SUMITOMO CHEMICAL

November 30, 2020

Sumitomo Chemical

IR Day

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I

Corporate Strategy

Keiichi Iwata

Representative Director &
President

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I Corporate Strategy

I-1 Performance Forecast for FY2020 vs. FY2019

(Billions of yen)

	FY2020 Forecast	FY2019	Change
Sales revenue	2,215.0	2,225.8	-10.8
Core operating income	100.0	132.7	-32.7
Non-recurring items	5.0	4.9	0.1
Operating income (IFRS)	105.0	137.5	-32.5
Finance income/expenses, income tax expenses, and net income attributable to non-controlling interests	-75.0	-106.6	+31.6
Net income attributable to owners of the parent	30.0	30.9	-0.9

Naphtha price	¥28,900/kl	¥42,900/kl
Exchange rate	¥107.47/$	¥108.70/$

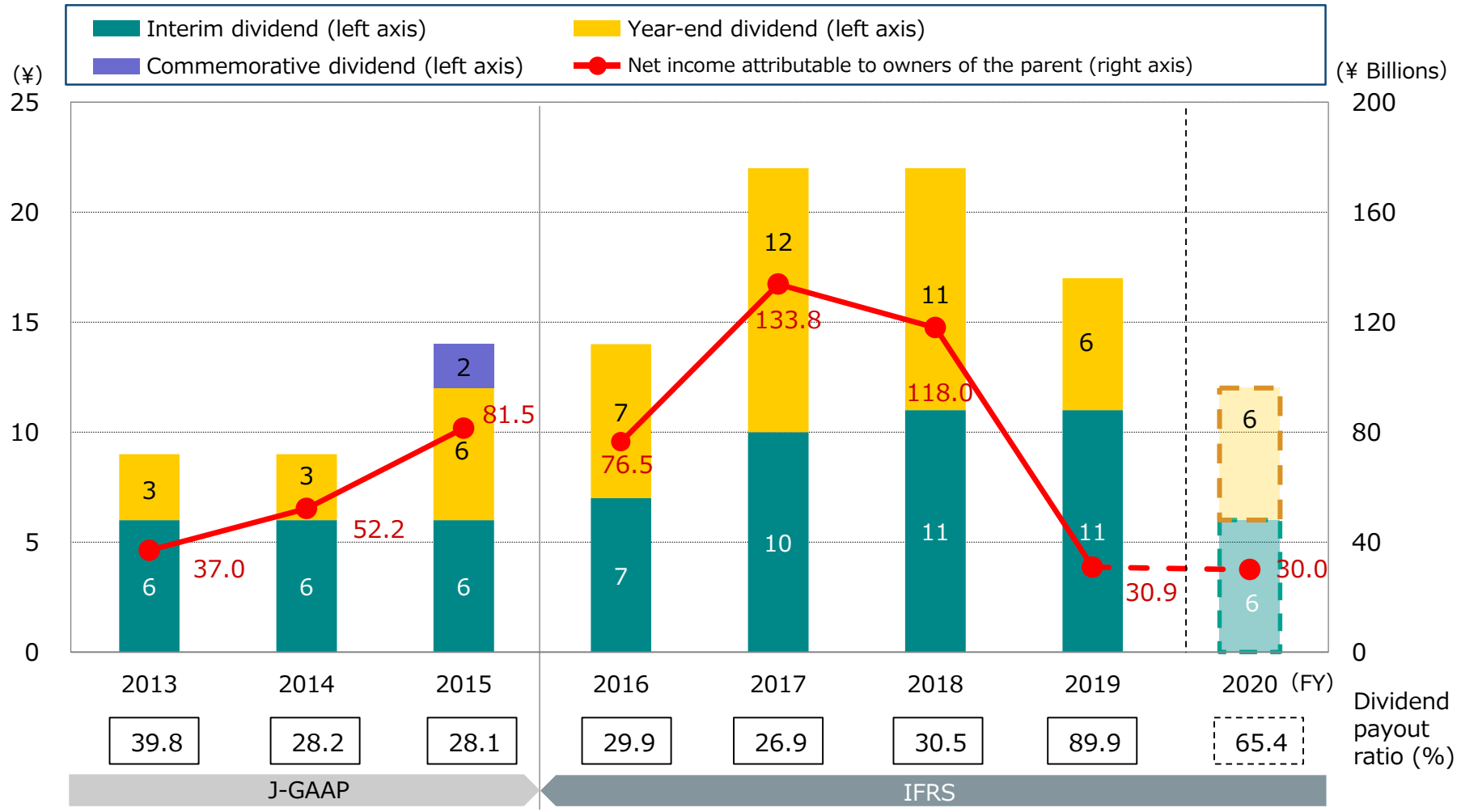
I-1 Core Operating Income Forecast by Sector for FY2020 vs. FY2019

(Billions of yen)

	FY2020 Forecast	FY2019	Change	Change
Petrochemicals & Plastics	-33.0	14.5	-47.5	Weaker petrochemical markets, Petro Rabigh's periodic shutdown maintenance, and decreased shipment volumes due to Covid-19
Energy & Functional Materials	18.0	20.3	-2.3	Decreased shipment volumes due to Covid-19
IT-related Chemicals	36.0	25.1	10.9	Increased shipment volumes of semiconductor processing materials
Health & Crop Sciences	31.0	2.1	28.9	Higher market price for methionine and increased shipment volumes of crop protection products
Pharmaceuticals	51.0	75.3	-24.3	Increased up-front expenses for the strategic alliance with Roivant
Others	-3.0	-4.6	1.6	
Total	100.0	132.7	-32.7	

I-1 Shareholder Returns

Total dividends for FY2020 to be 12 yen per share



I Corporate Strategy

Priority Efforts for FY2020

Priority issues for FY2020

- Carry through **post-merger integration (PMI) for the large-scale M&As**
- Focus on **the further improvement of our business portfolio**

I-2 Priority Efforts for FY2020: PMI for the large-scale M&As

Focusing on post-merger integration for the recently accomplished large-scale M&As

Strategic Alliance with Roivant Sciences

Making good progress in the development of the acquired pipeline drugs (due to be launched in and after FY2020)

Building sales forces by leveraging the existing North American functions (Sunovion Pharmaceuticals)

Acquisition of Four South American Subsidiaries of Nufarm

PMI being well under way amid the pandemic—system integration completed early through active communication via virtual meetings

I-2 Priority Efforts for FY2020: Further Improve Business Portfolio

Petrochemicals & Plastics

- Enhance licensing and catalyst businesses
- Shift to high value-added resin products
- Develop businesses and technologies that contribute to reducing environmental impact

Energy & Functional Materials

- Maintain and strengthen stable revenue sources including alumina and resorcinol businesses
- Take advantage of 5G and CASE and focus on expanding super engineering plastics and battery materials businesses

IT-related Chemicals

- Further improve business portfolio through advancement and fusion of underlying technologies in the areas of displays and semiconductors
- Drive optimization in response to changes in the LCD market to secure certain profit levels

I-2 Priority Efforts for FY2020: Further Improve Business Portfolio

Health & Crop Sciences

- Global expansion, with a primary focus on South America and India
- Launch crop protection products in the pipeline, including B2020 and A2020, without fail

- Build a foundation for strengthening biorational business
  - Sales: Established dedicated sales units in North America and Europe and increased staff
  - Development: Launched a biorational team in Health & Crop Sciences Research Laboratory

Pharmaceuticals

- Accelerate development of post-Latuda blockbuster candidate drugs

  Relugolix: prostate cancer
  ▶expected to be approved in the U.S. in December 2020

  Vibegron: overactive bladder
  ▶expected to be approved in the U.S. in December 2020

- Urovant becoming Sumitovant Biopharma's wholly-owned subsidiary

- Sharing the data science technology platforms, including DrugOme, across the Sumitomo Dainippon Pharma group to accelerate digital innovation

I-2 Major Developments in the Past Half Year

Good News

Termination of Completion Guarantee for Rabigh Phase 2 Project Financing

Good progress in the development of pipeline drugs

Smooth progress in post-merger integration of the acquired South American crop protection business

I-2 Initiatives under Corporate Business Plan

Basic Policies of Corporate Business Plan

Continue to focus on accelerating the development of next-generation businesses and improving productivity through digital innovation

1. Accelerate the development of next-generation businesses
2. Improve productivity through digital innovation
3. Further improve business portfolio
4. Build a more robust financial structure
5. Employ, develop and leverage human resources for sustainable growth
6. Ensure full and strict compliance and maintain safe and stable operations

Change & Innovation 3.0

For a Sustainable Future

I-2 Accelerate the Development of Next-Generation Businesses

Four Priority Areas of the Corporate Business Plan

Health care

Food

Reduction of environmental impact

ICT

Innovation Ecosystem

I-2 Accelerate the Development of Next-Generation Businesses

Corporate unit-led research × Business unit-led research

→ **Advancing major development projects in each area**

Major progress by area

Health care

Contract development and manufacturing organization (CDMO) for regenerative medicine and cell therapy

Established a Sumitomo Chemical-Sumitomo Dainippon Pharma joint venture

Food

Biorational products

Established a SynBio hub in VBC of U.S.

Reduction of environmental impact

Solid-type batteries

Launched an industry-academia joint research program with Kyoto University

Chemical recycling

Aim to commercialize all the three projects during the 2020s

ICT

Image sensor materials

Development of new materials for CMOS image sensors

I-2 Improve Productivity through Digital Innovation: DX Strategy 1.0

Significant improvement in efficiency and quality

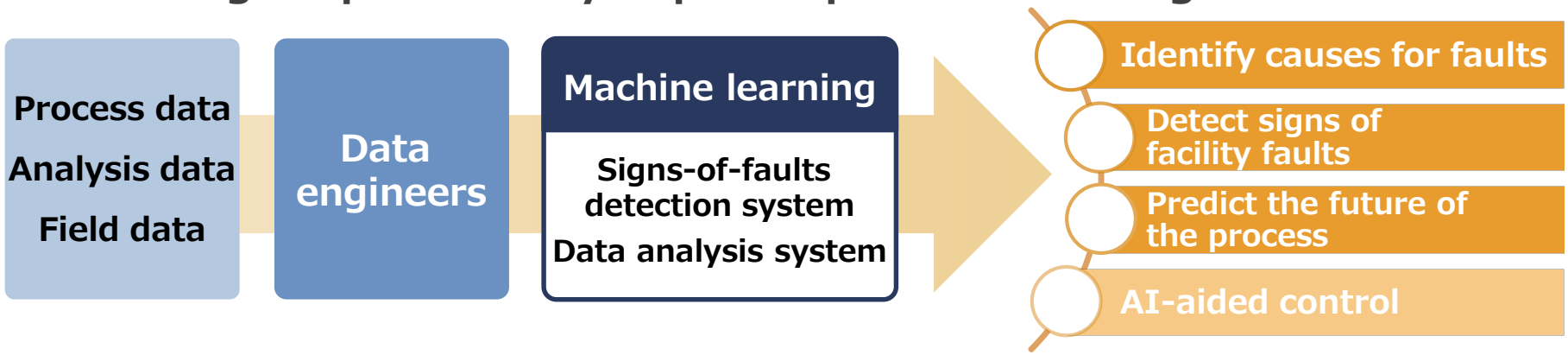
in the areas of production, R&D, supply chain management and administration

DX Strategy 1.0

	Initiatives completed up to the previous Corporate Business Plan	Initiatives in progress under the current Corporate Business Plan
Digital Plant	Partial introduction of AI and IoT	Improving the quality of production operations by leveraging AI and IoT technologies
Digital R&D	Partial introduction of Materials Informatics (MI)	Improving the efficiency and quality of R&D activities by leveraging AI Building MI into R&D activities
Digital SCM (including marketing)	Partial introduction of S/4HANA	Full-scale introduction of S/4HANA Job standardization and work style reform
Digital Office	Partial introduction of RPA Introduction of Office365	Full use of robotics Measures to boost communication Promoting paperless operations

I-2 Improve Productivity through Digital Innovation: Examples of DX Strategy 1.0 Initiatives

Promoting advanced use of data collected from production facilities to achieve higher productivity in plant operations management



Examples of signs-of-facility faults detection systems

Use machine learning to detect signs of facility faults and put out an alert

Currently used in **8** plants in **4** production sites and to be brought in phases to all the other plants

I-2 Improve Productivity through Digital Innovation: Our DX Strategy Milestones

Corporate unit-led efforts

DX Strategy 1.0

Improve productivity in four focus areas for DX

Generate extra capacity and reduce operation cost by streamlining processes

Improve quality and efficiency of functions and operations and share best practices across organization

Business unit-led efforts

DX Strategy 2.0

Consolidate competitiveness of existing businesses

Enhance customer interface and improve customer satisfaction to create added value and expand market shares and sales

Cross-functional drive to optimize the entire supply chain

Built in as continuous efforts

DX Strategy 3.0

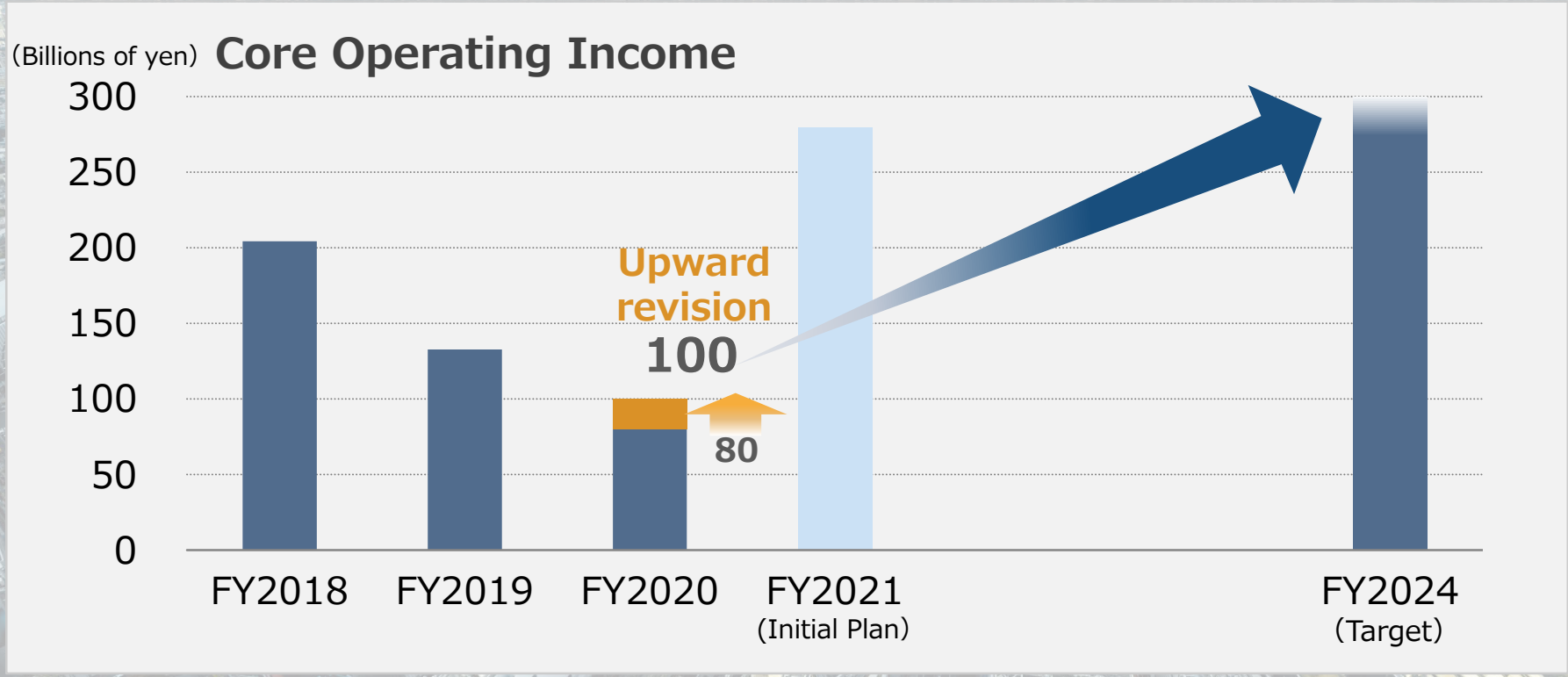
Create new business models

Create new business models leveraging services and data and our core technologies

Improve our corporate value as leading DX-driven company

I-2 Striving for Sustainable Growth

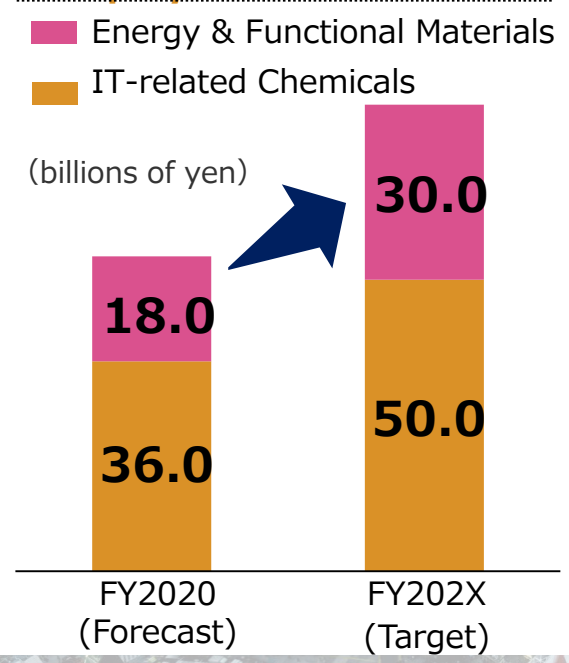
We will strive to achieve a significant improvement in performance in the next Corporate Business Plan period by ensuring PRC's stable operation and expanding sales of new pharmaceutical and crop protection products.



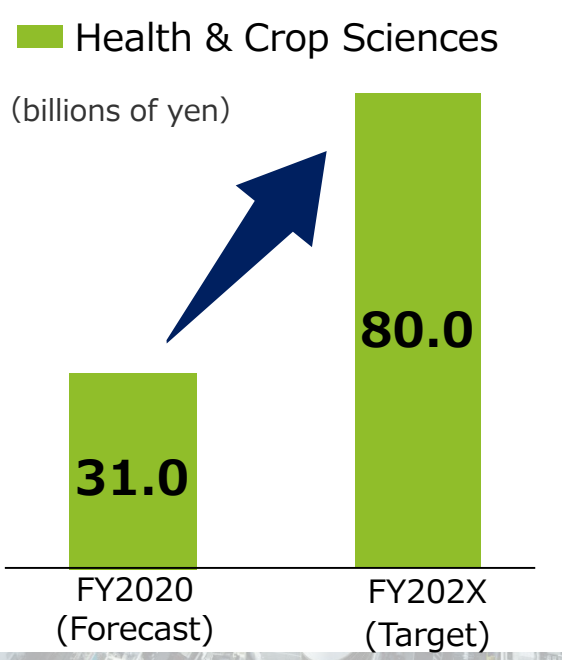
Striving for Sustainable Growth

Outlook for performance improvement by sectors (core operating income)

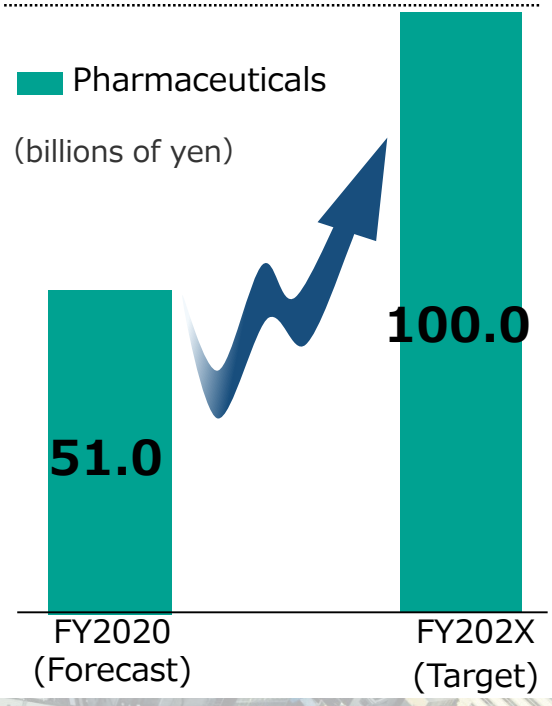
- Actively invest resources in high-growth areas such as 5G and mobility
- Develop and promote high value-added products and new products such as products for next-generation displays



- Launch B2020 and A2020 products
- Enhance sales of our biorational products
- Expand business in South America and India

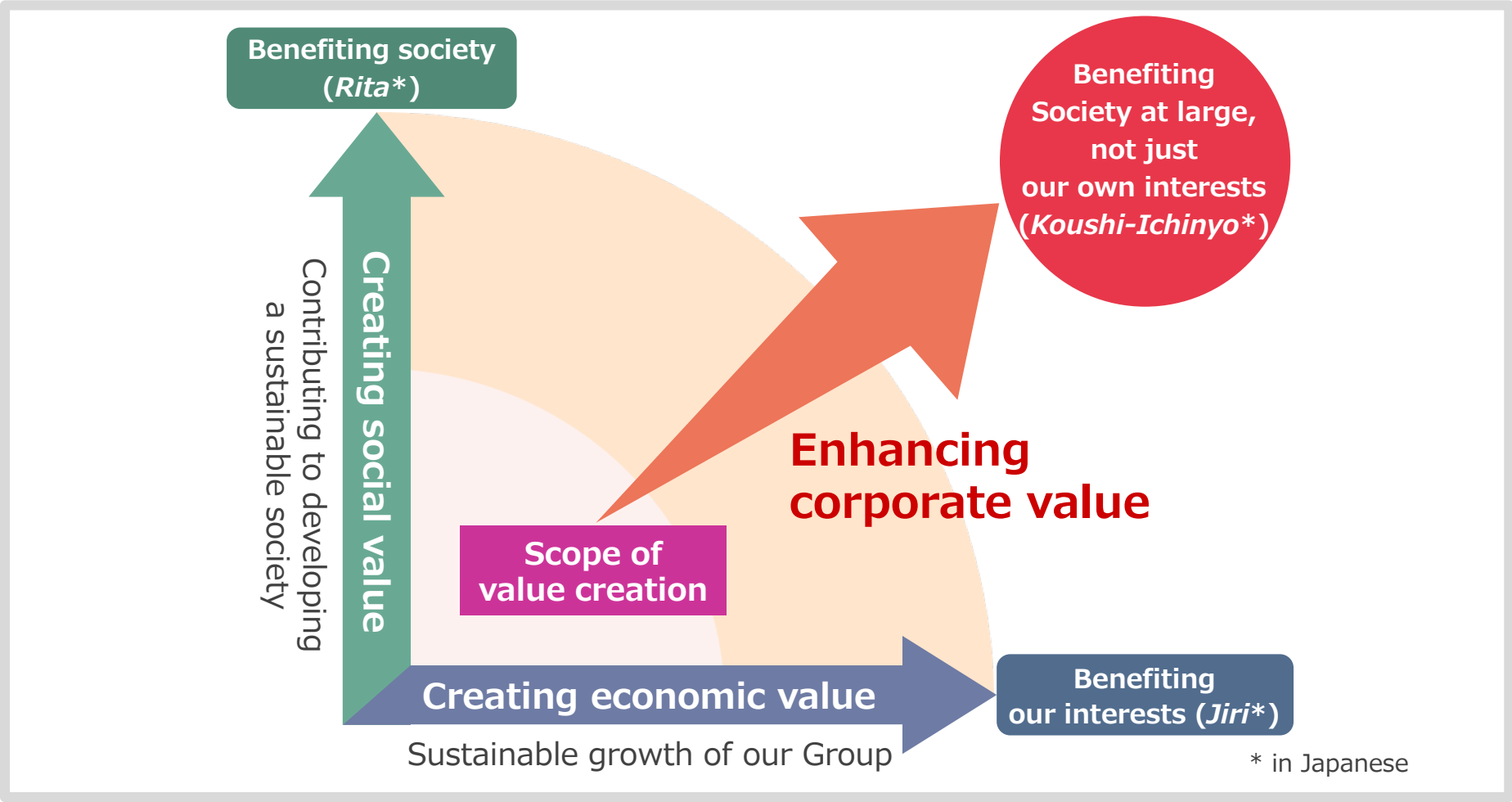


- Increase sales of the drugs acquired through the alliance with Roivant and our oncology drugs



I Corporate Strategy

I-3 Sustainability Efforts: What We Strive to Be



What We Strive to Be

Achieving sustained growth for the Sumitomo Chemical Group and helping build a sustainable society by creating economic value and social value in an integrated way

I-3 Sustainability Efforts: Contribution through Our Business

Contribution through our business (seizing opportunities)

Reducing environmental impact	Food	Health care	ICT
▪ Carbon cycle ▪ Chemical recycling ▪ Energy saving ・・・	▪ Agrochemicals ▪ Biorational ▪ Methionine ・・・	▪ Containment of infectious diseases via vector control ▪ Development of drugs for infectious diseases ▪ Regenerative medicine and cell therapy ・・・	▪ Meeting the needs of a super-smart society and smart mobility ・・・

Promotion of Sumika Sustainable Solution products

Provide solutions to build a sustainable society by
promoting development and widespread use of Sumika Sustainable Solution products

KPI

Sales revenue of Sumika Sustainable Solution products (FY2021)
560 billion yen
(FY2019: 479.8 billion yen)

Examples of contributions to society

Contribution of Sumika Sustainable Solution products to GHG emissions reduction
62 million tons

Contributing to building a sustainable society through our business

I-3 Sharing Our Aspirations with Stakeholders

Sumitomo Chemical creates
economic value and social value in an integrated way

Contribute to realizing a sustainable society through our business

- Sharing our aspirations with stakeholders -

II

Petrochemicals & Plastics Sector

Noriaki Takeshita

Representative Director &
Senior Managing Executive Officer

Ⅱ Petrochemicals & Plastics Sector

Ⅱ Petrochemicals & Plastics Sector

Ⅱ-1 Major Products

Polyethylene (PE)

Resin used as a packaging material,
a major product of the petrochemical industry

【Our features】
・Strengths in high quality protective films
・3 production bases in Japan/Singapore/Saudi Arabia


Polypropylene (PP)

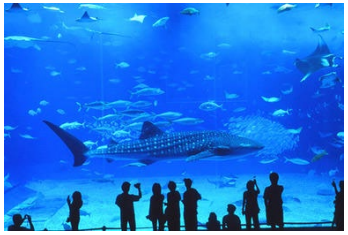
Widely used resins for automobile parts and
packaging materials, etc.

【Our features】
・Global operation of PP compounds for automobiles
・Strong in high-performance packaging applications


MMA (MMA-m/PMMA)

Resins with high transparency and
excellent weather resistance, and their raw materials

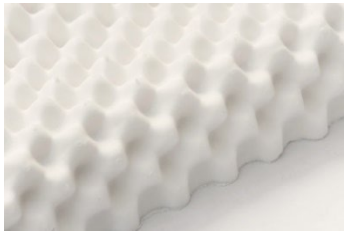
【Our features】
・2nd largest market share in Asia, 4th in the world (MMA-m)

Propylene Oxide (PO)

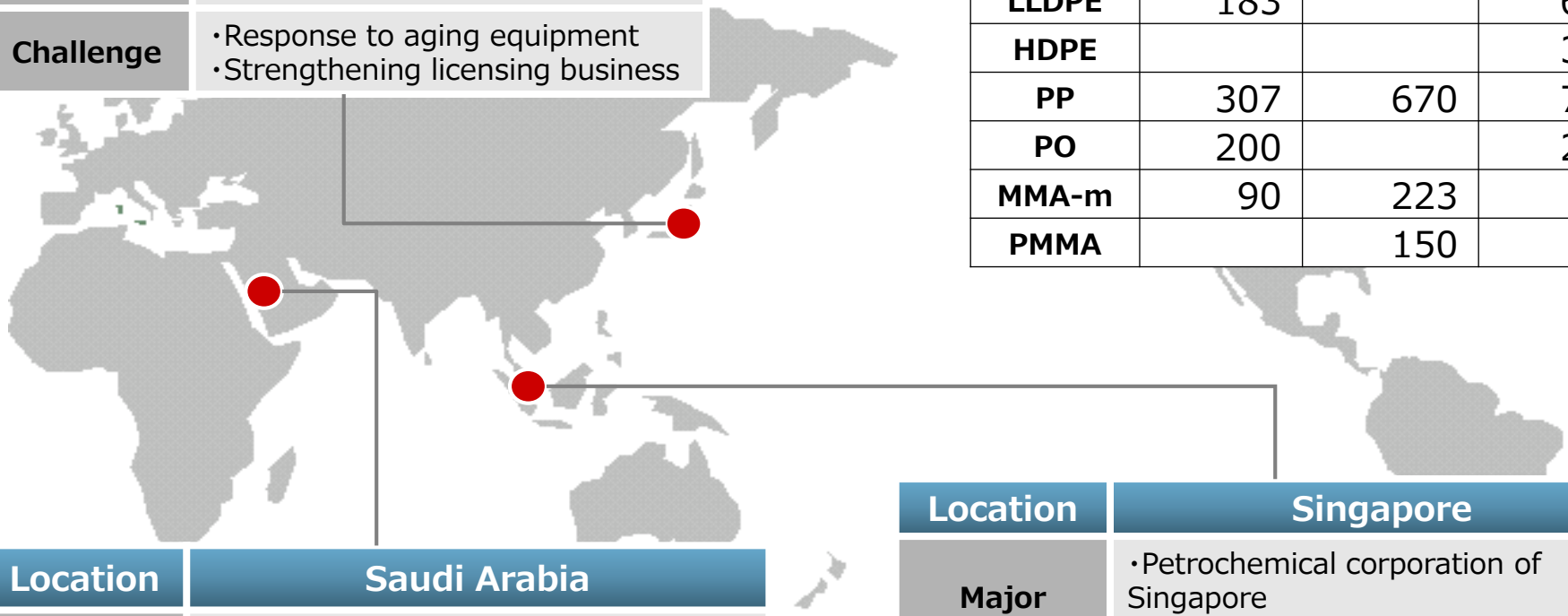
Raw material for urethane used in automobile seats and
furniture

【Our features】
・Proprietary technology that does not produce co-products
・Promoting licensing of the proprietary technology

Ⅱ-1 Petrochemicals & Plastics Sector by Region

Location	Japan
Positioning	・Development base for new products & technologies
Challenge	・Response to aging equipment ・Strengthening licensing business



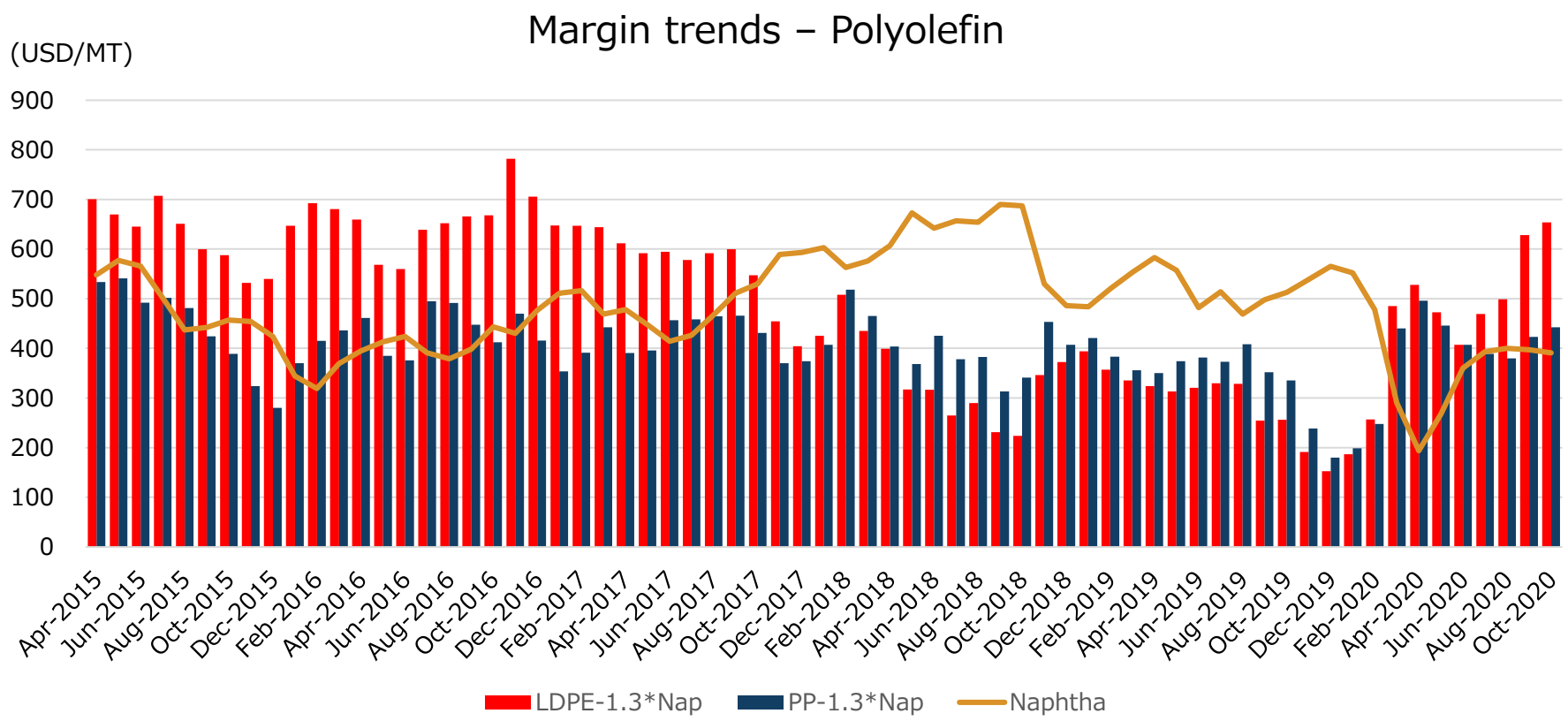
Capacity (KTA)	Japan	Singapore	Saudi Arabia
LDPE	172	255	150
LLDPE	183		600
HDPE			300
PP	307	670	700
PO	200		200
MMA-m	90	223	90
PMMA		150	50

Location	Saudi Arabia
Major affiliates	・Petro Rabigh (PRC)
Positioning	・Refinery-Chemicals integration complex, taking advantage of low-cost feedstocks and fuels
Challenge	・Unstable profit and loss trends due to fluctuations in oil refining margin

Location	Singapore
Major affiliates	・Petrochemical corporation of Singapore ・The polyolefin company ・Sumitomo chemicals Asia
Positioning	・Petrochemical business hub with strong customer base
Challenge	・Continue to add value to products ・Maintaining high share for leading customers

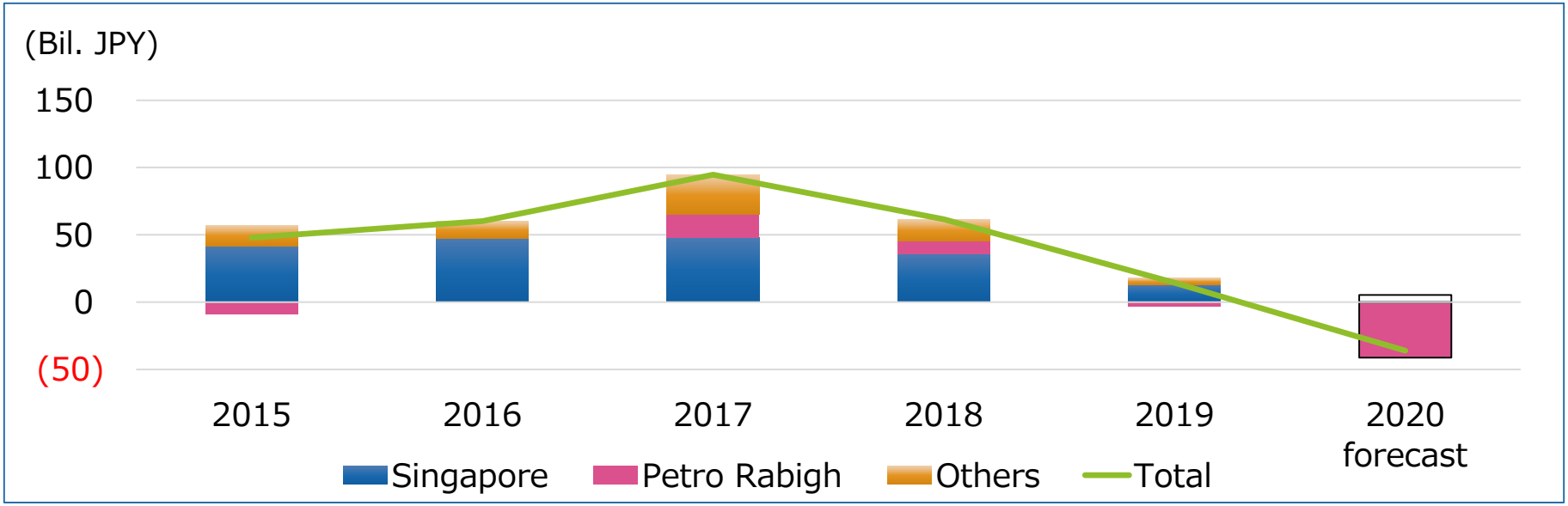
Ⅱ-1 Petrochemical Market Conditions

Margins for petrochemical products peaked around 2016 and had been on a downward trend, but improved in 2020 despite COVID-19.



Source: Sumitomo Chemical calculated from IHS Markit

Ⅱ-1 Performance Trends for the Petrochemicals & Plastics Sector



※ 2015, 2016: Operating Income + Equity in earnings (losses) of affiliates
2020 forecast: Petro Rabigh's figure shows Jan.-Sep. Actual

- **The profit level of the Petrochemical & Plastics sector is affected heavily by petrochemical product market conditions.**
- **The profit and loss forecast for FY2020 is a large deficit, despite relatively favorable product market conditions, due to the deterioration of Petro Rabigh's business performance.**

Ⅱ-1 Petro Rabigh's Performance

FY2020

(unit; USMM)

	Jan.-Mar.	Apr.-Jun.	Jul.-Sep.
Income before tax	-547	-304	-168

Major causes for deterioration

Scheduled Maintenance | **Crude oil price plunge** | **Margin reduction due to COVID-19**

All these events hit during the scheduled maintenance period in Mar.-Apr.
- unprecedented and extremely special situation

Future outlook

- **FY2020: Scheduled maintenance completed.**
  Product margins recovering, deficit shrinking
- **FY2021: Impact from special events will diminish.**
  Improving profit & loss by continuing stable operations

Ⅱ-1 Rabigh Phase Ⅱ Project – Resolved completion guarantee in Sep. 2020

Progress of the Phase Ⅱ Project

2012
Confirmed business feasibility with a feasibility study

2017
Construction completed

End of 2017
Test run

March 2018
All products complied with specifications

October 2019
Completed CRT*1

November 2019
Started commercial operations

September 2020
Resolved completion guarantee

Maintaining stable operations at both PRC Phase Ⅰ and PRC Phase Ⅱ

*1 Creditors Reliability Test

Investment and Completion Guarantee

Total investment in PRC:
Approx. US$9.1bn.

Cash flow before completion
Approx. US$0.9bn.

Project financing
Approx. US$5.2bn.

Loan guarantees by parent companies
Approx. US$3.0bn.

Completion guarantee (amount borne by Sumitomo Chemical)
Approx. US$2.3bn.*2
Resolved in Jun. to Sep. 2020

Debt guarantees (amount borne by Sumitomo Chemical)
Approx. US$1.5bn.*2
To continue until capital increase is executed

*2 As of Sep. 2020

Ⅱ Petrochemicals & Plastics Sector

Licensing & Catalyst Business

Expansion of Technology Licensing Business

Propylene Oxide Technology

Licensed to 4 Plants at 4 Companies (As of 2020)

- Energy saving & environmental-friendly
- World's first co-product-free process

Caprolactam Technology

2020: Entry to Licensing Business

- World's first vapor-phase Beckman rearrangement process
- Ammonium sulfide free
- High performance catalyst

HCl Oxidation Technology

Licensed to 10 Plants at 6 Companies (As of 2020)

- Recycling of by-products
- Significant energy savings

PE & PP Technology

- Wide range of polymer grades and portfolio
- High performance catalyst

Catalyst Manufacturing Plant (Chiba Works)

Started-up

PE・PP Cat.	2019 3Q
PO Cat.	2019 4Q

Stable profit through technology licensing and catalyst sales

Ⅱ-2 High Value-Added Polymers

Flexible Displays

Mono-material film
Contribution to materials recycling

5G materials
Contribution to achieving an IoT society

Commodity polymers

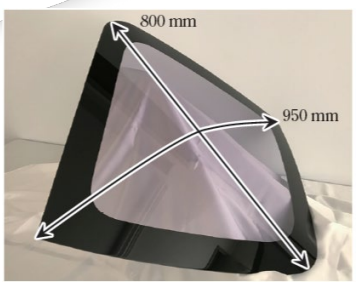
Highly rigid and tough materials for automobiles
Reduction of CO_2 emissions by reducing weight

High performance retort pouches
Reducing food loss, reducing packaging weight

New resin heat storage material
Contribution to energy saving

Microwaveable retort pouches

HEATORAGE®

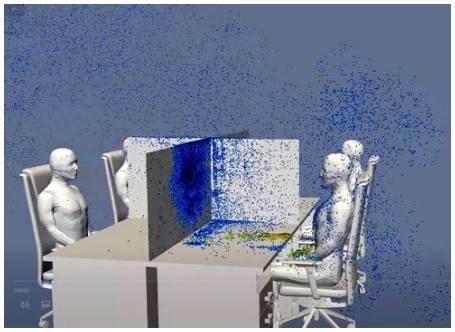


Prototype PMMA rear window for cars

Ⅱ Petrochemicals & Plastics Sector

Ⅱ-3 COVID-19 Countermeasure Products

1) Product introduction



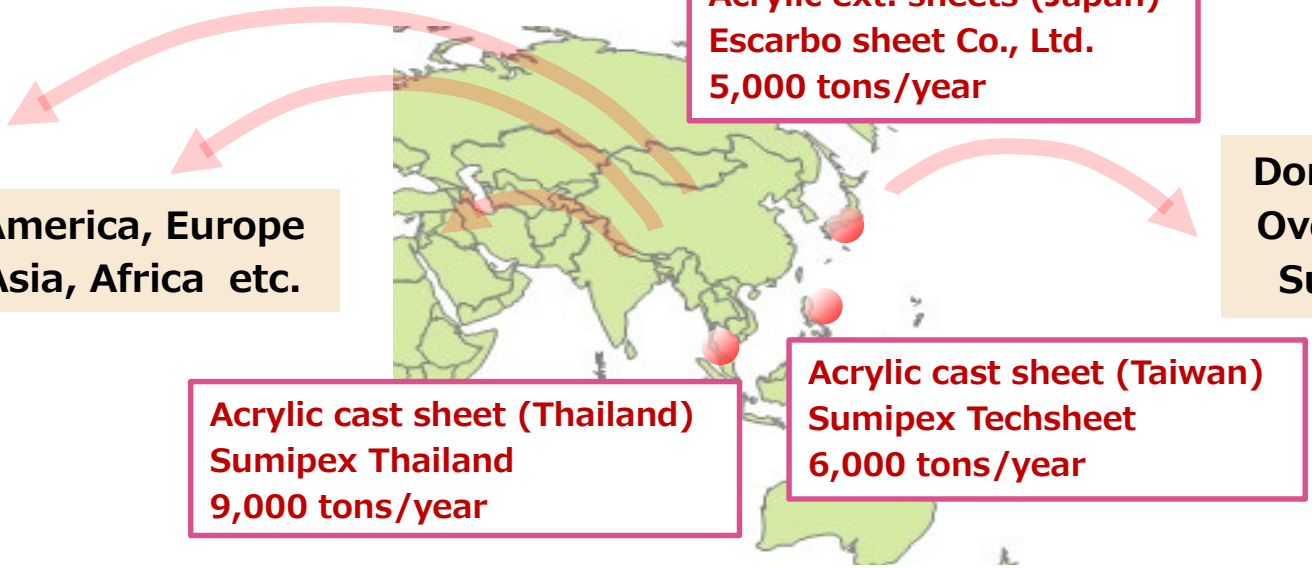
Transparent acrylic cast sheet: Sumipex

Transparent acrylic ext. sheet: Sumipex E

Features: Excellent transparency, scratch resistance, weather resistance, suitable for long-term use.

Example uses: Store/reception counters, restaurants, hospitals, schools, etc.

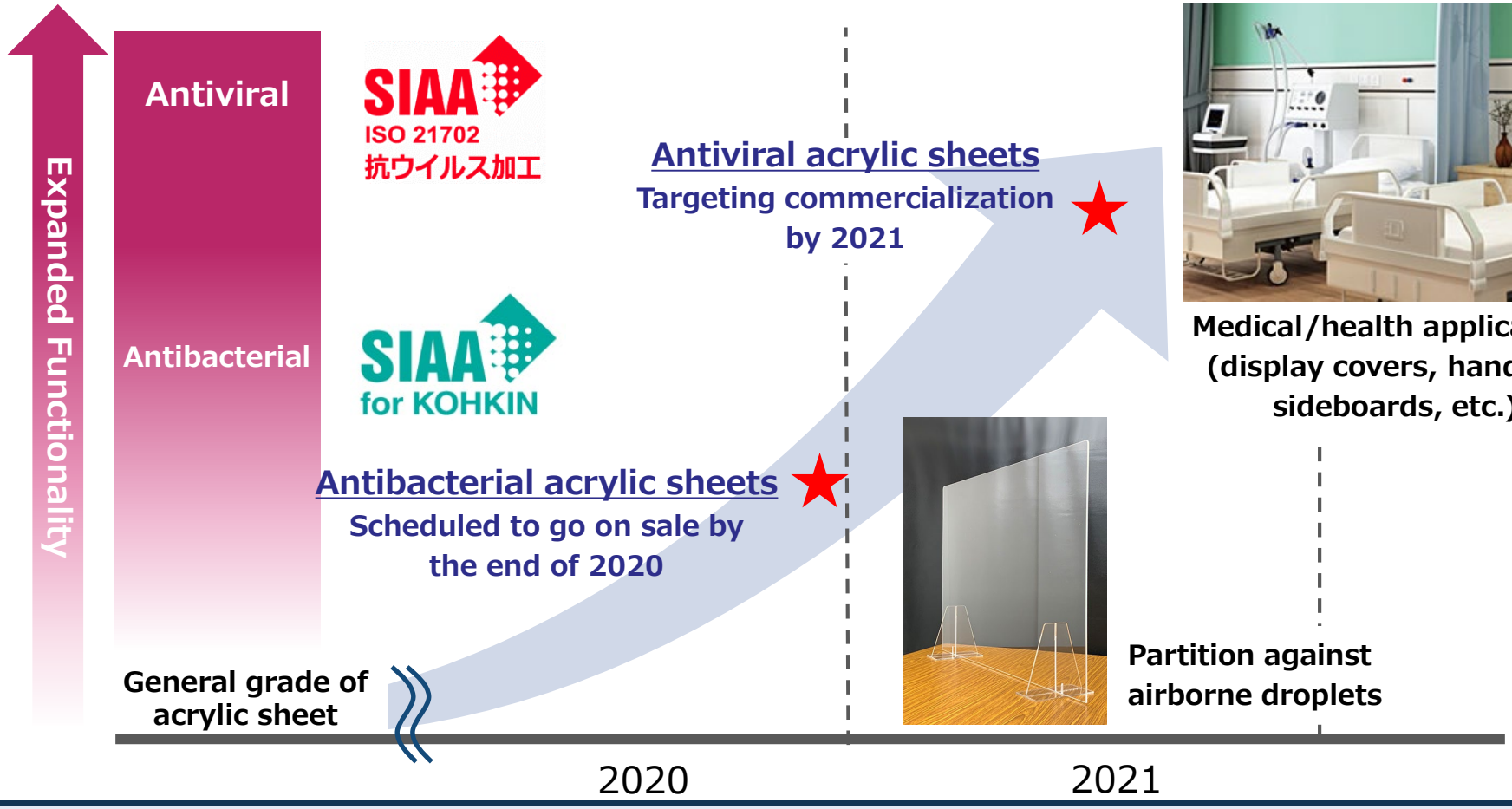
2) Global supply chain



COVID-19 Countermeasure Products

3) Expanding the functionality of acrylic sheets

> Increased demand for antibacterial and antiviral materials due to COVID-19 situation
> Providing solutions through technical collaboration with Sumika Environmental Science Co., Ltd. (antiviral agent).



Ⅱ-3 Global Warming Initiatives ①

Promote fuel conversion to reduce CO_2 emissions in major domestic production bases (Ehime & Chiba)

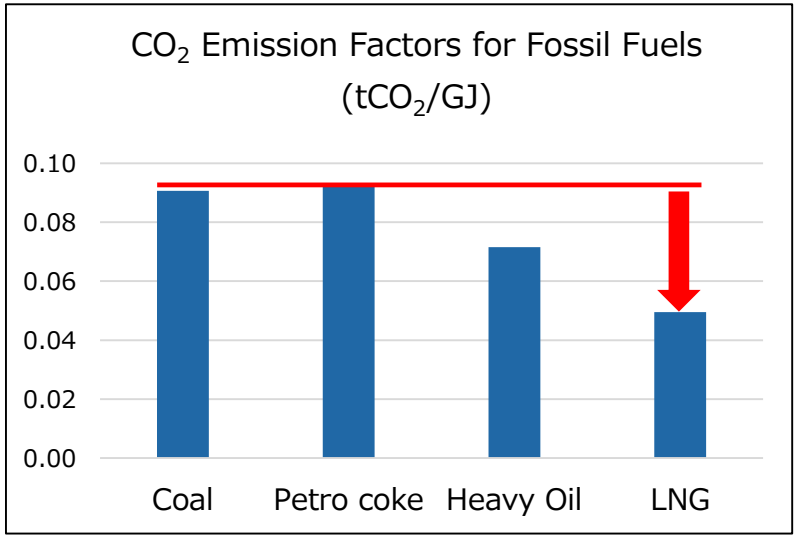
- Build LNG terminal in Ehime through joint investment by 5 firms
- Introduce high-efficiency gas turbine power generators
- Replace some of the existing boilers

Fuel conversion	Shift from coal, petroleum coke and heavy oil to LNG
Thermal efficiency	Supply steam, using high-temperature exhaust gas from gas turbines

Reduce CO_2 emissions

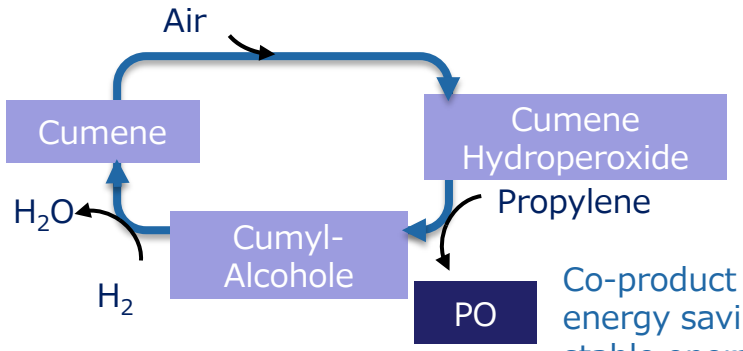
Ehime: 650 thousand tons/ year
Chiba: 240 thousand tons/ year

Composite image: LNG terminal at the Ehime works



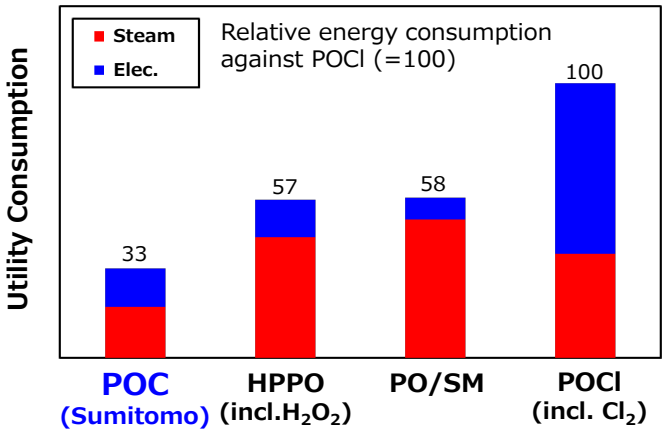
Ⅱ-3 Global Warming Initiatives ②

Propylene Oxide-only Method (Cumene Method)

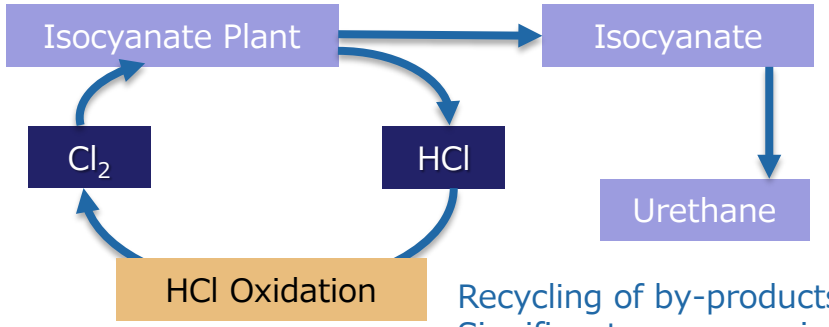


Co-product free, energy saving and stable operation

Comparison with typical PO technologies



HCl Oxidation Technology



Recycling of by-products, Significant energy savings

Comparison with typical alternative

	Sumitomo HCl Oxidation	NaCl Electrolysis
Electricity [kWh/t-Cl2]	**165**	2,500
CO_2 Emissions*1 [t/t]	**0.08**	1.3

*1 The value was calculated with CO_2 emission factors from the Japanese Ministry of the Environment

Contributing to reducing global warming by licensing energy-saving processes

Ⅱ Petrochemicals & Plastics Sector

Ⅱ-4 Prospective business

Aiming at a Decarbonized Society, Circular Economy

Plastic products make our lives richer and more convenient, but there are issues with both the carbon footprint caused by consuming petroleum as a raw material and with how to handle and reuse waste plastic products.

Area	Direction of business
Addressing Climate Change	Contribute to reducing GHG emissions
	Use biomass-derived raw materials
Reducing Environmental Impact	Contribute to reducing waste plastics
	Contribute to reducing impact in food production
Effective Use of Resources	Implement carbon resource recycling
	Expedite carbon capture and utilization technology

Direction of R&D

We strive to promote R&D in plastics products that contribute to the 3 Rs (Reduce, Reuse, Recycle), and to enhance their environmental friendliness and utility value.

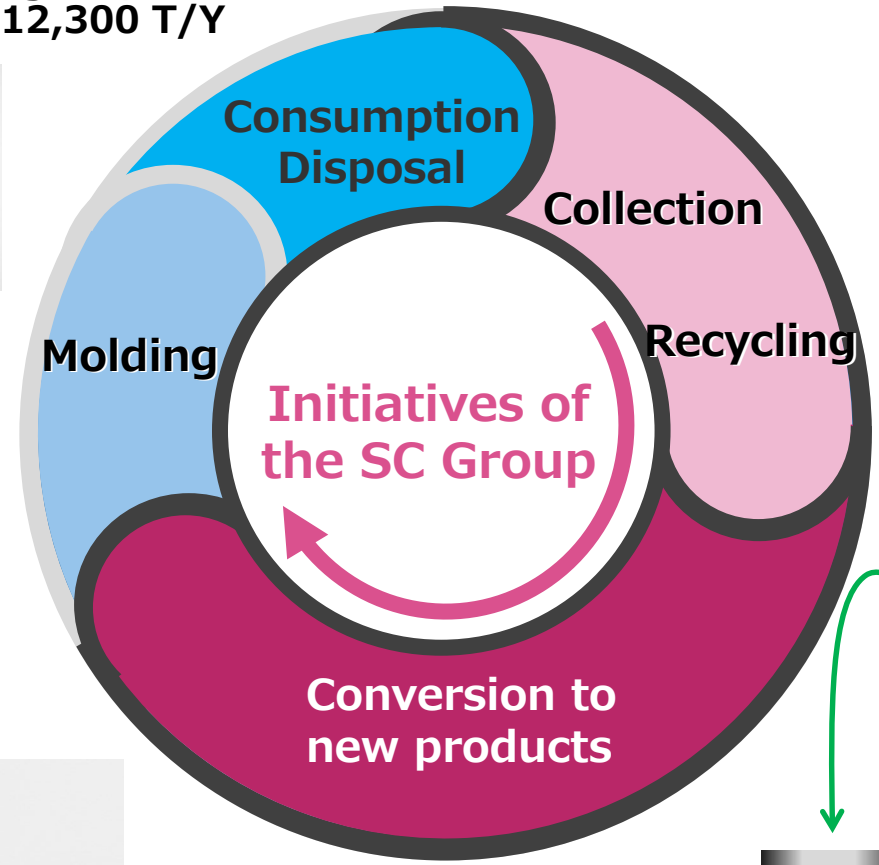
Lighter Packaging

Promotion of Reusable Products

Development of technology to utilize waste plastics and captured carbon

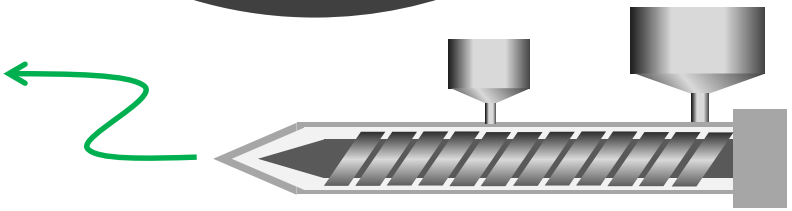
Materials Recycling Technology Automotive materials

Environmental Contribution Results (FY2018)
Reduction of Virgin PP usage: 4,700 T/Y
GHG emission reduction: 12,300 T/Y



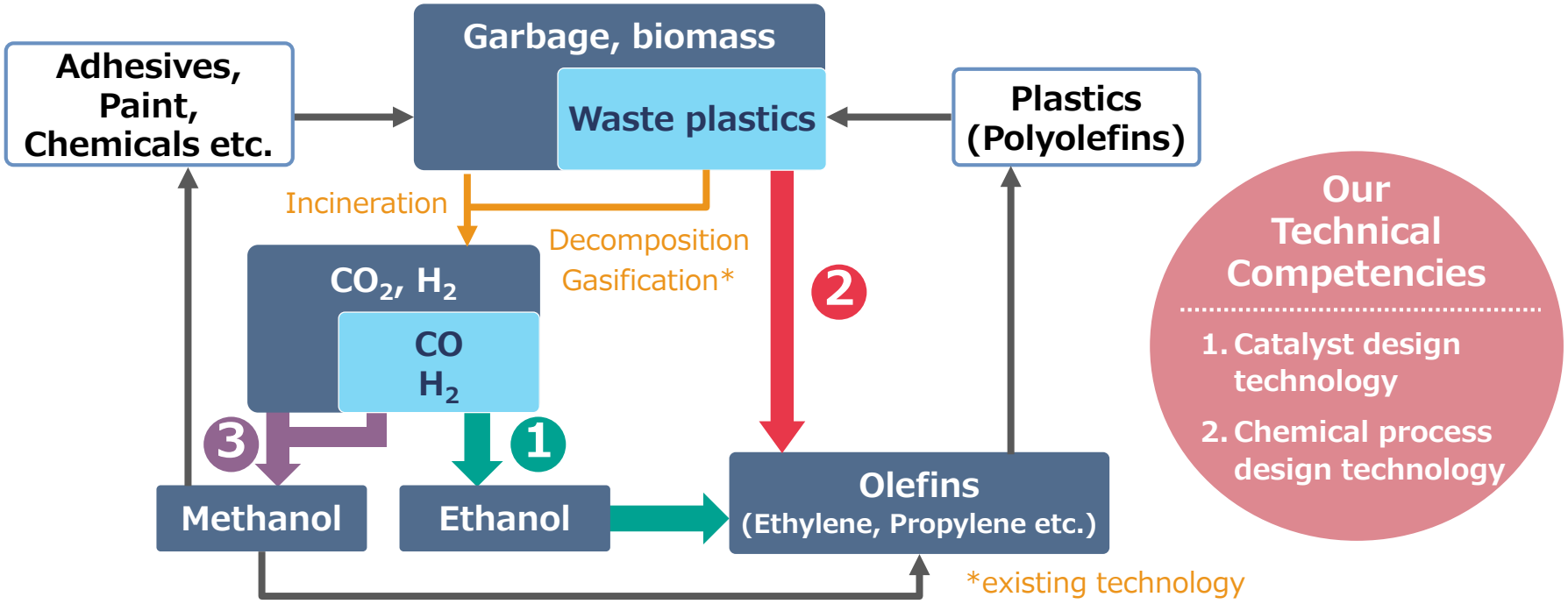
Commercialization through Sumika Polymer Compounds Europe Ltd.

Glass fiber reinforced PP compound (pellets)
Regenerated PP rate: Over 60%



Advanced manufacturing and quality control technology, and abundant know-how

Ⅱ-4 Chemical Recycling Technology



Our Technical Competencies

1. Catalyst design technology
2. Chemical process design technology

Produce plastics from waste plastics or garbage instead of fossil resources

① Alliance with SEKISUI CHEMICAL

RM	Garbage, waste plastics, biomass
Prod.	Polyethylene
React.	Gasification→ ethanol (by microbes) → PE

② Joint research with Muroran Inst. Tech.

RM	Waste plastics
Prod.	Ethylene, propylene
React.	Catalytic cracking

③Joint research with Shimane Univ.

RM	Garbage, waste plastics, biomass
Prod.	Methanol
React.	Catalytic synthesis of CO_2 and H_2

III

Energy & Functional Materials

Kingo Akahori

Representative Director &
Managing Executive Officer

Ⅲ Energy & Functional Materials

Ⅲ Energy & Functional Materials

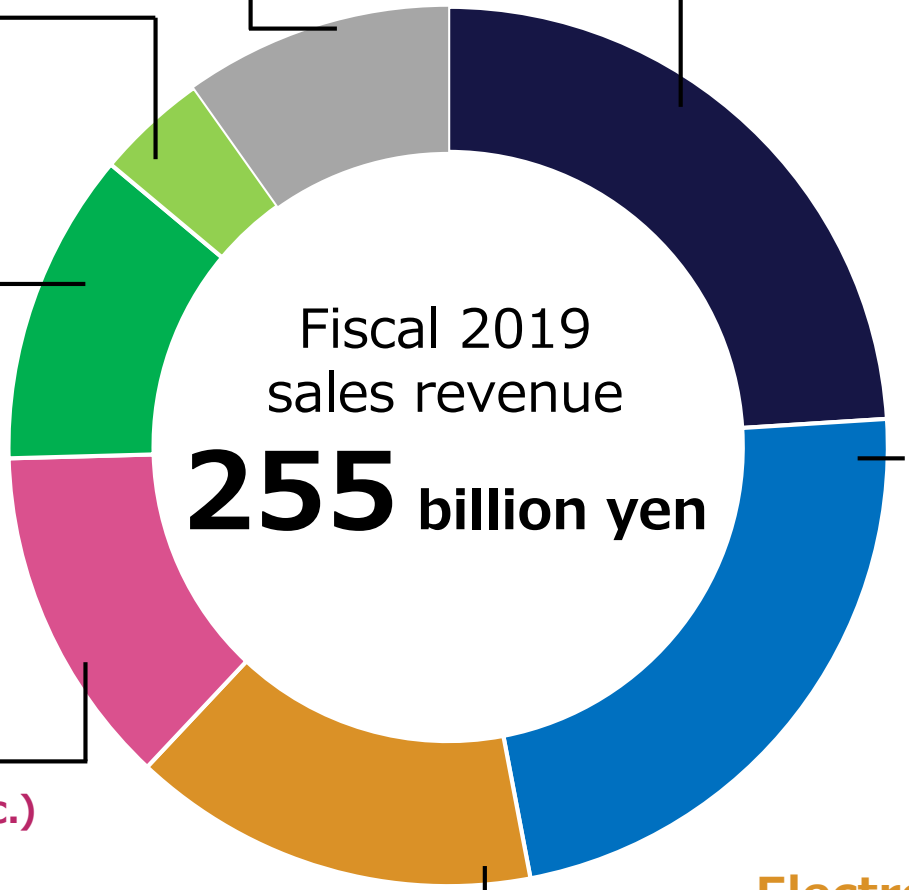
Ⅲ-1 Vision for Energy & Functional Materials

Contribute to Solving Environmental and Energy Issues through Innovative Technologies

Active injection of resources into growing businesses

- ☑ Expand sales of core products and accelerate R&D
- ☑ Secure stable revenue sources through higher added value
- ☑ Improve profitability of underperforming businesses and products
- ☑ Create new businesses in the fields of environment, energy, and high-performance materials

Ⅲ-1 Product Groups by Sector



Health & Crop Sciences
- Super engineering plastics
- Resorcinol

Others

Automotive
- Synthetic rubber
- Resorcinol
- Super engineering plastics
- Aluminum

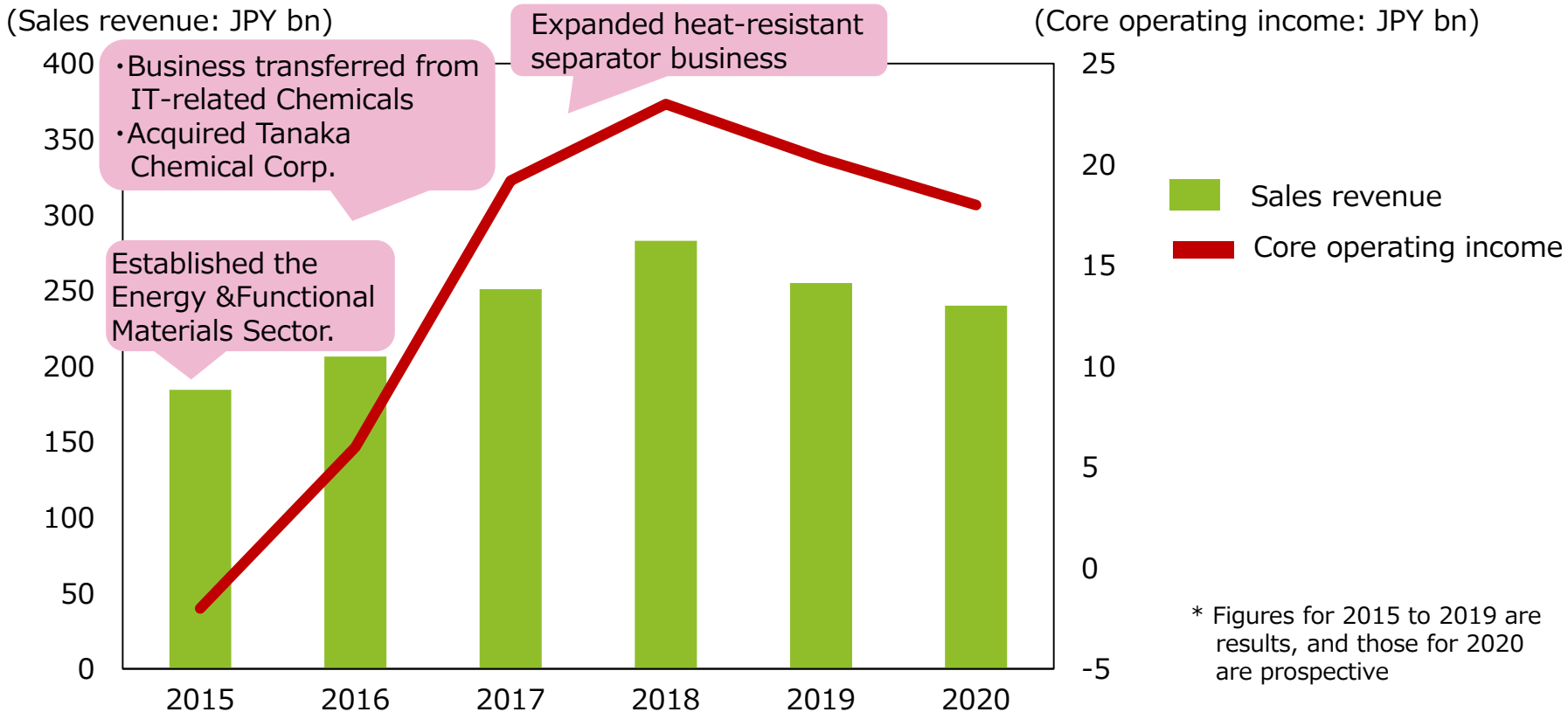
Industrial commodities (Aerospace, etc.)
- Super engineering plastics
- Alumina

Battery materials
- Heat-resistant separators
- Cathode materials
- High purity alumina

Living materials (building materials, etc.)
- Aluminum
- Resorcinol

Electronic goods
- Super engineering plastics
- Alumina

Ⅲ-1 Sector Performance



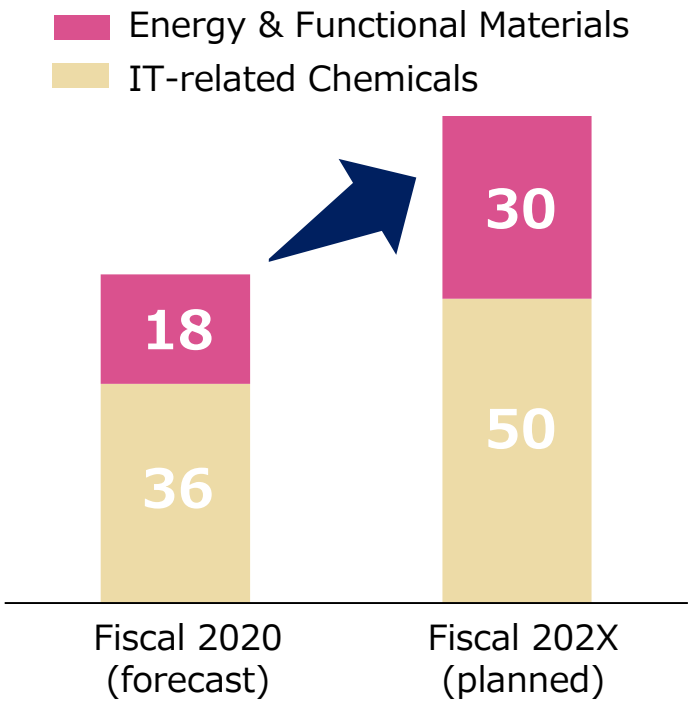
- ✓ Fiscal 2019 revenue and profit decreased from the previous year, impacted by lower market prices for aluminum and decreased shipments of heat-resistant separators.
- ✓ Fiscal 2020 earnings are expected to deteriorate, affected by decreased automotive demand due to the coronavirus pandemic.

Ⅲ-1 Sector Earnings Forecast

Boosting earnings power by playing a part in specialty chemicals

Current Priority Management Issues and Business Strategy (May 2020)

■ Core operating income (JPY bn)



✓ **Secure and enhance profits in businesses with stable earnings (Resorcinol, Alumina, etc.)**

While at the same time,

✓ **Increase earnings power by actively injecting resources in growing areas in a timely manner**

Active injection of resources

Battery materials

- Active investment in proportion to market expansion
- Accelerate development toward commercialization of next-generation batteries

5G/ mobility

Super engineering plastics

- Expand LCP sales for materials such as those needed in high frequency infrastructure
- Expand sales of automotive materials for lightweight vehicles

Preventing the Spread of the Coronavirus

Supplying raw materials for antiviral drugs (Koei Chemical Co., Ltd.)

- Building a supply system
- Ensuring prompt and stable supply

Avigan®
(RM: Pyridine)

Remdesivir
(RM: Pyrrole)

Fulfilling social responsibility to help abate the coronavirus pandemic

Ⅲ Energy & Functional Materials

Ⅲ-2 Positioning of Major Products

1 Stable revenue sources	• Alumina/High Purity Alumina • Resorcinol
2 Areas for active injection of resources	• Super Engineering Plastics • Heat-resistant separators • Cathode materials

1 Stable revenue sources

- **Alumina/High Purity Alumina**
- **Resorcinol**

2 Areas for active injection of resources

- Super Engineering Plastics
- Heat-resistant separators
- Cathode materials

Ⅲ-2 Maintain/Enhance Stable Revenue Sources

Use product groups with the global top share to secure stable earnings

	Main usage
Alumina/ High Purity Alumina	Lithium-ion secondary battery materials Heat-dissipating fillers for resin Sapphire use (LED substrate, crystal of watch) Components for semiconductor manufacturing equipment

Provide high value-added products, using particle size and shape control technology

	Main usage
Resorcinol	Adhesives for tires Ultraviolet ray absorbers Fire retardants

Maintain a stable supply system through multiple production facilities (Chiba, Oita).

Maintain/Enhance Stable Revenue Sources
(High Purity Alumina)

Our High Purity Alumina Lineup

Meet wide-ranging needs with diverse products

Large

Specific surface area

Small

NXA Series

AKP-700,AKP-53,AKP-50

AKP-20,AKP-30,AKP-3000

AA-03

AKP-15,AA-07

AA-05

AA-1.5

AA-3

AA-5

AA-10

AA-18

Ceramics,
Lithium-ion secondary batteries (LIB),
Abrasives, Fillers

Resin fillers,
Special fluorescent material

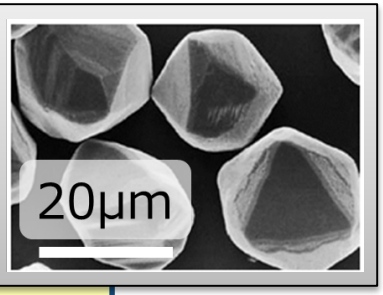
Thermal spraying

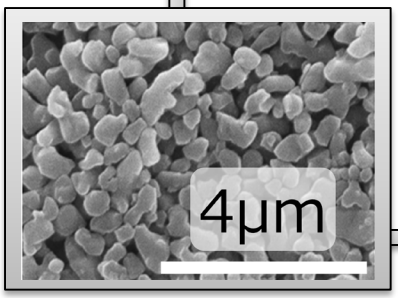
Sapphire ingredient,
Catalyst carrier, Spacer

AKQ Series

Resin fillers,
Sapphire ingredient

AKX Series





Small

Particle size

Large

Ⅲ-2 Maintain/Enhance Stable Revenue Sources (High Purity Alumina)

✓ 40 years from the start of production, we are aiming to solidify global top market share status, and accelerate growth even further

Market needs

- High strength, high corrosion resistance, and high heat resistance
- Ultrafine, uniform qualities, and stable supply

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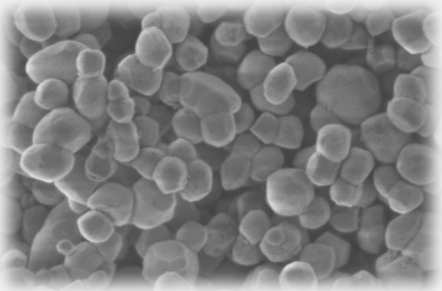
Our own technology

- Particle size precision control technology
- Highly productive manufacturing method

NXA (Ultrafine Alumina)

- World-first mass production of alpha alumina with a particle size of 0.0001mm
- Achieved fine and uniform particle distribution
  ⇒ Expanding use to precision abrasives and dental materials in addition to existing uses



Moving on to the medium volume trial production phase with an eye to launching in fiscal 2022

Ⅲ-2 Maintain/Enhance Stable Revenue Sources (Resorcinol)

Strengths in the Resorcinol Business

Reliability

- Multiple production facilites (Chiba, Oita)
- Global stock points

Stable Demand

- Adhesives for tires, ultraviolet ray absorbers, pharmaceuticals, crop protection products, etc.

Clean Process

- Less energy consumption per unit
- Low effluent load

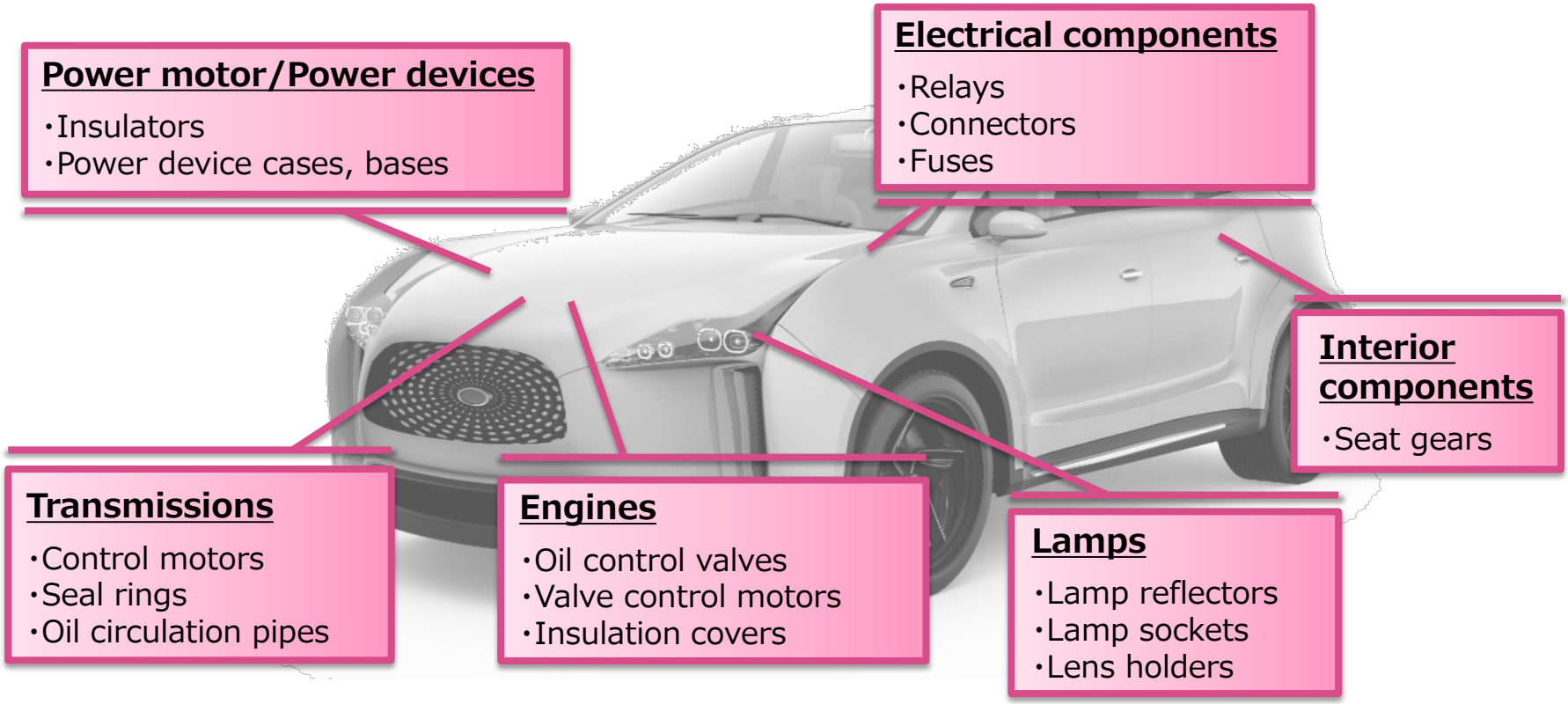
- Fulfill responsibility for stable supply as the world's top manufacturer
- Accelerate business growth by expanding into diverse uses, such as pharmaceuticals, crop protection products, and feedstock for resin

1 Stable revenue sources	• Alumina/High Purity Alumina • Resorcinol
2 Areas for active injection of resources	• **Super Engineering Plastics** • **Heat-resistant separators** • **Cathode materials**

Expanding Automotive Use
(Super Engineering Plastics)

- **Heightened need for better fuel performance and for lightweight components**
  ⇒ Multi-material car body with the use of resin, etc.

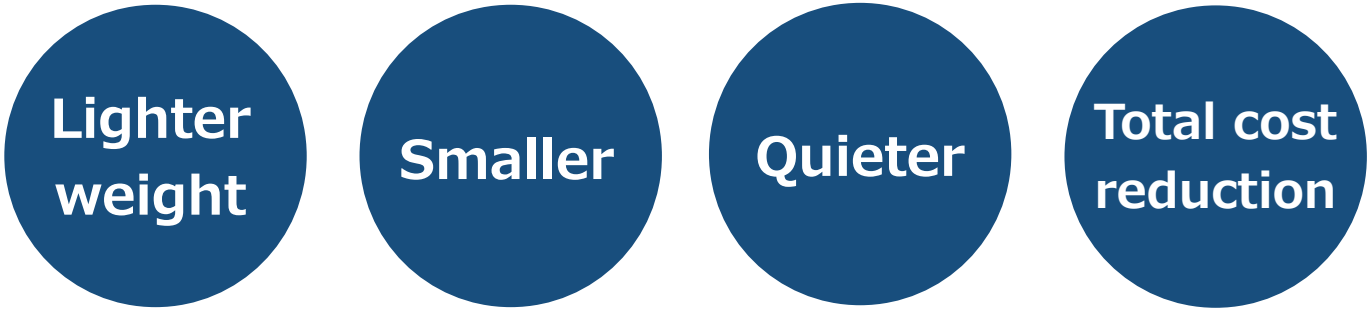
Applicable components (including candidate components)



Ⅲ-2 Expanding Automotive Use (Super Engineering Plastics)

Increasingly adopted for use as materials replacing metal automotive components

- Super Engineering Plastics (PES/LCP) are well positioned as components where **heat resistance, dimensional accuracy, thin design, and sliding performance** are required in addition to lighter weight.
- Proposing designs that leverage the processability and functionality of super engineering plastics



- Automotive use has been steadily increasing

FY2015	FY2019	FY2024
19 cases	28 cases	40 cases

Twice the level of FY2015

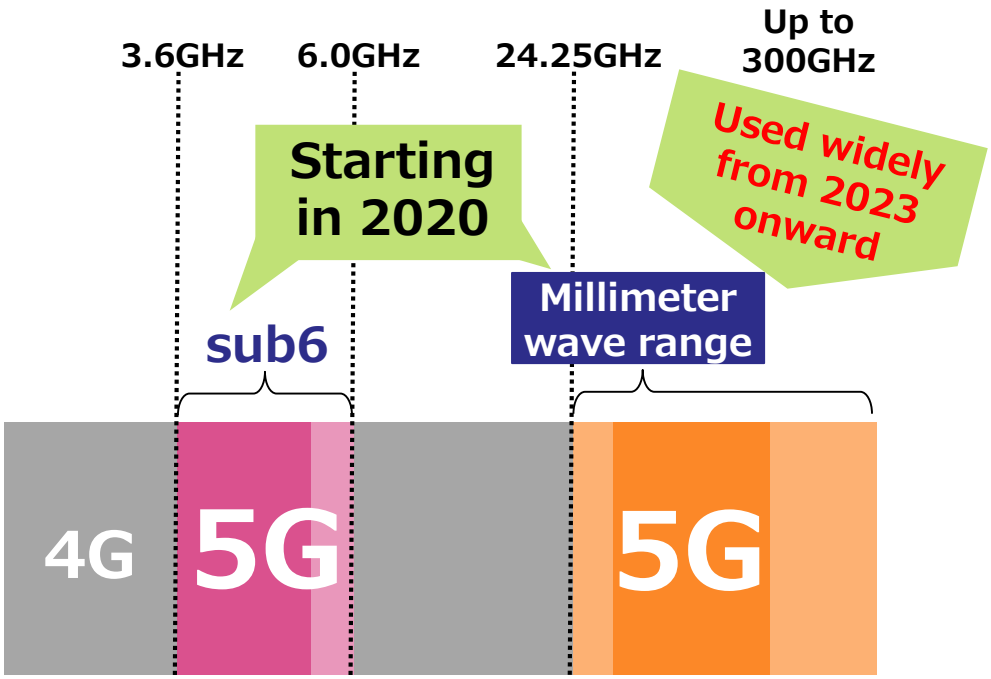
Ⅲ-2 Paradigm Shift

Paradigm Shift【ITC】

5G

- Enhanced Mobile Broadband **eMBB**
- Ultra-Reliable Low Latency Communications **URLLC**
- Massive Machine Type Communications **mMTC**

5G frequency bands



For a full-scale implementation of millimeter wave range

- Performance required for 5G-compatible components

Low transmission loss

Technology to process signals and communications without deterioration

Ⅲ-2 Making arrangements for 5G penetration (Super Engineering Plastics)

Our proprietary technology

- Molecular structure design, synthesis technology
- Mass production technology for soluble LCP
- Compound design, mass production technology
- Machining support technology utilizing material properties

We flexibly provide **materials with optimal transmission properties**, using a permittivity control method based on low dissipation factor performance due to our proprietary molecular designs.

Circuit board applications

- **Adopted as a film substrate material for smartphones**

Provided in 2 types of LCP

Solution type: Solution casting method (applicable to PI process)

Melting type: Inflation, extrusion

Connector applications

- **Adopted for use in high-speed data transmission connectors for data centers**

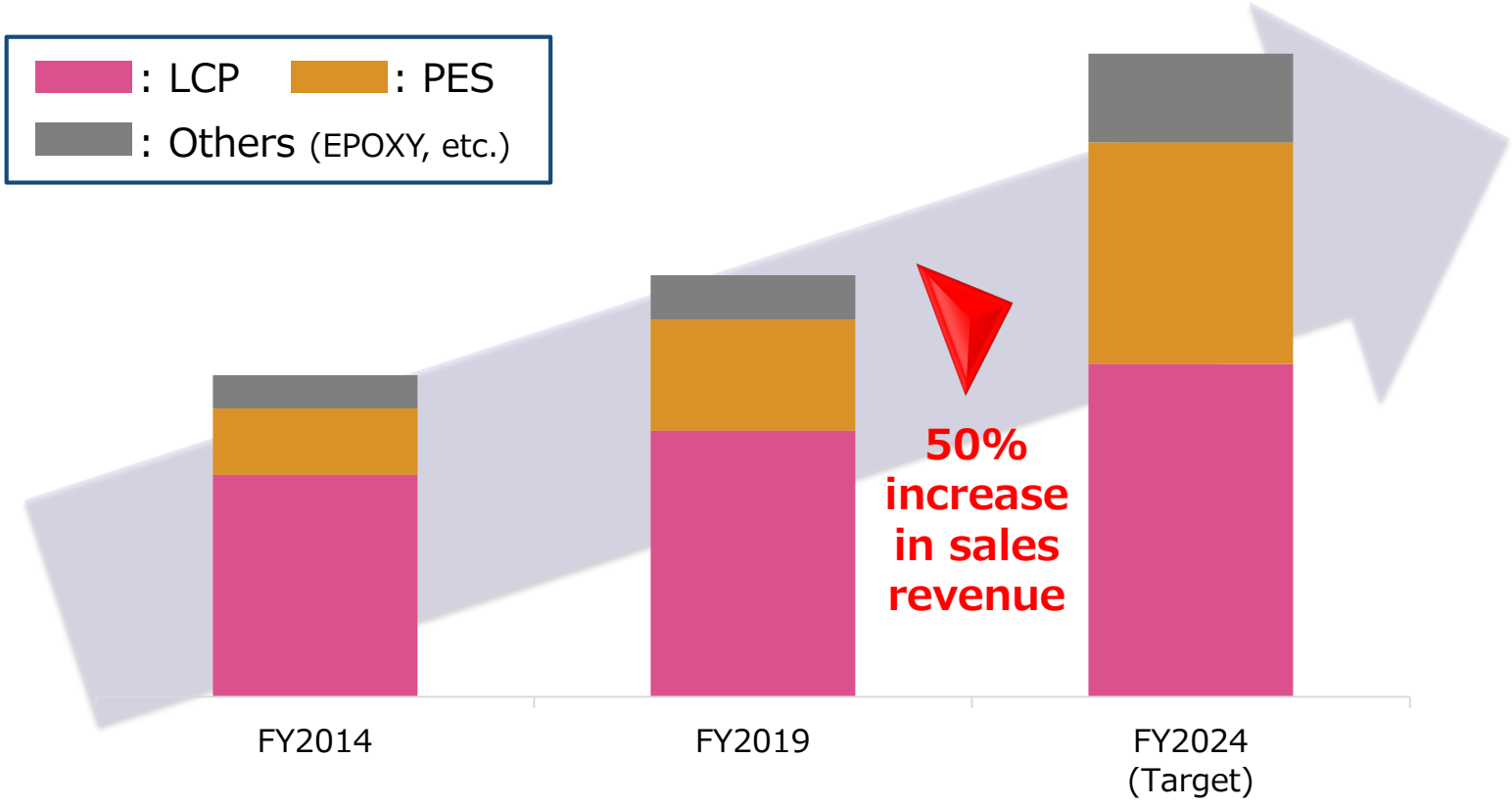
Expanded permittivity control grade

Provide materials that enable both low transmission loss and flexible impedance matching performance

Ⅲ-2 For Future Business Expansion (Super Engineering Plastics)

- Expand business by supplying materials widely considered indispensable for growing industries such as the automotive industry and IT/Telecommunications.

Target sales revenue for Super Engineering Plastics business



Ⅲ-2 Paradigm Shift【Automobile】

CASE

Connectivity

Sharing

Automatic driving

Electrification

EV policy trends in various countries

UK

Terminating sales of gasoline/diesel cars, including hybrids, **by 2035**

US

California State declared total abolition of gasoline cars **by 2035**

France

Terminating sales of gasoline/diesel cars **by 2040.**

China

Subsidies for EVs are extended to 2022. Total abolition of new gasoline car sales **by 2035** is under consideration.

Spain

Achieve no CO_2 emission from all new cars sold **by 2035**

(Source) “Status of the Greening of Tax Systems and Carbon Taxes in Japan and Overseas” by the Ministry of the Environment.

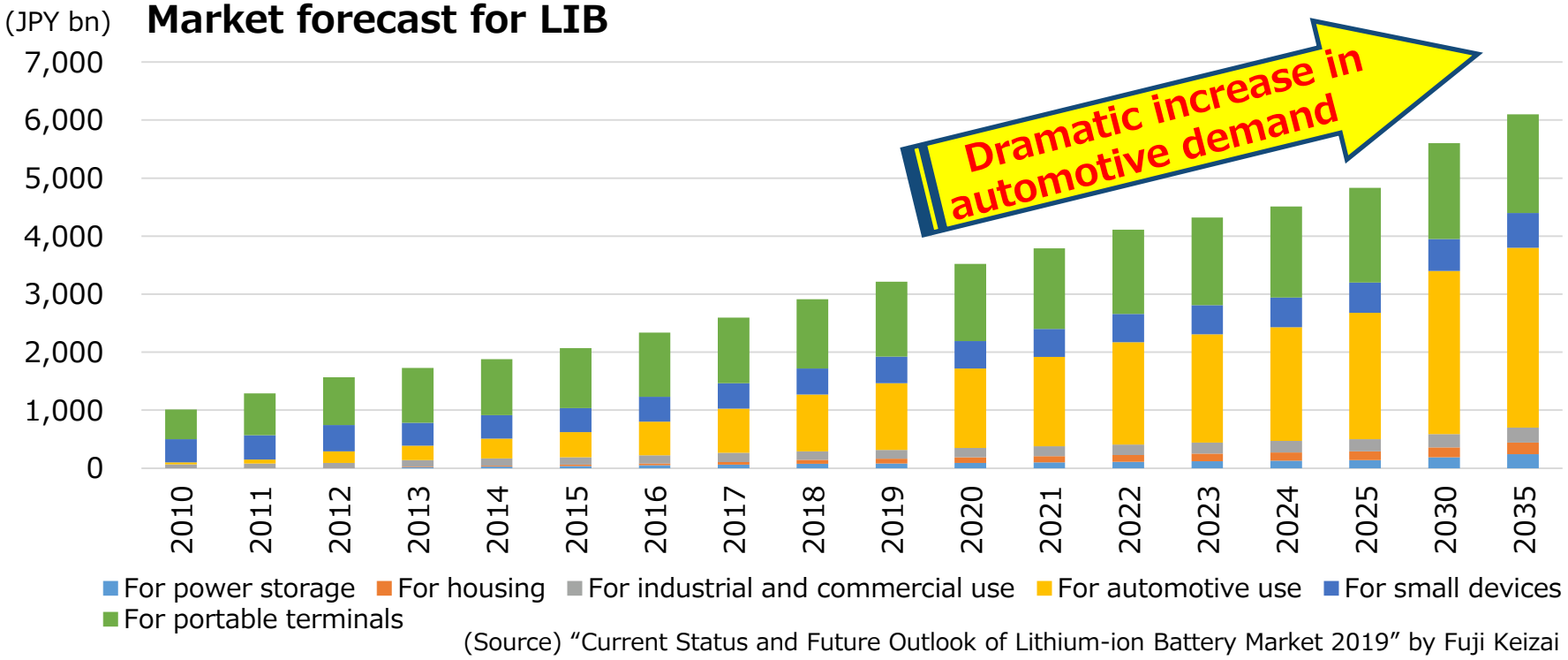
Need for EVs is expected to increase in the future.

Ⅲ-2 Expanding Demand for Electric Vehicles (Battery Materials)

Trends in lithium-ion secondary batteries (LIB)

- LIB market expansion along with the spread of EVs
- Tighter pricing
- Expansion of battery capacity for longer cruising distance in EVs

Market forecast for LIB



(Source) "Current Status and Future Outlook of Lithium-ion Battery Market 2019" by Fuji Keizai

Ⅲ-2 Expanding the Battery Business in the EV Market (Battery Materials - Cathode materials)

Market needs

- Expansion of battery capacity for longer cruising distance for EVs

Cathode materials (NMC,NCA)

- ✓ **More penetration of high-nickel cathodes for higher capacity,**

But in exchange,

- ✓ **Decreased use of elements (Mn, Co, etc.) contributing to structural stability**

Increased capacity ⇔ **Tradeoff** ⇔ **Safety**

Advantages of aramid-coated separators

High heat resistance + **Light-weight** + **Less powder dust**

Durability

Ensuring safety in **high-nickel batteries** as well with aramid-coated separator.

Excellent safe performance of aramid-coated separators contributes to increasing the capacity of LIBs.

Ⅲ-2 Expanding the Battery Business in the EV Market (Battery Materials - Separators)

Approach for business expansion

Increase production capacity

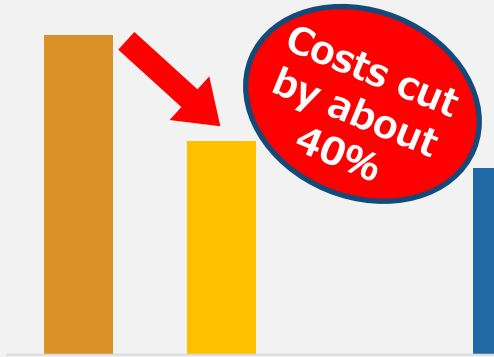
Our production capacity

2017	2021 expected
180 million ㎡	400 million ㎡

SSLM (South Korea) increased capacity in response to customer demand

Reduce costs through rationalization

Manufacturing costs of aramid-coated separators



Overhaul feedstock/manufacturing process, and improve cost competitiveness

Increase cost competitiveness and expand LIB business

Ⅲ-2 Expanding the Battery Business in the EV Market (Battery Materials - Cathode Materials)

Sumitomo Chemical
- Highly productive calcination process
- Analysis/Evaluation technology

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Tanaka Chemical
- Automotive precursor manufacturing technology
- Expertise with mass production

Business expansion through group synergy

To capture expanding demand
- ✓ Promote joint development of high-capacity cathode materials
- ✓ Consider installation of calcination equipment

Recent Initiatives at Tanaka Chemical

Sales

Concluded sales and manufacturing technical support agreements with a European battery manufacturer

Manufacturing

Completed phase 3 expansion in September 2020, started operations.

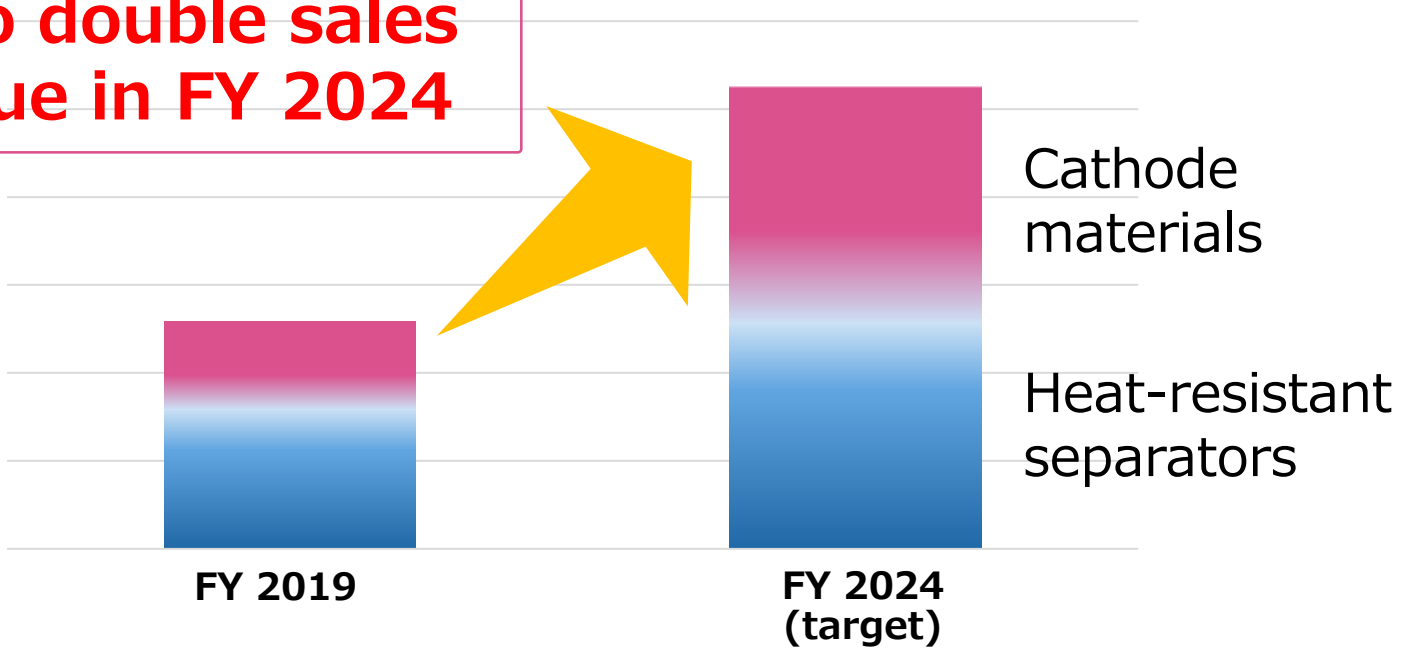
Expanding facilities

Phase 1	Expand main raw material melting facilities	Oct. 2018
Phase 2	+1,200t/month	Jul. 2019
Phase 3	+1,200t/month	Sep.2020

For Future Business Expansion
(Battery Materials Business)

Business target for battery materials

Aim to double sales revenue in FY 2024



Expand battery materials business with 2 components: heat-resistant separators and cathode materials

Ⅲ Energy & Functional Materials

Ⅲ-3

Toward the implementation of next-generation batteries for EVs (Solid-type batteries)

Ⅲ-3 Trends in Battery Components: Higher Capacity

Breaking through safety and productivity limits is a must for higher capacity batteries

	Current solution LIBs (up to 2025)	Improved solution LIBs (2020 to 2030)	Next-generation batteries (from 2025)
Energy density	100Wh/kg	250Wh/kg	500Wh/kg

	Current components	Example of technological development	Candidates for next-generation batteries
Cathode Materials	Middle Ni, Iron phosphate	High Ni, Cobalt-free, Nickel-free, Lithium-excess	① **Solid-type batteries**
Anode materials	Graphite (+silicone)	Silicone, aluminum, lithium	② **Other batteries** Lithium-oxygen batteries lithium-sulfur batteries
Separator	Aramid, Ceramic	Resistance to high voltage	
Electrolyte	LiPF6/EC	Ionic liquid, higher concentrations	

Development of Solid-type Battery Materials (Sumitomo Chemical)

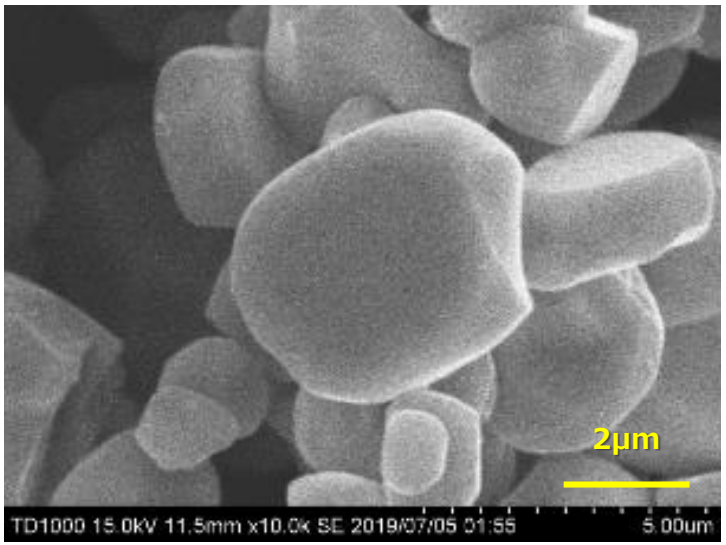
Development-I: Cobalt-free Cathode Materials

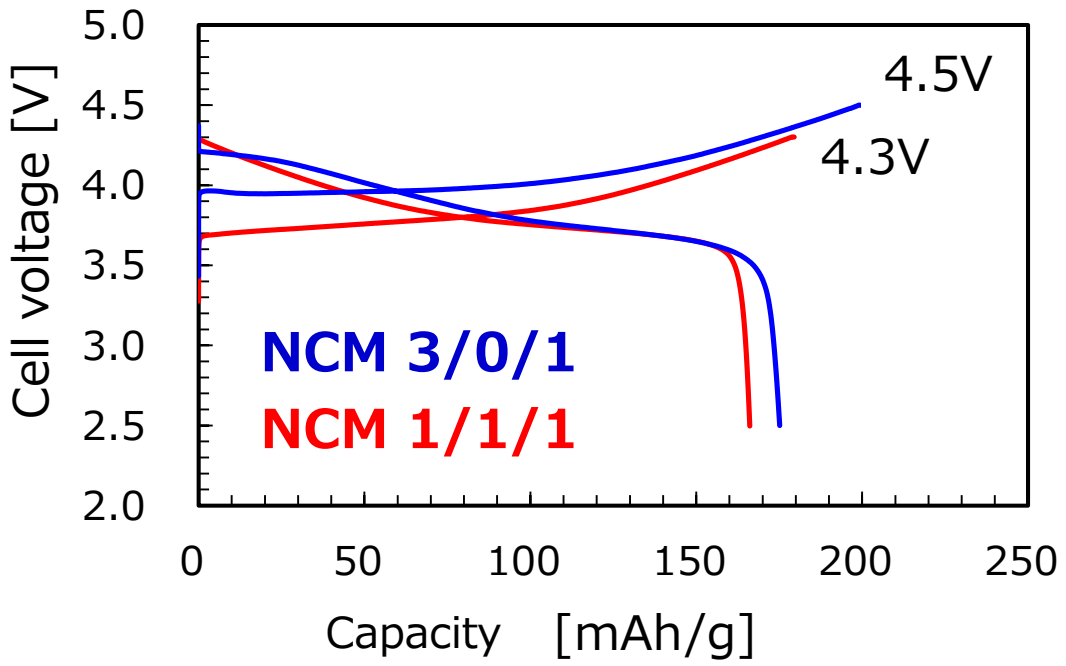
Designing high capacity and high output materials based on the findings accumulated with **Enervio®**

Composition: **NCM 3/0/1**

Particle size: D50 = 5 μm

Change in crystal axis length is small up to high-voltage region. Even with a 4.5V charge, the materials show high cycle characteristics.



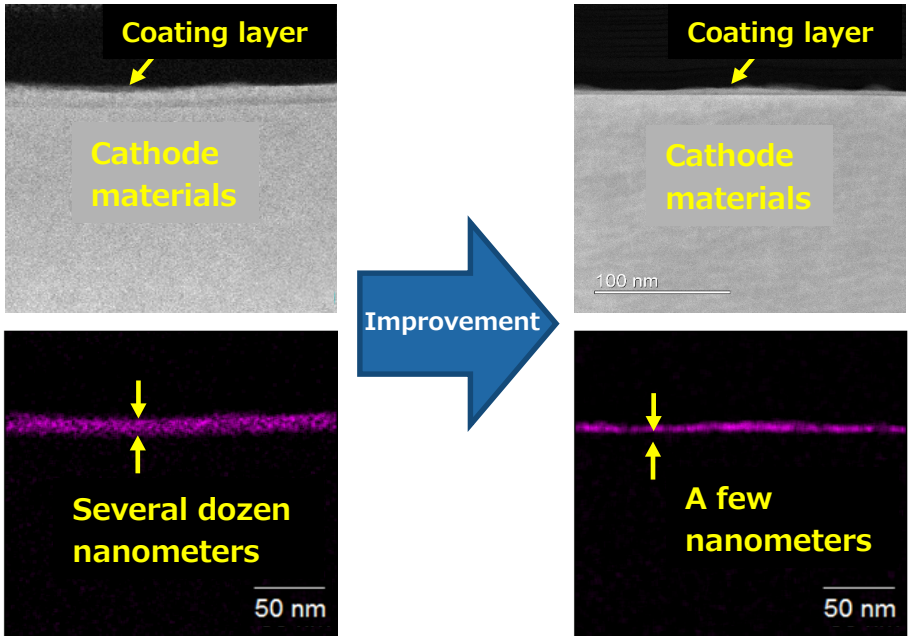


Development of Solid-type Battery Materials (Sumitomo Chemical)

Development-Ⅱ: Cathode material surface-coating technology

✓ Role of coating: It does not inhibit the movement of Li^+ but suppresses reactions between cathode materials and the electrolyte.

Ideal coating:
thinly and uniformly covers all surfaces of cathode materials.



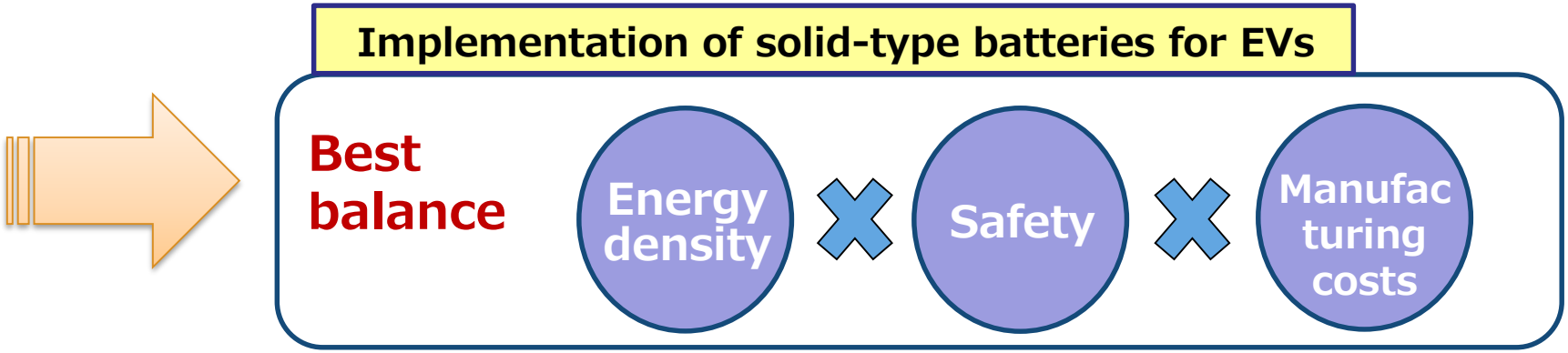
Achieved a uniform coating layer with the thickness of a few nanometers.

Ⅲ-3 Development of Solid-type Battery Materials (Joint development)

The course on joint research between industry and academia at Kyoto University

Opened in April 2020 for joint development of materials for solid-type batteries (cathode materials, solid electrolytes, etc.) and optimal designs for solid-type batteries

- ✓ Expand ideas through the deepening of discussions with professors at Kyoto University
- ✓ Validate utility with sample synthesis and the evaluation of actual battery performance
- ✓ **Aim to complete development of materials for solid-type batteries in 2023**



Ⅳ IT-related Chemicals

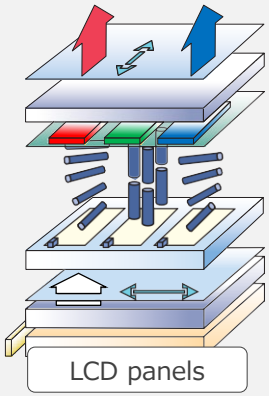
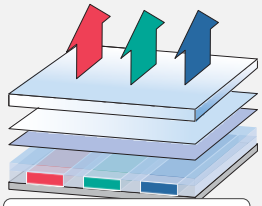
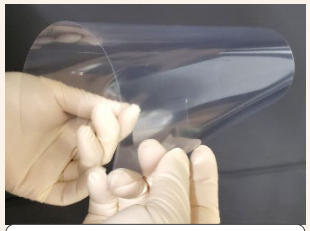
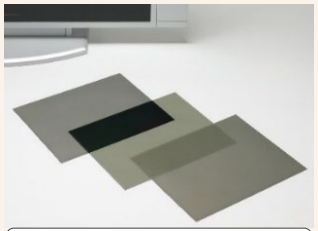
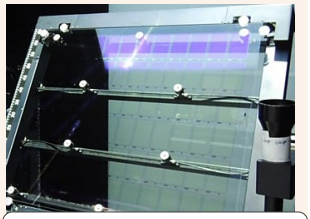
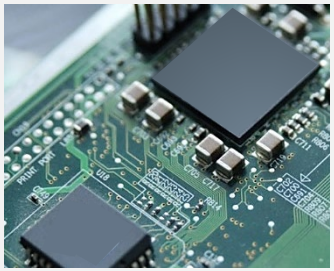
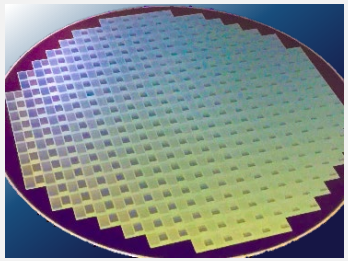
Masaki Matsui

Representative Director &
Managing Executive Officer

Ⅳ IT-related Chemicals

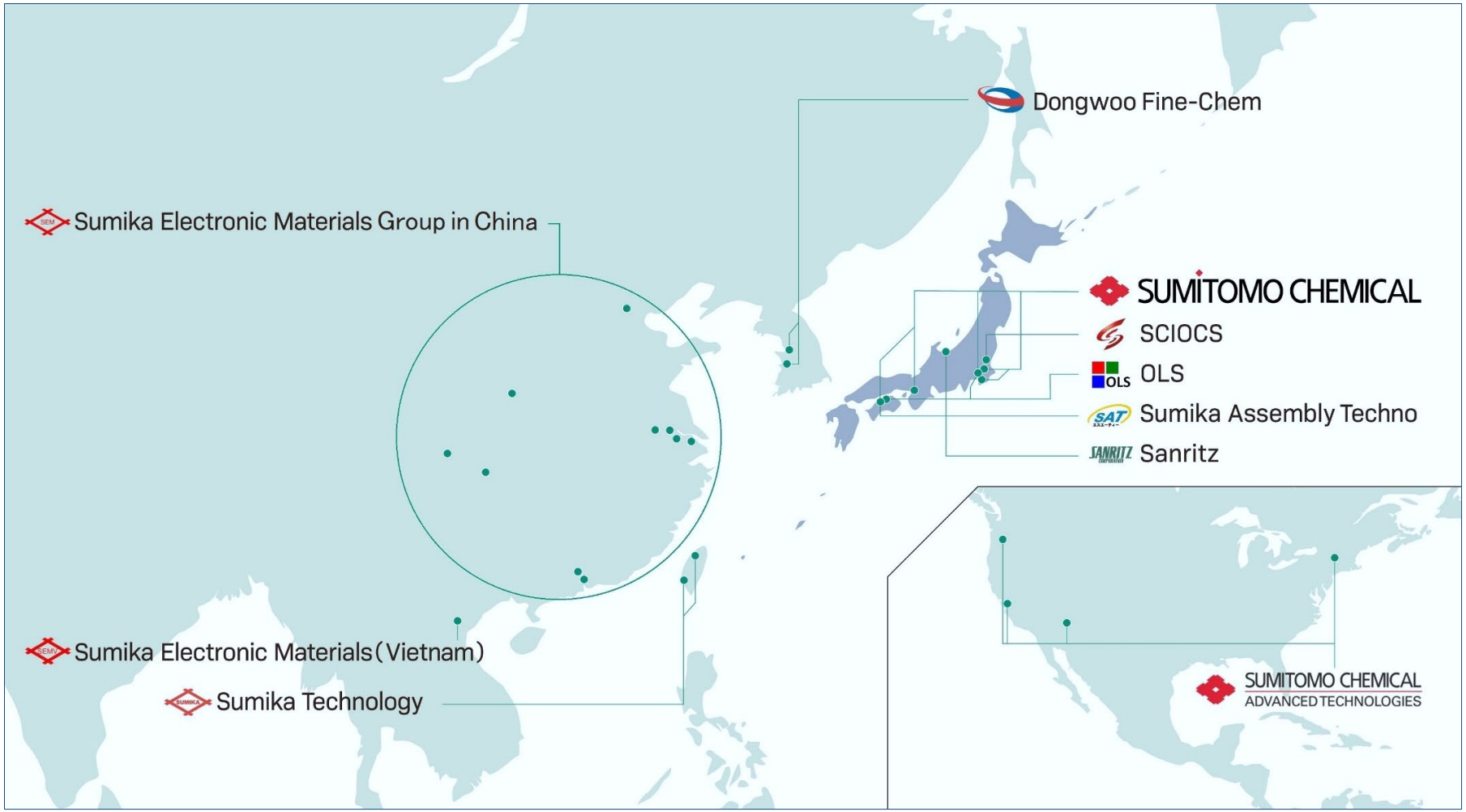
Ⅳ IT-related Chemicals

Ⅳ-1 Business Overview: Our Major Products

	End Market	Our Customers	Our Products	
Displays		 LCD panels  OLED panels	 Cover window films	 Polarizing films
			 Polymer light-emitting materials	
			 Touchscreen panels	
			 Color resists	
Semi-conductors			 Compound semiconductor epiwafers	 Photoresists
				 Processing chemicals

Developing business primarily in both display-related materials and semiconductor materials

Business Overview: Manufacturing and Sales Locations



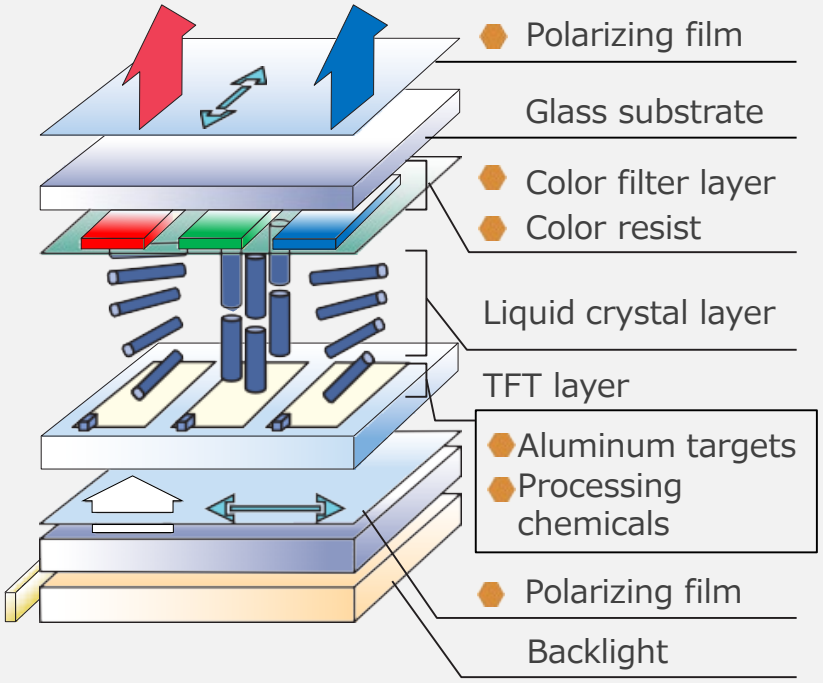
Building a business network centered in East Asia, an area with a high concentration of display-related and semiconductor industries

Business Overview: Display-related Materials Business

Interface between people and ICT technology

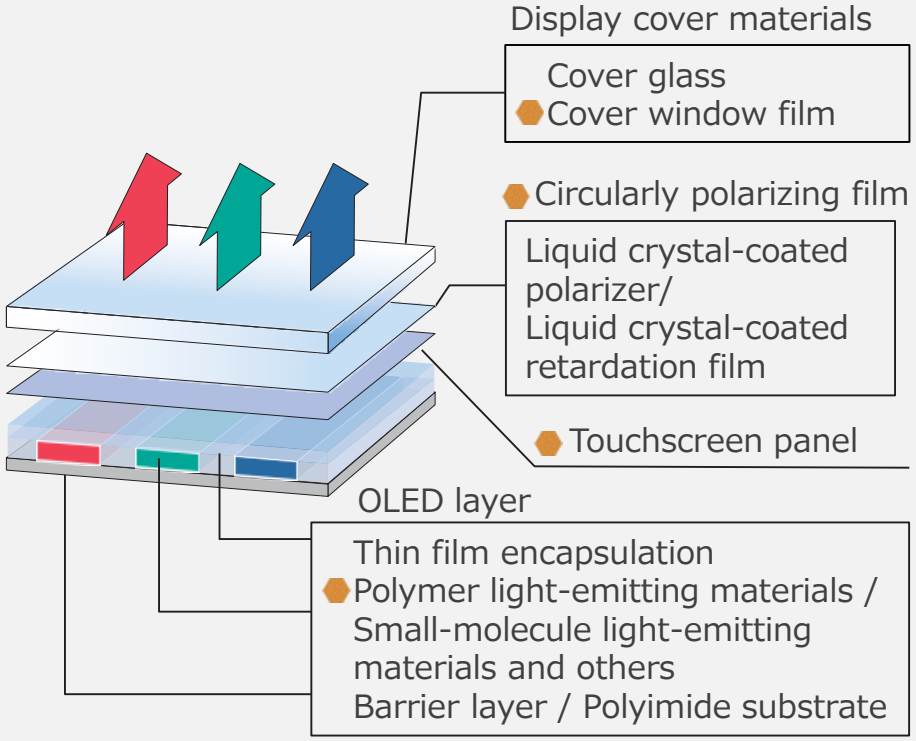
- Contribute to creating displays with outstanding portability, visibility and operability
- Deliver high-value-added products by combining our material development capabilities with our optimization technology

LCD Panel



(Note) ⬣: Sumitomo Chemical's products

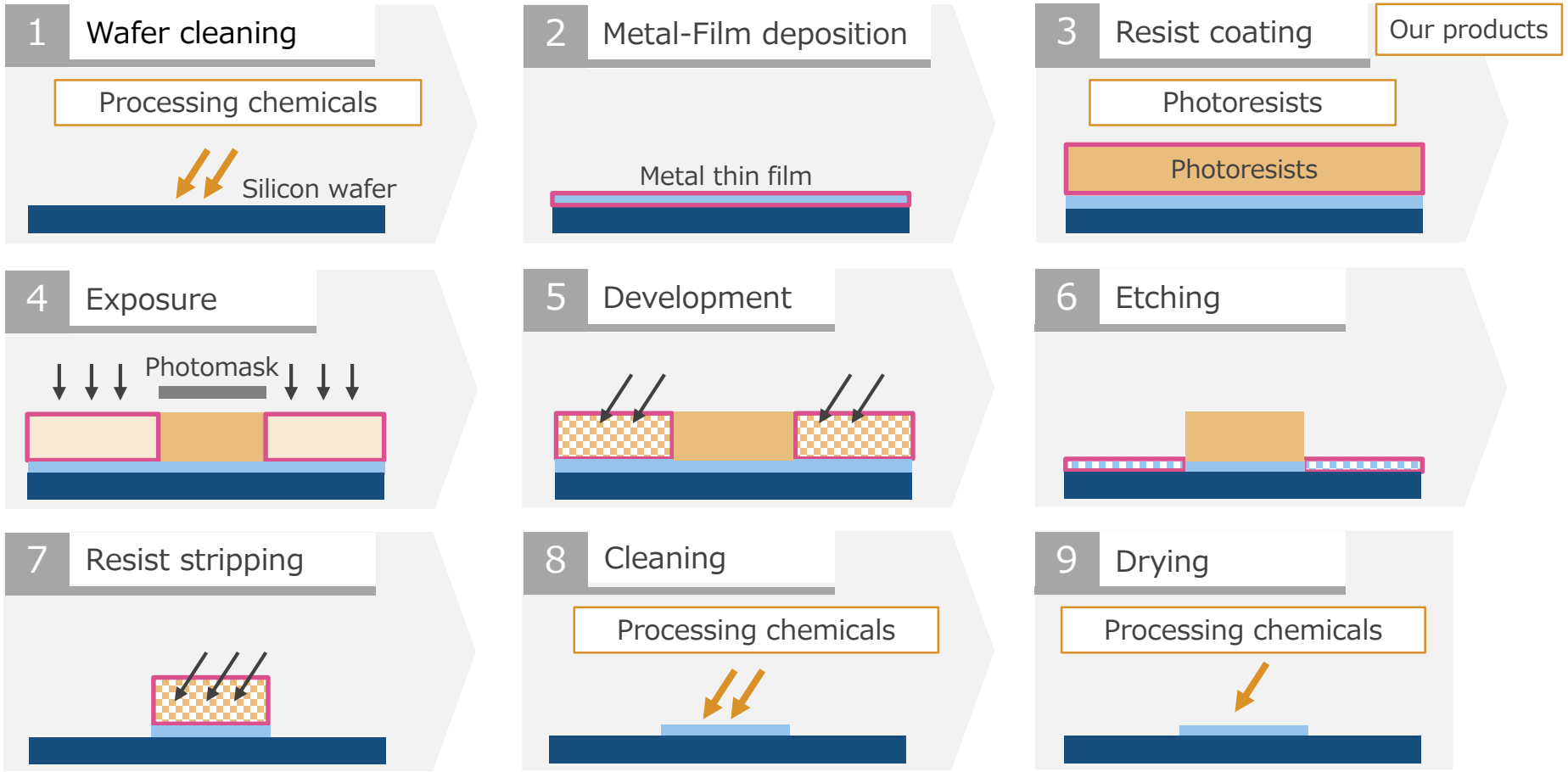
OLED Panel



Ⅳ-1 Business Overview: Semiconductor Materials

Infrastructure supporting modern society with ultra-microfabrication technology

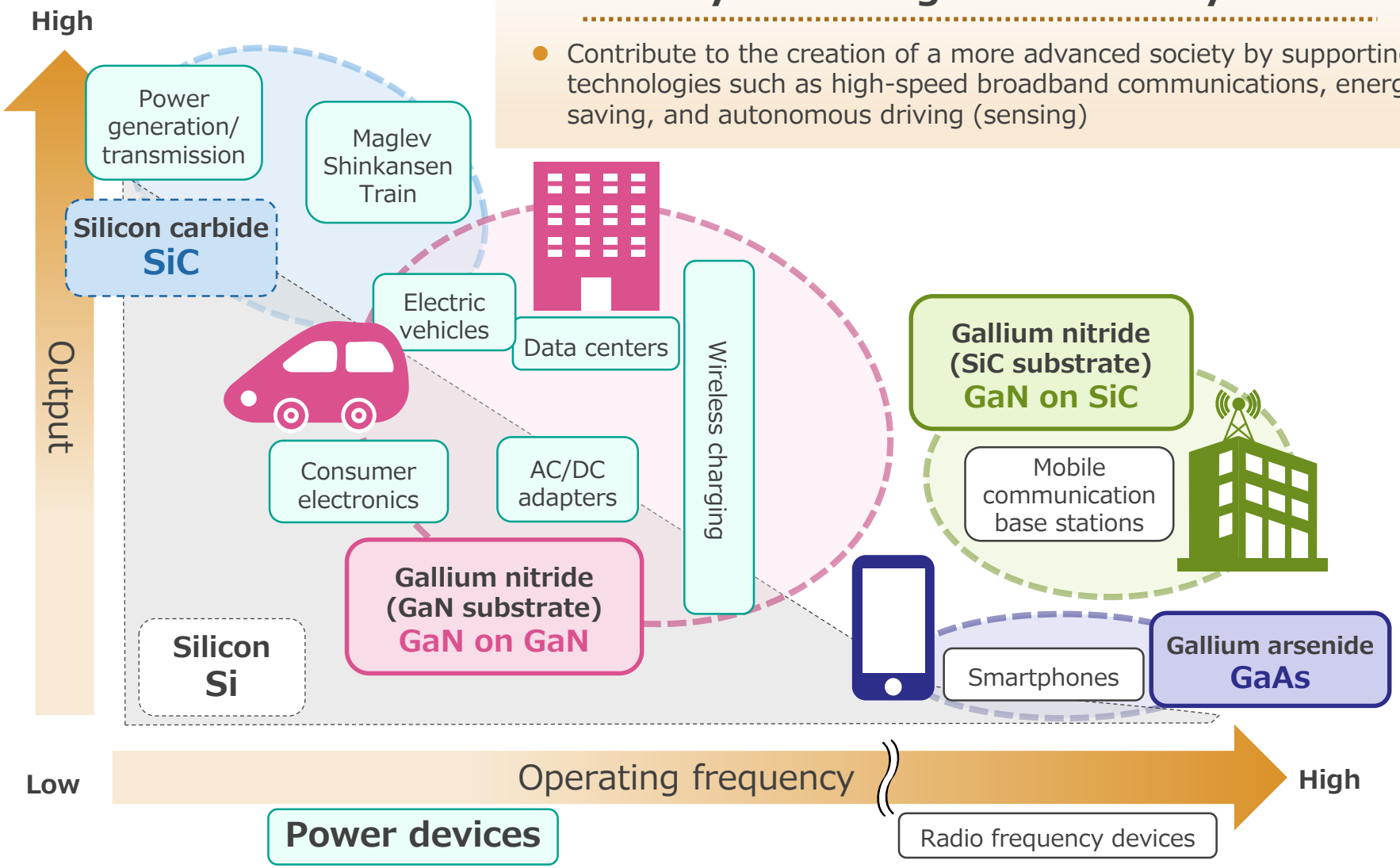
- Contribute to the continuous evolution of microfabrication technology with super high-quality chemicals



Business Overview: Compound Semiconductor Materials

Key technologies for Society 5.0

- Contribute to the creation of a more advanced society by supporting technologies such as high-speed broadband communications, energy saving, and autonomous driving (sensing)



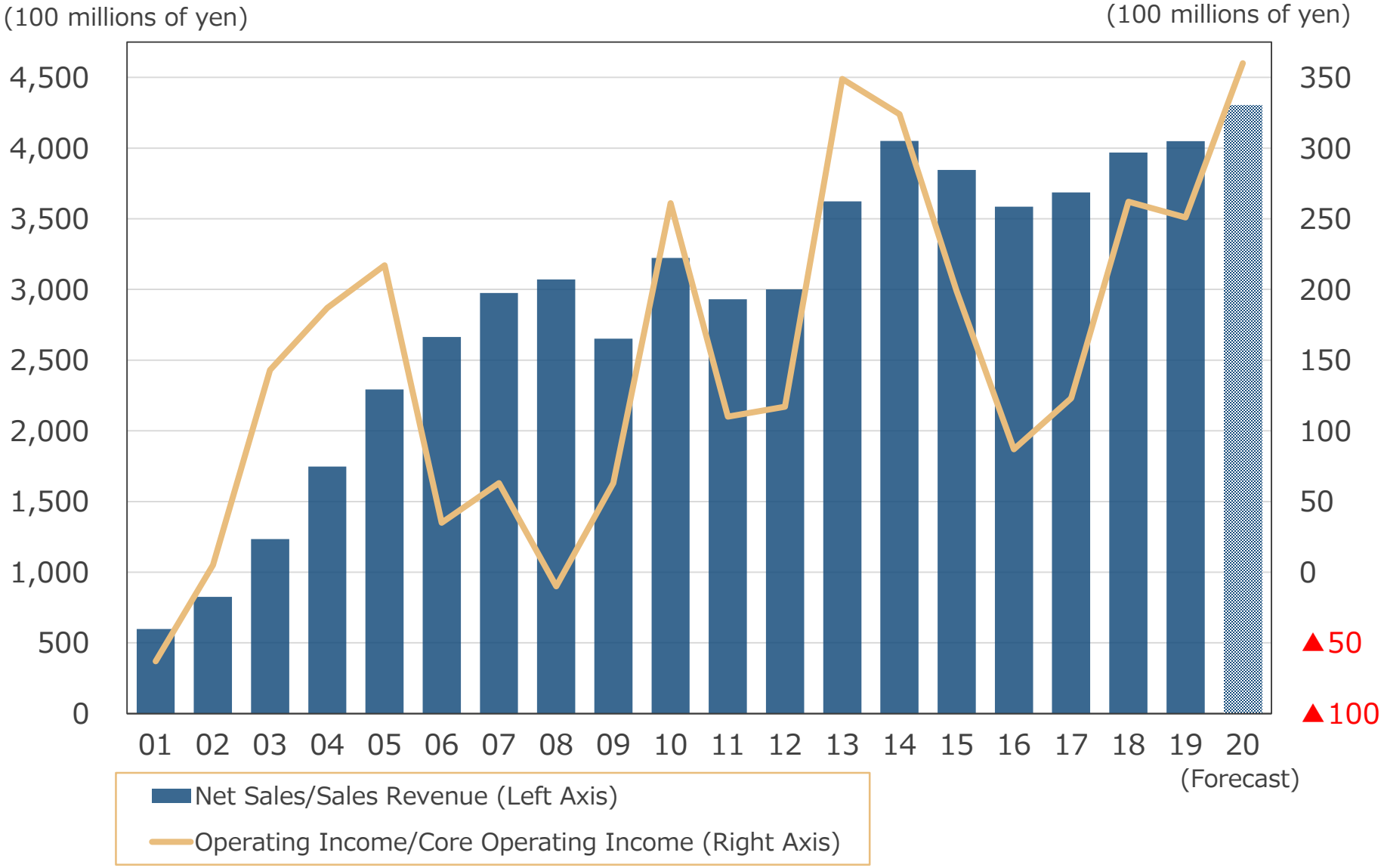
Ⅳ IT-related Chemicals

Ⅳ-2 Business Strategy for FY2019-FY2021: Further Improvement of Our Business Portfolio

	Major Issues	Action Plan
Display-related Materials	**Maximize profit by restructuring & focusing on high value-added products**	➢ Polarizing films for LCD » **Restructuring** - Optimization of global supply chain ➢ Products for smartphones » **Focusing on high value-added products** - Secure a share of the high-end market by utilizing core materials developed in-house ➢ Touchscreen panels » **Focusing on high value-added products** - Diversify product portfolio
Semiconductor Materials	**Secure growing demand by utilizing advance investment**	➢ Enhance systems of production, development and evaluation for photoresists ➢ Invest in processing chemicals in China
	Diversify product portfolio	➢ New processing chemicals or compound semiconductors for power devices etc.
Next-generation Businesses	**New products by increasing the sophistication of core in-house technology**	➢ Products for image sensors and next-generation displays etc.
	Approaches to adjacent markets based on open innovation methods	➢ Products developed by utilizing technologies from touchscreen panels and compound semiconductors etc.

Ⅳ IT-related Chemicals

Ⅳ-3 Financial Statements

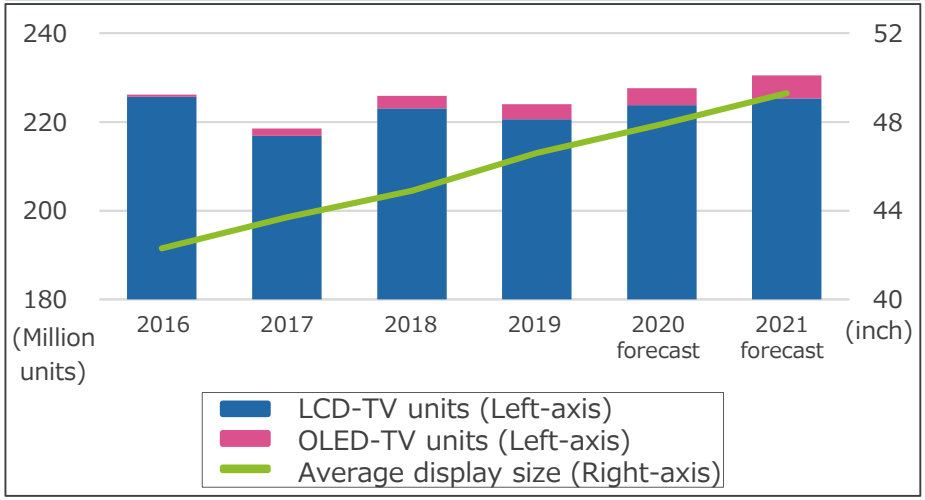


Ⅳ IT-related Chemicals

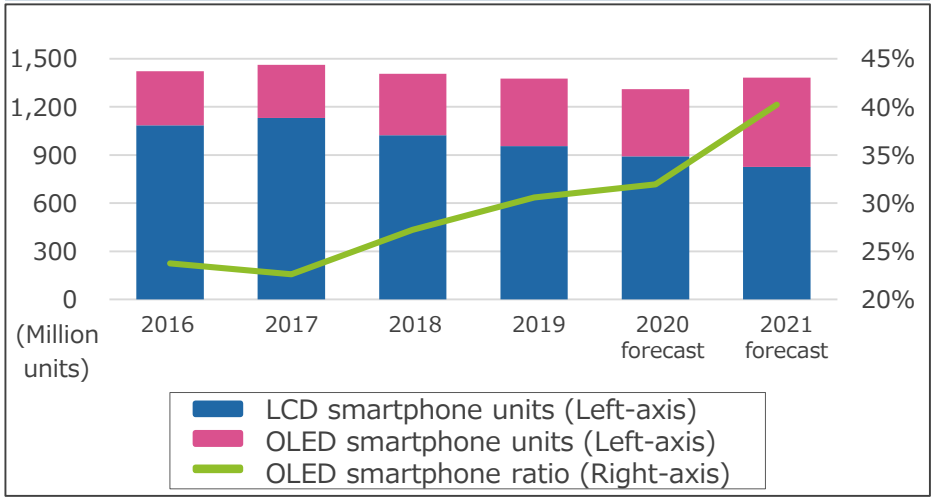
IV-4 Market Environment: Display-related Materials

Market assumptions for FY2019-FY2021	New factors	Current situation	Impact on our business (est.) 2019	2020	2021
• TV Displays: Number of TV sets remains almost the same, TV display size continues to get larger (Growth rate: YoY+4%)	Market Reorganization	➢ Market shift to China accelerates (Korean panel manufacturers withdraw or downsize LCD-TV business)	Slight	COVID -19 special demand	Moderate
• Mobile Displays: Number of smartphones remains almost the same, units with OLED display increase (27% in 2018 -> 48% in 2021)	COVID-19	➢ Market stagnates (especially in high-end) ➢ Increase in OLED units slows down (40% in 2021)	–	Moderate	Slight

TV Market (Source : Gfk)

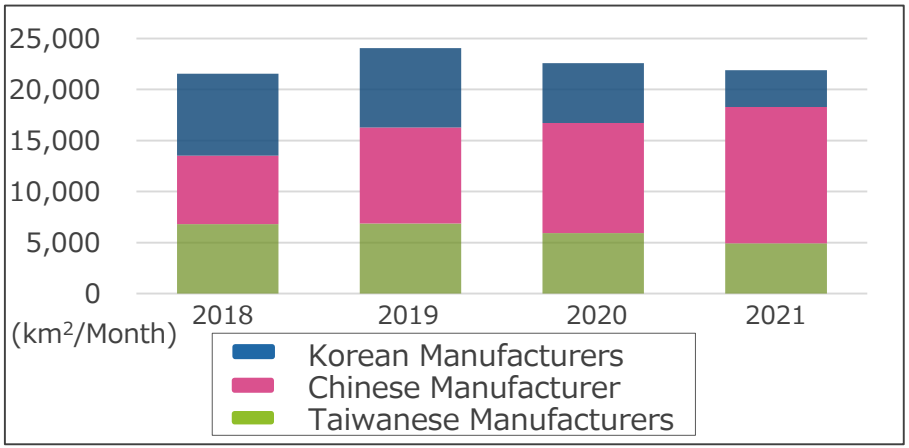


Smartphone Market (Source: Gfk)



Ⅳ-4 Market Environment: Display-related Materials

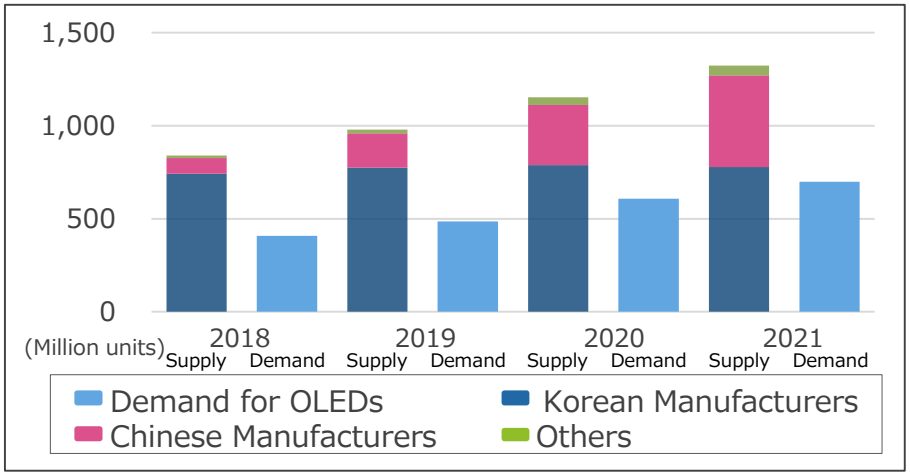
Large LCD panel supply capacity
(Source: Mizuho Securities, Sumitomo Chemical)



- Global supply capacity of large LCD panels is concentrating in China
- Market reorganization is going on within China (Consolidating to 2 major Chinese panel manufacturers)

Suppliers of LCD-related materials will be faced with fiercer competition

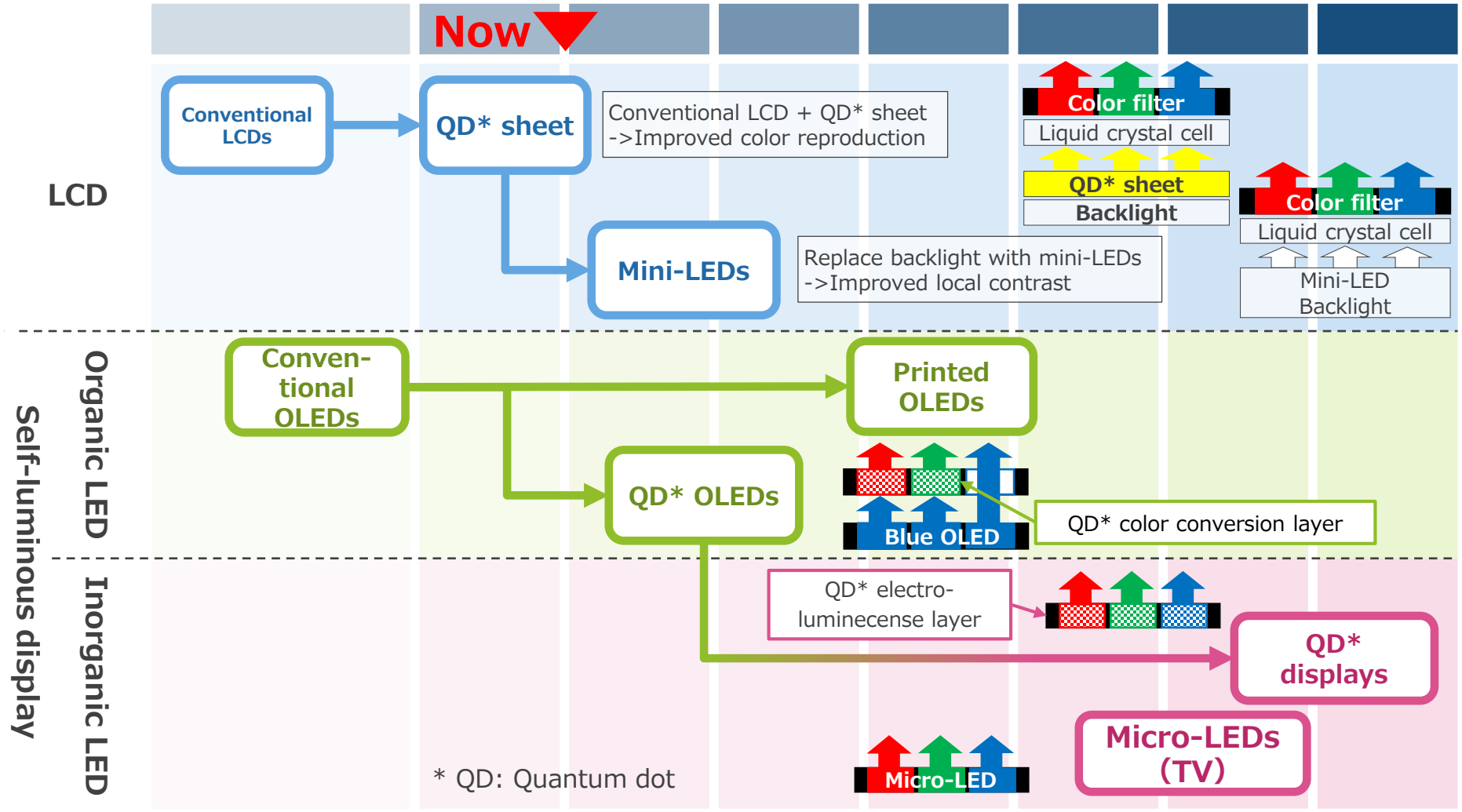
Balance of supply/demand for mobile OLED panels
(Source: Omdia, DSCC)



- Active investment by Chinese panel manufacturers
- Slower growth of the end market of OLED smartphones than expected

Demand for differentiation to provide additional value becomes stronger due to the expanding supply/demand gap

Ⅳ-4 Market Environment: Display-related Materials



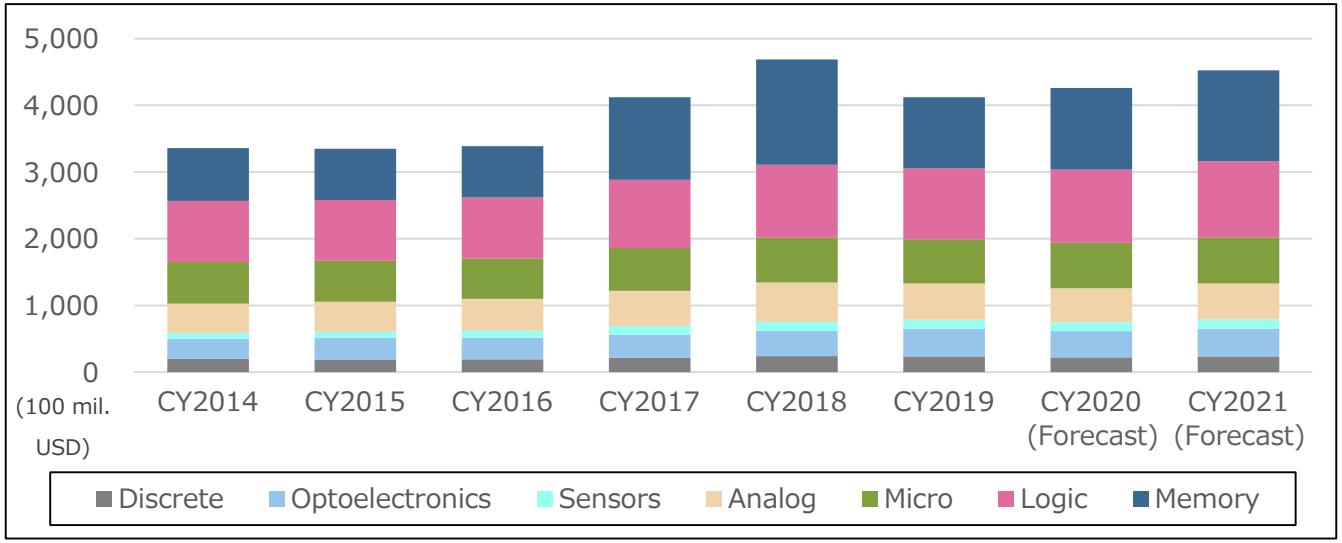
The increasing sophistication of LCDs and the development of next generation self-luminous displays are progressing in parallel

Ⅳ-4 Market Environment: Semiconductor Materials

Market assumptions for FY2019-FY2021	New factors	Current situation	Impact on our business (est.) 2019	2020	2021
• Steady market growth accompanying digital transformation (Growth rate: +4%/year)	COVID-19	➢ Demand stays firm on the whole, although some categories are affected by COVID-19	–	Slight	Slight
	US-China trade war	➢ Demand for cutting-edge products is very strong, and supply/demand balance is tight	Slight	Slight	Slight

Semiconductor Market

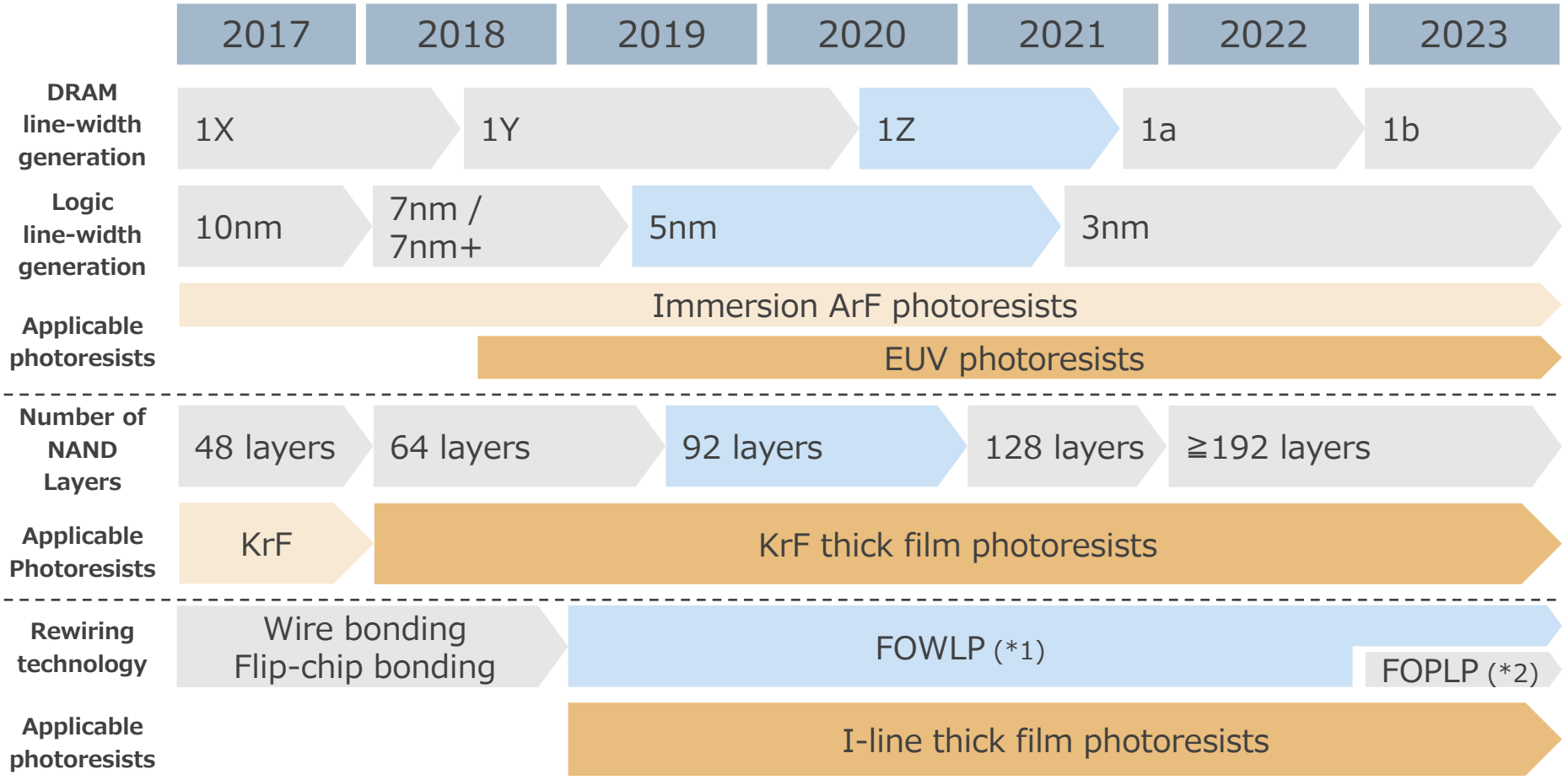
(Source: WSTS)



Compound Average Growth Rate (CAGR)

Memory	8%
Logic	3%
Total Semiconductor	4%

Ⅳ-4 Market Environment: Semiconductor Materials



*1 Fan Out Wafer Level Package *2 Fan Out Panel Level Package

Line-width shrinking and multilayer structures are required to achieve semiconductor performance improvement

Ⅳ IT-related Chemicals

Progress on Major Issues:
Expand Product Portfolio & Develop New Businesses

Expand existing businesses

Increased sophistication of in-house core technologies and multifunctional materials, fusion of display-related and semiconductor materials technologies

Existing businesses

Display-related Materials

Semiconductor Materials

Develop new businesses

Collaboration and investment in business fields where we expect synergy

IV-5 Progress on Major Issues: Display-related Materials for OLED Displays

Major Issue	Action Plan	Progress
Focusing on high value-added products	➢ Secure a share of the high-end market by utilizing core materials developed in-house	☑ Full-fledged mass-production of polarizing film with in-house LC* coating retardation for OLED smartphones has started
	➢ Expand touchscreen panel product portfolio	⇨ See "Progress on Major Issues: New products" section
	➢ Develop products for flexible displays	

Element technology	2018	2019	2020	2021
Polarizer	Stretched PVA			
				LC* coating (In-house)
Retardation film	LC* coating (Procurement)			
				LC* coating (In-house)

* LC: Liquid crystal

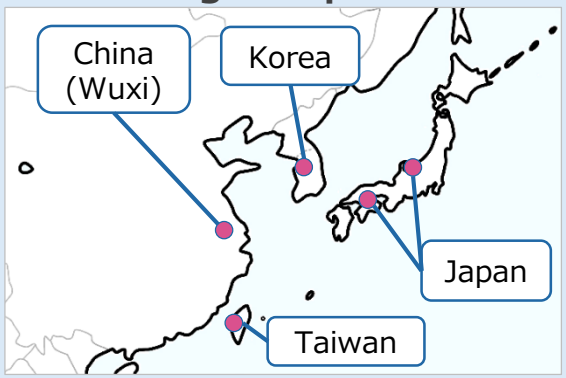
Continue to secure high market share with a wide-lineup of polarizing film materials for OLED displays

IV-5 Progress on Major Issues: Display-related Materials for LCDs

Major Issue	Action Plan	Progress
Market shift to China	➢ Design polarizing films to meet the requirement of Chinese panel manufacturers	☑ Lower shrinkage stress & improved permeability of polarizing film with acrylic protective film
Restructuring	➢ Optimize our global supply chain	☑ Optimization of product allocation of polarizing film for LCD-TVs has made some progress
Focusing on high-end LCDs	➢ Secure market share in extra-large sized TVs and PIDs* (polarizing film)	☑ "Roll to Panel" lines for extra-large sized panels have been installed in customer factories
	➢ Achieve wide color gamut & high color reproduction (color-resists)	☑ Development of new color materials for high-end LCD-TVs (8K, Mini-LED etc.) has started

* Public Information Displays

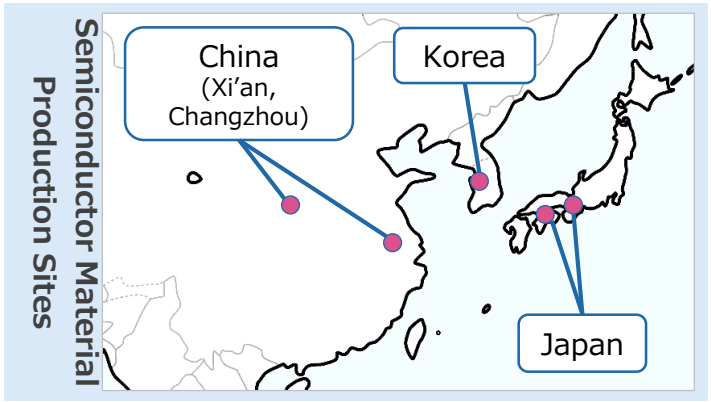
Polarizing film production



Focus our resources effectively on promising fields (ex. next-generation displays) while keeping some profit in conventional business fields

IV-5 Progress on Major Issues: Semiconductor Materials

Major Issue	Action Plan	Progress
Secure growing demand by utilizing advance investment	➢ Expand production capacity for immersion ArF photoresists	☑ Full-fledged operation has started from the July-September quarter of 2020
	➢ Enhance the development and evaluation system of photoresists for cutting-edge processes	☑ Plan to start in the April-September period of 2022
	➢ Invest in a processing chemical plant in China	☑ Operating stably
Diversify product portfolio	➢ Expand sales of EUV photoresists ➢ Develop compound semiconductors for power devices	⇨ See “Progress on Major Issues: New products" section

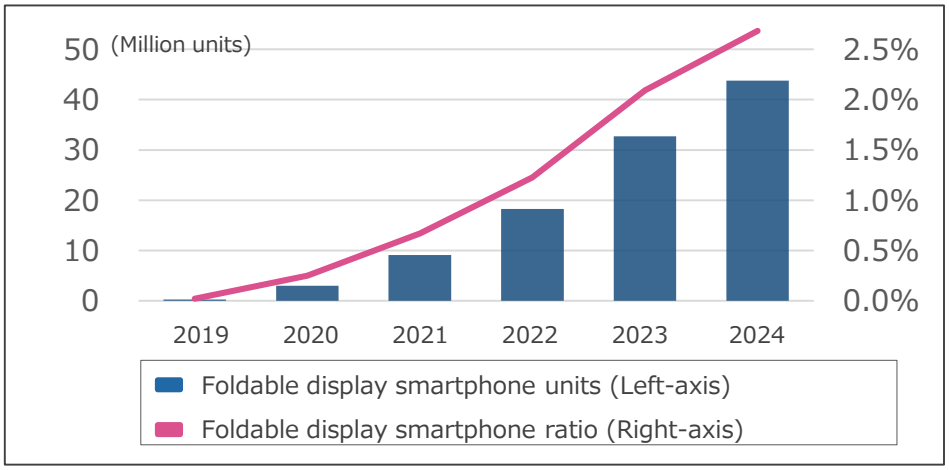


Secure market share by providing high-performance and high-quality chemicals needed for enhancing the density of semiconductors (line-width shrinkage and multilayer structures)

IV-5 Progress on Major Issues: New Products (Foldable Display Materials)

Market for foldable display smartphones

(Source: Omdia)



Foldable display materials

	Our products	Competitor
Display cover materials	Clear resin film	Ultra thin glass
Polarizing film	LC-coated polarizer/ retardation film	Stretched/coated-PVA polarizer
Touchscreen panel (TSP)	Flexible TSP (Add-on)	On-cell TSP (Manufactured by panel mfr. in-house)

OLED Panel

Our position

- Have a wide-lineup of foldable display materials
- Have advantages in optimization of product properties by utilizing organic synthesis technology

Action Plan

☑ Propose materials that meet the requirement of panel/device manufacturers

Progress

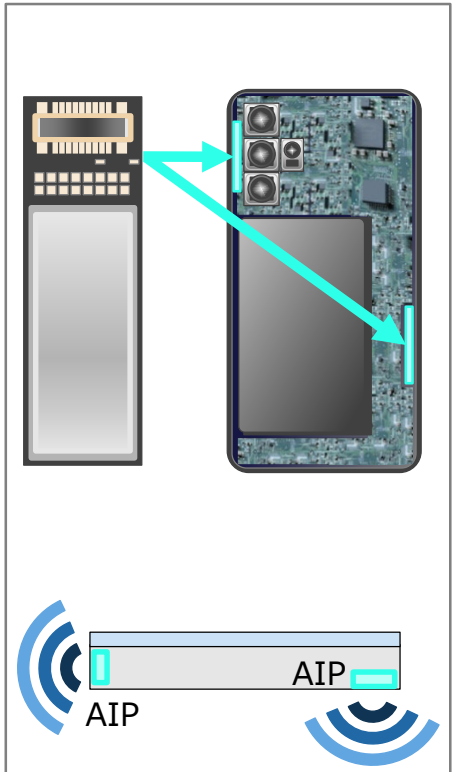
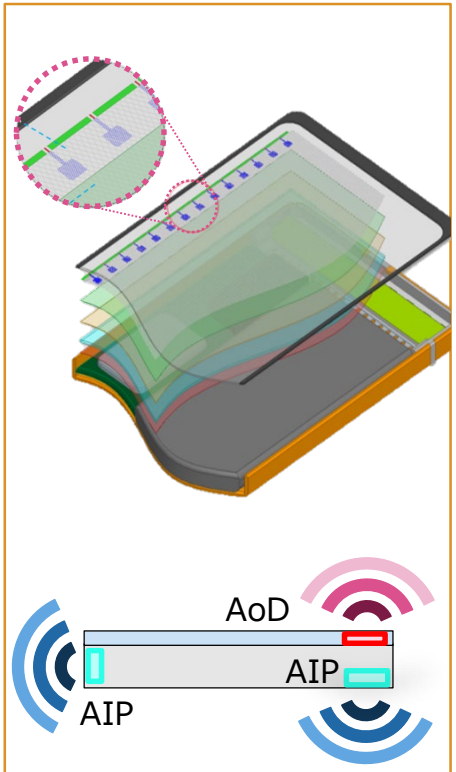
☑ All products already have been launched separately

☑ Prepare to launch multi-functional materials in 2021

Secure market share in foldable display materials

IV-5 Progress on Major Issues: New Products (5G Antenna on Display)

Comparison with existing technology

Existing product (Antenna in Package)	Our product in development (Antenna on Display)
	

Position of our technology

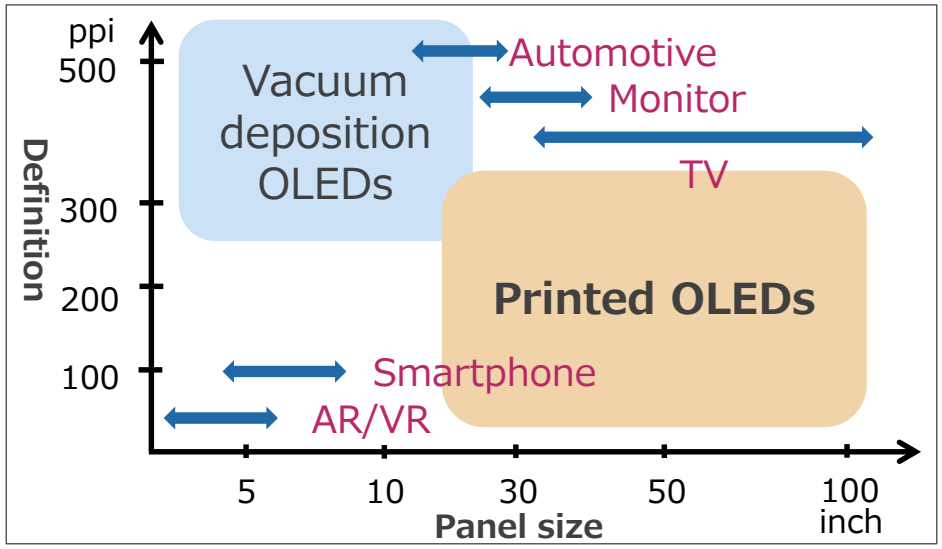
- For millimeter wave bands
- Making the most of touchscreen panel technologies and production lines

Action Plan	☑ Promote improved 5G communication performance in combination with existing technology ☑ Develop new applications for which thin, transparent and flexible properties are suitable
Progress	☑ Performance test using AoD antenna modules is on going

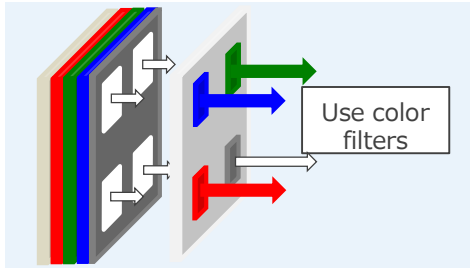
Smooth commercialization by utilizing our existing resources

IV-5 Progress on Major Issues: New Products (Polymer Light-emitting Materials)

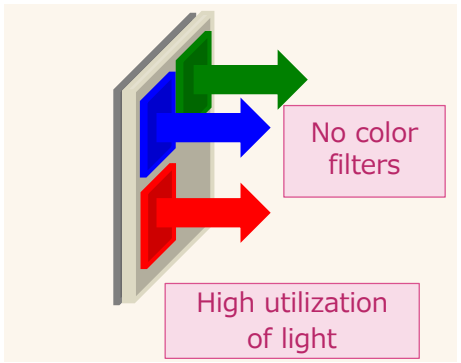
Target markets for printed OLEDs



Comparison of luminescence mechanism with existing OLED-TV panels



Bottom emission



Top emission

Our position

- Have light-emitting material technologies for all RGB colors
- Already achieved mass-production of mid-sized printed OLED panels before competitors

Action Plan	☑ Improve the lifetime of blue light-emitting material
Progress	☑ Performance tests on OLED panels with new promising materials are planned to start

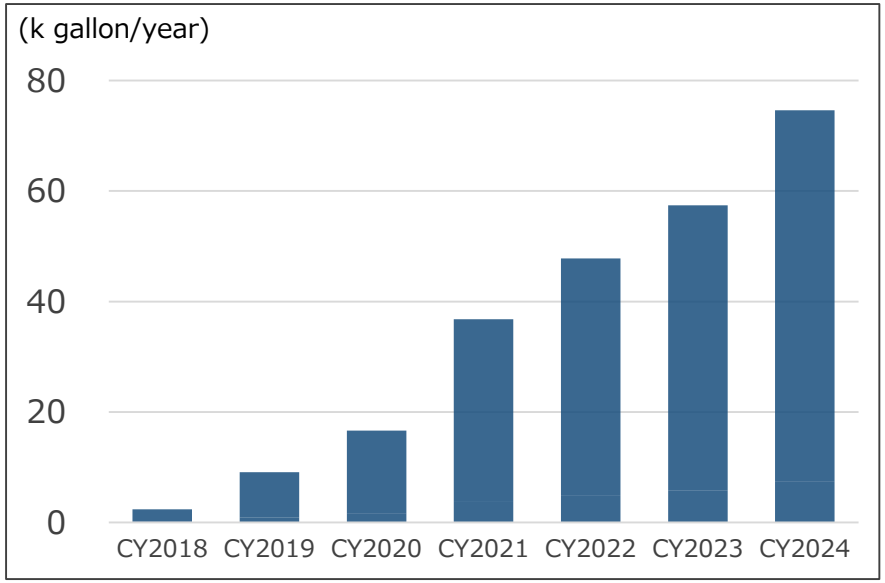
Improve performance further for mass-production of TV panels

Introduce customers to the best conditions to maximize light-emitting performance

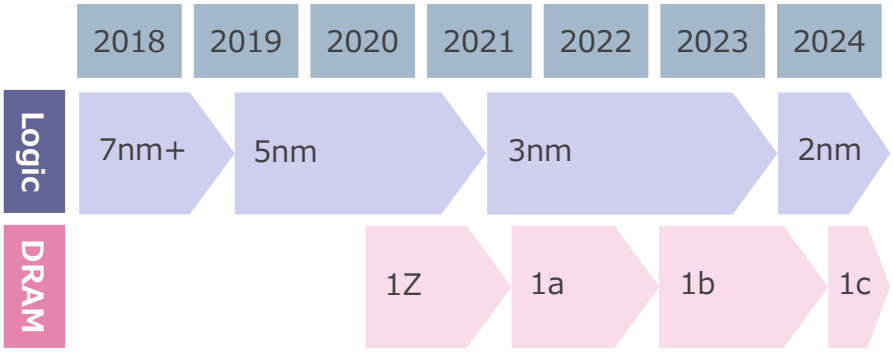
IV-5 Progress on Major Issues: New Products (EUV Resists)

EUV photoresist market (quantity)

(Source: Fuji Keizai)



Line-width Generation for EUV Resists



Our position

- Have the top market share (over 30%) in immersion ArF photoresists, but slightly lagging behind in EUV
- Started sales in FY2020

Action Plan

☑ Develop a composition that can achieve higher resolution to expand sales

Progress

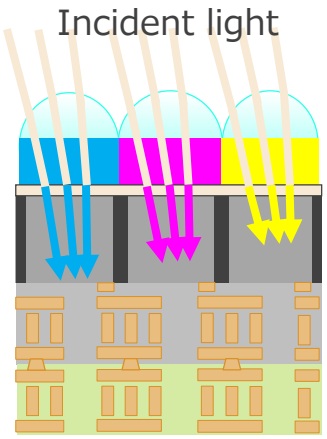
☑ Found the optimum composition in short time by utilizing Materials Informatics

☑ Obtained good evaluations in a competition for mass production scheduled after FY2023

Aim for 20~30% share as soon as possible

IV-5 Progress on Major Issues: New Products (Image Sensors)

Structure of image sensors (CIS)



Layer	Function
Micro lens	Light focusing
Color filter	Color separation
Photodiode	Photoelectric conversion
Logic	Image processing

Technical trends in CIS

Higher definition

- Miniaturize photodiode pixels

Our products: ArF thick film photoresists

Higher sensitivity

- Increase the amount of light focused by the lens
- Use CMY color filters instead of RGB

RGB ➡ CMY

Our products: High refractive clear resin; CMY color resists

Our position

- Built up technology and know-how in both display & semiconductor fields
- Have technologies applicable for high definition & high sensitivity

Action Plan

- ☑ Secure mass-production results for new color materials
- ☑ Propose the combination of clear resin for lenses & photoresists for shaping micro lenses

Progress

- ☑ New color materials: To launch in 2021
- ☑ Resin for lenses: Optimizing properties for launch in 2021

Increase in sensing demand (ex. autonomous driving)
-> Seize the opportunity to expand share of image sensor market

IV-5 Progress on Major Issues: New Products (Next-generation Power Semiconductors)

Comparisons of Power Semiconductors

Type	Operating voltage	Operating frequency	Size (*1)	Characteristics
Silicon (Si)	○	○	△	• Well proven • Cost competitiveness
Silicon carbide (SiC)	◎	○	○	• High operating voltage • Already in mass-production (*2)
Gallium nitride (GaN on GaN)	○	◎	◎	• At the R&D stage

*1 Power unit size for the same output
*2 For some electric vehicles and high-speed trains

Development of the GaN on GaN Power Semiconductors Market

Characteristics (compared with Si/SiC)	Example uses (expected)
• Low loss -> Energy saving	• Power sources for data centers
• Small-sized -> Light weight	• Electric vehicles
	• Wireless power supplies

Need to reduce costs and develop applications that require the characteristics of GaN on GaN power semiconductors

Our position

- Have manufacturing technologies for both GaN substrates and GaN epi-wafers

Action Plan

☑ Reduce cost of GaN substrate (produce large-diameter substrates, improve productivity)

☑ Develop applications by collaborating with other players

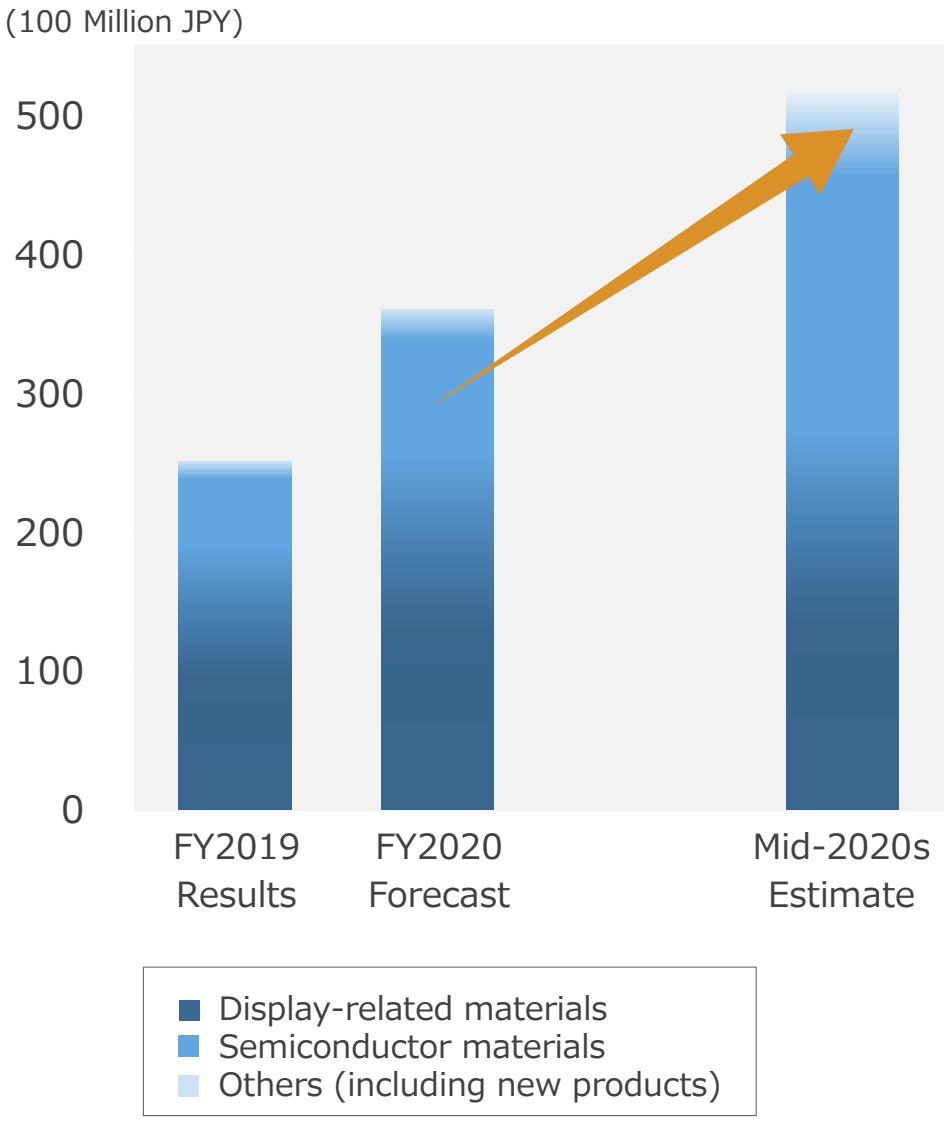
Prog-ress

☑ Made progress in development of elemental technology for manufacturing GaN substrates suitable for power semiconductors

Create a market for GaN on GaN power devices and enjoy first-mover advantage

Ⅳ IT-related Chemicals

Ⅳ-6 Long-term Targets



Further improvement of our business portfolio

Focusing on high value-added products & Developing/launching new businesses

- Materials for OLED/ next-generation displays
- Materials at the boundary area between semiconductors & displays
- Materials for cutting-edge semiconductor processes
- High-performance & energy-saving compound power semiconductors etc.

Carry out action plans in response to LCD market changes

Aim for a core operating income of around ¥50 billion in the mid-2020s

V

Health & Crop Sciences Sector

Nobuaki Mito

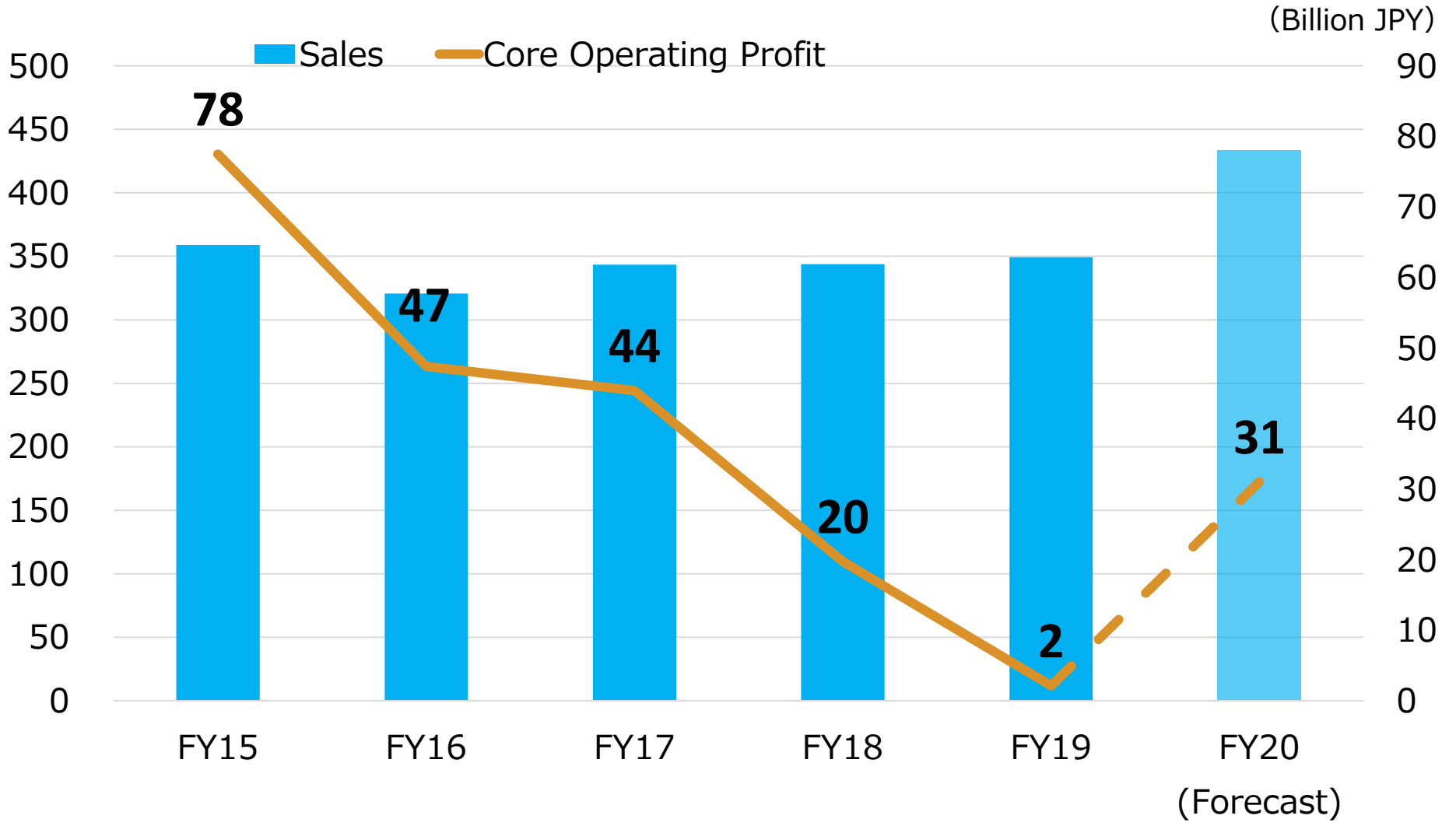
Representative Director &
Managing Executive Officer

V Health & Crop Sciences Sector

V Health & Crop Sciences Sector

V-1

Consolidated Performance Trends in the Health & Crop Sciences Sector



V Health & Crop Sciences Sector

V-2 Contribution to the Containment of the Infectious Disease Pandemic

SanTerra Co., Ltd.

Material for medical gowns（PE Film）

Contribution to solving the supply shortage of medical PPE in clinical environments

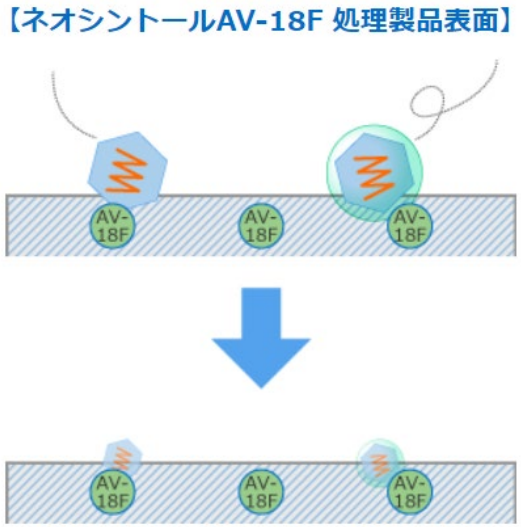
Sumitomo Chemical Garden Products Inc.

Household antiviral disinfectants spray

Contribution to improving household hygiene

Sumika Environmental Science Co., Ltd.

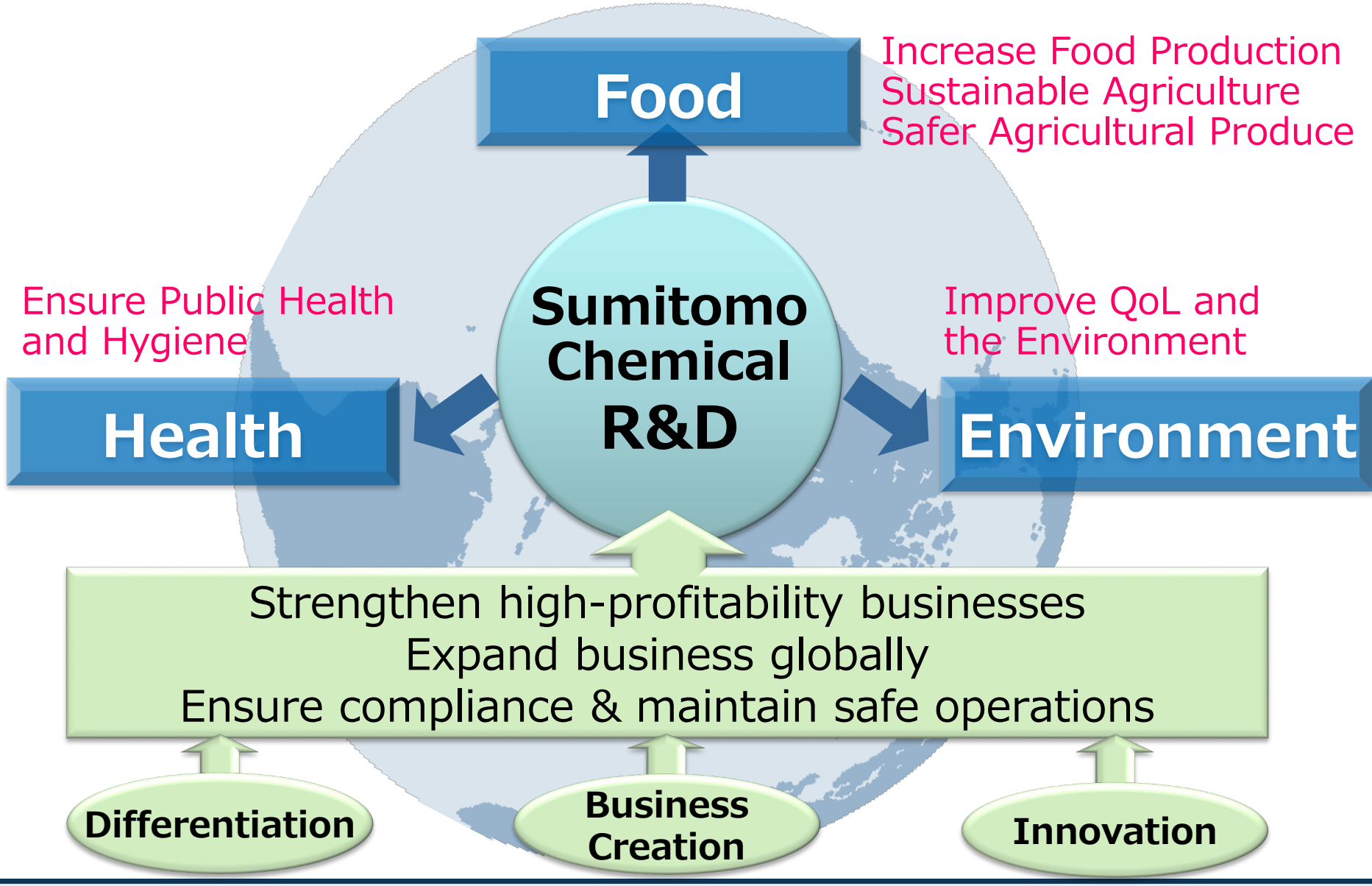
Antiviral agents



Contribution to enhancing public health
(e.g. surface treatment for buttons on a vending machine)

V Health & Crop Sciences Sector

V-3 Long-Term Vision for the Health & Crop Sciences Sector



V-3 Business Growth Strategy Aligned with Long-Term Vision

Key Words for the Growth Strategy

Topics covered in this presentation

Global

- Progress update on the AgroSolutions business expansion in **LATAM & India**

Innovation

- Progress update on the **AgroSolutions product development pipeline**
- Next Generation Tech-development : Access to **Synthetic Biology**
- **Digital Transformation (DX)** in domestic Ag-Market

Differentiation

- Strengthening the **Biorational** business

Business Creation

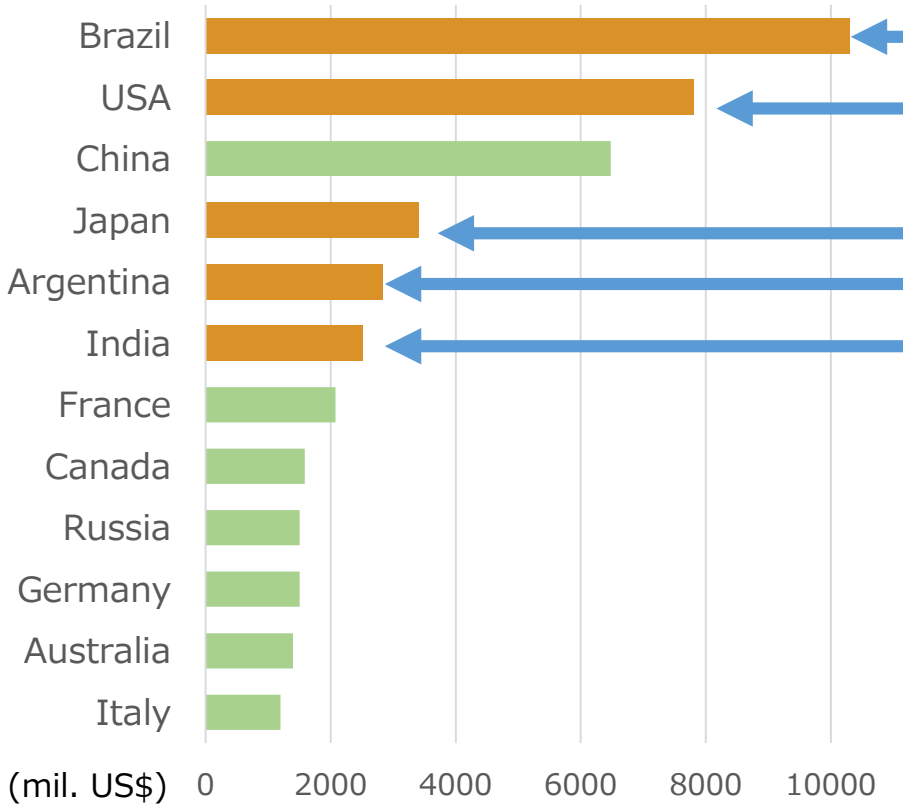
- Creating and expanding an **Antiviral-product business**
- Expanding our **product portfolio in the Animal Nutrition business**
- Business development in **Nucleic Acid medicine**

Global Business Expansion: AgroSolutions

Global

Expanding & strengthening our sales footprint in 5 of the 6 top global Ag-markets

Crop Protection Market Size（Year 2019）



Acquisition of Nufarm's LATAM business

Strengthening the sustainable solution business at Valent USA

Reinvigorating growth in the domestic AgroSolutions business

Merger of subsidiaries in India

Source : AgbioCrop （Oct 2020）

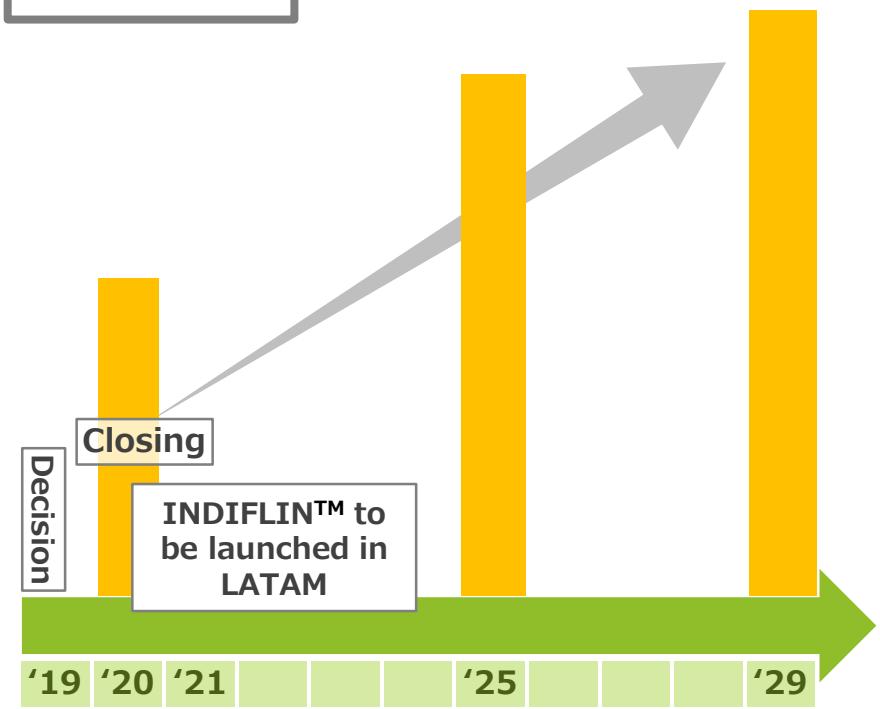
Global Business Expansion: AgroSolutions Business in LATAM

Global

Acquired 4 subsidiaries of Nufarm in LATAM (Brazil, Chile, Argentina and Columbia)

Invested approx. 90bn. JPY

Sales in LATAM to grow to 200 bn. JPY



*LARC: Latin America Research Center

PMI Progress

- With new management in place, integrated operations began in August 2020
- Accelerate use of Fortaleza plant— 5 new formulated products entering production

Plant in Fortaleza, Brazil

New product development

- A registration application for a new INDIFLIN™ mixture product developed by Nufarm has been submitted, following the application for an INDIFLIN™ mixture developed by SCC filed in 2017.
- Other new product development is also being accelerated by utilizing Sumitomo Chemical's LARC facility*

V-3 PMI Progress (Acquisition of Nufarm LATAM)

Global

Completed onboarding for **over 700 employees**. **Sumitomo Chemical's history & spirit deeply shared** through active participation by SCC management

Over 10,000 stakeholders engaged in communication

Over 75 people involved in the project, divided into 20 functional working groups

Despite the Covid-19 situation and the fact that some people never met in person, **teams are highly motivated and working together well**

Over 200 policies and procedures were mapped and analyzed across all functional areas

Over 250 virtual meetings held across all people engaged in the integration project

174 milestones and 851 activities mapped in the integration plan – roughly half of those milestones completed

Early realization of **cost synergies & cost reduction** due to smooth integration of IT systems (SCM, CRM, etc.)

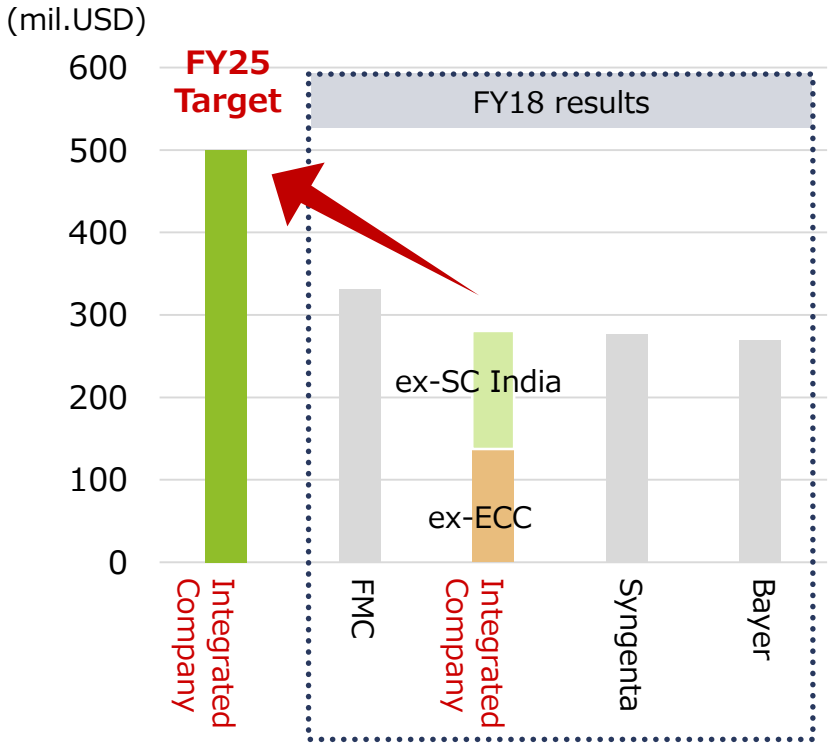
200 bp reduction in interest on loans achieved under Sumitomo Chemical's group finance scheme

Global Business Expansion: AgroSolutions business in India

Global

AgroSolutions Market in India

Growing at 7 to 8% per year



Initiatives to achieve synergies from integration

- **Develop and Launch new mixture products**
  Combine Sumitomo Chemical's proprietary products with the former ECC's generics.
- **Utilize former ECC manufacturing facilities**
  Plan to manufacture some of Sumitomo Chemical's products in India to secure supply capacity in the existing plants in Japan
- **Promote digital marketing**
  Expand sales in India by using social media and smartphone apps to reach end-users, many of which are small-scale farms
- **Strengthen the Biorational business**
  Promote the introduction of new products by working closely with Valent BioSciences

Aiming to be a leading AgroSolution products company in India's rapidly growing market

V-3 AgroSolutions Pipeline Outlook

Innovation

B2020

Compound	Use	Evaluation	Full-scale development	Registration	Market Launch
INDIFLIN™ (inpyrfluxam)	Agricultural fungicide e.g. Soybean rust	☑ Completed		☑ Registered in Japan	Launched in Japan in 2020 Scheduled to be launched in LATAM in 2021
PAVECTO™ (methyltetraprole)	Agricultural fungicide e.g. Septoria	☑ Completed		☑ Registered in Japan	Scheduled to be launched in Japan in 2021
ALLES™ (oxazosulfyl)	Agricultural insecticide e.g. Major rice pests etc.	☑ Completed		☑ Submitted	Scheduled to be launched in Japan in 2021
Name - TBD (pyridaclomethyl)	Agricultural fungicide e.g. Field crop & vegetable diseases	☑ Completed		☑ Submitted	

A2020

Pipeline A	Agricultural plant growth regulator			☑ Submitted	
Pipeline B	Next generation herbicide effective against herbicide-resistant weeds		Full-scale development in progress		
Pipeline C	Botanical insecticide for agriculture and household hygiene		Full-scale development in progress		
Pipeline D	Agricultural insecticide to control insecticide-resistant Pests	Evaluation in progress			

Potential sales: Approx. JPY150-200 billion in total

V-3 Development of Next-generation Technologies

Innovation

Introduction of new technology to strengthen core R&D capabilities

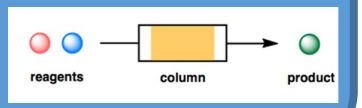
Technology development for creating new business

Discovery of new chemical substances

- AI (Docking simulation)
- Target-based screening
- Technology introduction promoted by open innovation approach

Chemical Processes

- Utilize AI
- Flow process



Applications

- Utilize drones
- Utilize sensing technologies
- Utilize eco-friendly materials for product design

Biorationals/Botanicals

- Evaluate & introduce natural plant-based products
- Utilize synthetic biology
- Innovative fermentation process technologies

Crops/Agriculture

- Develop a new variety of rice
- Phenotyping
- Plant growth prediction

Next-generation Technologies for the Biorational Business

Innovation

Discovery of novel microorganisms and natural products

Provide library of marine microbes

BioMar

Skill in developing Biorational products

Infrastructure for, and skill in screening discovered compounds

Innovation in fermentation processes through synthetic biology

zymergen

CONAGEN

SATT PARIS-SACLAY

INRAE

VBC
Biorational
Research
Center

Sumitomo Chemical
H&CS Sector Research Lab

Sumitomo Chemical
Corporate Research Lab

V-3 Long-term Biorational Growth Drivers

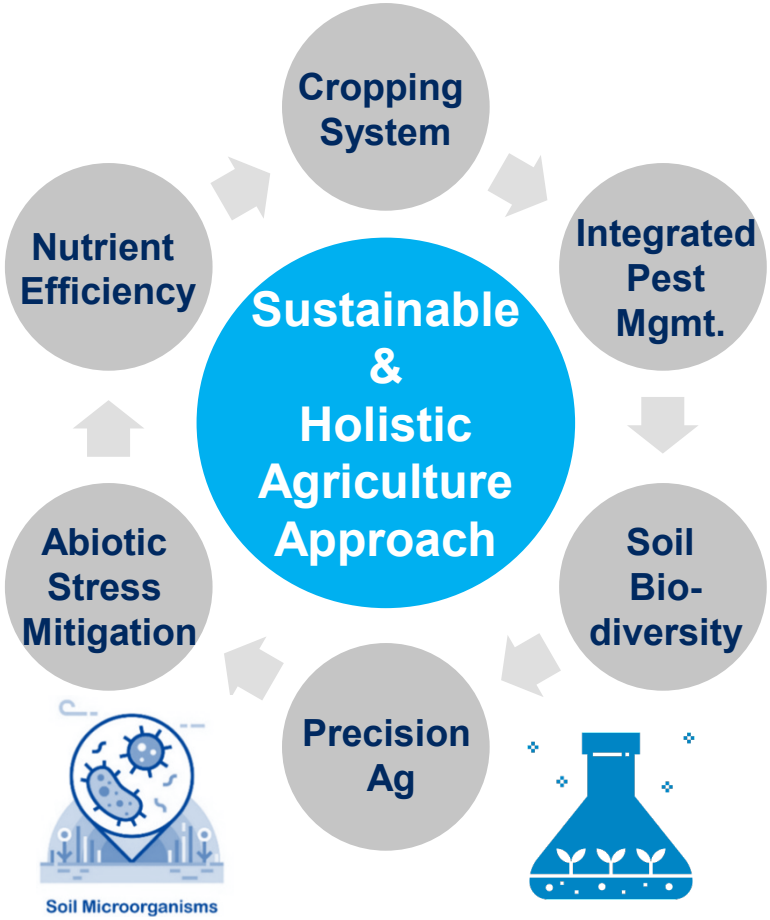
Differentiation

~10b People by 2050
50% More Food

Seeking Yield Boost

Climate Change
(+17% crop loses 2050)

Stress Mitigation



Consumer Demand
"Safe"/Local/Quality

Food Supply → Grower Sustainable Ag

Non-Fertilizer Yield Improvement

Bio Yield Alternatives

Soil Health Trend & Awareness

Microbial Biodiversity

Loss of Conventional Crop Protection

Integrated Programs

V-3 Strengthening the Biorational Business

Differentiation

Contents

Business Management Structure

- Streamline management layers to enable **more swift strategic decision-making & resource allocation**.
- **Establish and strengthen SSBUs(Sstainable Solution Business Units), dedicated teams for Biorational demand creation** in key countries / markets.
  - ✓ NAFTA: Significant increase in personnel for SSBU
  - ✓ LATAM and Europe: SSBU newly established

R&D

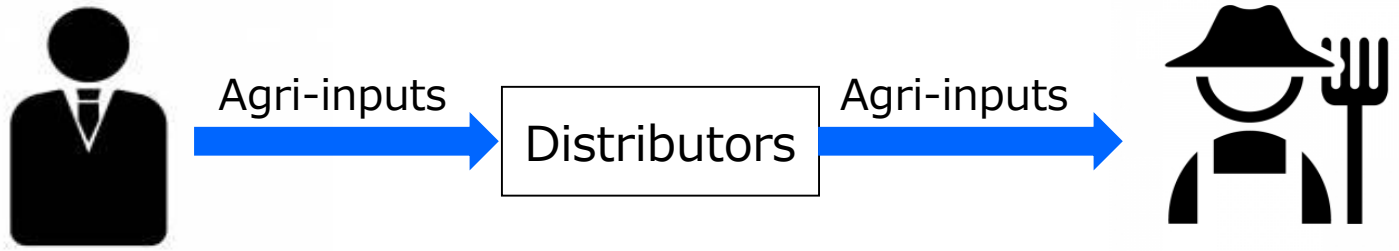
- Harness technological innovation in **Synthetic Biology** for Biorational R&D activities (e.g. cost-reduction projects for existing products, novel product development and launch)
- **Establish Biorational Team** in H&CS Sector Research Lab to accelerate pipeline development

Accelerate launch of 6 pipeline products in later development stages (PGR 4, Bioinsecticide 1, Rhizosphere 1)

V-3 Agricultural Digital Transformation (DX) in Japan

Innovation

We aim to build a digital information platform which can provide Japanese growers with useful & valuable information, which will enable us to find solutions for various challenges (e.g. aging population, frequent abnormal weather conditions, labor shortages, etc.) that domestic agri-business is currently facing



Digitized Information

農力 農業経営支援システム あぐサポ®

MiRISE 栽培支援システム こめサポ

V-3 Create & Expand an Antiviral-product Business

Business Creation

	Development of active ingredients	Product portfolio expansion	Sales expansion
Action items	▪ Improve quality of existing active ingredients ▪ Discovery / development / introduction of new active ingredients	▪ Development of applied technology for resin / coating use ▪ Development of devices	▪ Coordination & collaboration with Sumitomo Chemical's group companies, such as Sumika Environmental Science Co., Ltd.

(e.g.) Natural plant extracts

(e.g.)

✓ Optical film
✓ Smartphone case

✓ General-purpose plastic films (buttons / touch panels on vending machines, elevators, etc.)

住友化学

SES

SPT 住化プラステック株式会社 SUMIKA PLASTECH Co.,Ltd.

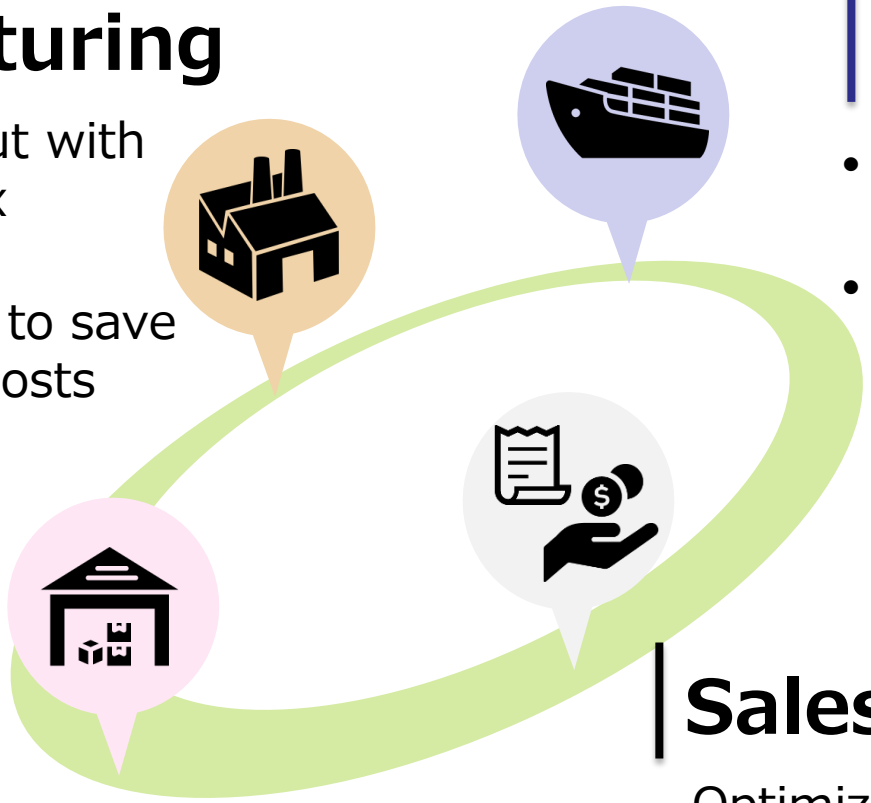
神東塗料

Creating a new, core business pillar in the Environmental Health Division in response to societal demand for COVID-19 containment

V-3 On-going Profit Improvement Activities in the Methionine Business

Manufacturing

- Increase output with minimal CapEx
- Shut down aging facilities to save maintenance costs
- Cost reduction



Logistics

- Inventory management with DX
- Rationalization of international shipping costs

Procurement

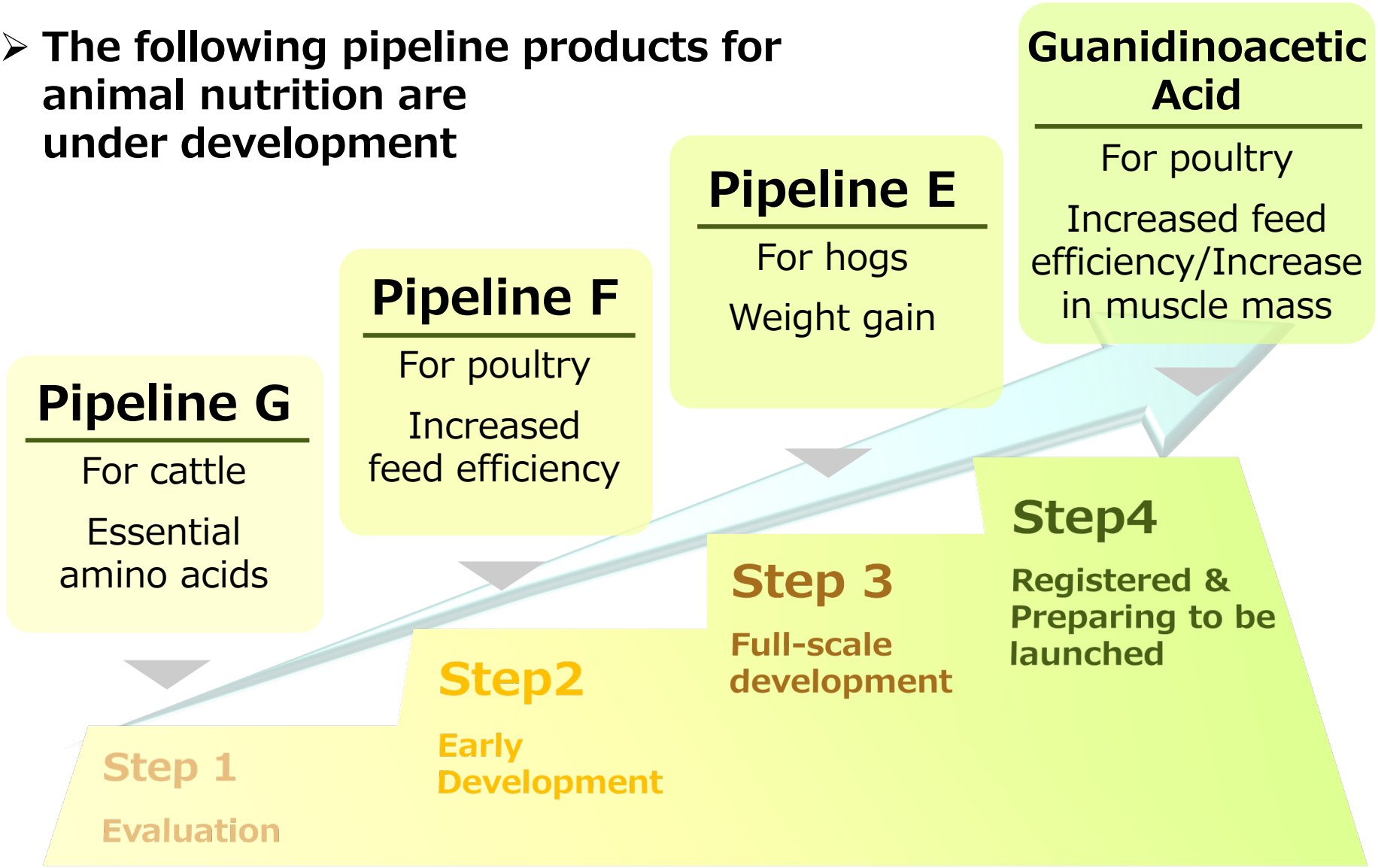
- Reducing the purchase price of key raw materials

Sales & Marketing

- Optimization of focused sales territories / key accounts
- Efficient use of sales force

Expansion of the Animal Nutrition Business Product Portfolio

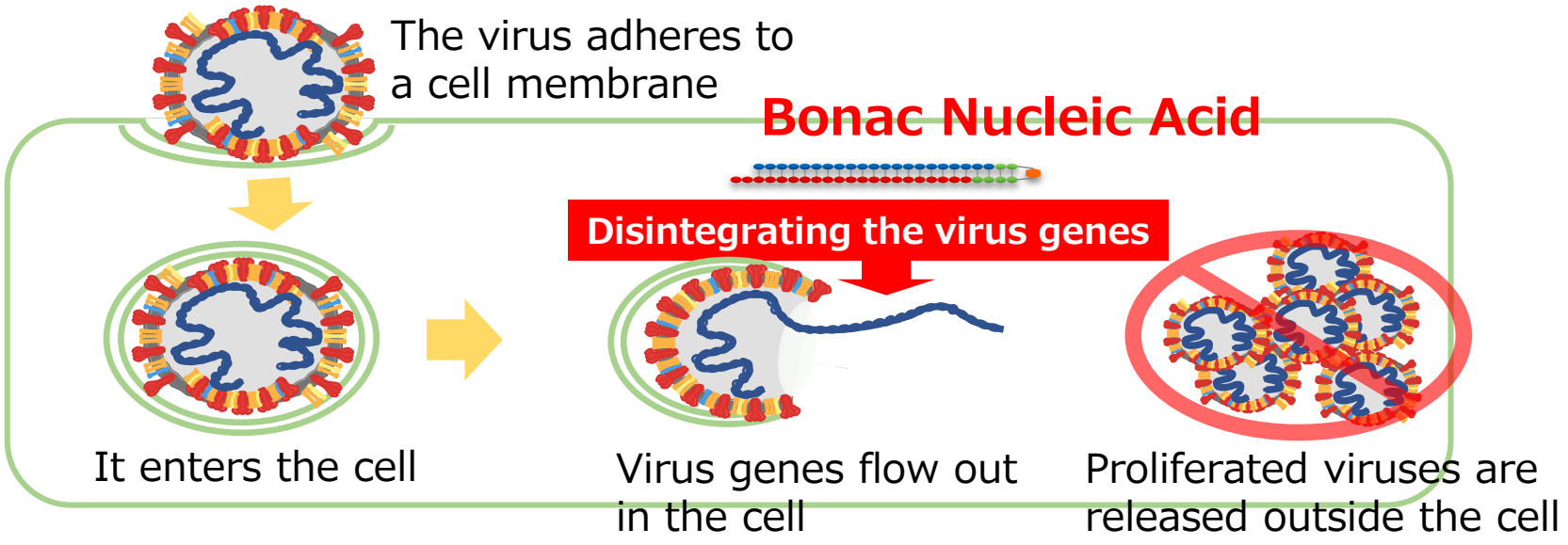
- **The following pipeline products for animal nutrition are under development**



Promote the Nucleic Acid Medicine Business (1)

☐ Supply active ingredient of nucleic acid drug for Covid-19

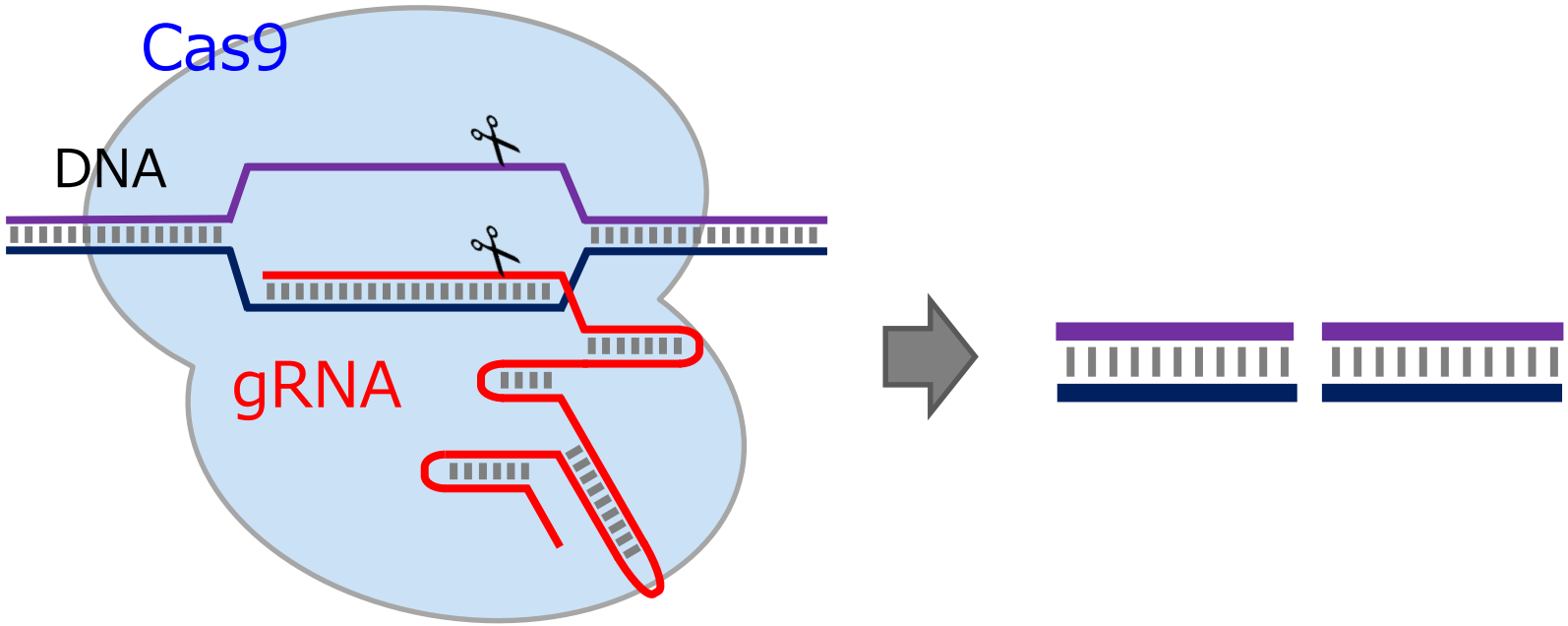
- Bonac Corporation and Fukuoka Institute of Health & Environmental Sciences are jointly screening candidate substances that can disintegrate virus genes
- A candidate substance will be selected by the end of 2020. Production will commence in early 2021.



Promote the Nucleic Acid Medicine Business (2)

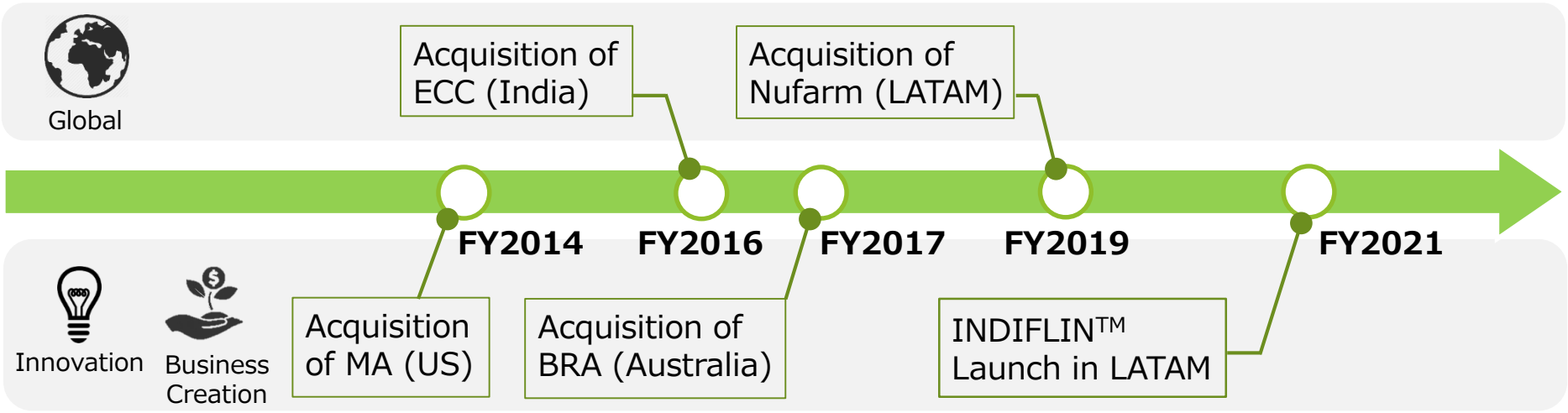
☐ Supply long-chain RNA for genome editing use

- Supply long-chain RNA for Crispr-Cas9 genome editing technology (which won the Nobel Prize in Chemistry in 2020)
- The only technology in the world that enables the manufacture of a large amount of high-purity long-chain RNA under GMP conditions

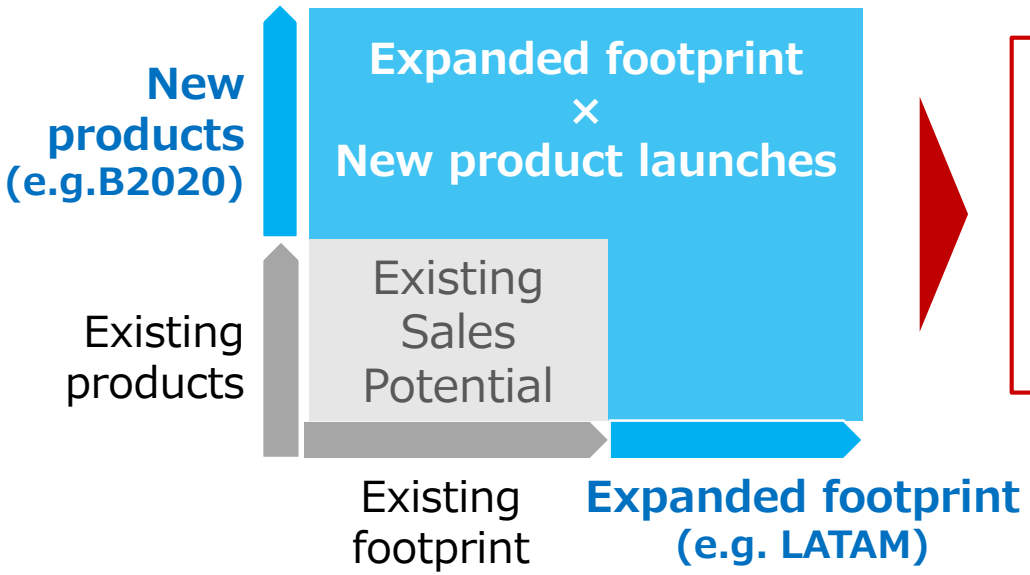


V Health & Crop Sciences Sector

V-4 Top-line Growth Going Forward



Vision for Revenue Growth

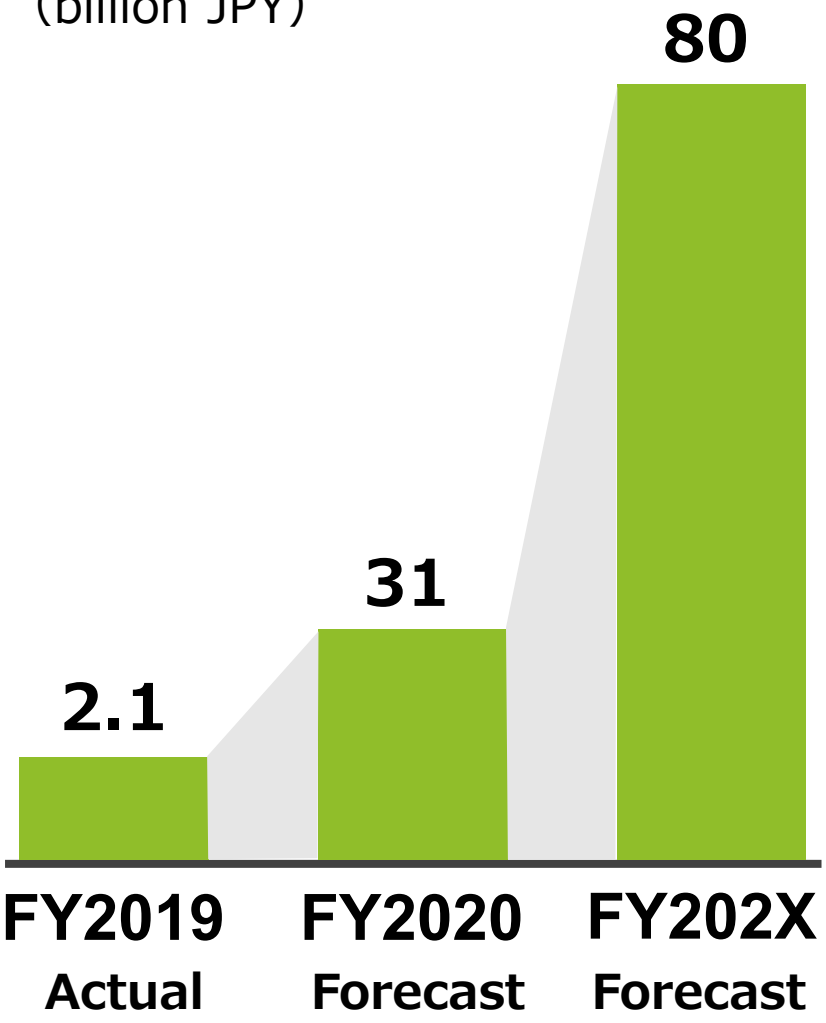


Strive to achieve strong revenue growth by leveraging past strategic investments in a multiplicative way

V-4 Performance Outlook in the Health & Crop Sciences Sector

Core Operating Profit

(billion JPY)



Revenue Growth

- B2020/A2020 Launches
- Biorational Business Expansion
- Growth in LATAM / India

Profit Improvement

Revenue Growth

+

- Strengthen cost competitiveness of the methionine business
- Differentiate our proprietary crop protection products from generics
- Optimize operating expenses

Pharmaceuticals Sector

Takashi Shigemori

Director &
Senior Managing Executive Officer

VI Pharmaceuticals Sector

VI Pharmaceuticals Sector

VI-1 Business Environment

Environment

Opportunities

- Global healthcare and pharmaceutical markets continue to expand
- Emergence of new therapeutic approaches through technological innovation (preemptive, individualized and regenerative medicine)

Threats

- Shortage of healthcare finances
- Competition with generic drugs after the loss of exclusivity (Risks: Latuda®, FDG-PET)
- Entry of new players across industries into healthcare business spaces
- Decline in industry-wide R&D productivity

Group Initiatives

1. Offering New Value in Medical Practice through New Technologies

- Regenerative medicine and cell therapy
- Theranostics (fusion of diagnostics and therapeutics)

2. Timely Launch of Next-generation Products

- Continuous expansion of promising pipeline through in-house drug discovery and in-licensing

Drastic reinforcement through strategic alliance with Roivant

3. Improving R&D Efficiency and Increasing the Probability of Success

- Strengthening in-house R&D capability through various approaches, such as digital technology and big data

VI-1 Business Strategy: Pharmaceuticals Sector

FY2019-FY2021
Corporate Business Plan

Action plan & major issues	Progress
• Maintain profitability after Latuda's loss of exclusivity • Enhance drug discovery capabilities and improve the success rate in R&D • Strengthen innovation base with new approaches to drug discovery	• Strategic Alliance with Roivant Sciences ◆Acquired late-stage assets **Post-merger integration is progressing, including development of strategic pipeline and establishment of sales structure utilizing existing North American business bases.** ◆Acquired data science technology platforms, such as "DrugOme," to accelerate digital innovation • Launched sublingual film for the treatment of Parkinson's disease off episodes
• Launch new products in oncology	• Continuing clinical trials of napabucasin for colorectal cancer
• Explore opportunities in frontier businesses (healthcare solutions)	• Promoting R&D of new healthcare solutions using cognitive activation therapy and biological sensing technology
• Develop theranostics business and strengthen the competitiveness of existing radiopharmaceutical business	• R&D site for radiopharmaceuticals will be operational in 2020.
• Expand group synergies in the pharmaceutical business	• **Establishment of S-RACMO Co., Ltd., a new CDMO company for regenerative medicine and cell therapy, and development of novel drugs for infectious diseases.**

VI-1 Pipeline for Pharmaceutical Agents and In-vivo Diagnostic Agents

Product Launch Targets

FY2020	FY2021	FY2022	FY2023	FY2024
		SMC-01 (Mobile App. for management of Type 2 Diabetes)	NMB46 (Vasodilator for coronary arteries)	
KYNMOBI™ (OFF episodes associated with Parkinson's disease) Launched in September		Napabucasin (Colorectal cancer)	Napabucasin (Colorectal cancer)	
LATUDA (Schizophrenia／Bipolar depression) Launched in June	RVT-802 (Pediatric congenital athymia)	Allo iPS cell-derived products (Parkinson's disease) *2	SEP-363856 (Schizophrenia)	NMB58 (PET diagnostics for myocardial perfusion scintigraphy)
Relugolix (Prostate cancer)	Relugolix (Uterine fibroids)	Allo iPS cell-derived products (Age-related macular degeneration) Launch target under consideration *2	Alvocidib (Myelodysplastic syndrome) *1	Dubermatinib (TP-0903) (Solid tumors) *1
Vibegron (Overactive bladder)	Imeglimin (Type 2 diabetes)	Relugolix (Endometriosis)	TP-0184 (Solid tumors) *1	TP-3654 (Hematologic malignancies) *1

: Psychiatry & Neurology
: Regenerative medicine/ cell therapy
: Frontier field
: Oncology
: Oncology
: Radiodiagnostic agent

Expect peak annual sales to be 50 billion yen or more. (described in first launch)

*1 Premised on utilizing the accelerated approval program. (consultation with FDA planned)
*2 Launch schedule is based on our targets, pending agreement with partners.

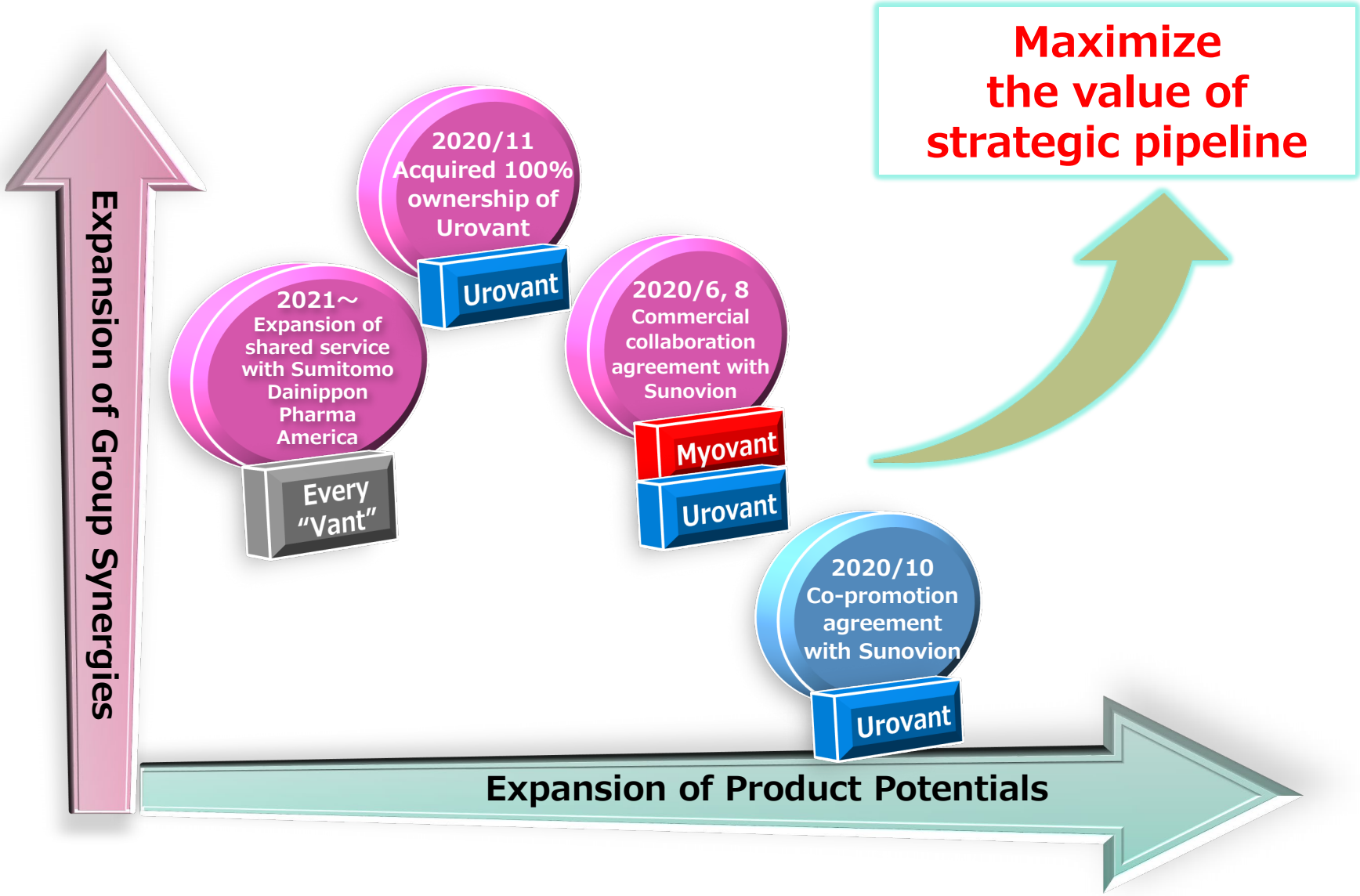
VI-1 Progress in Strategic Alliance with Roivant Sciences: Pipeline Development

Current development status of strategic pipeline

Product	Indication	Current development status	Expected schedule for NDA or approval
Relugolix (Myovant)	Prostate cancer	NDA submitted (US)	PDUFA date Dec. 2020
	Uterine fibroids	NDA submitted (US, EU)	PDUFA date June 2021
	Endometriosis	Phase 3	Plan to submit NDA in FY2020 4Q (at earliest)
Vibegron (Urovant)	Overactive bladder (OAB)	NDA submitted (US)	PDUFA date Dec. 2020
	OAB in men with benign prostatic hyperplasia	Phase 3	Plan to submit NDA in FY2021 4Q (at earliest)

VI-1

Progress in Strategic Alliance with Roivant Sciences: Post-Merger Integration etc.



VI-1

FY2020 Performance Forecast
(Released on October 30, 2020)

Performance Trends

- Sales of pharmaceutical agents remain generally strong regardless of the influence of COVID-19
- On the other hand, the number of laboratory tests for in-vivo diagnostic agents is lower due to the avoidance of medical consultation and restriction of lab tests because of COVID-19
- Higher SG&A and R&D expenses due to the alliance with Roivant, with newly acquired drugs yet to be launched

Risks and Challenges

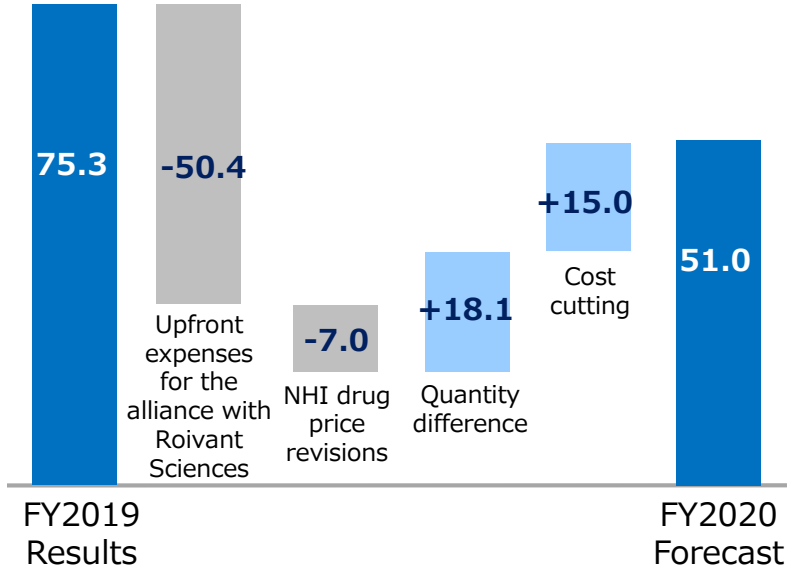
- Delay in sales expansion of newly-launched products and in recovery of the number of lab tests, caused by the recurrence or prolonged epidemic of COVID-19
- Delay in determining the results of the Phase 3 clinical trial for napabucasin because of the influence of COVID-19
- Increase in upfront investment in late-stage pipeline for smooth market entry

The impact of acquiring 100% ownership of Urovant announced in Nov. is being examined.

FY2020 Forecast (Billions of yen)

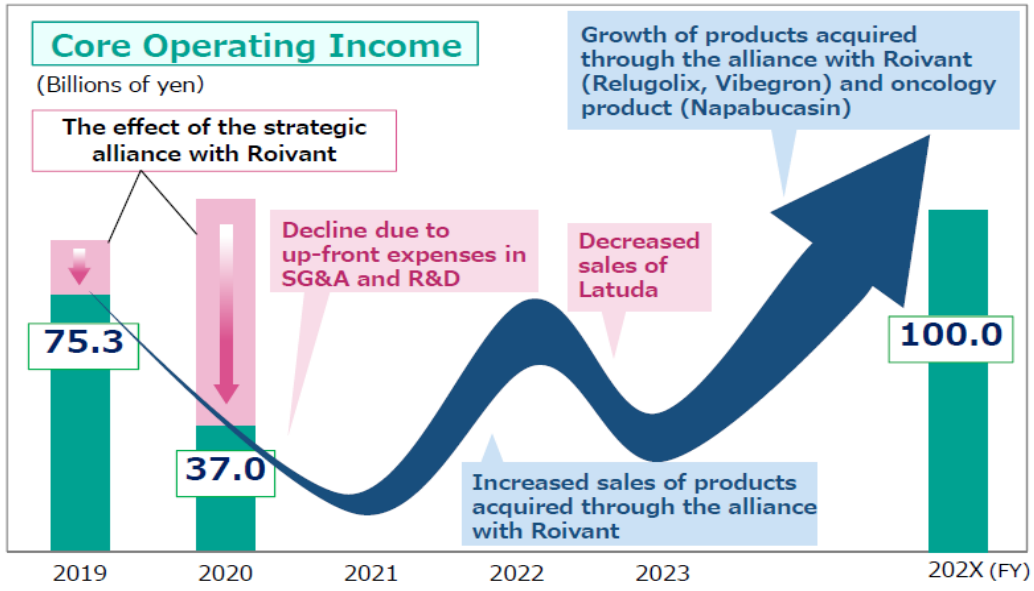
Sales revenue	535.0
Core operating income	51.0

Variable Factors of Core Operating Income
(FY2019 Results against FY2020 Forecast)



VI-1 Mid- to Long-Term Outlook for the Pharmaceuticals Sector

Investors' Meeting for the Current Priority Management Issues and Business Strategy on May 28, 2020



Expecting to overcome the LATUDA cliff and achieve long-term growth, after initial years of increased expenses and lower operating income, due to the investment in the alliance with Roivant

Major changes in the past 6 months

Initiatives in the Group

1 Upward revision of FY2020 results

Core operating income

37.0 → **51.0** billion yen

2 Promotion of sharing Sunovion's capabilities

Use of Sunovion's distribution channels (Myovant, Urovant)

Expansion of access to general practitioners (Urovant)

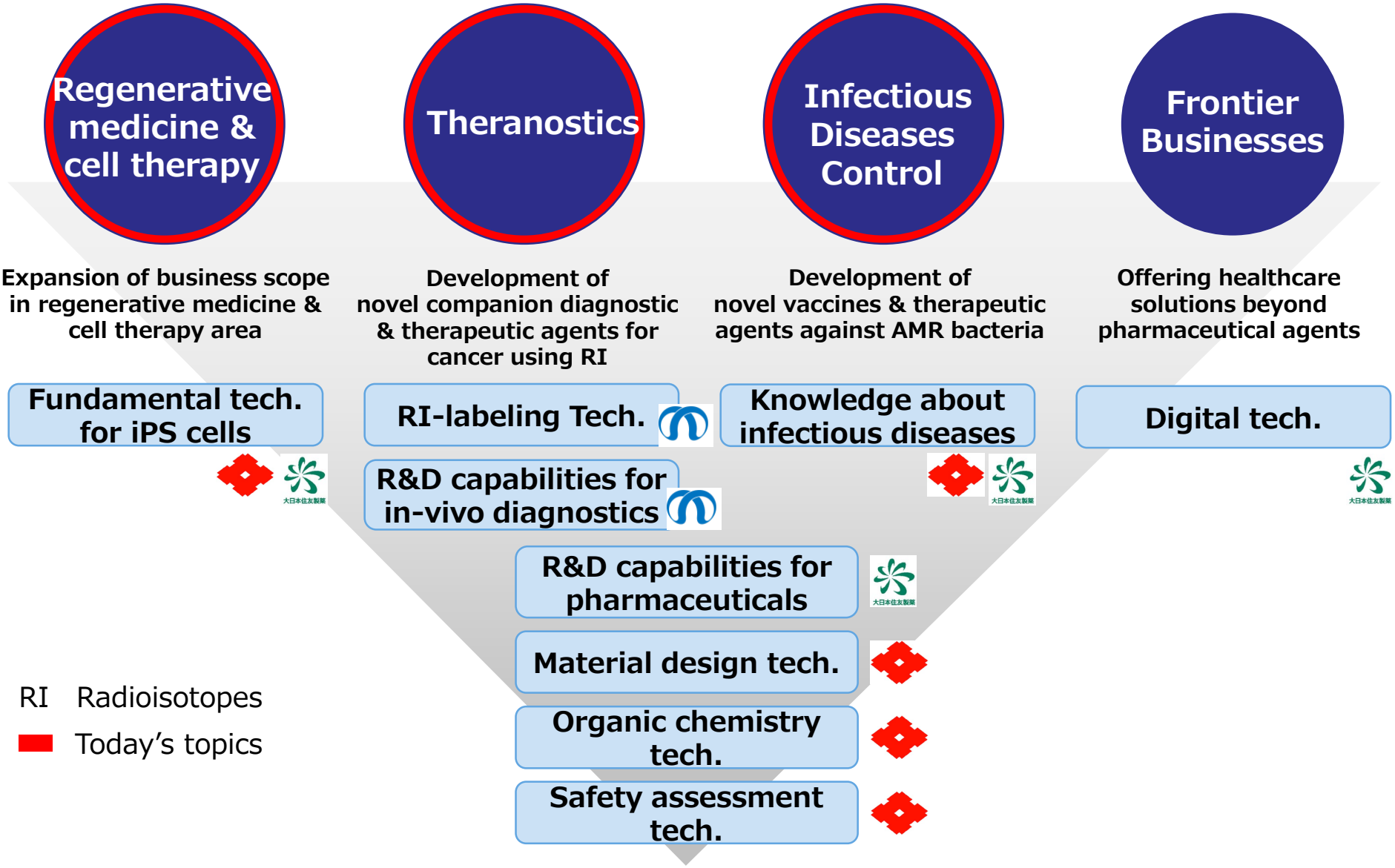
3 Acquired 100% ownership of Urovant

Timely provision of operating & growth funds

Maximize group synergies

VI Pharmaceuticals Sector

VI-2 Creating New Value through Group Synergies



VI-2 ① Regenerative Medicine and Cell Therapy

Proposed indication, etc.	Partners	Region (planned)	Cell type	Status
Pediatric congenital athymia (RVT-802)	-Duke University	Global	Cultured thymus tissue	Under preparation to resubmit BLA
AMD (Age-related macular degeneration)	-Healios -RIKEN	Global	Allo iPS cell-derived retinal pigment epithelium	In progress: clinical research Preparing to start clinical study (Japan)
Parkinson's disease (Designated as a "SAKIGAKE")	-Kyoto University -CiRA	Global	Allo iPS cell-derived dopamine neural progenitor	In progress: investigator-initiated clinical study (Phase 1/2 study) (Japan)
Retinitis pigmentosa	-RIKEN	Global	Allo iPS cell-derived photoreceptor (3D)	In progress: clinical research
Spinal cord injury	-Keio University -Osaka National Hospital	Global	Allo iPS cell-derived neural progenitor	In progress: clinical research
Kidney failure	-Jikei University -Bios -PorMedTec	Japan, North America	Auto/Allo iPS cell-based differentiation-induced nephron progenitor cells (organ)	In progress: pre-clinical research

Planned schedule FY2020

Launch schedule FY2022*

* Launch schedule is based on our targets, pending agreement with partners

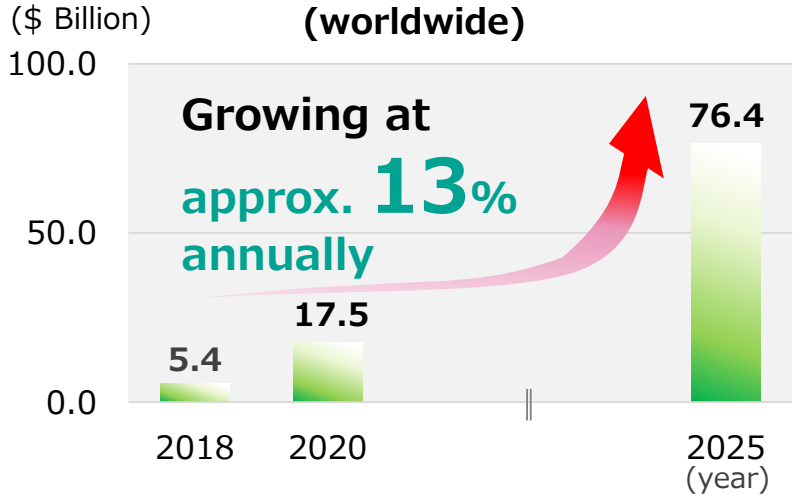
VI-2

② Entry into CDMO Business for Regenerative Medicine and Cell Therapy

CDMO business for regenerative medicine and cell therapy
(Contract Development and Manufacturing Organization)

- ☐ **Demand for pharmaceutical contract development and manufacturing offers high growth potential.**
- ☐ **In the area of regenerative medicine and cell therapy, there are only a limited number of companies in Japan that have the advanced technologies required for CDMOs.**
- ☐ **Leverage the strengths of Sumitomo Chemical and Sumitomo Dainippon Pharma**

Projection of global demand for regenerative and cellular medicine (worldwide)



SUMITOMO CHEMICAL

- ☐ Fundamental technology related to ES/iPS cells
- ☐ Expertise on CMO business for API
- ☐ Analysis and Safety Assessment of the products

×

Sumitomo Dainippon Pharma

- ☐ Industry-leading-level expertise on regenerative medicine and cell therapy
- ☐ iPS cell-derived cell therapies in development pipeline

Contributing to Resolving Healthcare Issues by Leveraging Group Synergies in the Area of Regenerative Medicine and Cell Therapy

② Entry into CDMO Business for Regenerative Medicine and Cell Therapy

Sumitomo Dainippon Pharma (51%) | SUMITOMO CHEMICAL (49%)

- Expertise on regenerative medicine and cell therapy
- Lease of existing facilities
- Dispatch of necessary personnel, such as technical staff.

- Investment, Financing
- Providing Services

- Dispatch of necessary personnel, such as technical staff
- Provide industrial technology in the future.

S-RACMO Co., Ltd.

Contracts for development of manufacturing process and product manufacturing

Solutions to manufacturing issues

Access to new opportunities for cell therapeutics (iPSCs & other cell types)

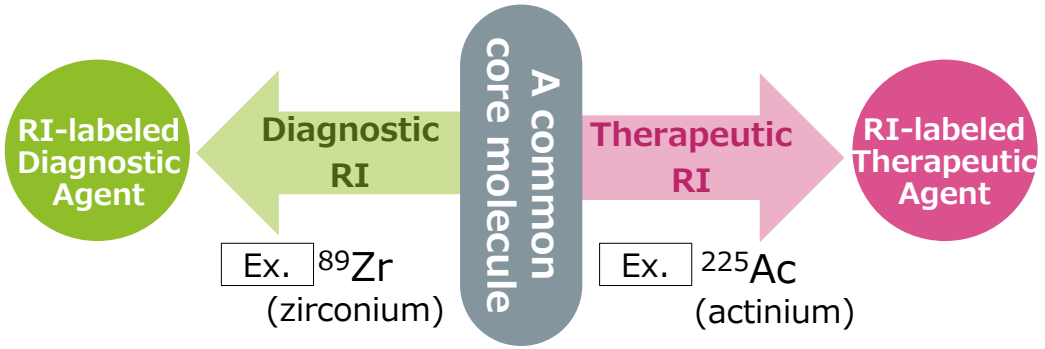
Therapeutic candidates developed by academia & startups
(Issues: Establishment of manufacturing systems)

* CorneaGen, Inc.(Washington State, US)and Sumitomo Dainippon Pharma will jointly develop cellular therapeutics with corneal endothelial cells. S-RACMO plans to receive the contract to develop the manufacturing process and to manufacture the product, as its first project.

VI-2 ③Theranostics

Theranostics = **Therapeutics** + **Diagnostics** Fusion of diagnostic and therapeutics

Basic concept of "Theranositcs" executed by Nihon Medi-Physics



Utilize a common core molecule (antibodies, peptides etc.) → Selectively deliver RI-labeled diagnostic or therapeutic agents to target organ

Adopted by AMED*1 as CiCLE*2

*1 AMED: Japan Agency for Medical Research and Development
*2 CiCLE: Cyclic Innovation for Clinical Empowerment

Aims of Theranostics Project

1 Offering new value in medical practice through nuclear medicine

- Development of companion diagnostic and α-emitting therapeutic agents for cancer using radioisotopes (RI) originated in Japan
- Expecting approval and launch in the second half of the 2020s through open innovation within and outside the Group

2 Building a new earnings base

- As the pillar for next-generation businesses following FDG-PET
- Expanding the ratio of new products to approximately 30% by 2030, along with new PET diagnostic agents under development

VI Pharmaceuticals Sector

VI-3 Global Infectious Disease Issues

Besides COVID-19, the following issues remain to be solved regarding infectious diseases.

* As for COVID-19, we participate in the US COVID-19 Research-Database, donate to the Kitasato Institute's Project for COVID-19 and provide medical protective equipment.

Global Health Issues

- Threats of periodic **pandemics by new strains of influenza viruses**.
- **The target for developing new vaccines has shifted to diseases for which vaccines are more difficult to develop, such as mycobacterium tuberculosis, malaria and HIV,** although the number of infected patients is large.

Spread of Antimicrobial- Resistant (AMR) Bacteria

- Since the 2010s, AMR bacteria have been recognized as a global issue.
- If no measures are taken, **in 2050 an estimated 10 million people will die** worldwide, and it is considered the **next threat after COVID-19**.

We aim to create **(I) Novel Vaccines (Universal Influenza and Malaria) and (II) Therapeutic agents for AMR bacteria**, by utilizing our accumulated knowledge in R&D in the area of infectious diseases.

VI-3 Development of Novel Vaccines and Therapeutic Agents against AMR Bacteria

Development of Vaccines

NIID 国立感染症研究所 NATIONAL INSTITUTE OF INFECTIOUS DISEASES

NIBIOHN 国立研究開発法人 医薬基盤・健康・栄養研究所 National Institutes of Biomedical Innovation, Health and Nutrition

Universal Influenza Vaccine

The next-generation vaccine that protects against various subtypes of flu viruses incl. pandemic ones

Joint Research

Sumitomo Dainippon Pharma

Novel Vaccine Adjuvant

Joint Research

Possibility of adjuvant manufacturing in Sumitomo Chemical in the future

愛媛大学 EHIME UNIVERSITY

Malaria Vaccine

Novel Malaria Vaccine

Therapeutic agents against AMR bacteria

Accumulated knowledge in drug discovery in the area of infectious diseases.

Joint Research

学校法人 北里研究所 THE KITASATO INSTITUTE

A long tradition and track record in infectious disease research over 100 years.

Research scientists at Sumitomo Dainippon Pharma

＋

Drug discovery group led by Dr. Ohmura (Nobel Prize Winner) in Kitasato University

Aim to overcome global issues on AMR bacteria

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.