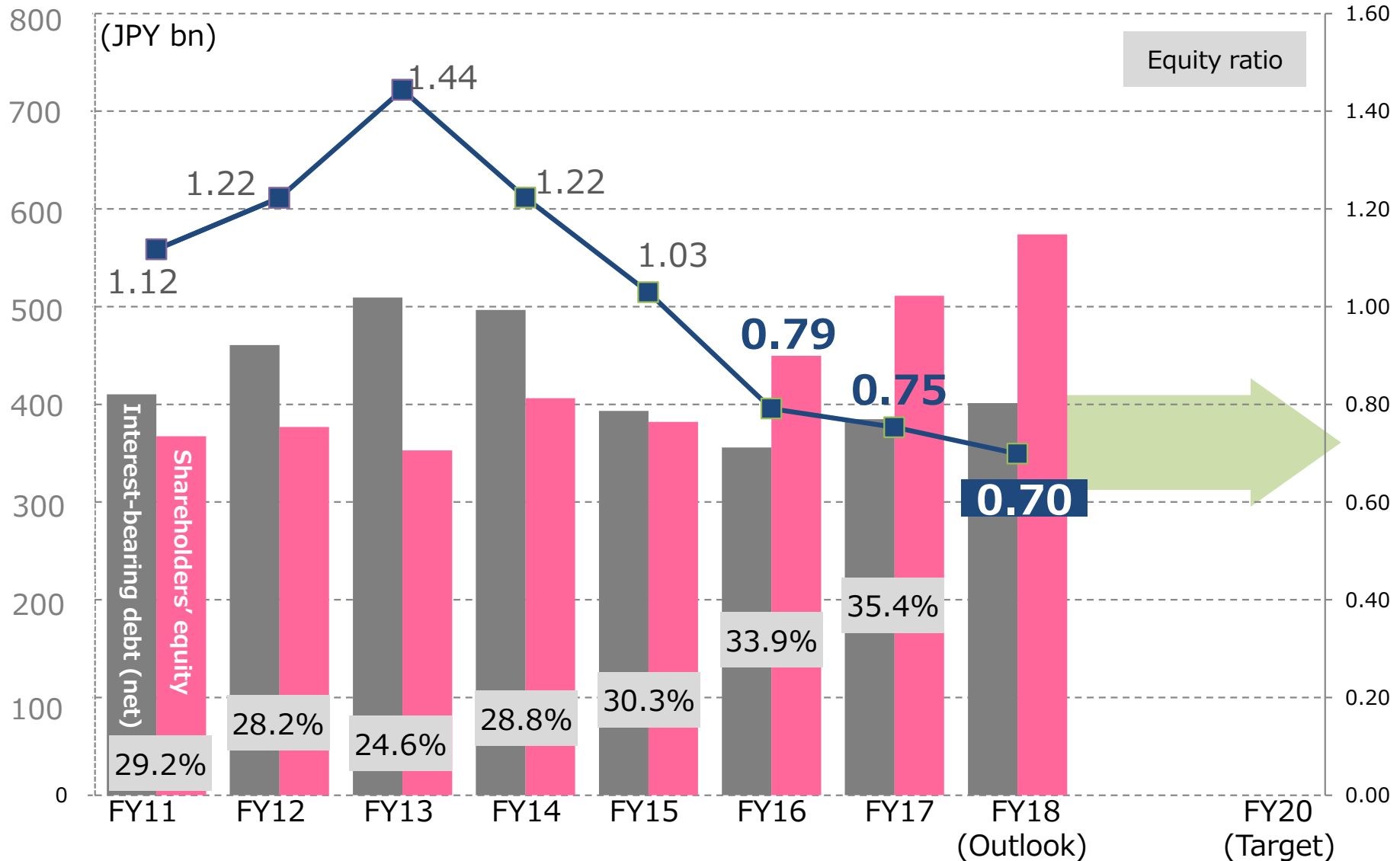
- ▶ Business Performance
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# ✓Cash flow from operating income remains high

## ✓Maintain active investment phase



- ✓ Dramatic improvement over initial target of 1.0 (FY18 outlook: 0.7)
- ✓ **Maintain active investments**, aiming at further enhancement of corporate value

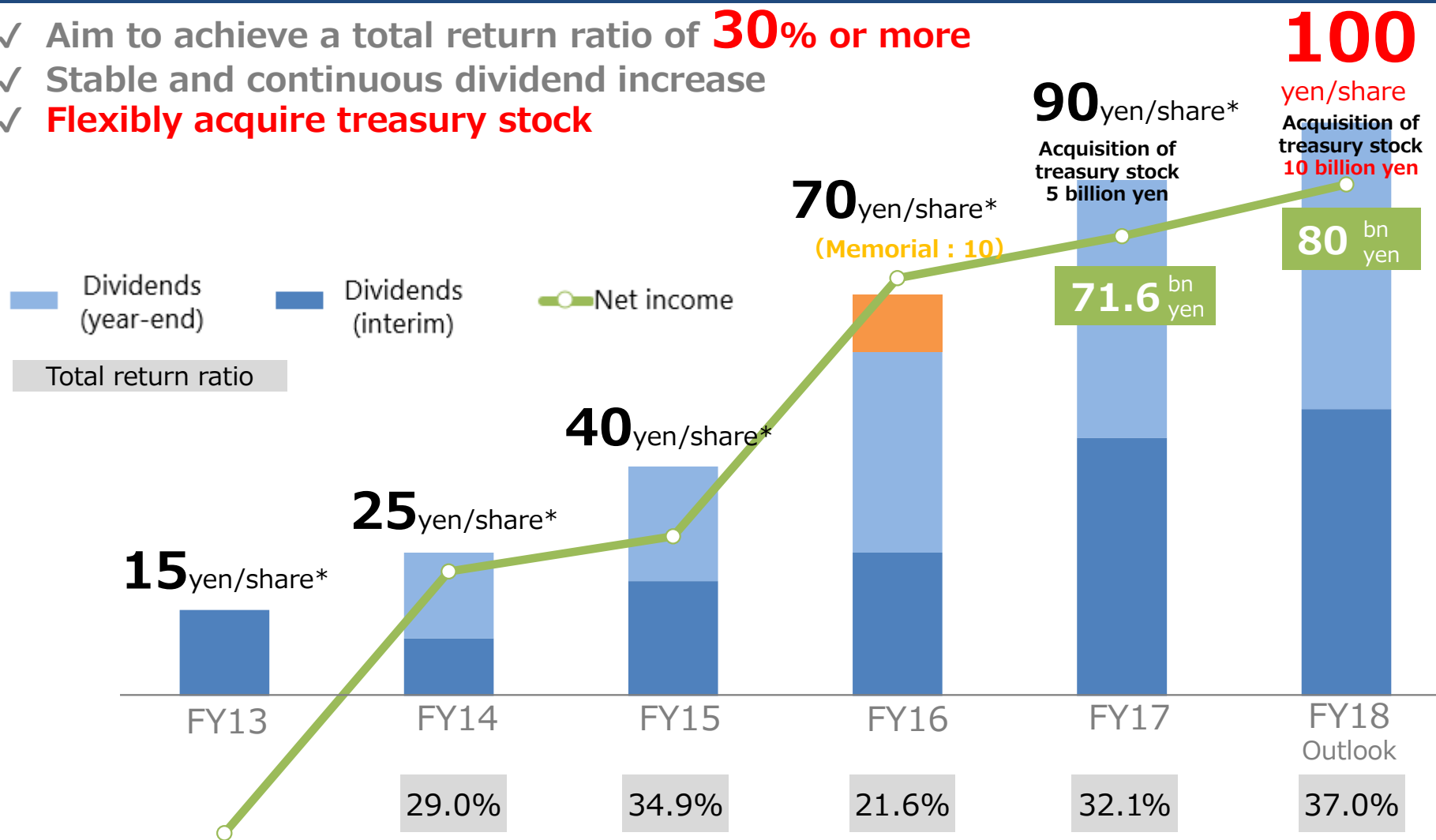




# Aim at further increasing returns to shareholders

## Acquire treasury stock of 10 billion yen

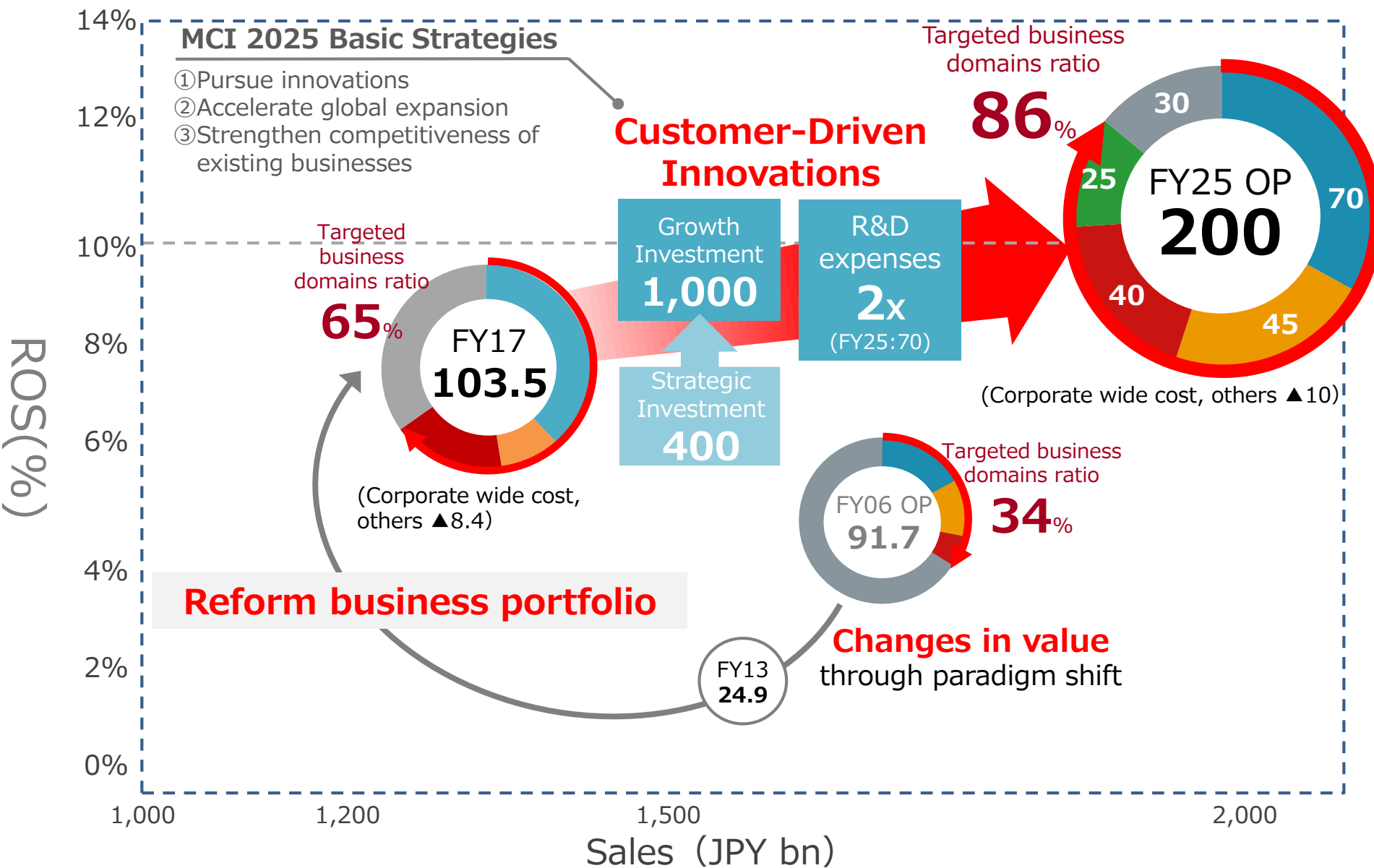
- ✓ Aim to achieve a total return ratio of **30% or more**
- ✓ Stable and continuous dividend increase
- ✓ **Flexibly acquire treasury stock**



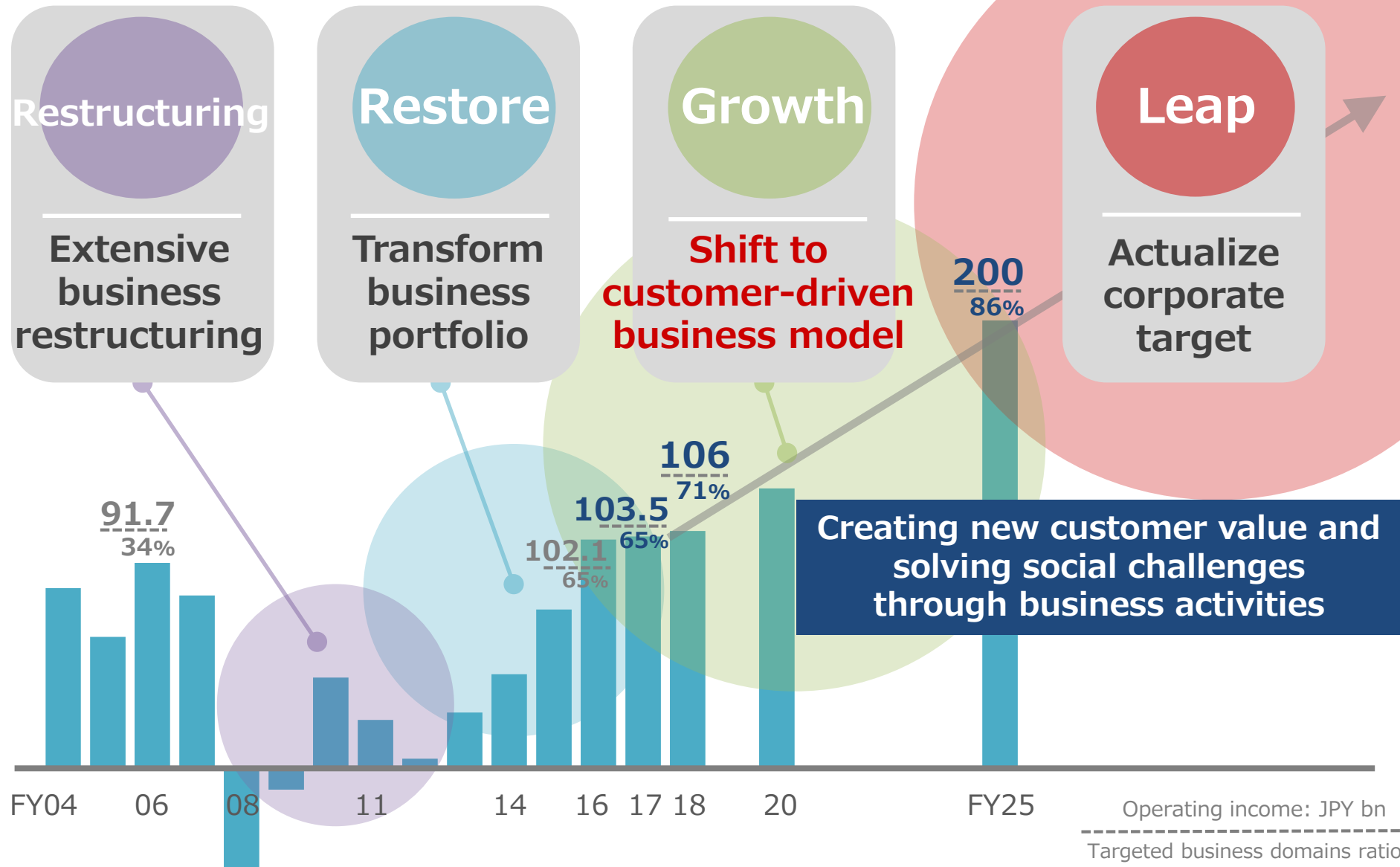
\*On October, 2017, Mitsui Chemicals conducted the 5-to-1 share consolidation. All dividends are re-calculated based on the share consolidation.



▲ Denotes a minus (JPY bn)



Constantly pursuing innovation and growth to become a chemical group with an undisputed global presence



The background of the slide is a bright blue sky filled with soft, white, fluffy clouds. A large, solid blue arrow points from the left side of the frame towards the right, partially overlapping the sky and clouds. The text is centered within the blue area of the arrow.

**Creating new customer value and  
solving social challenges  
through business activities**

**0→1 MAKE IT HAPPEN**



**Mitsui Chemicals**

**Challenge Diversity One Team**

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**BEST 100**

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Innovative plastic  
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## NAGORI™



\* Hands-on Interactive Display , "Touch The TouchFocus" also selected as a Good Design Award 2018

# ANREALAGE x Mitsui Chemicals



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