

Financial Results Presentation

for the FY 2022/3

May 10, 2022

 **SHIKOKU CHEMICALS CORPORATION**

Code number : 4099

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0. Our Business

Chemicals

Inorganic
Chemicals



Raw materials for
tires, etc.

Organic
Chemicals



For swimming pool
and septic tank
disinfectants

Fine
Chemicals



Chemicals for electronic
components
(for printed wiring boards,
resin modifiers, etc.)

Housing Materials

Interior,
Exterior Finishes
and
Paving Materials



Interiors

Exterior
Products



Exterior Products
(carports, gates, etc.)

I . Financial Results for the FY2022/3

I – 1. Consolidated Financial Results

■ Highlights of Financial Results for the FY2022/3

(Millions of yen)

	FY2021/3		FY2022/3		Increase of amount	Changes
	Amount	Percentage	Amount	Percentage		
Net sales	49,590	100.0%	54,137	100.0%	4,547	9.2%
Operating profit	7,401	14.9%	8,400	15.5%	999	13.5%
Ordinary profit	7,997	16.1%	9,291	17.2%	1,294	16.2%
Profit attributable to owners of parent	5,760	11.6%	6,878	12.7%	1,118	19.4%
Exchange rate (USD)	106		112			
Exchange rate (EUR)	122		131			

◆ **Net sales, operating profit, ordinary profit, and profit attributable to owners of parent reached record highs**

- Sales in chemicals exceeded the previous year's level, and overall net sales increased by 9.2% year on year.
- Profits increased due to price pass-through in energy, resources, and ocean freight costs, which soared due to COVID-19, Russia's invasion of Ukraine, and the yen's depreciation.
- The yen weakened against the U.S. dollar and the euro, resulting in a 992 million yen increase year on year in the amount of foreign exchange impact on sales.

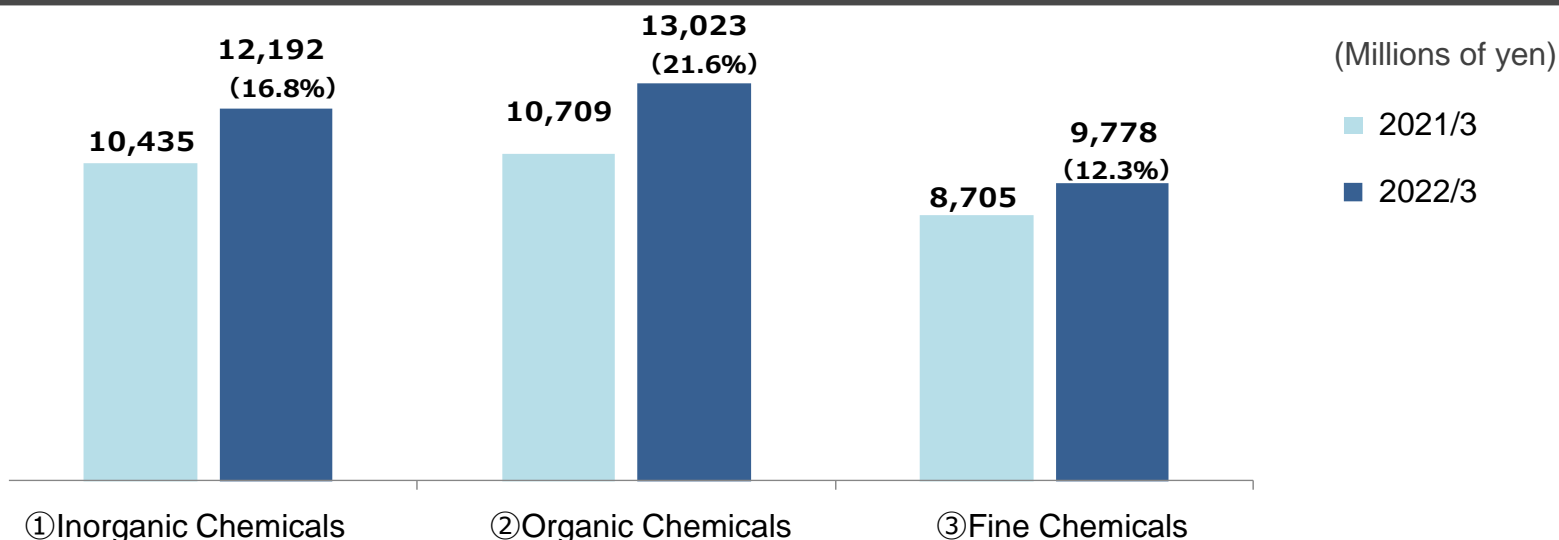
I – 2. Sales and Profit by Business segments(consolidated)

(Millions of yen)

Net Sales		FY2021/3	Percentage	FY2022/3	Percentage	Changes
Chemicals Operations	Inorganic Chemicals	10,435	21.0%	12,192	22.5%	16.8%
	Organic Chemicals	10,709	21.6%	13,023	24.1%	21.6%
	Fine Chemicals	8,705	17.6%	9,778	18.1%	12.3%
	Subtotal	29,850	60.2%	34,995	64.6%	17.2%
Housing Materials Operations	Interior, Exterior Finishes and Paving Materials	1,475	3.0%	1,395	2.6%	▲ 5.4%
	Exterior Products	17,285	34.9%	16,565	30.6%	▲ 4.2%
	Subtotal	18,760	37.8%	17,961	33.2%	▲ 4.3%
Other		979	2.0%	1,181	2.2%	20.7%
Total		49,590	100.0%	54,137	100.0%	9.2%

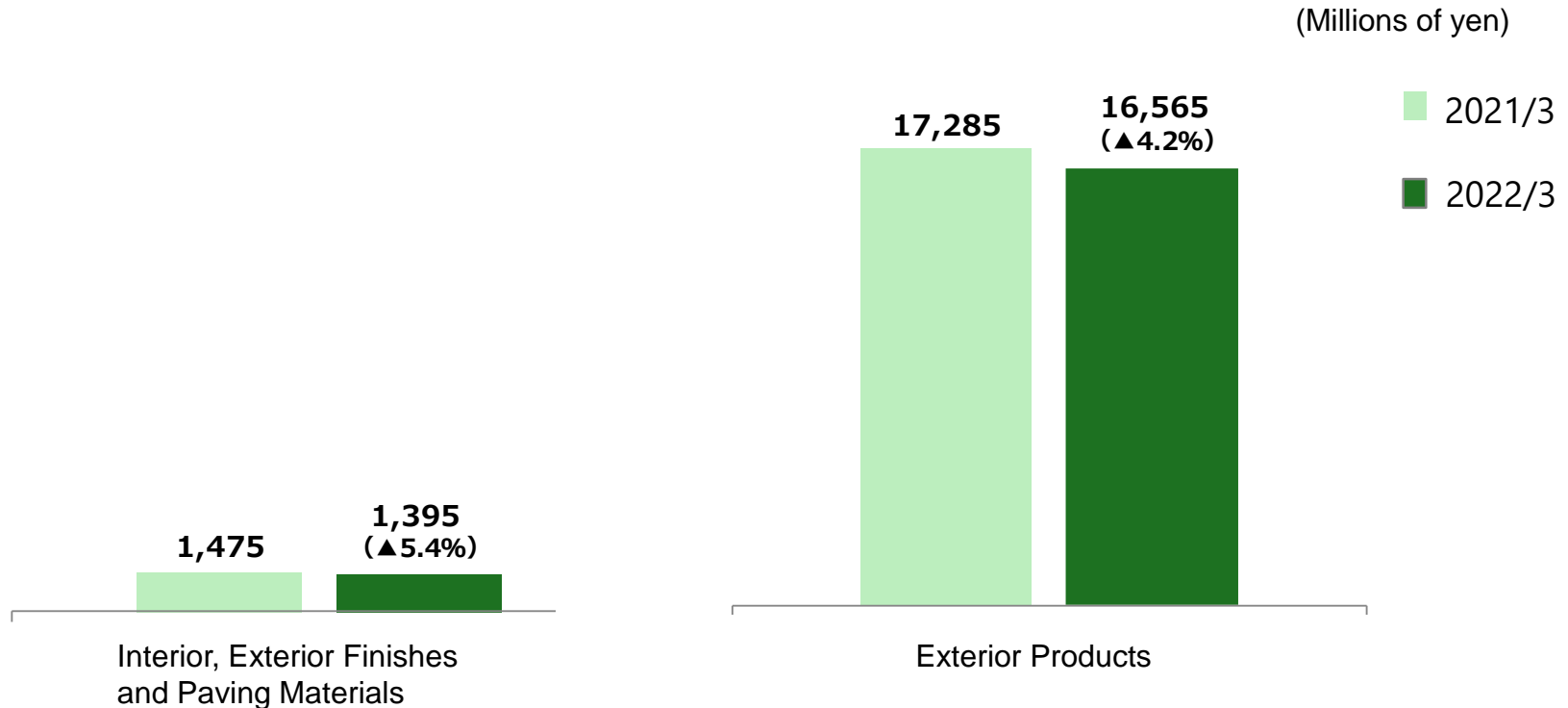
Segment Profit		FY2021/3	percentage	FY2022/3	percentage	Changes
Total of Chemicals Operations		5,664	76.5%	7,545	89.8%	33.2%
Total of Housing Materials Operations		3,505	47.4%	2,576	30.7%	▲26.5%
Other		▲ 1,768	▲23.9%	▲ 1,721	▲20.5%	▲2.6%
Total		7,401	100.0%	8,400	100.0%	13.5%

I -3. Overview of Sales by Segment (Chemicals Products)



- ① Sales of insoluble sulfur, a material for radial tires, largely surpassed those of the previous fiscal year, which was affected by the spread of COVID-19, due to solid demand for replacement tires and industrial vehicle tires, despite a decline in automobile production resulting from semiconductor shortages. Sales of carbon disulfide for rayon and cellophane, and sodium sulfate for bath agents and detergents increased year on year due to a rebound from the COVID-19 pandemic.
- ② Regarding chlorinated isocyanuric acid for disinfectants, the domestic market performed better than the previous year mainly due to a recovery in sales of agents for swimming pools following the partial resumption of swimming lessons at schools. In the U.S. market, the balance between supply and demand is tightening mainly due to a recovery in economic conditions and stay-at-home demand, and the Company tried to improve profitability by passing on soaring resource prices and distribution costs, which resulted in a significant increase in profitability.
- ③ Regarding Glicoat-SMD, a heat-resistant soluble OSP (Organic Solderability Preservative) for printed wiring boards, sales remained solid, against a backdrop of the growth of electronics markets worldwide. Sales of advanced & specialty chemicals such as epoxy resin curing agent (imidazoles), resin modifier (glycoluril derivatives, etc.) and semiconductor processing materials increased year on year, backed by an increase in demand for use in electronic components.

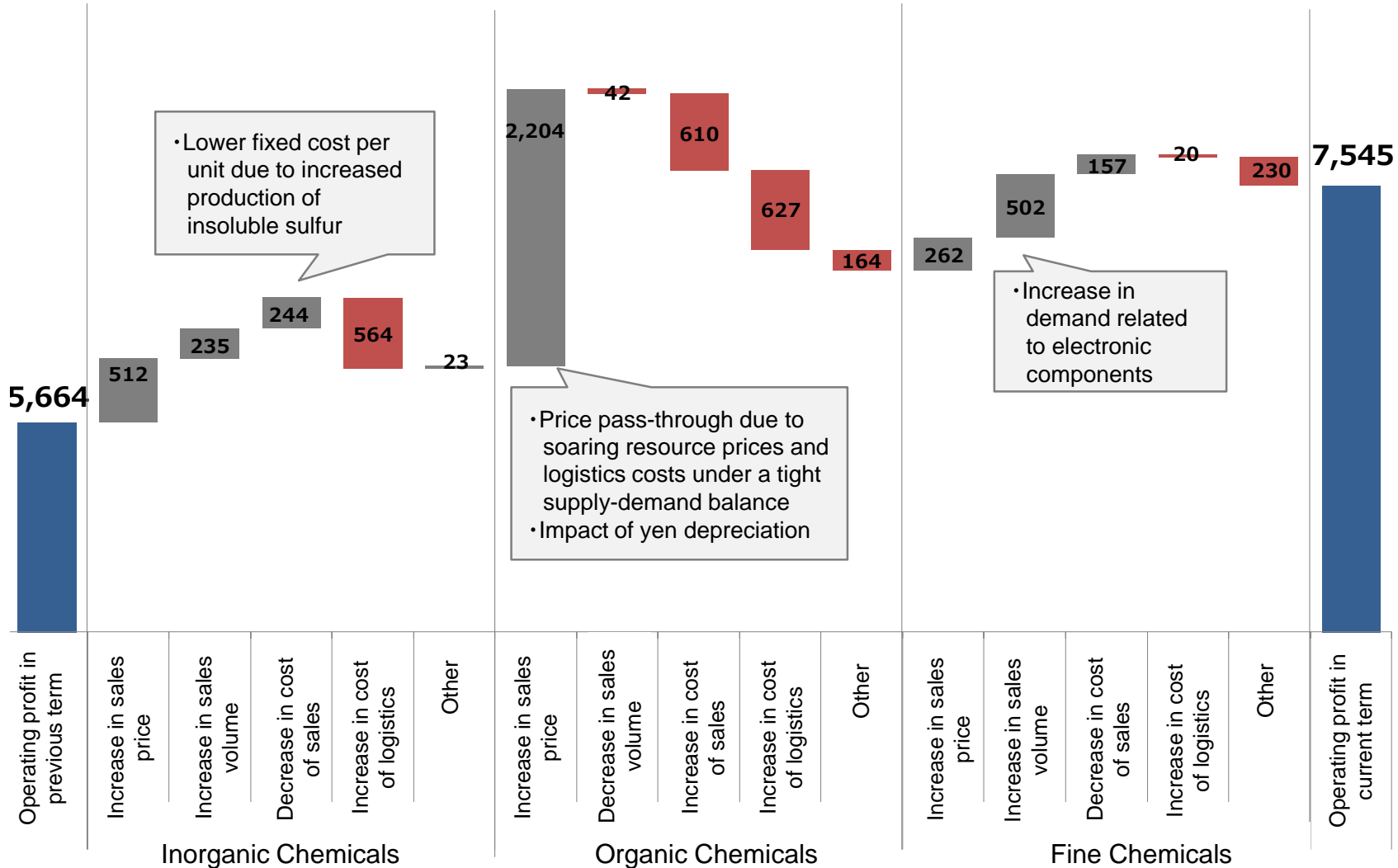
I – 4. Overview of Sales by Segment (Housing Materials Products)



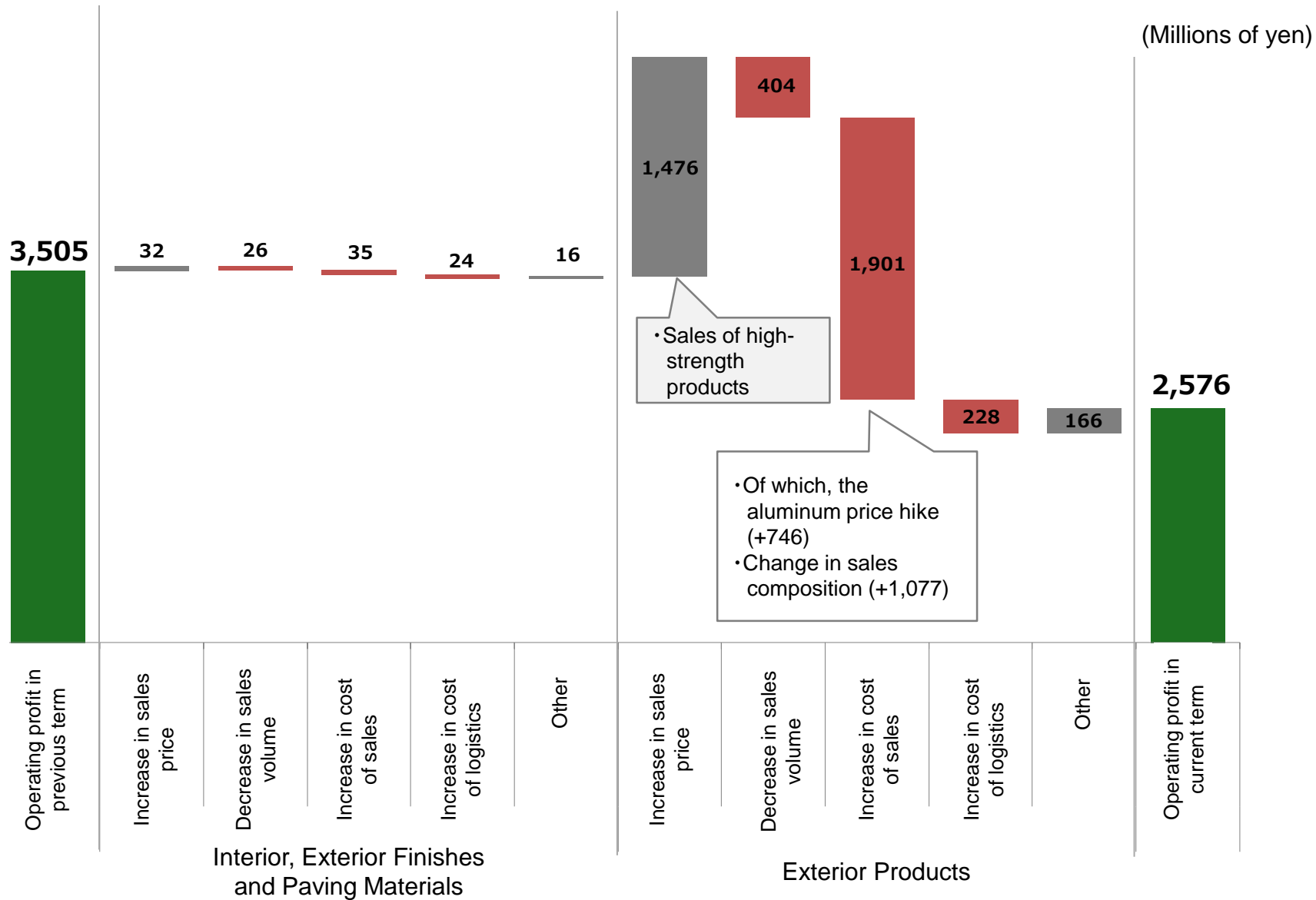
- ◆ Although the number of new housing starts showed signs of a slight recovery, sales of interior, exterior finishes and paving materials and exterior products remained sluggish, as governments and private companies deferred or had a wait-and-see attitude for their projects or capital investment, against a backdrop of falling consumer sentiment and uncertainty about the future. Profitability also declined due to soaring prices of raw materials including aluminum ingots.

I – 5. Analysis of Increase/Decrease in Chemicals Segment Profit

(Millions of yen)



I – 6. Analysis of Increase/Decrease in Housing Materials Segment Profit





**II . Forecast of Financial
Results
for the FY 2022/12**



Ⅱ – 1. The full-year financial results forecast (Consolidated)

		(Millions of yen)			<<Reference>>
		FY2021/12 (Apr.-Dec.) (Result)	FY2022/12 (Apr.-Dec.) (Forecast)	Changes	FY2022 (Apr.-Mar.) (Result)
Net sales		39,229	46,000	17.3%	54,137
Operating profit		6,158	5,800	▲ 5.8%	8,400
Ordinary profit		6,721	6,100	▲ 9.3%	9,291
Profit attributable to owners of parent		4,794	3,700	▲ 22.8%	6,878
Exchange rate	USD	111	120		112
	EUR	131	130		131

- Since the fiscal year-end will be changed to December in FY2022, the current fiscal year will be nine months.

Ⅱ – 2. Business Forecast by Segment (Consolidated)

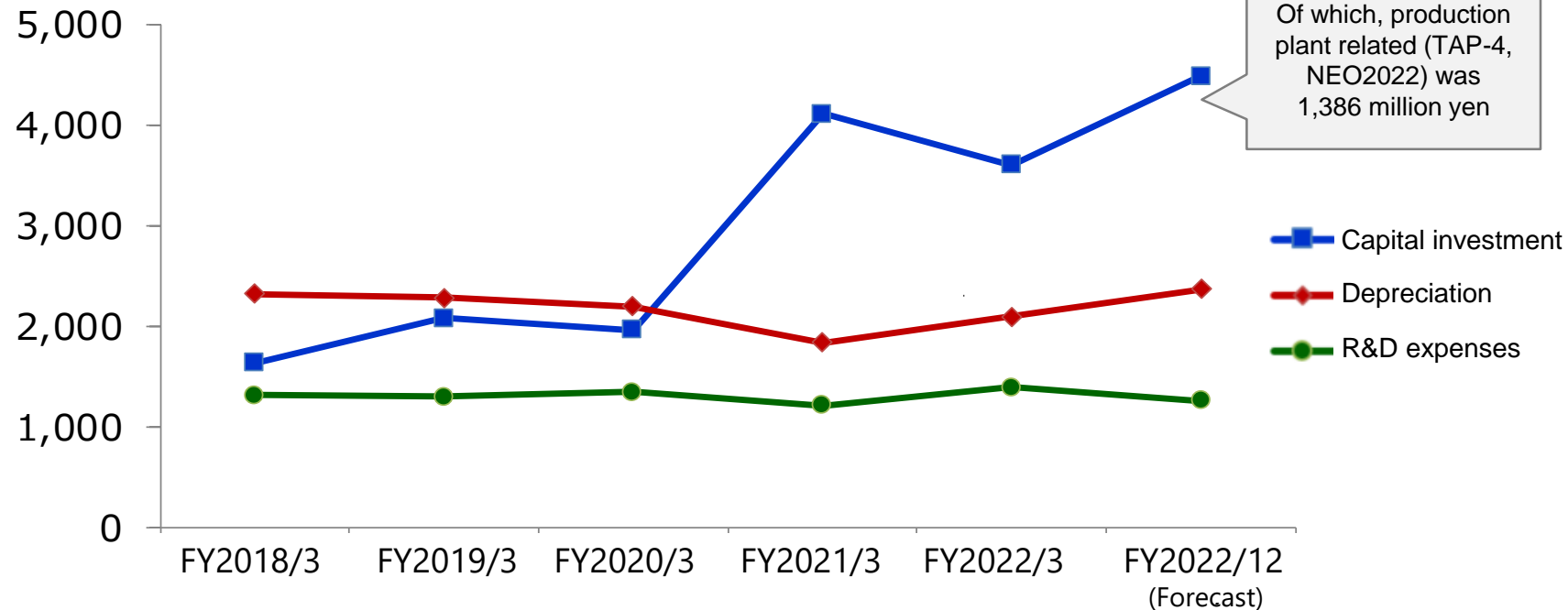
(Millions of yen)

<<Reference>>

	FY2021/12 (Apr.-Dec.) (Result)	FY2022/12 (Apr.-Dec.) (Forecast)	Changes	FY2022 (Apr.-Mar.) (Result)
Net sales				
Chemicals operations	25,499	30,000	17.6%	34,995
Housing Materials Operations	12,772	15,000	17.4%	17,961
Segment profit				
Chemicals operations	5,734	5,500	▲ 4.1%	7,545
Housing Materials Operations	1,693	1,800	6.3%	2,576

II – 3. Capital investment, Depreciation, R&D expense (Consolidated)

(Millions of yen)



	FY2018/3	FY2019/3	FY2020/3	FY2021/3	FY2022/3	FY2022/12 (Forecast)
Capital investment	1,628	2,073	1,961	4,106	3,599	4,477
Depreciation	2,318	2,281	2,189	1,835	2,090	2,368
R&D expenses	1,310	1,295	1,338	1,207	1,392	1,259

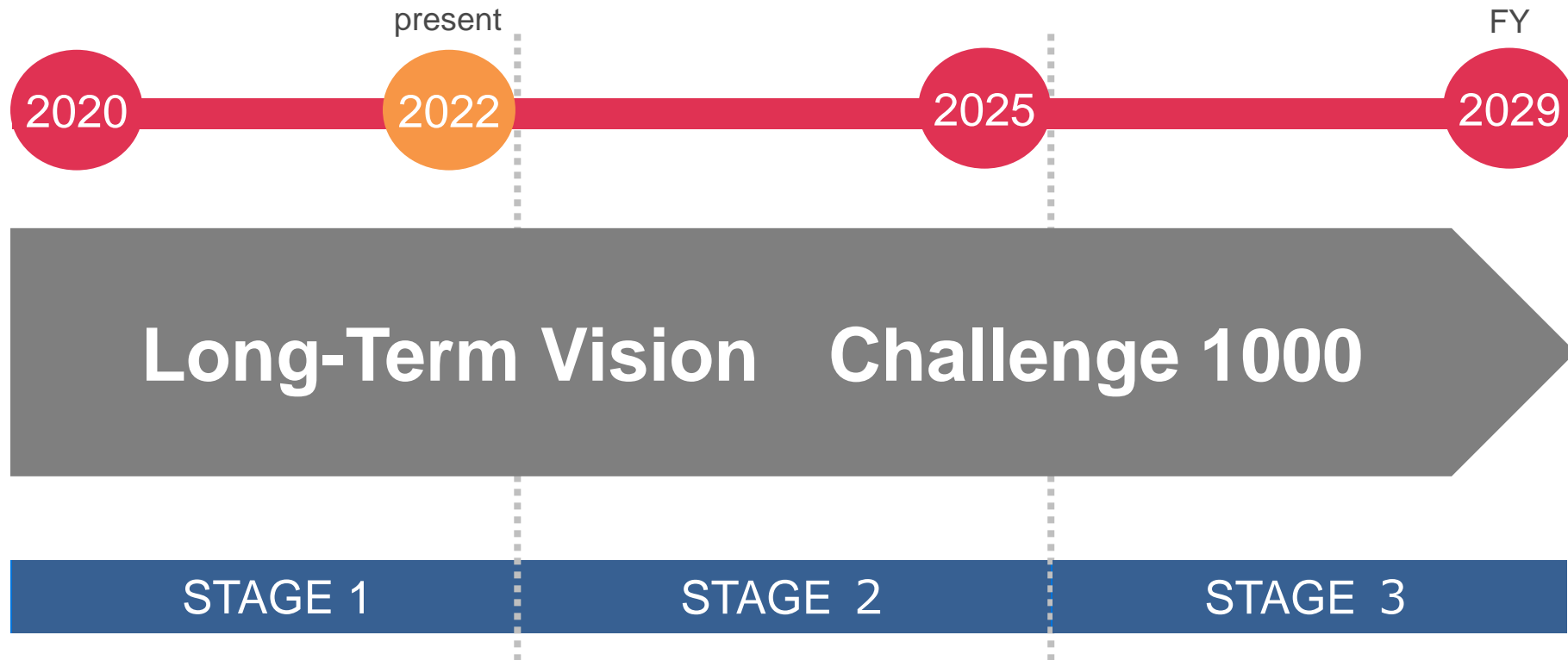
III. Long-term Vision

Challenge 1000

“STAGE 1”

Progress Status

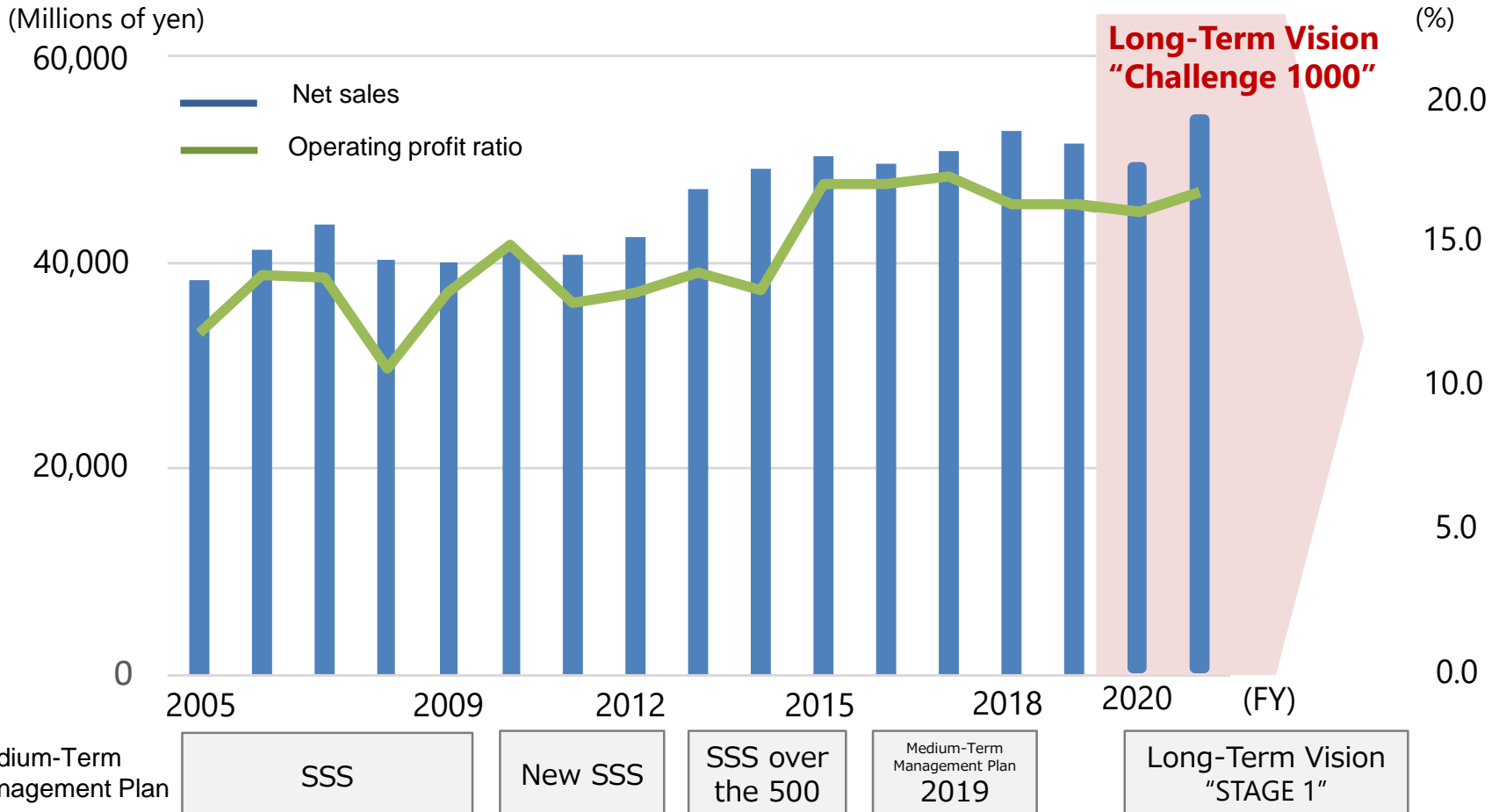
Ⅲ – 1. Outline of Challenge 1000 ①



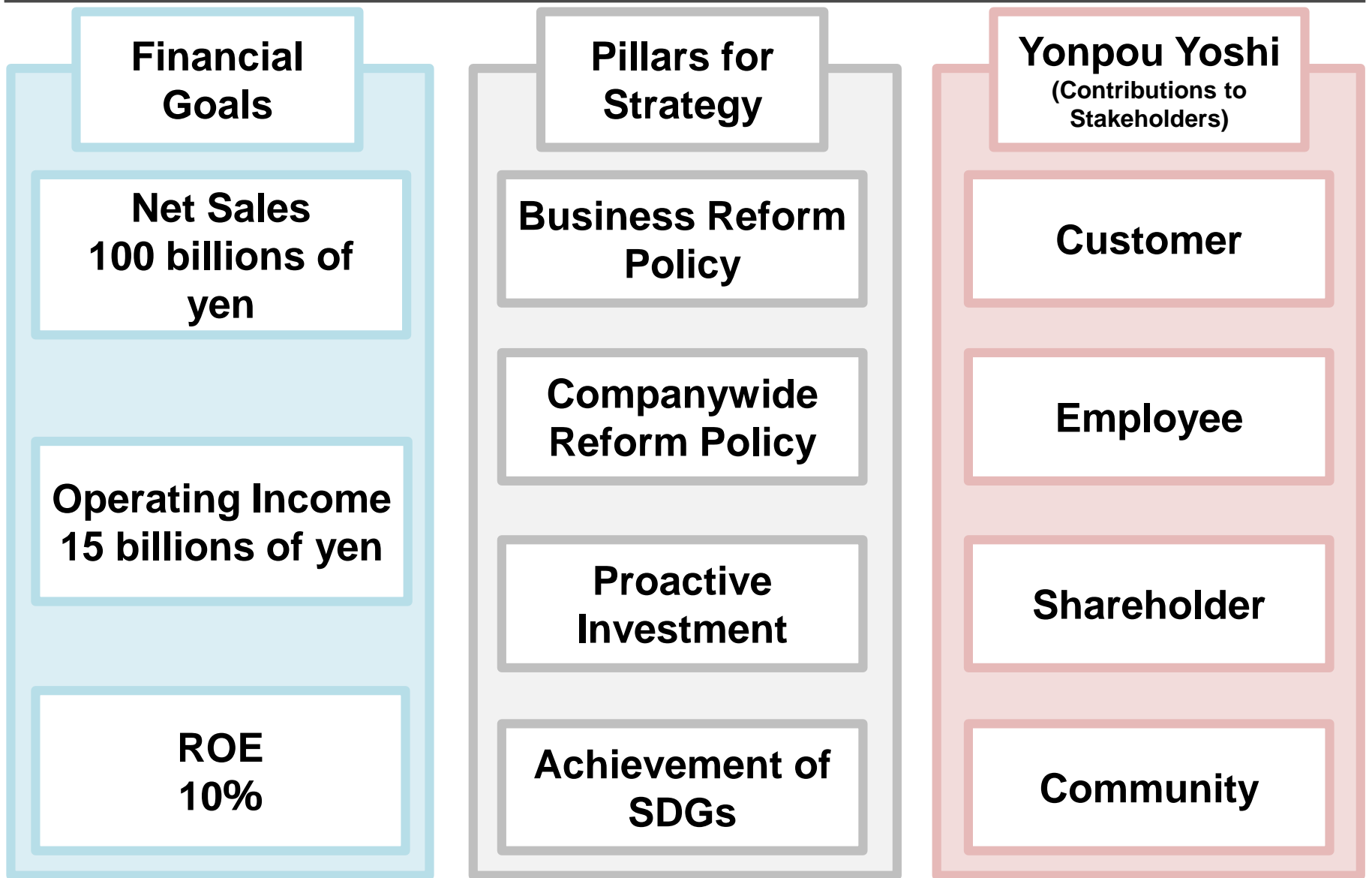
With its corporate philosophy “Dokusouryoku (creativity)”, the Group established its long-term vision “Challenge 1000” to become a company that makes a proposal one step ahead with Dokusouryoku (creativity) by 2030.

III – 2. Outline of Challenge 1000 ②

- Profitability and financial position deteriorated due to diversified management in the 1980s and 1990s. Under the Medium-term Management Plan “SSS” Series, with the basic policy of returning to the core business, the company was reborn with a strong and robust management structure by reforming management and restructuring businesses.
- After laying the foundations, the company formulated its Long-Term Vision, “Challenge 1000”, with the basic policy of aggressive management and business reinforcement and expansion.
- Business plans are being formulated and put into practice by backcasting from the vision of where the company wants to be in 2030.



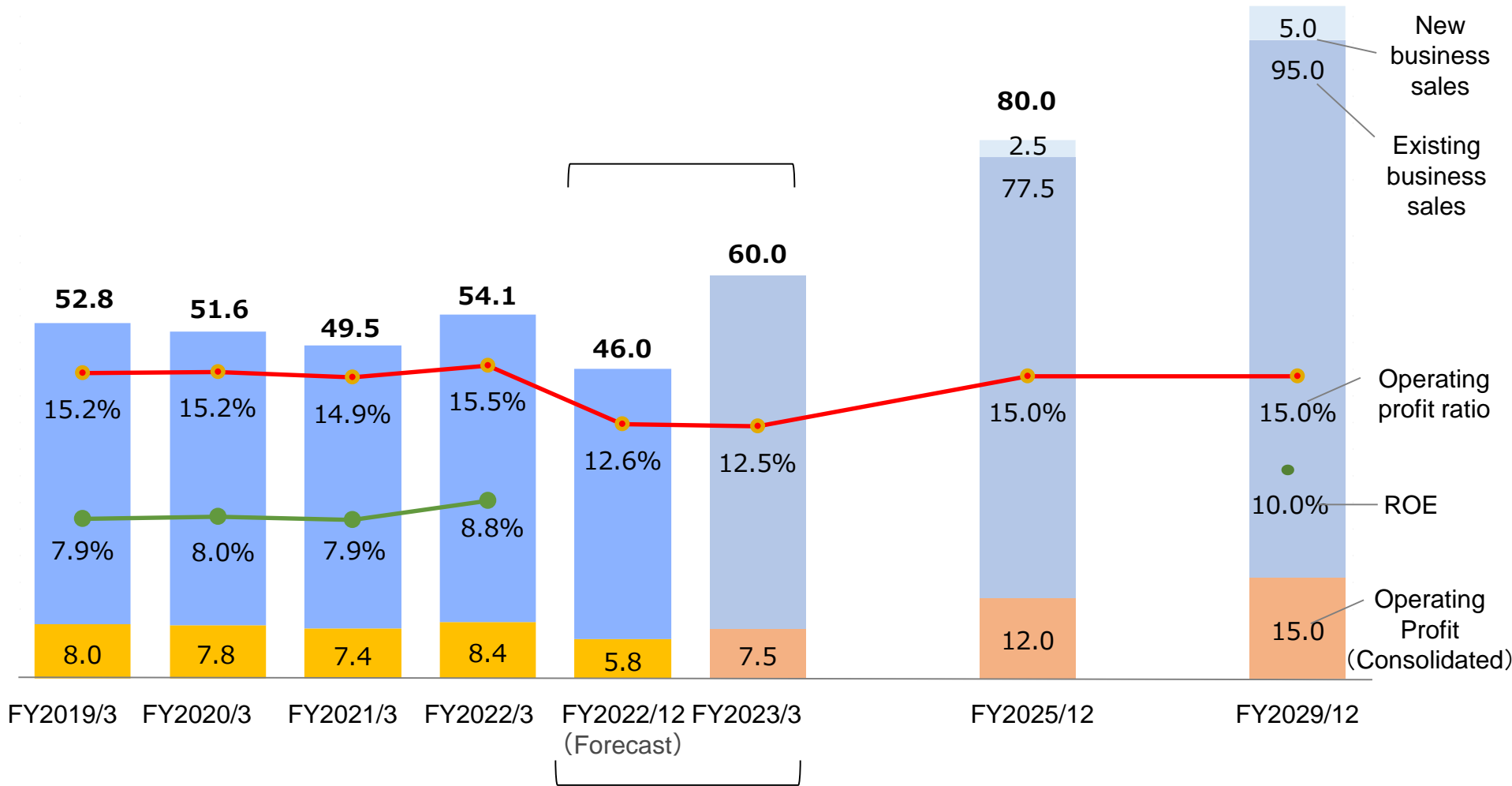
Ⅲ – 3. Outline of Challenge 1000 ③



III – 4. Financial goals

Implementing various measures in line with the strategic pillars to achieve the goals set at each STAGE

(Billions of yen)
 Net sales
100.0 (Consolidated)



III – 5. Progress Summary (FY2022/3)

Financial Targets

- ◆ **For FY2022/3 results, operating profit progressed according to the “STAGE 1” plan.**
 - Net sales for FY2022/3 reached a record high but did not achieve the plan. Operating profit achieved the plan.
 - FY2022/12 is the final year of “STAGE 1”. Due to a change in the fiscal year-end, it will be an irregular nine-month period, but we expect an increase in revenue over the previous year on a nine-month comparison.

Investment Business

- ◆ **Capital investment in production as planned**
 - Production facilities for fine chemicals (TAP-4) were completed and started operation last year.
 - ⇒ Strengthening production of semiconductor process materials.
 - Production facilities for chlorinated isocyanuric acid were completed in April and are scheduled to start this summer.
 - ⇒ Development of an efficient production system.

Yonpou-yoshi (Contributions to Stakeholders)

- ◆ **Activities to contribute to each stakeholder**
 - Shareholders: Executed share buyback and listed on the prime market.
 - Social: Installed a solar power generation system at Marugame Plant.
 - In-kind support to “Parklet” for the Setouchi Triennale 2022
 - Signed “Collaboration Agreement on Nigiwai (lively) Community Building” with Marugame City.



Parklet

III – 6. Progress on Business Reform Policy

Next FY2022/12 is the final year of “STAGE 1”.

We will achieve our goals and aim for further growth in “STAGE 2”.

Business Name	Topic	STAGE 1 Target
Inorganic Chemicals	<ul style="list-style-type: none"> Continue efforts to improve the quality of insoluble sulfur Consider commercialization of products developed from sulfur 	Consolidated sales of 14 billion yen (Results in 2022/3: 12.1 billion yen)
Organic Chemicals	<ul style="list-style-type: none"> Enhance production facilities (bulk products, ODM products, etc.) Strengthen sanitary products business 	Consolidated net sales: 10 billion yen (2022/3 results: 13.0 billion yen)
Fine Chemicals	<ul style="list-style-type: none"> Functional materials: Strengthen response to demand for semiconductor process materials. Develop new applications for resin modifiers (low dielectric, CFRP) Gliccoat-SMD: Aim to sell new OSPs that are halogen-free and have long-term storage stability GliAS: Start handling Gliccoat-SMD automatic analyzer. Aim to propose total solutions GliCAP: Approval of activities and achievements 	Consolidated sales of 8 billion yen (2021/3 results: 9.7 billion yen)
Housing Materials	<ul style="list-style-type: none"> Strengthen sales activities with high-intensity products Promote improvement of production efficiency through Smart Factory 	Consolidated net sales: 25 billion yen (2021/3 results: 17.9 billion yen)

III – 7. Progress on Companywide Reform Policy

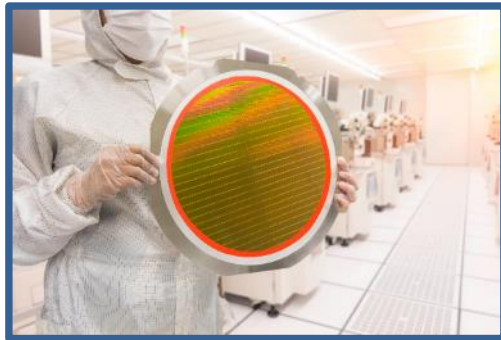
We are working to build a foundation that can accommodate diverse work styles, fostering a sense of self-improvement, and creating a framework for change, and we are generally making progress as planned.

Item	Topic
Creation of values	<ul style="list-style-type: none"> ◆ Enhance brand value (Formulation of SHIKOKU QUALITY) ◆ Strengthen environmental initiatives (Issue CSR report) ◆ Implement measures to create new businesses (Implement internal recruitment)
Creation of reserve energy	<ul style="list-style-type: none"> ◆ Promotion of telework and other initiatives to improve work efficiency <ul style="list-style-type: none"> • Promote telework, which allows employees to work efficiently regardless of their physical location
Creating of operational bases	<ul style="list-style-type: none"> ◆ Consolidation of sales bases <ul style="list-style-type: none"> • Moved interior, exterior finishes and paving materials production base to Yoshinari location of Tokushima Plant
Creation of organization	<ul style="list-style-type: none"> ◆ Start discussion to determine the organizational structure to be pursued <ul style="list-style-type: none"> • Transition to a holding company structure (see page 27 for details)
Creation of company climate	<ul style="list-style-type: none"> ◆ Dissemination of long-term vision and exchange activities to eliminate barriers between divisions <ul style="list-style-type: none"> • Hold workshops, roundtable discussions, and other events
Creation of human resources	<ul style="list-style-type: none"> ◆ Create an environment in which employees can actively tackle challenges (Review the evaluation system, including the introduction of challenge goals with a point system)

Ⅲ – 8. Pillar for Strategy (Proactive Investment)

Fine chemicals production facilities (TAP-4)

- Investment of 2.5 billion yen in new fine chemicals production facilities at Tokushima Plant, which started operation in July 2021
 - Multi-plant capable of handling prototyping to mass production
 - Owning manufacturing facilities capable of producing high-quality, high-value-added semiconductor materials and pharmaceutical intermediates
 - Owning facilities, manufacturing technologies, and analytical technologies capable of controlling foreign materials and metals at the low ppt (parts per trillion) level
- Used in the semiconductor field to realize IoT technology
 - Expanding needs for high-quality, highly functional materials from manufacturers of semiconductor process materials, etc.
 - The company provides new materials quickly by utilizing its proprietary organic synthesis technology and TAP-4
- Aiming for sales of 2 to 3 billion yen by 2030 in the semiconductor process materials field



Semiconductor silicon wafers



TAP-4(Tokushima Plant)

III – 9. Pillar for Strategy (Proactive Investment)

Chlorinated isocyanuric acid production facilities (NEO2022)

- Construction of new 5 billion yen chlorinated isocyanuric acid production facilities completed in April 2022 at the Tokushima Plant
 - Increase production efficiency => Strengthen global expansion of the business
- Organic chemicals set the vision of “Delivering cleanliness to people across the globe by protecting the environment and ensuring sanitation ”
 - In addition to the core pool business, expand the business into sanitary and other high value-added fields
- Strengthen product development under our brand and further downstream business by leveraging our chlorine handling technology



NEO2022(Tokushima Plant)



Ⅲ – 1 0. Pillar for Strategy (Achievement of SDGs)

◆ Expansion of 2022 CSR Report

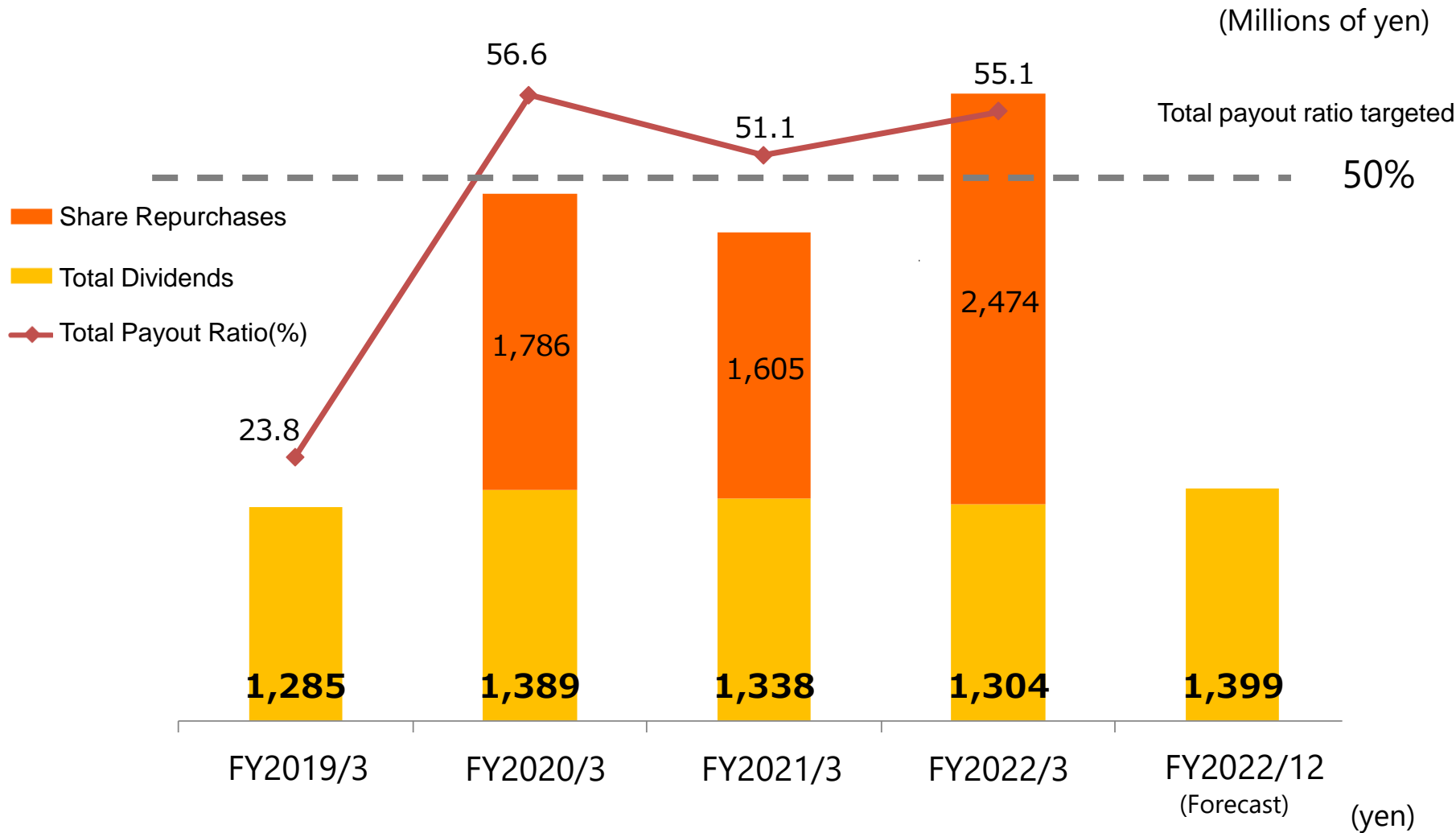


CSR Report (2022 edition) to be released on our website in August

The following topics will be added to the 2022 edition:

- ◆ Materiality Themes
- ◆ Climate change initiatives, etc.

III – 1 1. Shareholders Return–Transitions in Dividend Payouts–



Dividends per share (annual)	FY2019/3	FY2020/3	FY2021/3	FY2022/3	FY2022/12 (Forecast)
	22.0	24.0	24.0	24.0	26.0 (Forecast)

IV. New Organizational Structure

IV – 1. Transition to a Holding Company Structure-1

Preparing for transition to a holding company structure from January 2023

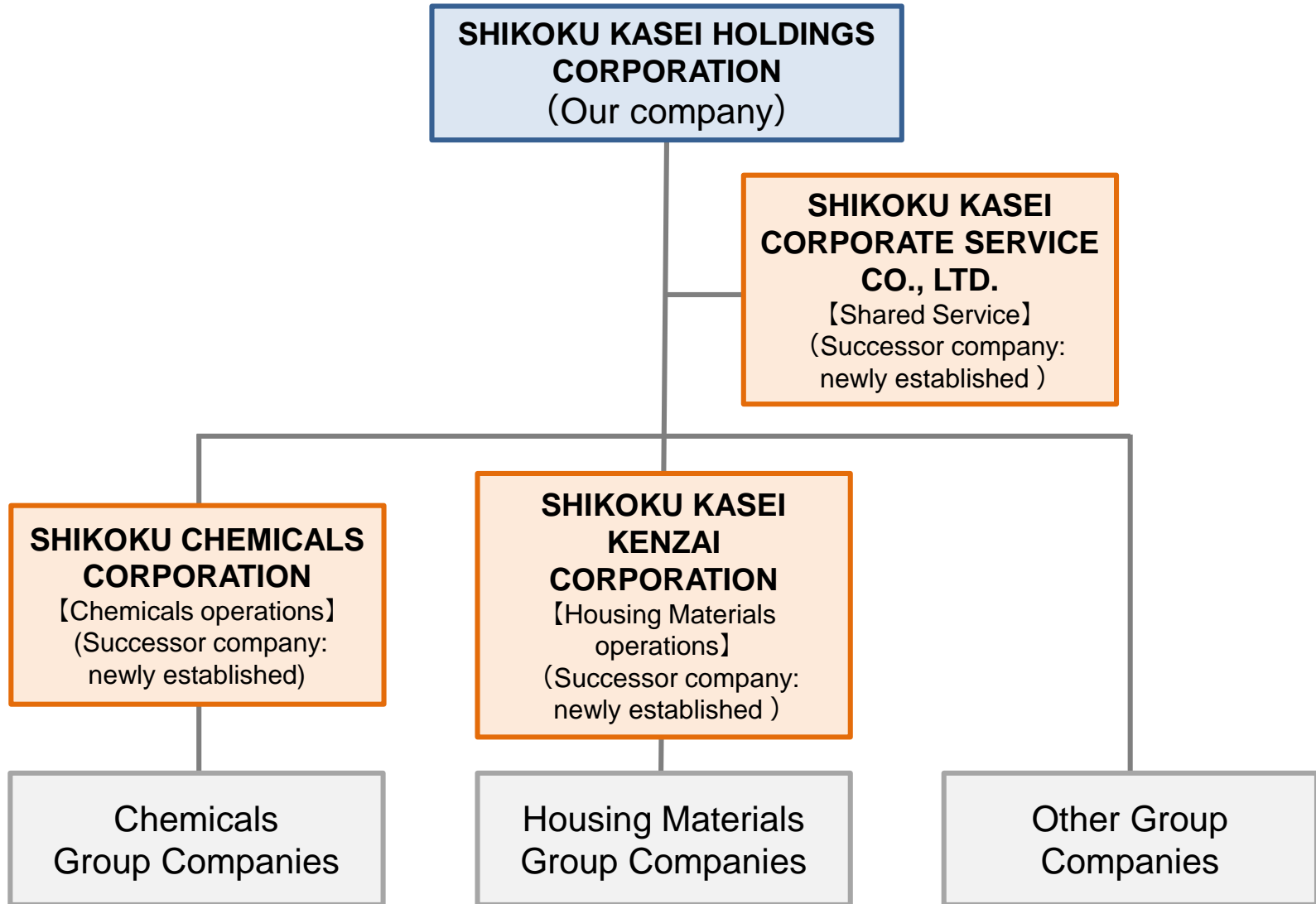
Objectives

- (1) **Enhancement of the business operation structure**
Speed up decision-making by boldly transferring authority to each operating company
- (2) **Governance structure and redefinition of the head office's role**
Specialize the holding company in group management functions
Spinning off head office indirect divisions to eliminate duplication and optimize operations
- (3) **Strengthening the development of management talents**
From the perspective of strengthening sustainable management capabilities, promote the development of future management human resources through autonomous management of the operating companies

Aiming to accelerate growth and respond to changes and challenges in the business environment

IV – 2. Transition to a Holding Company Structure-2

[Image of Group management structure after the transition]



IV – 3. Transition to a Holding Company Structure-3

◆ Schedule

	2022			2023
	Jan.	Apr.	June.	Jan. 1
Schedule for Transitioning to Holding Company Structure	Establish a preparation company for transfer to holding company	Approval of the absorption-type company split agreement by the Board of Directors	Special resolution at the shareholders' meeting	Succession of rights and obligations to the new company Commencement of the holding company structure

On January 1, 2023, we will be reborn under a new management structure and begin our Long-term Vision, Challenge 1000, “STAGE 2”.

We are determined to leap into becoming a company that will last for 100 years.



**Thank you
for your attention!**



V.References

Financial Data

V – 1. Consolidated Balance Sheets

(Millions of yen)

	FY2021/3	FY2022/3	Increase of amount	
Current assets	65,024	67,668	2,644	Accounts receivable - trade (+1,767)
Non-current assets	42,319	46,137	3,818	Investment securities (+2,625)
Total assets	107,344	113,805	6,461	
Current liabilities	15,702	19,109	3,407	Current portion of long-term borrowings (+2,000)
non-current liabilities	15,075	13,788	▲ 1,287	
Total liabilities	30,778	32,897	2,119	
Total net assets	76,566	80,908	4,342	Retained earnings (+3,334) Valuation difference on available-for-sale securities (+1,064)
Total liabilities and net assets	107,344	113,805	6,461	
Capital-to-asset ratio	70.5%	70.3%	▲ 0.2%	
ROE	7.9%	8.8%	0.9%	

V – 2. Consolidated Statements of Cash Flows

(Millions of yen)

	FY2021/3	FY2022/3
Net cash provided by (used in) operating activities	7,411	5,089
Net cash provided by (used in) investing activities	(2,999)	(5,087)
Net cash provided by (used in) financing activities	89	(1,809)
Net increase (decrease) in cash and cash equivalents	4,599	(1,451)
Cash and cash equivalents at end of period	37,207	35,755
Flee cash flow = CF from operating activities - CF from investing activities	4,412	2

◆ **Cash flows provided by operating activities totaled ¥5,089 million.**

Major sources of revenue : Profit before income taxes of ¥9,710 million and depreciation of ¥2,090 million

Major expenditure factors : Income taxes paid of ¥2,739 million

◆ **Cash flows used in investing activities totaled ¥5,087 million.**

Major expenditure factors : Purchase of property, plant and equipment of ¥4,153 million

◆ **Cash flows used in financing activities totaled ¥1,809 million.**

Major sources of revenue : Proceeds from long-term borrowings of ¥2,160 million

Major expenditure factors : Purchase of treasury shares of ¥2,474 million and dividends paid of ¥1,326 million.



Corporate Profile

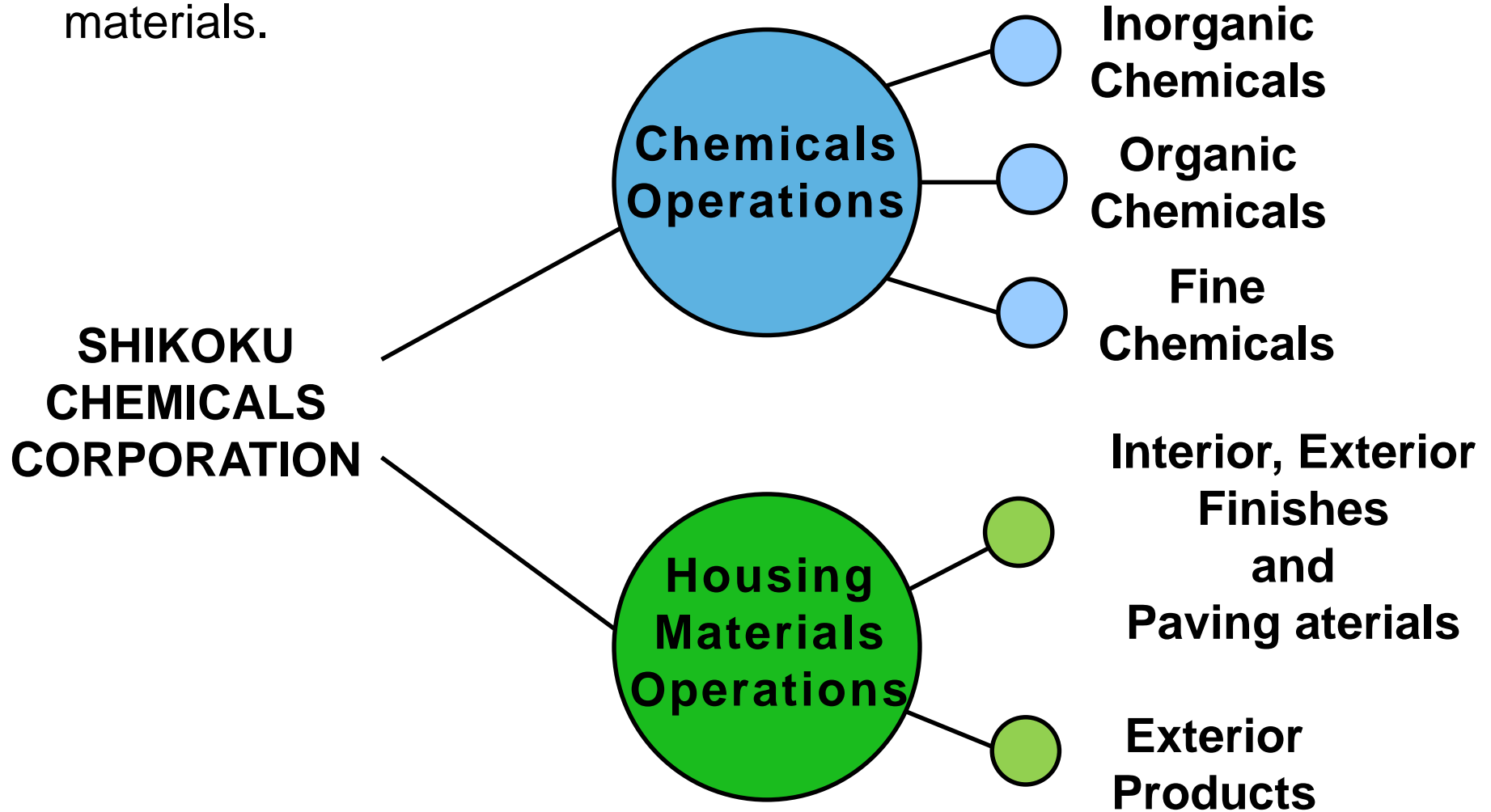
V – 3. Corporate Profile

(As of March 31, 2022)

■ Company name	SHIKOKU CHEMICALS CORPORATION	
■ Code number	4099	Industry : Chemicals
■ Stock exchange listing	Tokyo	
■ Incorporated	October 10, 1947	
■ Head office	Marugame, Kagawa Prefecture	
■ President and C.E.O.	Naoto Tanaka	
■ Capital	6,867 million yen	
■ Number of employees	1,210 (Consolidated)	
■ Net sales	54,137 million yen (Consolidated)	

V - 4 . Business Structure

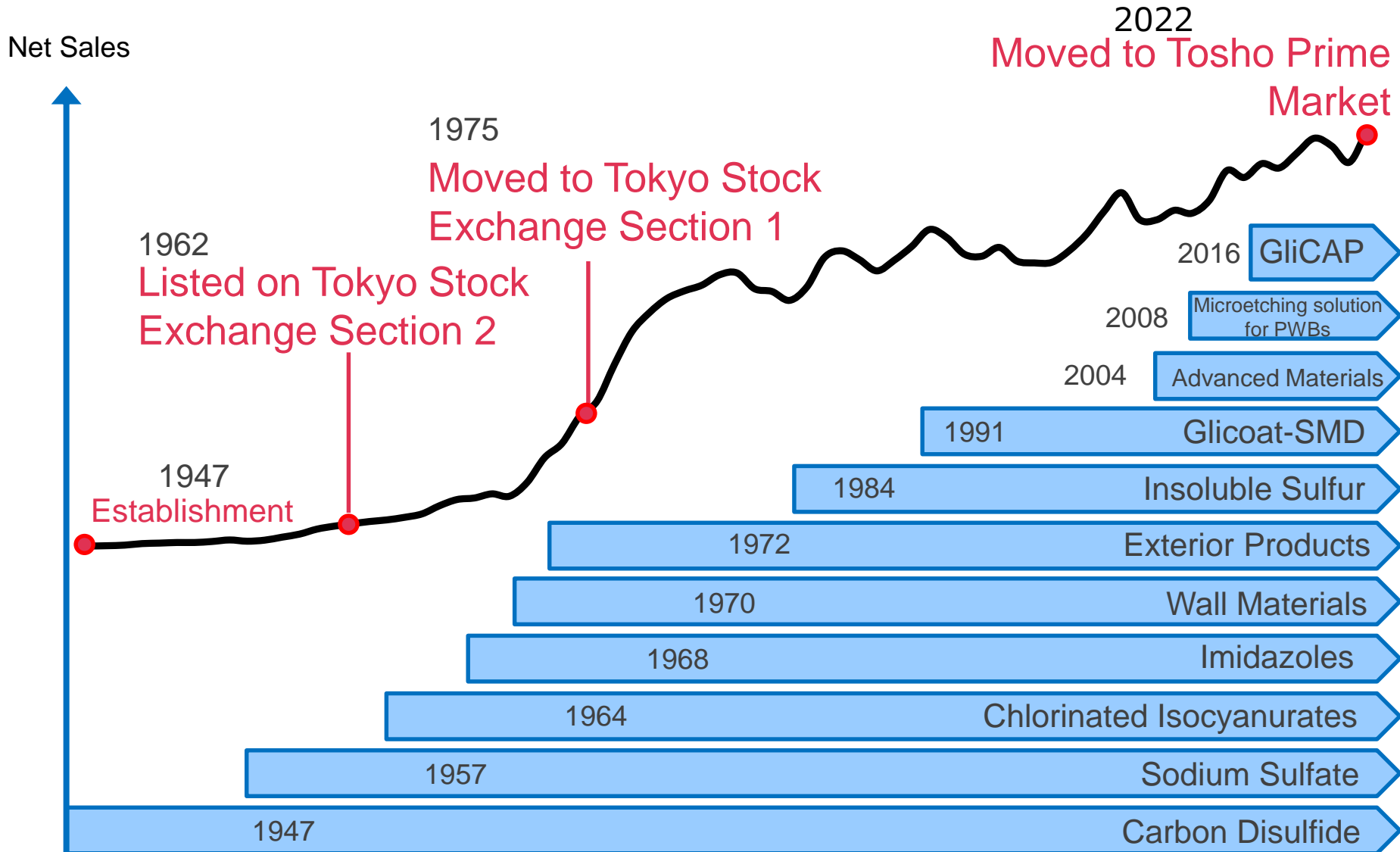
- Two main business pillars, which are chemical products and housing materials.



V – 5 . History

Oct 1947	Established in Marugame, Kagawa Prefecture with a capital of 2 million yen as a producer of carbon disulfide (=> inorganic chemical products)
Oct 1957	No. 1 Tokushima Plant (now Tokushima Plant's Yoshinari location) was constructed and began operations in the production of sodium sulfate (=> inorganic chemical products)
Jun 1962	No. 2 Tokushima Plant (now Tokushima Plant's Kitajima location) was constructed
Oct 1962	The Company's shares were listed on the Second Section of the Tokyo Stock Exchange
May 1964	Japan's first operations to produce chlorinated isocyanurates (=> organic chemical products) were launched at No. 2 Tokushima Plant
Dec 1969	The Company began production of OSP (Organic Solderability Preservative) (which was later called Gliccoat-SMD (=> Fine Chemicals) for PWBs (Printed Wired Board) and other electronic components
Sep 1970	The Company began production in the field of housing materials, launching production of interior finishes (JULUX) at No. 2 Tokushima Plant
Jun 1972	The Company began production and sales of accordion gates (=> Exterior Products)
Mar 1975	The Company moves its share listings from the Second to First Sections of the Tokyo Stock Exchange and Osaka Securities Exchange
Jul 1975	Tadotsu Plant was constructed in Tadotsu, Kagawa Prefecture
Nov 1975	Full-scale production of imidazole (=> Fine Chemicals) began at No. 2 Tokushima Plant (test production began in 1968)
Jun 1981	The Company opened a representative office in Los Angeles (which later became an overseas subsidiary as SIC in 1985)
Jul 1984	Production of insoluble sulfurs (=> Inorganic Chemicals) began at Marugame Plant
Sep 1992	The Research Center (now R&D Center) was constructed in Utazu, Kagawa Prefecture
Oct 1995	Ranzan Plant was constructed in Ranzan, Saitama Prefecture
Jul 2006	Shikoku (Shanghai) Co., Ltd. was established in Shanghai
2008	The Company began sales of a roughening agent for PWBs (=> Fine Chemicals) , and constructed a new plant for Gliccoat-SMD at Marugame Plant
Aug 2013	Tokushima Advanced Chemicals Plant-3 (TAP-3) facility was constructed at Tokushima Plant
Sep 2014	Converted Nippon Ryutan Kogyo Co., Ltd., the only carbon disulfide production company in Japan, into a consolidated subsidiary
Apr 2015	Offices were established in Taiwan and Singapore
Apr 2017	Converted Nippon Koki Co., Ltd. into a subsidiary
Jul 2021	Tokushima Advanced Chemicals Plant-4 (TAP-4) facility was constructed at Tokushima Plant
Apr 2022	Moved to the prime market following the TSE's market reclassification
Apr 2022	New chlorinated isocyanuric acid production facilities (NEO2022) constructed at Tokushima Plant

V - 6 . History and Sales Trends





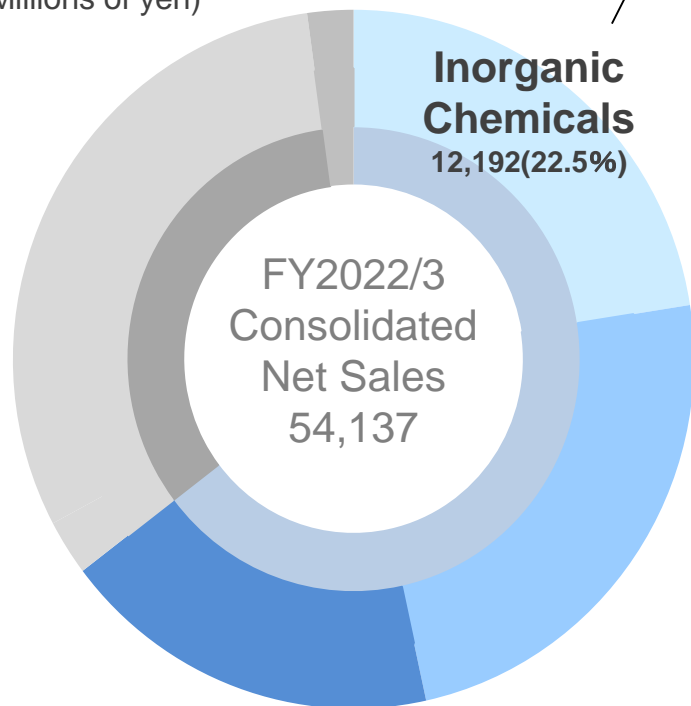
Chemicals Operations

Chemicals Operations

① Inorganic Chemicals

V - 7 . Inorganic Chemicals

(Millions of yen)



[Major products]

- Carbon Disulfide ...Essential materials for chemical fiber rayon
- **Insoluble Sulfur** ...**Rubber vulcanization agent**
- Sodium Sulfate ...Warm bath effect accelerator for bath additives
Synthetic detergent cleaning aid



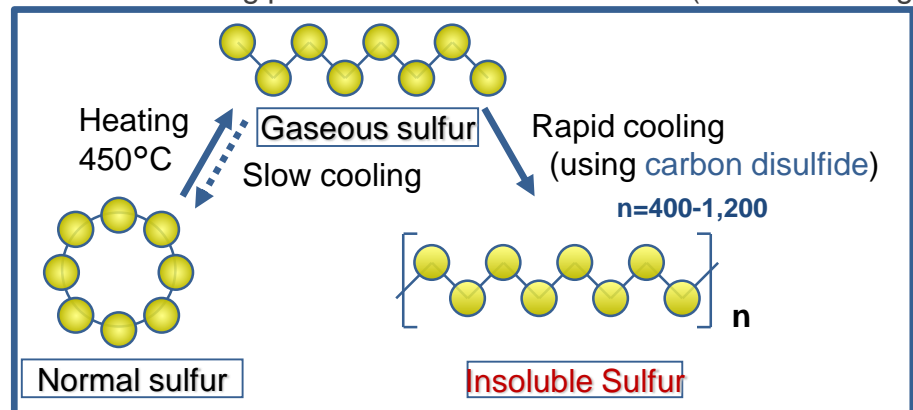
V – 8 . Insoluble Sulfur-Product Introduction-

- Application: Vulcanizing agent for rubber
- Main customers: Domestic and overseas tire manufacturers
- The raw material rubber is hard, and it acquires the characteristic to extend and contract by adding sulfur and heating (vulcanizing).
- When normal sulfur is used in the production process of radial tires, sulfur blooming (deposition) occurs on the surface of rubber and cause poor adhesion of rubber. Since insoluble sulfur is dispersed in the material rubber, it can be used to suppress blooming.
- For production of insoluble sulfur, polished handling technique for the company foundation product “carbon disulfide” is required.
- High quality is demanded in insoluble sulfur by tire manufacturers.
- In March 2017, production facility expansion was completed, and our production capacity was increased to 1.3 times.

■ Insoluble Sulfur



■ Manufacturing processes for insoluble sulfur (schematic diagram)

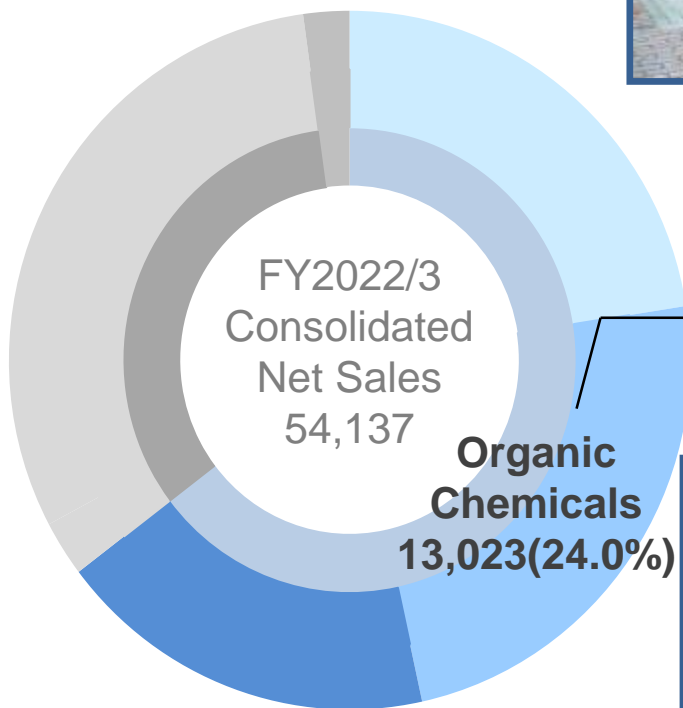


Chemicals Operations

②Organic Chemicals

V - 9 . Organic Chemicals

(Millions of yen)



[Major products]

- Chlorinated Isocyanurates (NEO-CHLOR) ... for swimming pool and septic tank disinfectants
- HIPOLKA ... Wastewater/sludge treatment agent



V – 10. Chlorinated Isocyanurates-Product Introduction-

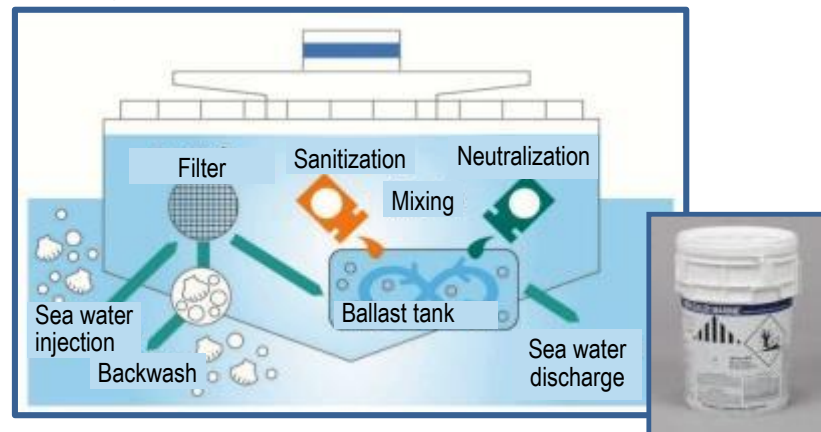
- Applications: Sanitizing agent for swimming pools and septic tanks, chlorine-based sanitizing agent for spas and home baths
- Main customers: Swimming pool operators, schools, general consumers (U.S.)
- Main component: Chlorinated Isocyanurates
- Compared to other disinfectant agents for swimming pools, “NEO-CHLOR” is characterized by longer duration in outdoor pools and little quality deterioration even after a long period of storage, as it undergoes little degradation caused by ultraviolet rays.
- It delivers strengths in “NAPIX,” an automatic chlorine feeder for swimming pools and business baths.
- Utilizing the strong oxidation, bleaching, and cleaning power of chlorine, we are developing various fields of application such as industrial and home sanitary field, ballast water (seawater used as weight on the bottom of the ship) treatment, drinking water application, and sanitation management applications in various facilities.

■ NEO-CHLOR product group



Chlorinated Isocyanurates

■ Image of ballast water sanitization



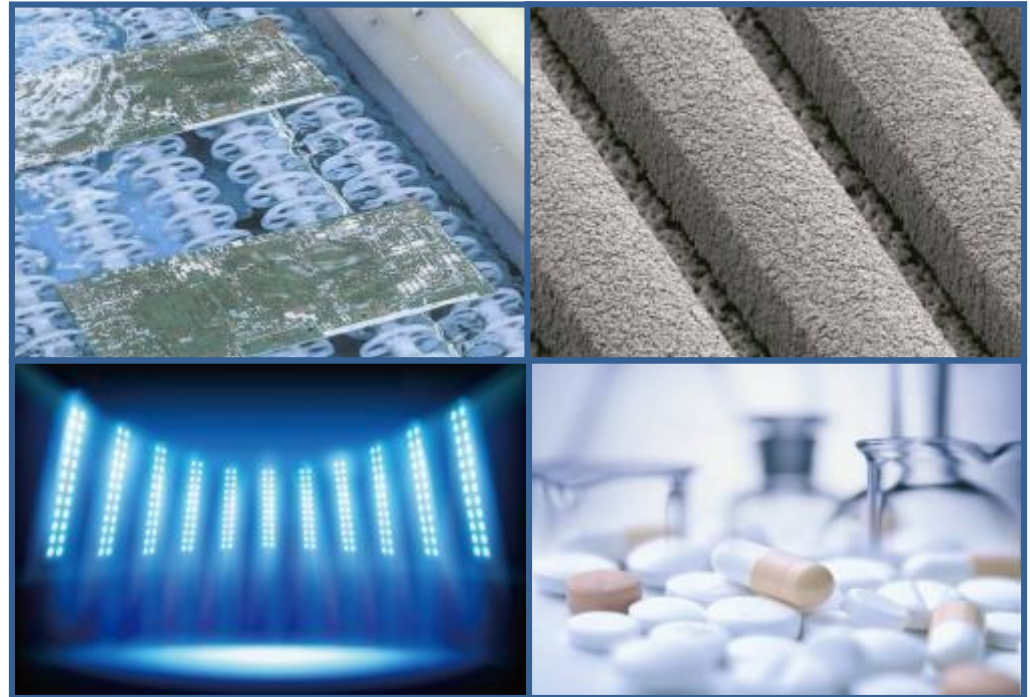
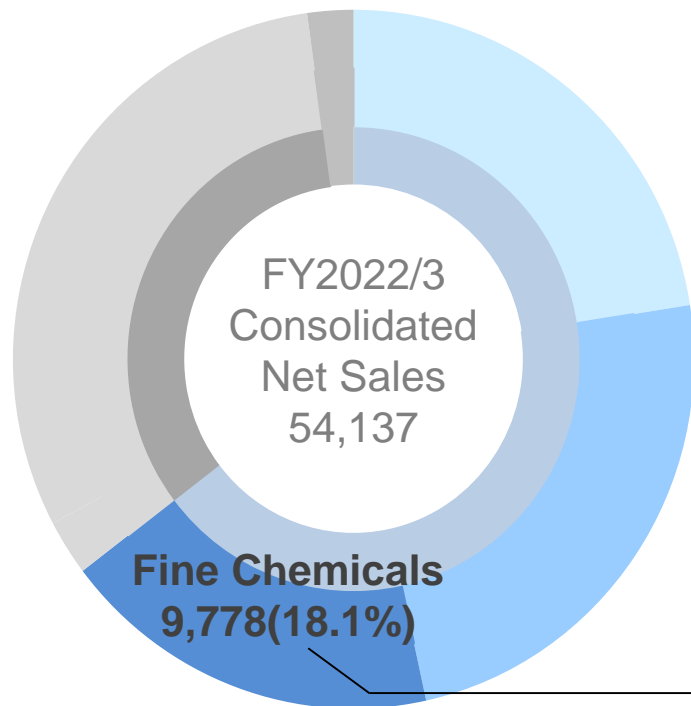
「NEO-CHLOR MARINE」

Chemicals Operations

③ Fine Chemicals

V - 1 1. Fine Chemicals

(Millions of yen)



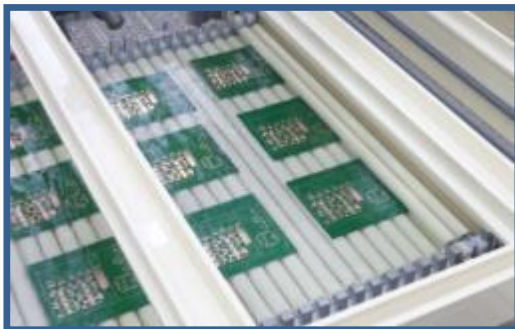
[Major products]

- Gliccoat-SMD... Water-soluble rust preventive agent for printed wiring boards (OSP)
- Advanced & Specialty Chemicals...
Imidazoles (curing agent of epoxy resin)
Resin modifier, raw material for drug
- THEIC ... Raw material for heat-resistant wire varnish
- Solder resist

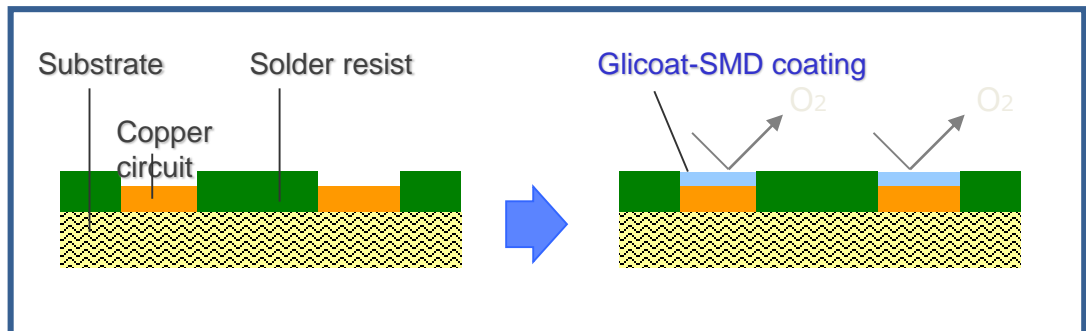
V – 1 2. OSP: Organic Solderability Preservative-Product Introduction-

- Application: Water-soluble rust preventive agent for printed wiring boards [OSP: Organic Solderability Preservative]
- Main customers: [Printed wiring board](#) manufacturers all over the world
- By forming an organic coating on the copper circuit of the printed wiring board to prevent oxidation of the exposed copper circuit, it ensures good soldering performance in the implementation process, and contributes to reliable electronic component manufacture.
- The main component of OSP is imidazole, which has a property to selectively undergo chemical reaction with copper. Our strength is that we are also an imidazole manufacturer and can synthesize the main ingredient to suit the required properties of OSP.
- While rust preventive agents for printed circuit boards include metal plating in addition to OSP, the percentage of OSP is still increasing.
- Gliccoat-SMD has acquired a lot of material designations from major electrical manufacturers, and has become an industry standard.
By increasing the environmental performance ahead of other companies, we are increasing the adoption results for [automotive electrical components](#) and [semiconductor package boards](#).

■ Printed wiring boards going through Gliccoat-SMD treatment tank



■ Treatment with Gliccoat-SMD (schematic diagram)

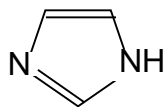


V – 1 3. Advanced & Specialty Chemicals-Imidazoles

- Application: Curing agent and curing accelerator for epoxy resin*, raw material for drugs
- Main customers: Resin material manufacturers and drug manufacturers
- Imidazole is used in a wide range of applications, including curing agent for epoxy resin and urethane resin, raw material of **drugs and agricultural chemicals**, and raw material of various industrial chemicals such as **rust preventive agents**.
- The majority of our company sales come from application as an epoxy resin curing agent. Epoxy resin which used imidazole as a component has optimal properties for **electrical and electronic component applications**.
- We have a lineup of various imidazoles to support the diverse curing speeds and properties demanded by the users.
- In the fields where competitive products (non-imidazole products) were strong, there is a movement for customers to newly adopt imidazole to improve the product performance.

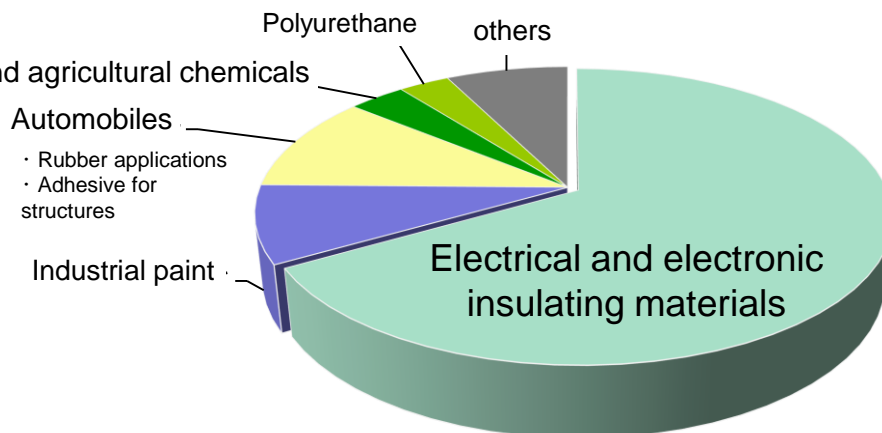
*Epoxy resin: A collective term for resin-like compounds with epoxy groups that readily react at the ends of a molecule, and thermosetting synthetic resins that are formed by polymerizing the compounds with curing agents. Used in printed circuit boards, paints, etc. in addition to adhesives.

■ Electronic part using epoxy resin (example)



Imidazole

■ Applications of imidazoles from our company



V - 1 4. Advanced & Specialty Chemicals-Imidazoles

Engine CPU

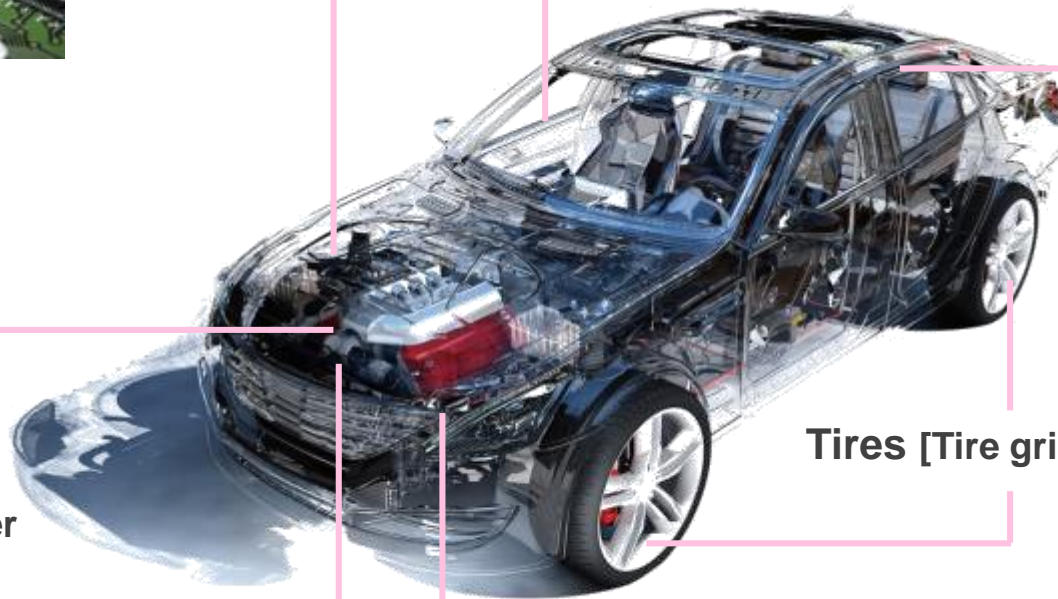
[Laminated plate, sealing agent, solder resist ink]



Engine hood
[CFRP (reinforced carbon fiber)]

Car navigation system

[Liquid crystal sealing material]



Frame structure
[Adhesive for structures]

Tires [Tire grip improving agent]

Electric motor
[Insulating powder paint]



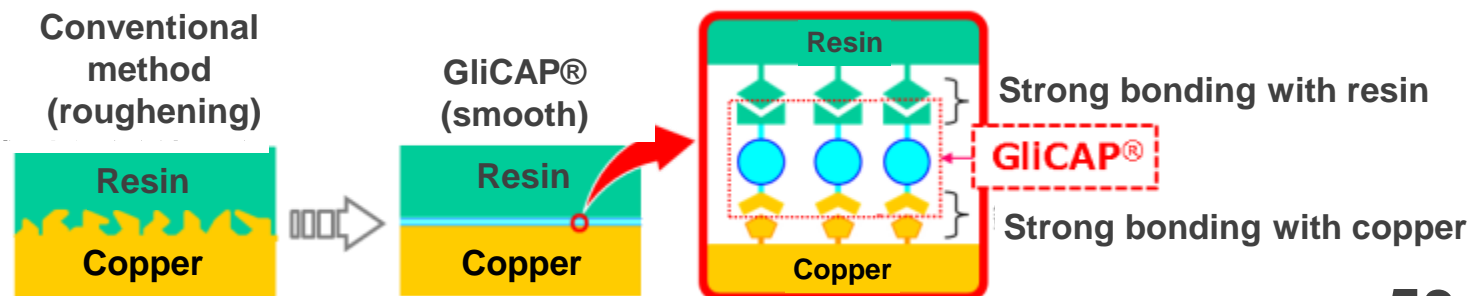
Air hose
[Acrylic rubber agent]



V – 1 5. Focused Products (Printed Wiring Boards Agents)

■ GliCAP®

- Adhesion improving agent between copper circuit and resin on printed wiring boards.
- Conventionally, unevenness was formed on surface by roughening (etching) the copper so that the adhesion to resin was improved by “mechanical bonding” (anchor effect).
- As the performance of semiconductors is improved, it is becoming more difficult to roughen the copper on **package boards** implementing high performance semiconductors, with the copper circuit width decreasing to ultrafine level.
- Copper circuits with smooth surface are required for high-frequency **server boards** for which further acceleration is being demanded to achieve practical application of the 5th generation mobile communication system (5G), since transmission loss is caused by the unevenness of the copper surface in the high-frequency range.
- GliCAP® has both properties to “strongly bind to resin” and “strongly bind to copper,” and can improve the adhesion “chemically” without roughening the copper surface.
- We are including applications other than those in printed circuit boards for GliCAP® in the future.



V – 1 6. Focused Products (Advanced & Specialty Chemicals)

- Advanced materials
 - Advanced materials at our company refer to the products (compounds) that can improve various functions by blending them as materials for electronic parts such as **semiconductors** that are used in **electronic devices**, etc.
 - Demands for improvement in the properties of resin materials to be used (heat resistance, electrical properties, etc.) are increasing as electronic devices evolve, and there are increasing opportunities to consider the functional materials of our company.
 - The range of examination for the functional materials of our company is quite wide, and examinations are being made even with **carbon fiber reinforced plastics (CFRPs)** that are used as structural materials for automobiles and aircrafts with a purpose to improve heat resistance and strength.
 - Using the organic synthesis technology cultivated with imidazole and isocyanuric acid, our company is committed to research and development of new functional material products.
 - Construction of a plant equipped for high quality such as **low metal control** has been decided in order to produce state-of-the-art semiconductor process materials. The plant (TAP-4) started operation in July 2021.



TAP-4 (Tokushima Plant)

V – 17. Focused Products (Advanced & Specialty Chemicals)

- A new isocyanuric acid derivatives
 - We developed this material by utilizing isocyanuric acid synthesis technology we have accumulated.
 - It has excellent heat resistance, light resistance, and transparency, and is used as a **modifier** for **sealing agent**, etc.
- **New adhesion improver**
 - A **resin modifier** that improves adhesion to inorganic materials such as metals through addition to the resin. Since it delivers adhesion equivalent to the conventional modifiers while having no sulfur content, it can improve the metal corrosivity, which was a problem with the conventional product.
 - We are developing its application in a wide range of resin materials including epoxy system commonly used in electronic parts, acrylic system, urethane system and polyimide system.
- **Benzoxazine**
 - A **resin** with excellent heat resistance, flame resistance and electrical properties.
 - Examination is being made as a semiconductors **sealing agent** and **carbon fiber reinforced plastics (CFRPs)** .

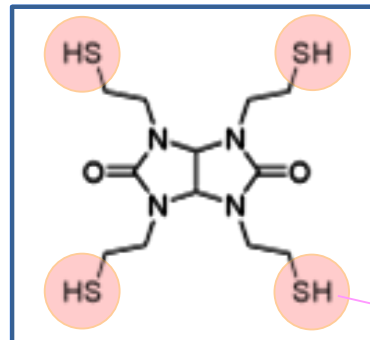
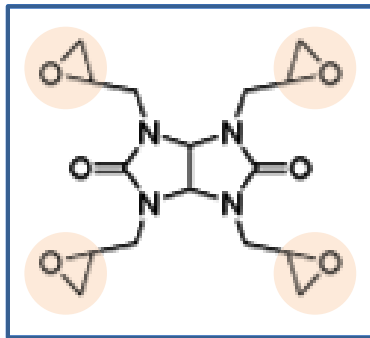
■ Benzoxazine



V – 1 8. Focused Products (Advanced & Specialty Chemicals)

■ Glycoluril derivatives

- A multi-functional resin modifier with transparency and high heat resistance.
- It has 4 functional groups and is expected to form hardened materials with a high crosslinking density.



Thiol group



- Products having a thiol groups (-SH) as a functional group will rapidly cure with epoxy resin at a low temperature. Compared to the conventional modifiers, cured resin has excellent heat resistance, moisture resistance, acid resistance, alkali resistance, and hardness, and it can significantly improve the resistance to heat and moisture, which had been a problem.
- It has been adopted in the field of electronic materials that continue to advance in performance and miniaturization.



Housing Materials Operations

Housing Materials Operations

④ Interior, Exterior Finishes and Paving Materials

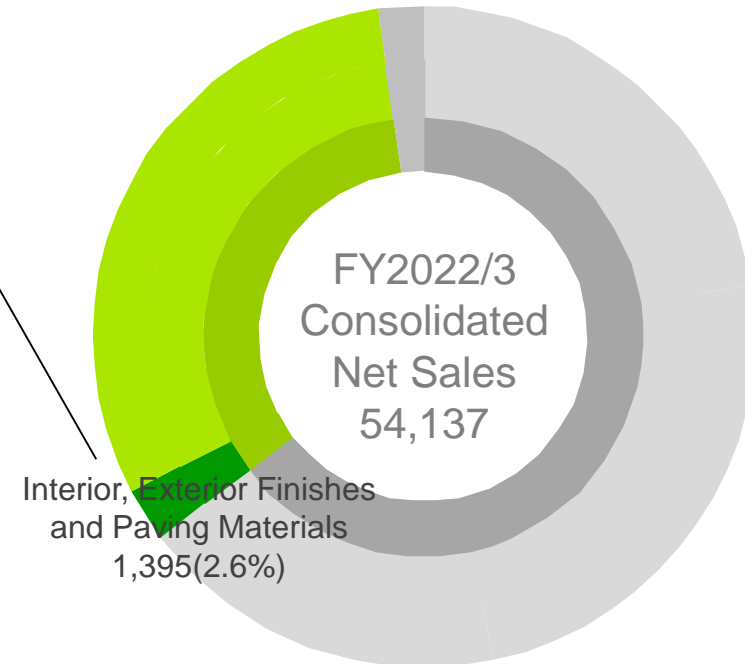
V – 19. Interior, Exterior Finishes and Paving Materials

[Major products]



- Interior materials (silicate walls, natural material walls)
Plastered wall materials with moisture control function and harmful chemical substance and daily odor adsorption/decomposition function
- Exterior materials
Wet exterior material for housing
- Paving materials
Natural stone paving materials, recycled glass paving materials
Rubber chip paving materials

(Millions of yen)



V – 2 0. Interior, Exterior Finishes and Paving Materials

□ Interior materials

- The business started with "JULUX," the first industrial product for plastered wall material in Japan, which was developed for in-house chemical glue CMC application.
- It is difficult to handle Juraku wall, traditional Japanese wall, but with our wall materials, uniform quality can be maintained only by mixing a specified amount of water. Our plastered wall material is freshly drawing attention because of its property of high adsorption of chemicals that cause sick building syndrome such as formaldehyde as well as odor.
- We are deploying the products characterized by high designability to our target market of commercial and public space design and custom-designed houses. Colors and expressions are brought to a space by three-dimensional and various patterns that can be only achieved with thick coating.

■ Interior materials



V – 2 1. Interior, Exterior Finishes and Paving Materials

- Exterior and paving materials
 - We also expand our business to “exterior” to cover the outside of buildings and exterior parts, and “paving” to cover the surfaces of roads and approaches.
 - Our exterior materials come in wide variations including colors and can create subtle expressions as they are finished manually to the texture of the surface. As paving materials, we offer materials such as natural stone, natural sand, and rubber chips.
 - For exterior materials and paving materials, we create synergistic effects by making use of our sales channels for exterior products.

■ Paving materials



Housing Materials operations

⑤ Exterior Products

V – 2 2. Exterior Products

[Major products]

Home Exterior Products

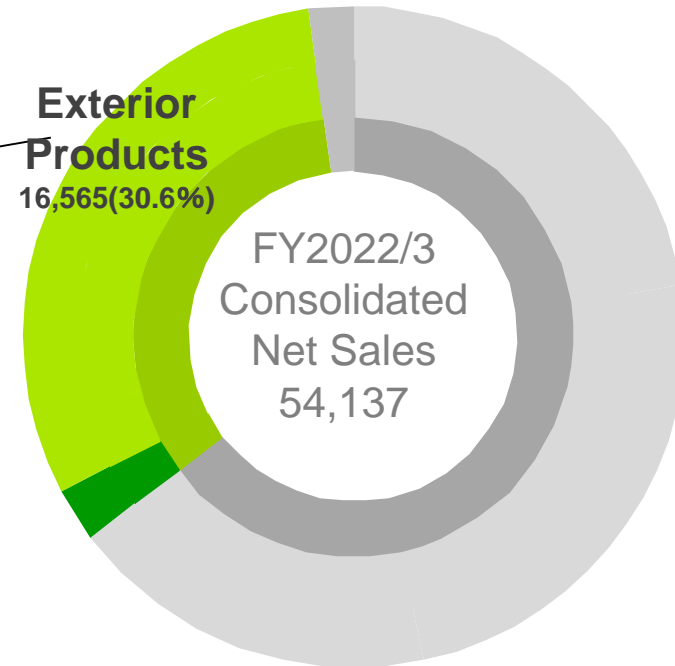
- Gates, fences, carports, and decks
- Accordion gates
(expansion type gates)
- Art Wall
(aluminum system fence)

First product
in industry
which was
developed by
our company

Decorative Exterior Products

- Large gates, fences, pathway shelters,
bicycle parking spaces
- Garbage accumulation storage (first product
in industry which was developed by our
company)
- Green roof, etc.

(Millions of yen)



V – 2 3. Home Exterior Products

- In 1971, when the motorization was rapidly progressing, we devised an “**accordion gate**,” which can be easily opened and closed with an expansion mechanism, and which can respond to the residential situation with limited space in Japan, and it became the standard for gates in front of the car shed.
- Since then, we have continued to add to the product lineup for general gates, car sheds (car ports), fences, deck materials, terraces, etc.
- We also devote our efforts in design, in addition to our focus on functions, and won the first “G mark” (current Good Design Award) in the exterior industry in 1984.
- ‘Fun roof,’ our terrace roof with a sample design which harmonizes to the house using flat, wood-like ceiling materials received the 2019 Good Design Award.

■ Terrace



■ Carport



■ Accordion gate



V – 2 4. Decorative Exterior Products

■ Pathway shelter



■ Bicycle parking space



■ High strength car stops



■ Garbage accumulation storage



V – 2 5 . Efforts in Housing Materials Business

- We are adding to the lineup of high-strength exterior products that are resistant to wind and snow and promoting sales expansion, based on the fact that large-scale disasters such as typhoons have been recently happening one after another over the country.
- We deploy the strength standards and quality cultivated in the decorative area to all products and are developing products with high quality and strength.
- As parts of the lineup of high-strength products, we have commercialized fences for detached houses, and independent terraces in addition to the large fences, archways, Large fences, and car ports.

■ Fences



■ Shelter



■ Car port



■ Fences



■ Terrace



Long-Term Vision

V – 2 6. Business Reform Policy

Chemicals Operations

Continue to develop and advance for the sake of the world

Desired State

Inorganic

Make use of materials which are difficult to handle in a recycling-oriented manner and contribute to technological innovation and environmental preservation around the world

Organic

Deliver cleanliness to people across the globe by protecting the environment and ensuring sanitation

Fine

Contribute to technological advancement by providing highly functional products based on unique technologies

Create global standards with our new technologies

Strategic Scenario

Accumulate sulfur handling and synthesis reaction evaluation technologies

Create new value starting from making use of sulfur and expand the business domain

Anticipate customer needs based on social issues such as the water environment and sanitation and make optimal proposals concerning sterilization and cleaning with our unique technologies and services

Set unique themes by anticipating needs and establish technologies in cooperation with prosperous customers.
Develop highly functional products based on accumulated unique technologies

Set themes with an eye on market trends and develop products drawing on our strengths
Strive to propose comprehensive solutions from the point of view of customers

V – 27. Business Reform Policy

Housing
Materials
Operations

Design a new lifestyle in the future and contribute to the community development around the world for everyone's happiness

Housing
Materials

Desired state

Design a new lifestyle in the future and contribute to the community development around the world for everyone's happiness

Process to provide value

Attract and acquire human resources and engineers in Japan and overseas, with original products placing focus on the design and functionality

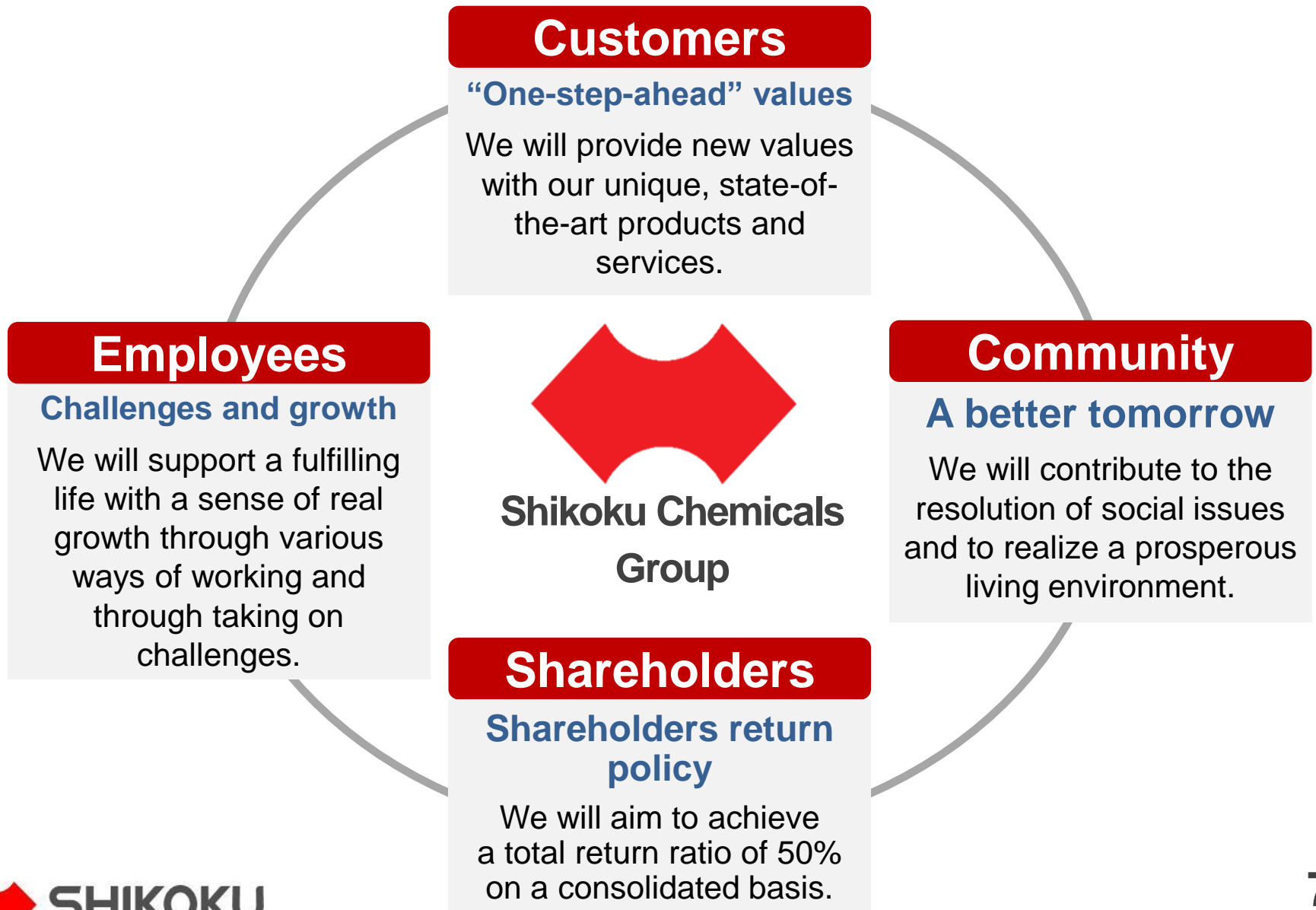
Promote alliance and extend operations globally with our unique product categories

V – 2 8. Companywide Reform Policy

- Set six companywide reform policies toward realization of the desired state in 2030 and push forward with them mobilizing group-wide efforts

Desired state in 2030	<p style="text-align: center;">Toward “one- step-ahead, proposal” company with Dokusouryoku (creativity)</p> <p style="text-align: center;">Solve social issues with creative ideas, leading the progress of the world</p>					
Company-wide reform policy	1 Creation of values	2 Creation of reserve energy	3 Creation of operational bases			
	<p style="text-align: center;">Increase brand value and take on challenges for new business</p> <ul style="list-style-type: none"> ● Improvement of SHIKOKU QUALITY ● Establishment of a framework that makes it easier for everyone to propose and take on challenges for new businesses and ideas for such businesses 	<p style="text-align: center;">Improve efficiency to secure resources for reforms</p> <ul style="list-style-type: none"> ● Elimination of inefficiencies and simplification and standardization of operations ● Efficiency improvement by making use of technology such as IT ● Optimal allocation of personnel and work style reforms 	<p style="text-align: center;">Gain a foothold into the world and accelerate global business expansion</p> <ul style="list-style-type: none"> ● Formulation of companywide operational base strategy ● Optimization of domestic production, development and sales operational bases ● Optimization of overseas production, development and sales operational bases 			
	4 Creation of organizations	5 Creation of company climate	6 Creation of human resources			
	<p style="text-align: center;">Establish a group governance structure to realize the vision</p> <ul style="list-style-type: none"> ● Building of an optimal group governance structure ● Establishment of a group governance structure in keeping with the business expansion overseas 	<p style="text-align: center;">Foster company climate which embraces diversity and encourages challenges</p> <ul style="list-style-type: none"> ● Spread of “proposal-based styles” among employees ● Fostering of company climate to develop “proposal-based styles” ● Establishment of a working environment which accommodates diverse work styles 	<p style="text-align: center;">Build a framework to encourage individuals to take on challenges and evaluate individuals fairly</p> <ul style="list-style-type: none"> ● Establishment of a framework for recruitment which attracts desired human resources ● Creation of opportunities for growth where each individual is respected ● Revision to and strengthening of management of the evaluation system 			

V – 29. Yonpou Yoshi – Contributions to Stakeholders –



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Further, the purpose of this material is to provide information to the investors, and not to serve as a recommendation to buy or to sell. Please note that SHIKOKU CHEMICALS CORPORATION will not be responsible for the consequences of investments etc.