

Mid-term Business Plan (FY16-FY18)

 **SUMITOMO BAKELITE CO., LTD.**

Basic Policy and Target

Basic Policy of Mid-term Business Plan

Leverage on fundamental plastics technologies, to build a more value-added business structure

- **“CS First”**

- **Deeper and more substantial relations with priority customers**

- **More cooperation & collaboration in-house and with outside partners**

- **Strengthen business foundation through cost structure reform**

Target
Sales:250 billion yen
Operating income:20 billion yen

Basic Strategy of Mid-term Business Plan

■ New business start-ups, creation

Packaging Materials for Semiconductor Substrates, optical circuit products, bio related products, etc.

■ New growth of existing domestic businesses and change of business model

- Cost structure reform and fundamental structural change
- Eliminate unprofitable business and enhance high added-value business
- Streamlining domestic production/sales structure, etc.

■ Increase in profitability and scale of growing areas

Growing area: Aerospace related business, automotive related business, etc.

Growing market: China, ASEAN, India, etc.

Business Environment



Risks

- **Brexit**
- **Slowdown of economic growth in emerging countries**
- **Fluctuation in oil and raw materials prices**
- **Fluctuation in FOREX**

Market Changes

- **Progress in smartification of automobiles/housing/ home electronics ...**
- **Expansion of IoT**

Social Issues

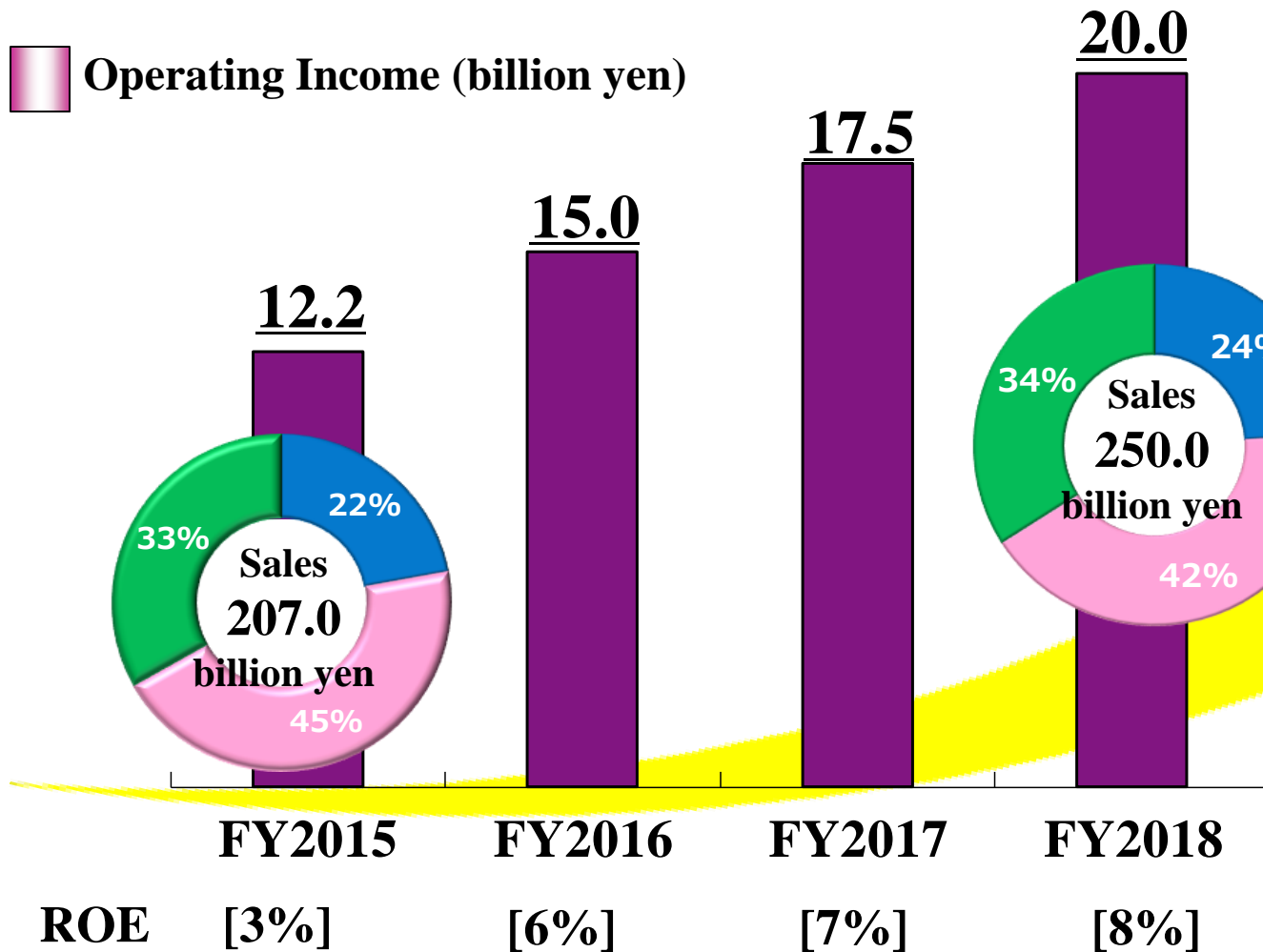
- **Aging of society, increase in social security costs**
- **Tightening environmental regulations, safety and security of food**
- **Progress in borderless society (Development in traffic and communications ⇒ expansion of risk range)**

Think of changes in the market and social issues as tailwinds and move forward to sustainable growth!

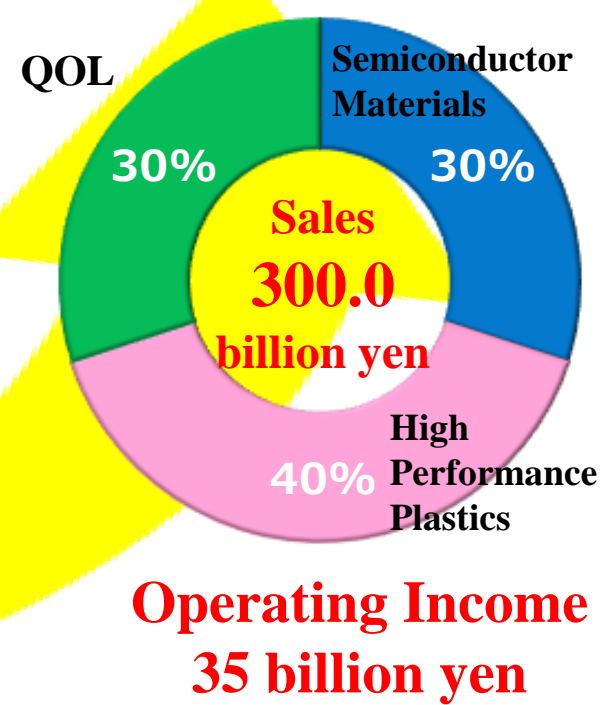
Mid-term Business Plan Targets

Mid-term Business Plan

Operating Income (billion yen)



What we want to be

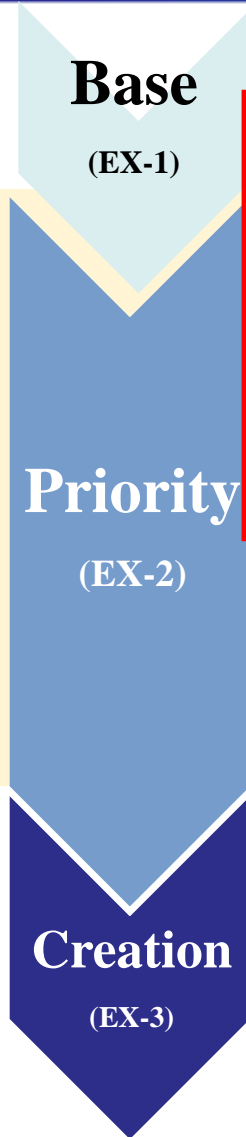


Mid-term Business Plan Target (FY18): Operating Income= 20 billion yen, ROE=8%

*Exclusive of actuarial differences of retirement benefit accounting

Business Growth Strategy

1. Business Strategy (Semiconductor Materials)



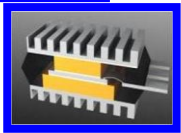
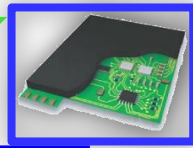
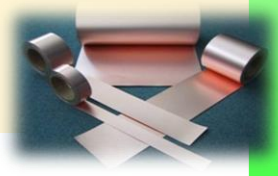
Compounds for encapsulation (EME)/Liquid resins (CR) **LaZ[®]** Others

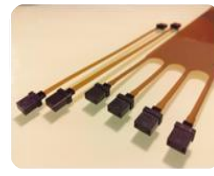
★: Priority measures


- ★Optimize management resources allocation and organization globally (mainly China)
- ★Expand business area of packaging materials for semiconductor substrates “LaZ[®]”
- ★Increase sales and enhance facilities for cutting edge products (mold underfill materials, granular compression molding)/volume zone products
- ★Expand business into growing business areas (automotive, social infrastructure)
Drive to create new business with in-house cooperation and Smart Community Marketing & Developing Div. (SCM) plays core role

- Mold underfill materials/
Materials for vacuum pressure molding
- Materials for 3D laminated devices
- Materials for power devices/module
- Automotive, social infrastructure related

- High stiffness solder resist (RCF/RCC)
- Ultrathin prepreg



- Optical circuit products
- 

- OLED/LCD heat-resistance materials for substrates
- 

Strengthen the base of existing businesses, expand business in growing area

1-1 Smart Community related

- Environment
- Safe and comfortable drive

Market superiority

- ▼ Make comprehensive proposals centering on (i) semiconductor encapsulation materials and (ii) molding compounds for automotive electro-mechanical parts which have top share globally and high reliability, combined with advanced technologies such as optical waveguides, LaZ® and shozo materials (=materials made by wet-laid nonwoven technology)
- ▼ Global structure: Deploy SCM organization and open labs

⇒ Establish overwhelming advantage through expanding globally and collecting customer data

Automobile [from eco-friendly to safe and comfortable drive]

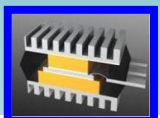
● Endless possibility to apply technology of Semiconductor encapsulation materials to in-vehicle application

- Materials for fixing motor magnets
- ECU related
- Power device/module related
- Sensor related

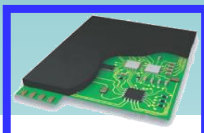
■ Already launched globally as motor parts



■ Already launched as motorcycle parts



■ To be launched as automotive parts(target)



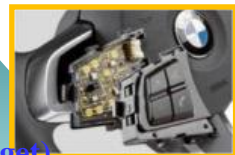
■ Already launched as power devices parts



■ Increase customers for sensors

- Optical communications related
- LaZ®
- Shozo materials

Commercialization as communications parts including support for self-driving automobiles

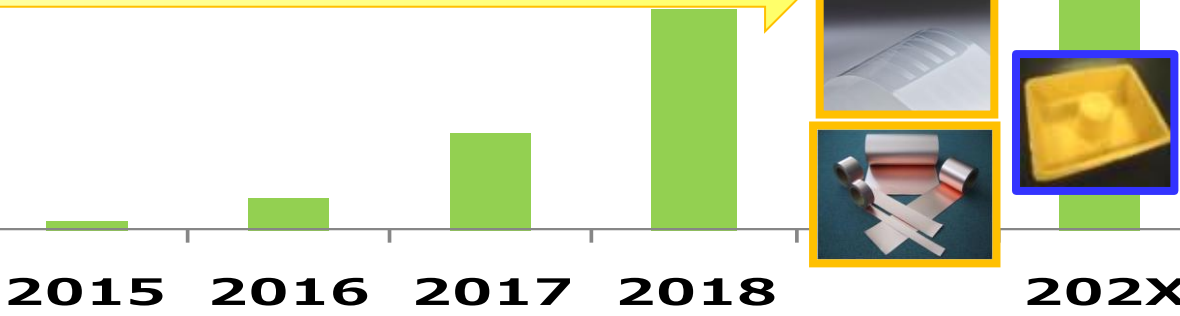


■ 3D circuit molding materials



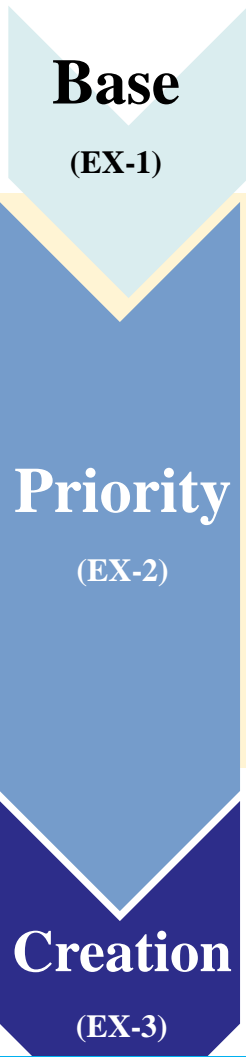
■ Molding materials for cameras

★ Commercialization of optical circuit products/LaZ®/Shozo materials for in-vehicle application



The smart society is here! Expand product lineup and business with a global viewpoint

2. Business Strategy (High Performance Plastics)



Japan/Asia

EU/North America

★: Priority measures

- ★Expand into growing businesses (automotive/aerospace business)
Increase resinification through plastic and metal composites, etc.
- ★Expand into growing market through M&A, joint ventures, and human resource reallocation
- ★Develop new products targeting from high-end to volume-zones
- ★Utilize global production bases to increase WW No.1 products

■ Aircraft related parts



Composite materials (around seats)



Honeycomb panels (around windows)



■ Plastic and metal composites



Plastic parts for engines



Plastic parts for brakes

Strengthen revenue base of existing business and expand proactively into new growing markets

2-1 Aerospace related

Measures for expansion of aerospace business

Expand sales of existing Vaupell business

- ▼ Increase customers:
 - … Aircraft manufacturers, Tier-1 companies

Expand business area with SB's material technology as a weapon

- ▼ Commercialize honeycomb panel (market size more than 100 billion yen/year)
 - … Lower cost with multi-stage press method
- ▼ Promote composites (e.g. window units /seats)
 - … Utilize metal-plastic composites, 4FST-PC sheets, etc.
- ▼ Utilize external technology through M&A and/or cooperation

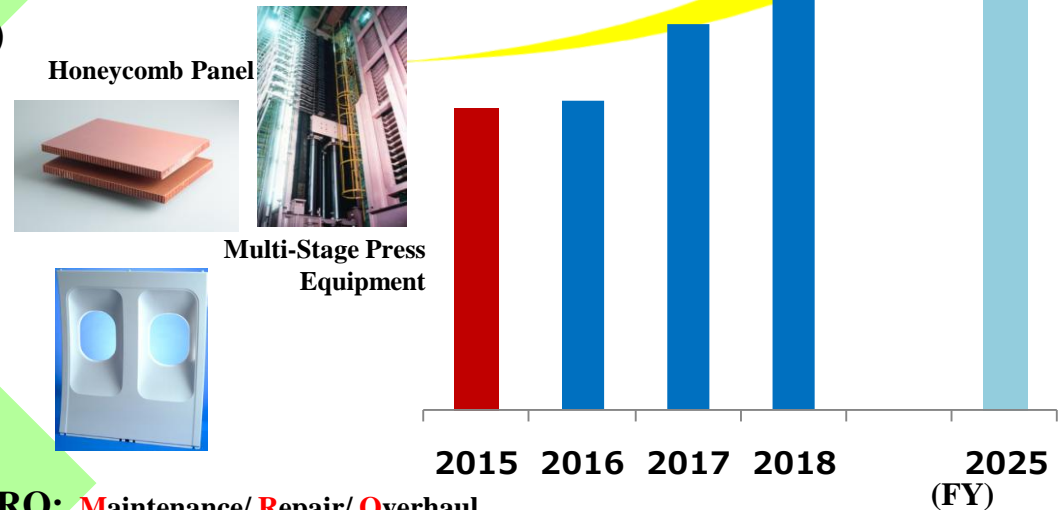
Enter into *MRO market

- ▼ Utilize SB bases (China, Malaysia)

*MRO: Maintenance/Repair/Overhaul



Aerospace related sales plan



3. Business Strategy (Medical/Bio)

★: Priority measures

Medical devices

Bio related products

Base
(EX-1)

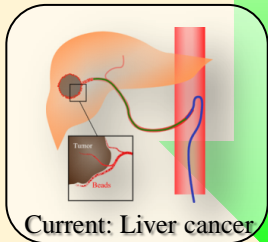
★ Strengthen product lineup and develop kits in growing areas (IVR/Endoscope)

★ Develop core customers through cooperation
Business Areas: regenerative medicine/
bio-pharmaceuticals/high precision diagnostics

★ Build global business structure (Sales/Production/R&D)
⇒ Expand sales channels through cooperation with Vaupell /outside partners

Priority
(EX-2)

■ Steerable microcatheters
(Launched in FY15)



■ Target
Expand range of department of medical care
• Interventional Radiology (IVR)
+
• Vascular Surgery
• Cardiovascular Internal Medicine



■ Become the de facto standard of cell culture incubator for regenerative medicine
■ Roll out glycan analysis business for bio-pharmaceuticals into US
■ Increase adoption of microfabricated chips for diagnostics



Glycans analysis kit for antibody drug

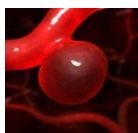


3D cell incubator

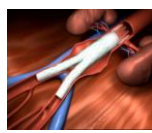
Expansion of application range= extension product lineup and promotion of a group of products



Head and neck cancer



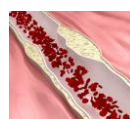
Aneurysm of internal organs



Abdominal aortic aneurysm



Fibroid



Arteriosclerosis of lower extremities



Microfabricated chips

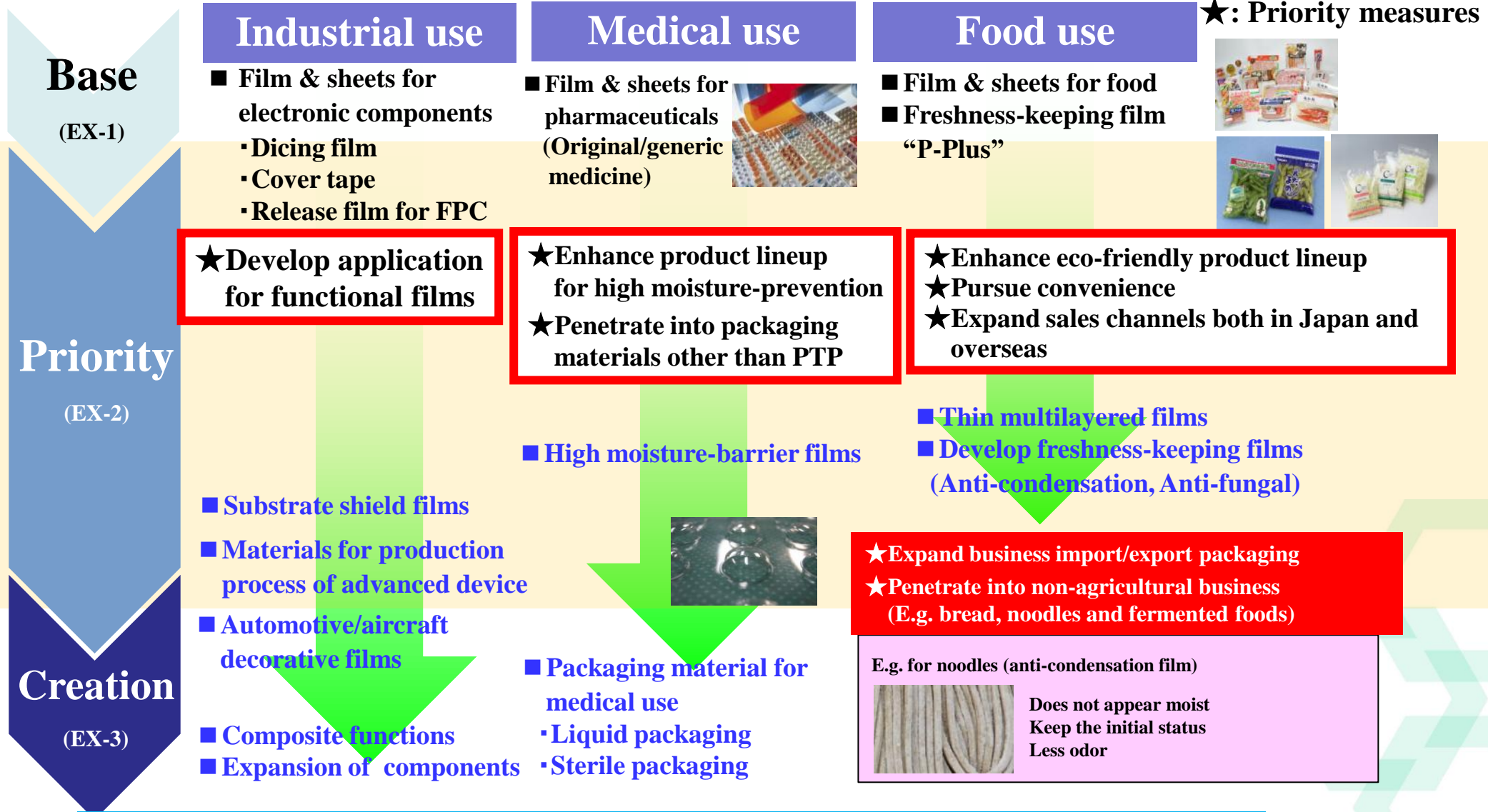


Incubators for regenerative medicine

Cooperation with outside partners for development of diagnostic drugs
⇒ Expand business size

Roll out new products into growing markets and actively expand it globally

4. Business Strategy (High Performance Film & Sheet)



Explore and expand product line of functional film & sheets

5. Business Strategy (Plates, waterproofing, Decola Innovair)

★: Priority measures



Plates

- Construction area

Waterproofing

- Construction area

Decola Innovair

- Construction area

Secure market competitiveness: cost structure reform

- ★ Capture market needs
- ★ Optimal allocation of human resources

- ★ Expand sales for general construction use (buildings/apartments)

- Add new functionalities

- ★ Specialize in areas with competitive superiority

- Elevators ⇒ Doors/walls
- Railway carriage interior

Change organization: Develop products based on customers needs through more cooperation in-house and with outside partners

- Automotive related use
- Aircraft interior use



CS First! Restructure and enhance profitability through focused marketing

Business Structure Reform



Business Structure Reform (1)

Through implementation of company-wide business structural reform, aim to resolve key issues of all business and ensure cost competitiveness

■ Key issues for implementing business strategy

IT Materials and LαZ® Business

- ▼ Expand sales in volume zone and increase share
- ▼ Strengthen cost competitiveness through productivity improvement in LαZ® business
- ▼ Increase sales in high added-value products such as mold underfill materials (MUF)

High Performance Plastics Business

- ▼ Establish lower cost prescription and production method to acquire volume-zone
- ▼ Improve development speed/probability by enhancing BtoB relationship with OEM & Tier-1 companies
- ▼ Strengthen global network of SB group

Business Structure Reform (2)

Medical and Bio Business

- ▼ Strengthen cost competitiveness of Akita and Dongguan plants (medical expenditures restraint in Japan; limits to OUT-IN method)
- ▼ Concentrated production of cutting-edge medical devices/bio products in Akita, enhance R&D bases
- ▼ Enhance competitiveness of US base, strengthen cooperation between Japan and US for development
- ▼ Promote R&D and commercialization of system products and diagnostic drugs

Film & Sheet Business

- ▼ Innovative expansion of business area and differentiation of products with new functionalities
- ▼ Prolonged sluggishness of Japanese market growth ⇒ requires further cost reduction and enhanced competitiveness at Amagasaki plant
- ▼ Prompt full-fledged contribution of production/sales at Nantong plant

Plate Business and Waterproofing Business

- ▼ Strengthen cost competitiveness by rationalizing production system and reducing fixed costs at Kanuma plant
- ▼ Reduce cost and improve profitability by rebuilding efficient and focused structures of sales and agencies

R&D Strategy/ Financial Strategy

R&D Strategy: Research and Development Targeting 4 Creation Areas

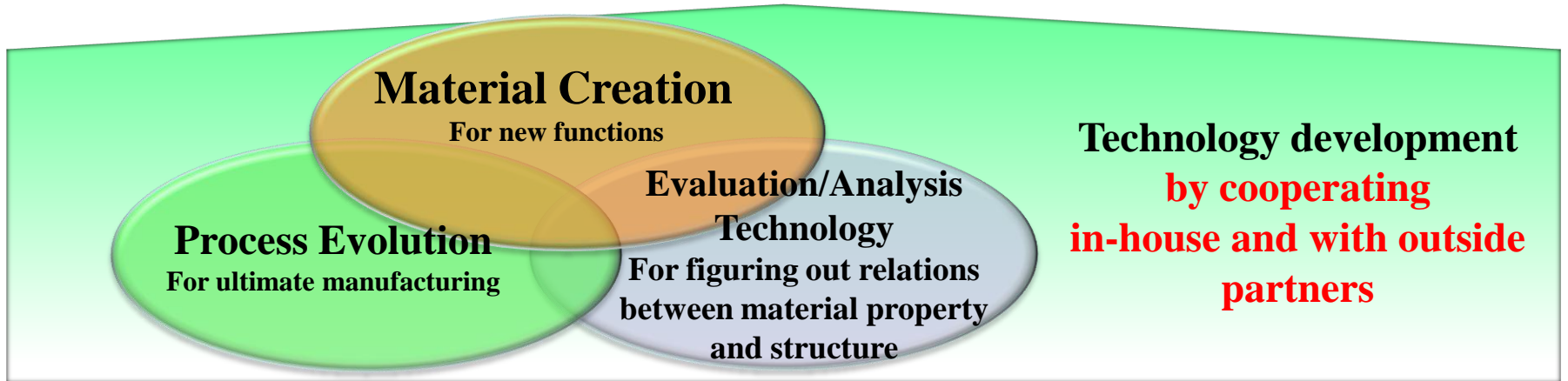
Our Themes



Four Creation Areas



Base Technology



Realize value designed functional plastics for society and customers by focusing on R&D in four creation areas

New Core Products in the Future

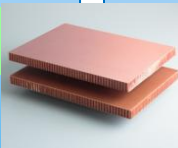
Aircraft interior



Composite materials
(around window
frames and seats)



Honeycomb panels



Flame-retardant sheets
for interior



Automotive parts

Plastic parts for engines



Plastic and Metal composites



Decorative films



Materials for large-size automotive
module



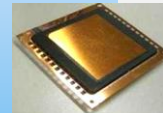
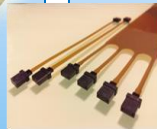
Anode materials(High speed
charging/ discharging.)

Highly integrated device

Materials
for organic semiconductors

Materials for 3D laminated devices

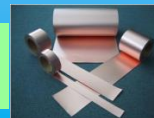
Optical circuits



Thermal interface materials
for high-power devices

High heat
dissipation/insulation
sheets

Substrate materials for
semiconductor packages
(Ultra Thin)



Health care

Products for biological
molecule analysis



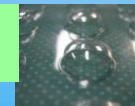
Cell culture products for
regenerative medicine

Endovascular
treatment devices



Safe endoscopes
treatment devices

High moisture barrier
sheets for medical use



Anti-condensation/anti-
fungal films

Steerable microcatheter

Core technology creation

Bio aromatic
compounds using
bio refinery process

Precise
polymerization
process

Fiber
reinforced
plastic
using shozo
process

Core
Technology

Catalyst
Design

Monomer
Synthesis

Mixing
/Dispersion

Joining of
dissimilar
materials

Surface control

Super
Multilayering

Precision
Processing

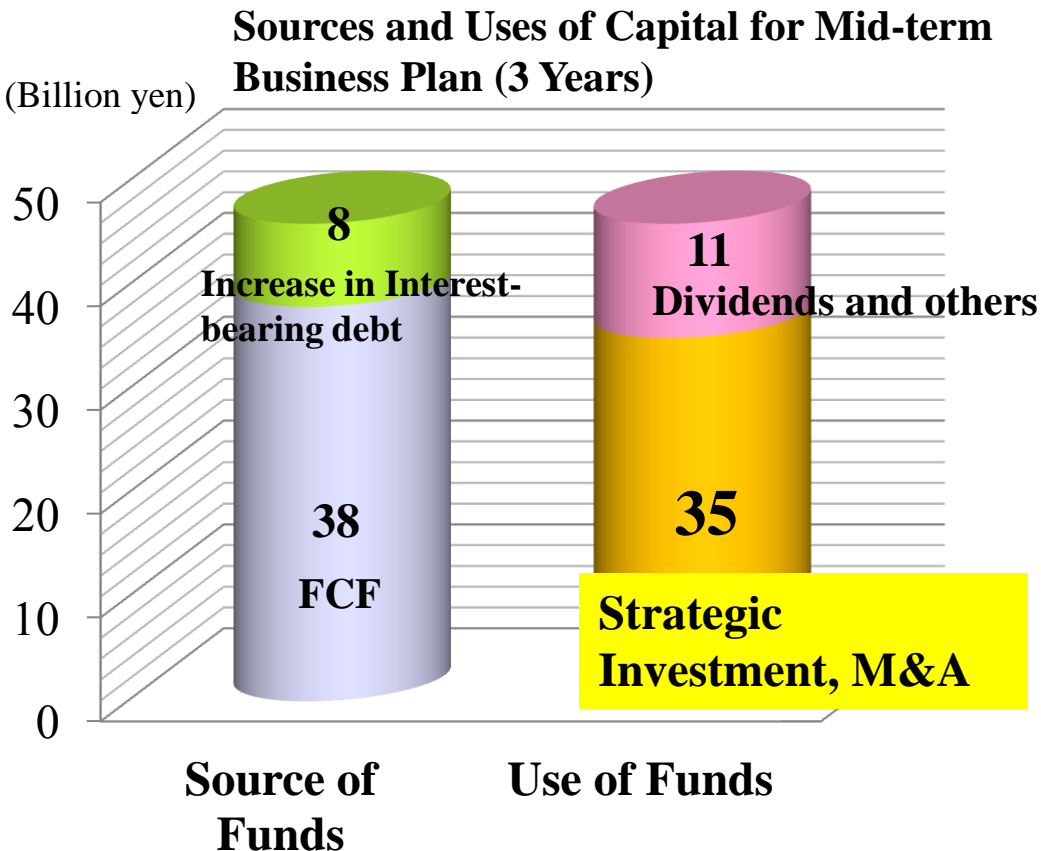
Cross-Linking
Structure
Analysis

Compound Material
Analysis

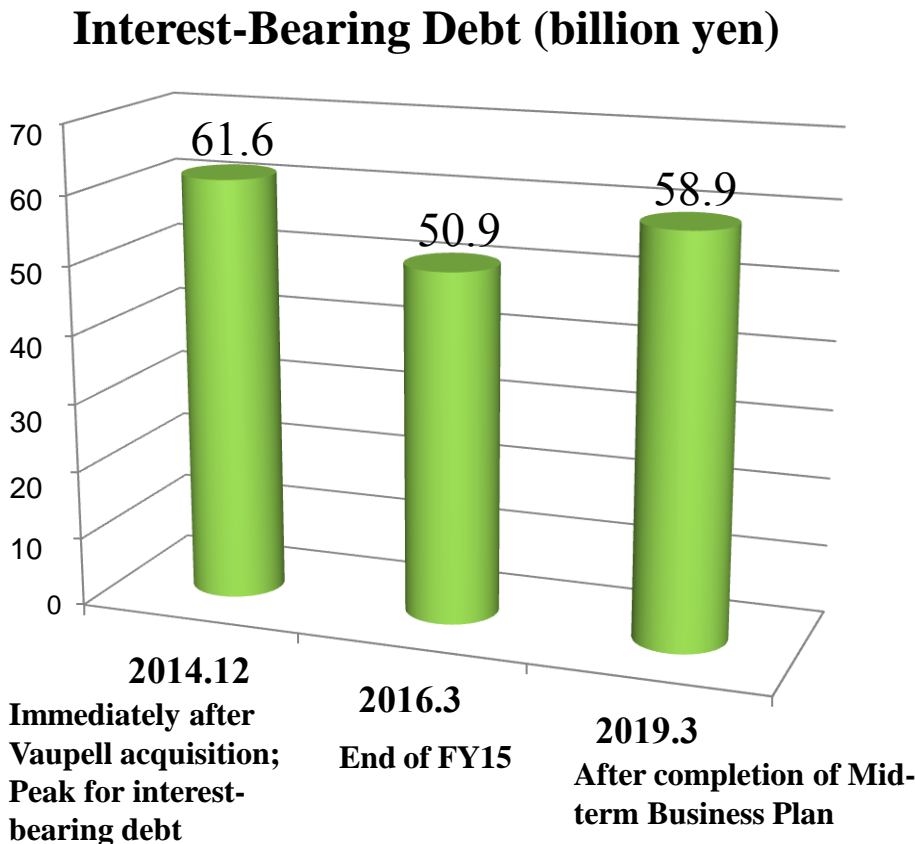
Complex Interface
Characteristics
Analysis

Aim to achieve sustainable growth by supplying total solution via creation of future core products

Financial Strategy: Strategic Investment and M&A



Strategic investment and M&A for the 3 year Mid-term Business Plan is expected to be about 35 to 40 billion yen



Interest-bearing debt increase as shown, but will not exceed historical peak

•Above FCF is based on ordinary capital expenditure for the 3 year Mid-term Business Plan of 35 billion yen, separate from the strategic investment/M&A expenses (within depreciation)