

FYE March 2020 Financial Briefing

NAGASE & CO., LTD
June 10, 2020

Summary

■ FYE March 2020 Results

- Factors including trade friction between the United States and China caused a slowdown in growth in China and other parts of the world economy. Meanwhile, the COVID-19 pandemic caused the world economy to deteriorate quickly in the fourth quarter. In addition, the declining market for resins and other products led to weak performance for the year as a whole.
- The Prinova Group's contribution to operating income was limited in part because of the temporary costs associated with merging our businesses.
- As a result, profits were lower, despite net sales level with the prior year.

■ FYE March 2021 Earnings Outlook

- Projections are based on the assumption that the economic impact of the COVID-19 pandemic will largely abate in the second half for NAGASE Group business domains.
- The automotive industry will be especially impacted. Sales are forecast to be down sharply in the first half and recover gradually in the second half.
- Prinova Group performance will contribute for the year as a whole.
- We project lower sales and profits overall.

■ Toward a New Paradigm for the Post-Corona Era

- We recognize and will respond to the changes that the COVID-19 pandemic is making in the environment

■ Progress of Mid-Term Management Plan *ACE-2020*

- We are building a strategic foundation to expand food ingredients business in Europe/Americas in the focus area of Life & Healthcare

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FYE March 2020 Results

Consolidated Statements of Income

- **Net sales:** Net sales were largely flat. The Group added sales from the Prinova Group, acquired by the Company in the consolidated second quarter of the fiscal year, but sales also suffered from trade friction between the US and China and the growing COVID-19 pandemic
- **Operating income:** The Prinova Group's contribution to profitability during the fiscal year was limited because of the temporary costs associated with merging our businesses.

Factors such as increasing investment in DX and leading-edge technologies caused general and administrative expenses to rise and led to lower profits

(100 millions of yen)

	19/03	20/03	Change	Vs. PY	Orig. Forecast (full year)	Achievement
Net sales	8,077	7,995	△ 81	99%	8,200	98%
Gross profit	1,054	1,049	△ 5	99%	1,080	97%
<GP ratio>	13.1%	13.1%	+0.1%	—	13.2%	—
SG&A expenses	802	857	+ 55	107%	865	—
Operating income	252	191	△ 60	76%	215	89%
Ordinary income	266	190	△ 75	72%	220	87%
Profit attributable to owners of the parent	201	151	△ 49	75%	173	88%
US\$ Exchange rate (period average)	@ 110.9	@ 108.7	@ 2.2	strong yen	@108.0	—
RMB Exchange rate (period average)	@ 16.5	@ 15.6	@ 0.9	strong yen	@ 15.4	—

[Foreign exchange rate impact on 20/03 net sales and operating income results]

Net sales: △¥12.6 billion (approx.); Operating income: △¥500 million

[Per-yen exchange rate impact on net sales and operating income]

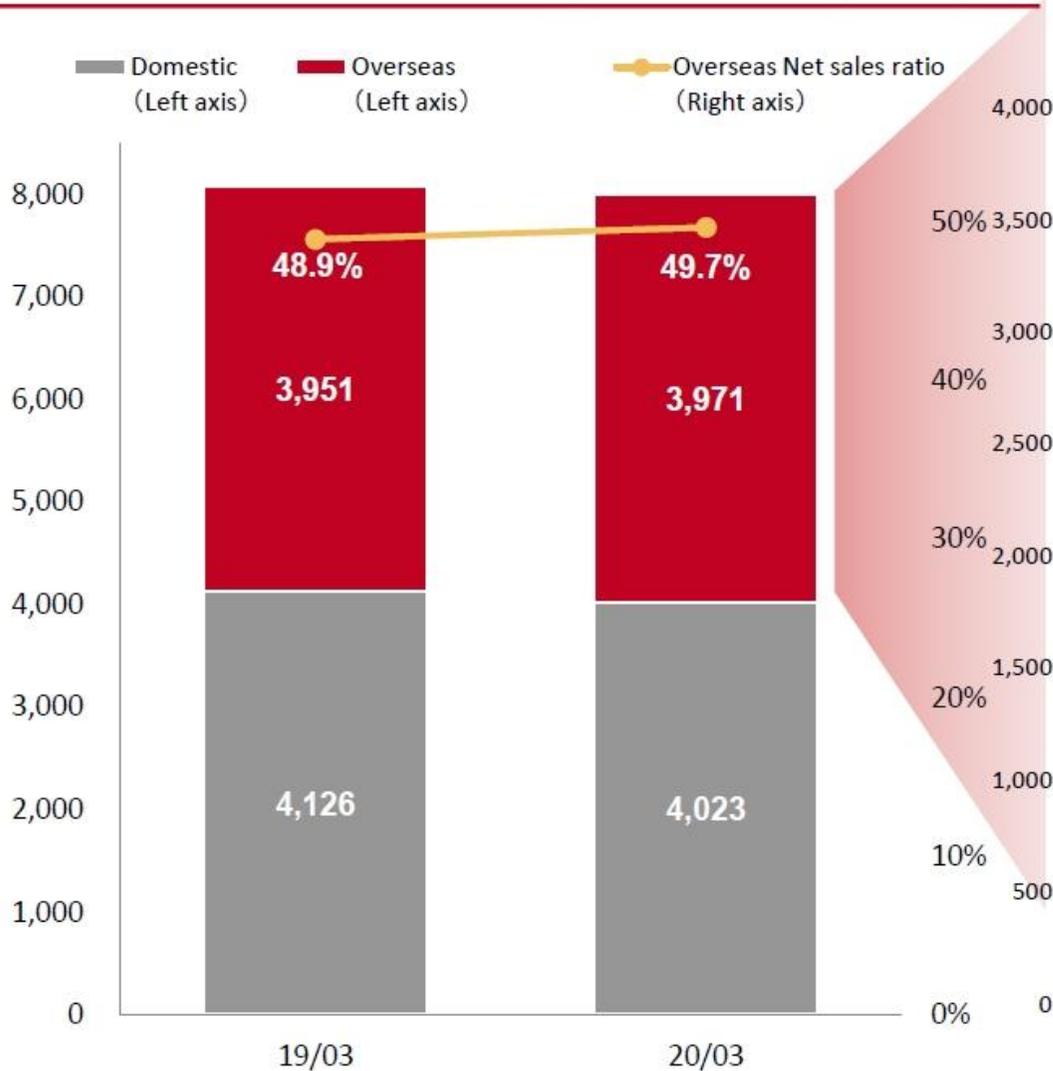
	Impact of US\$ /yen	Impact of RMB/yen
Net sales	¥1.5 billion (approx.)	¥7.8 billion (approx.)
Operating income	¥0.0 million (approx.)	¥370 million (approx.)

*DX: digital transformation (transforming products, services, business models, business processes, organizations, and corporate cultures and establishing competitive advantage by using digital technologies and data to better meet customers' and society's needs)

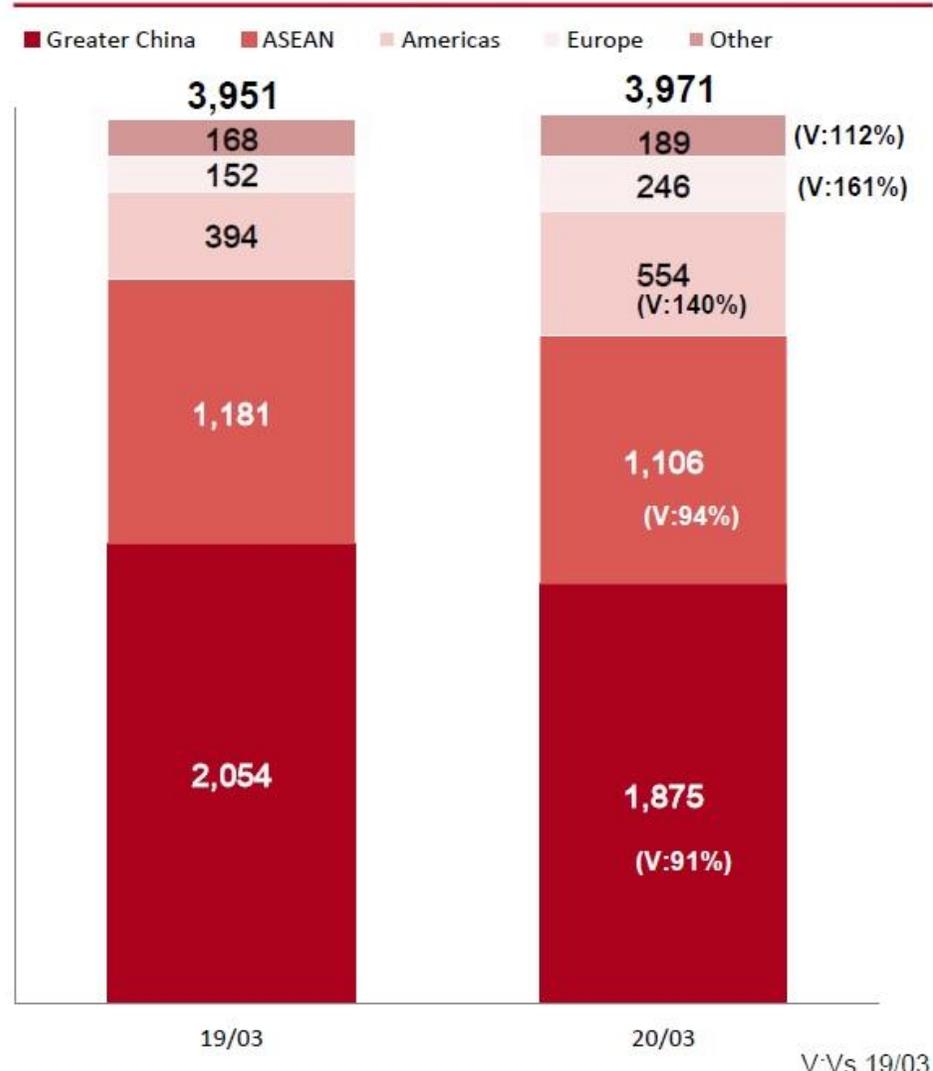
Net Sales by Region (Domestic, Overseas)

- In Asia including Japan, sales were down, but with the acquisition of the Prinova Group, net sales in Europe/Americas rose (overseas ratio of total sales: 49.7%)

Domestic & Overseas Sales (100 millions of yen, %)



Overseas Sales by Region (100 millions of yen, %)



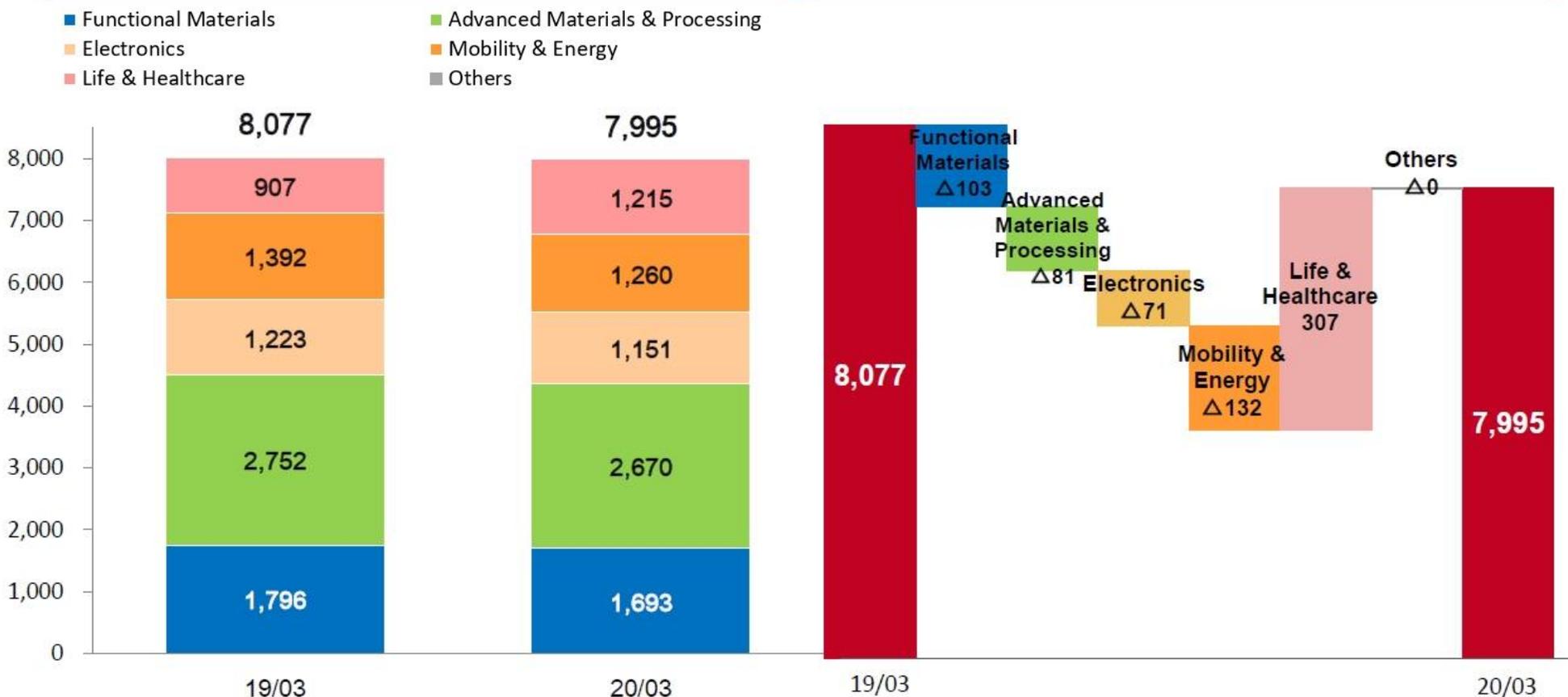
V:Vs 19/03

Net Sales: Two-Year Comparison (by Segment)

- **Advanced Materials & Processing:** Lower sales. Though sales of plastic materials were up by volume, prices declined. In addition, sales of conductive materials fell, leading to lower sales overall
- **Mobility & Energy:** Lower sales because of factors like lower sales of plastic materials in Japan and overseas as the number of automobiles produced declined
- **Life & Healthcare:** Sales were up. Although sales of AA2G™ declined, sales of TREHA™, pharmaceutical raw materials and intermediates, and medical materials increased, and we added sales from the Prinova Group, newly-acquired by the Company in the consolidated second quarter of the fiscal year

Net Sales by Segment (100 millions of yen)

Change in Net Sales by Segment (100 millions of yen)

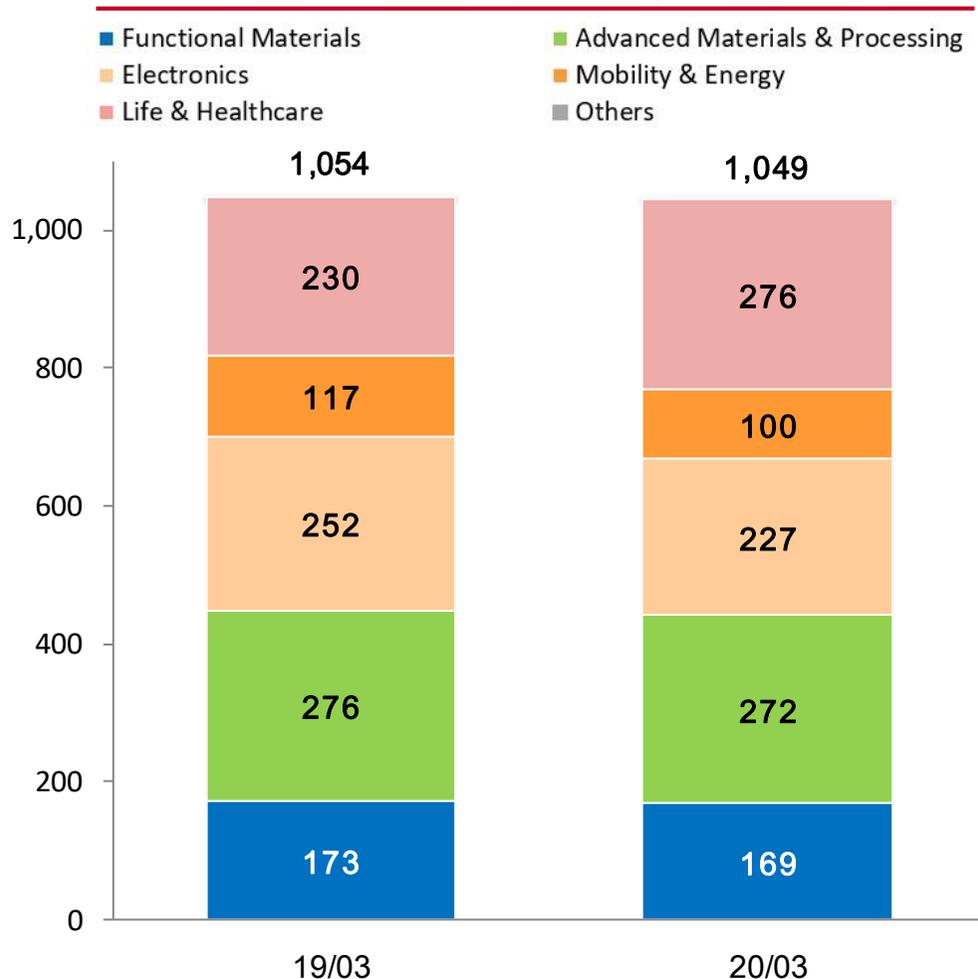


* As of April 1, 2019, the Automotive & Energy Segment has been renamed the Mobility & Energy Segment

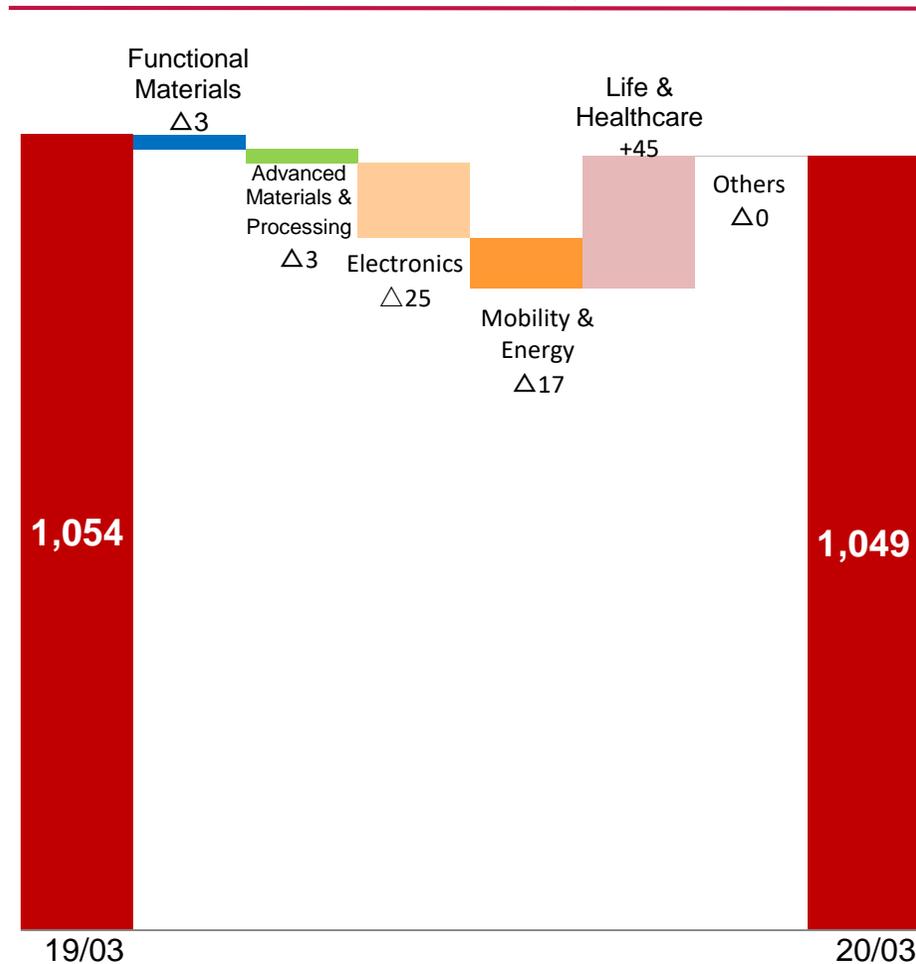
Gross Profit: Two-Year Comparison (by Segment)

- Despite increased profits in the Life & Healthcare segment due to the new consolidation of the Prinova Group, profits decreased in other segments, so that profits ended up level with the prior fiscal year

Gross Profit by Segment (100 millions of yen)



Change in Gross Profit by Segment (100 millions of yen)

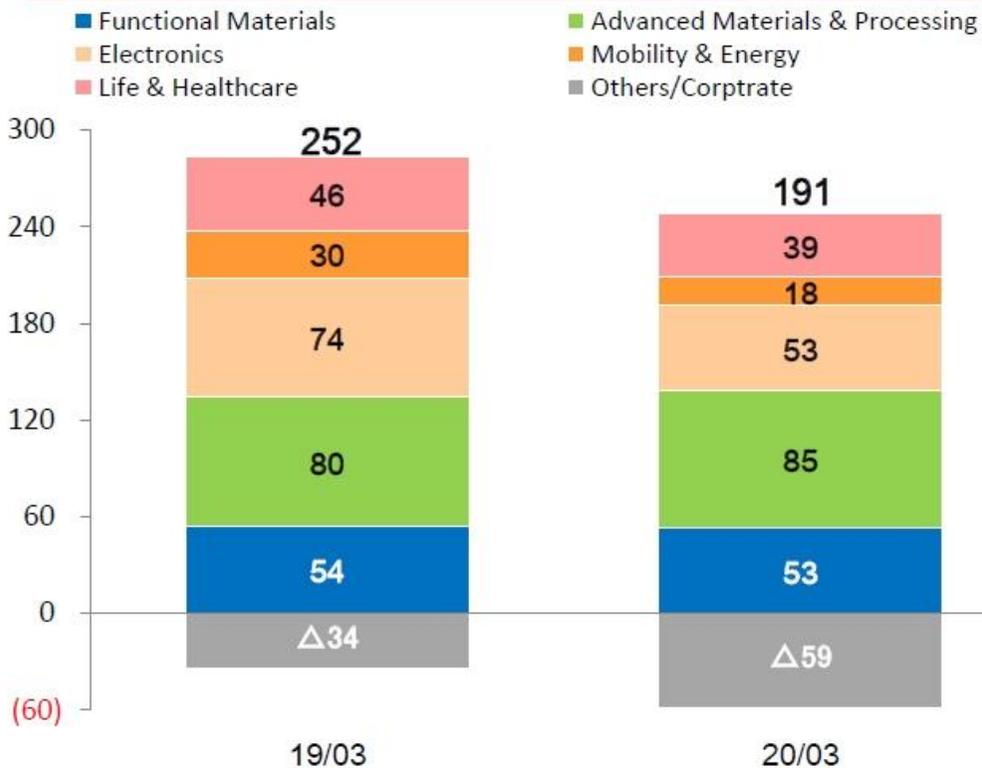


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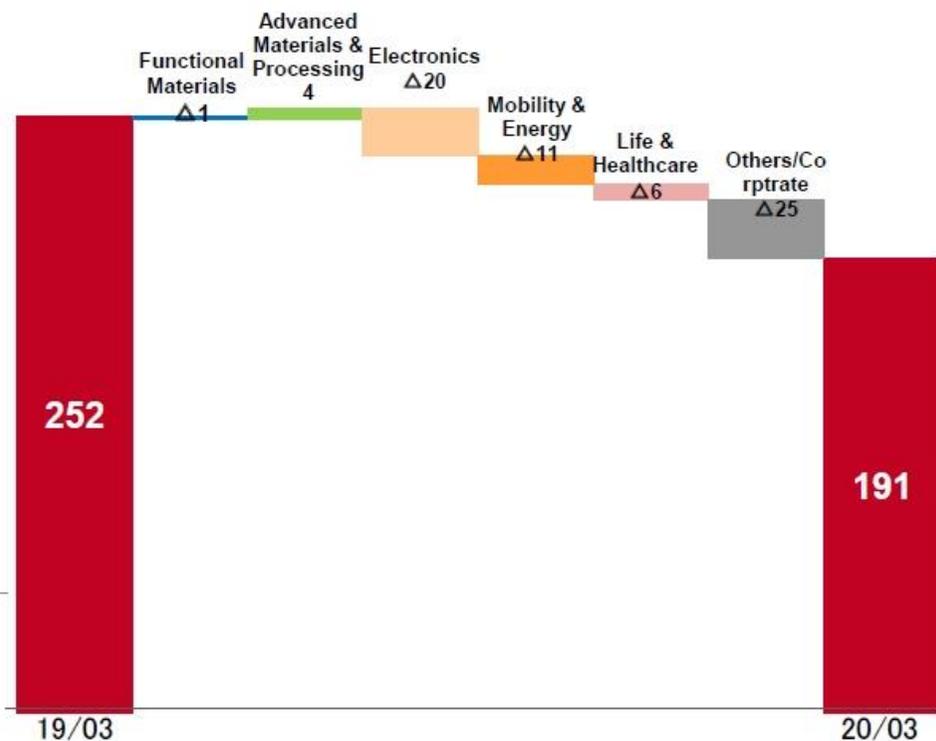
Operating income: Two-Year Comparison (by Segment)

- **Advanced Materials & Processing:** Despite reduced sales, increased profitability in the Company's manufacturing subsidiaries in Japan led to higher profit
- **Electronics:** Lower profits due to declining sales and worsening profitability of the thin processing business for glass substrate in China
- **Life & Healthcare:** Despite increased sales, profitability declined because of temporary costs associated with merging businesses and the worsening of profitability at some of the Company's Japanese manufacturing subsidiaries
- **Other/Corporate:** Factors such as increasing investment in DX and leading-edge technologies caused general and administrative expenses to rise and led to lower profits

Operating income by Segment (100 millions of yen)



Change in Operating income by Segment (100 millions of yen)



* As of April 1, 2019, the Automotive & Energy Segment has been renamed the Mobility & Energy Segment

Earnings at Major Consolidated Subsidiaries

- Nagase Plastics Co., Ltd. sales and profits remained level despite a declining market for resins, mainly due to an increase of sales of super engineering plastics to the electronics industry
- Nagase (Thailand) Co., Ltd. recorded lower sales and profits mainly due to lower sales of engineering plastics for the automotive and OA industries

(100 millions of yen)

Company Name		Net sales	Vs. PY	Operating Income (Note 2)	Vs. PY
Manufacturing Companies	Hayashibara Co., Ltd.	250	98%	49	95%
	Nagase ChemteX Corporation	263	101%	27	95%
	Total for manufacturing (Note 1)	1,054	97%	110	95%
Domestic Sales Companies	Nagase Plastics Co., Ltd.	368	99%	9	97%
	Nagase Chemical Co., Ltd.	188	100%	3	111%
	Nishinihon Nagase Co., Ltd.	82	89%	3	71%
	Total for domestic sales (Note 1)	924	98%	26	93%
Overseas Sales Companies	Nagase (Thailand) Co., Ltd.	374	93%	11	89%
	Shanghai Hua Chang Trading Co., Ltd.	366	102%	8	88%
	Shanghai Nagase Trading Co., Ltd.	428	96%	6	67%
	Total for overseas sales (Note 1)	3,835	101%	78	87%

Note 1: Totals for each category are the simple sums of each company in the category. These sums do not equal consolidated figures.

Note 2: Operating income does not reflect amortization of goodwill and depreciation of technology-based assets.

State of Two Major Manufacturing Subsidiaries

- Hayashibara Co., Ltd.: Recorded lower sales and profits. Though sales of TREHA™ and pullulan rose overseas, sales of AA2G™ in Japan dropped, impacted by the decrease in inbound demand in Japan
- Nagase ChemteX: Sales remained level. Sales in the Performance Chemicals Business were slow, but firm in the Epoxy Resin Business and Bio Chemicals Business, and favorable for the Photolithography Materials Business. Profits down due to worsening product mix

Hayashibara Co., Ltd.

(100 millions of yen)

	19/03	20/03	Change	Vs. PY
Net sales	254	250	△4	98%
Operating income	51	49	△2	95%

- Sales of TREHA™ were higher due to strong sales overseas (particularly in Europe)
- Sales of AA2G™ were lower, despite strong sales to major customers in overseas markets, as inbound demand in Japan decreased
- Higher sales with new adoptions of Fibryxa™ in the food industry
- Higher sales of pullulan for use in hard capsules for medical and health food products
- Strong sales of other and LUMIN™-A

Nagase ChemteX Corporation

(100 millions of yen)

	19/03	20/03	Change	Vs. PY
Net sales	260	263	+2	101%
Operating income	28	27	△1	95%

- The Epoxy Resin Business recorded higher sales, mainly due to sales increase in mobile device electronic components and for semiconductor industries
- The Photolithography Materials Business recorded higher sales due to a recovery in customer capacity utilization
- The Performance Chemicals Business recorded lower sales despite strong performance in epichlorohydrin conductors for 3D printers and household goods as sales of conductive materials for the LCD industry were down

- The Prinova Group's contribution to operating income was limited because it was consolidated for five months of the fiscal year, we amortized goodwill and other intangible assets, and we recorded temporary costs resulting from fair market valuation of inventory

	FYE March 2020 Impact on NAGASE Group Consolidated Earnings (August–December performance)	*Reference FYE December 2019 (full year) (excluding special M&A-related expenses)
Prinova Group net sales	¥31.8 billion	Approx. ¥82.0 billion
Prinova Group operating income	¥1.4 billion	Approx. ¥4.0 billion
Amortization of goodwill and other intangible assets	¥0.8 billion	-
Inventory cost processing (temporary costs)*	¥0.6 billion	-

*All costs for inventory that underwent fair market valuation were recorded in the fiscal year (temporary costs for the fiscal year only)

Amount of goodwill and other intangible assets recorded (amount originally recorded)	Goodwill	¥10.7 billion (20-year amortization)
	Customer-related assets	¥18.2 billion (19-year amortization)
	Trademark rights	¥6.5 billion (20-year amortization)

- The work of integrating Prinova Group into the NAGASE Group following acquisition is largely finished
- In addition to building a governance system, synergy with Hayashibara is starting to produce results

Business

- ✓ Prinova began selling Hayashibara and Nagase ChemteX products in Europe/Americas
- ✓ Hayashibara Hesperidin S has newly produced results for sports nutrition applications
- ✓ Lowered costs by making concentrated purchases of raw materials
- ✓ Began business collaboration in various regions to prepare for Prinova business expansion into Asia
- ✓ Began DX initiatives, etc.

Governance

- ✓ Revised management system, decision-making authority, etc., and began operation
- ✓ Revised HR related regulations and started operation
- ✓ Introduced monthly management accounting and global CMS
- ✓ Implemented internal control and confirmed effectiveness, etc.

*PMI: Post Merger Integration



- Exhibiting at Supply Side WEST 2019 in Las Vegas, USA to promote Hayashibara's TREHA™ and Hayashibara Hesperidin S



- Deepening communication in NAGASE Group as a whole and pursuing business as a unified Group

- Assets increased ¥44.1 billion due to an increase of assets and the recording of goodwill and other intangible assets related to the new consolidation of subsidiaries, though this was offset somewhat by a decrease in investments in securities stemming from the sale of certain shares owned by the Company and lower fair values of shares owned
- Liabilities increased ¥43.4 billion due to increase in long-term loans and bonds as a result of procuring funds for the Prinova Group acquisition
- Shareholders' Equity Ratio down 4.3 points to 49.9%

Assets				Liabilities and Net Assets			
	19/03	20/03	Change		19/03	20/03	Change
Total current assets	3,658	3,793	+ 135	Total current liabilities	2,018	2,004	△ 14
Cash and time deposits	440	514	+ 73	Notes and accounts payable	1,172	1,082	△ 89
Notes and accounts receivable	2,304	2,211	△ 93	Short-term loans and current portion of CP	579	618	+ 39
Inventories	810	956	+ 146	Other	266	302	+ 35
Other	102	111	+ 8	Total long-term liabilities	528	978	+ 449
Total non-current assets	2,015	2,321	+ 306	Long-term loans and Bonds	275	726	+ 450
Property, plant and equipment	664	743	+ 78	Net defined benefit liability	124	136	+ 12
Intangible fixed assets	372	725	+ 353	Other (Deferred tax liabilities, etc.)	128	115	△ 13
Investments, other assets	977	852	△ 125	Total liabilities	2,547	2,982	+ 434
Investments in securities	902	761	△ 141	Total net assets	3,126	3,132	+ 6
Other	75	91	+ 15	Shareholders' equity	2,628	2,723	+ 94
				Accumulated other comprehensive income	447	329	△ 118
				Net unrealized holding gain on securities	418	326	△ 92
				Translation adjustment	32	10	△ 21
				Other	△ 2	△ 6	△ 3
				Non-controlling interests	49	79	+ 29
Total assets	5,673	6,114	+ 441	Total liabilities and net assets	5,673	6,114	+ 441

Cash Flows

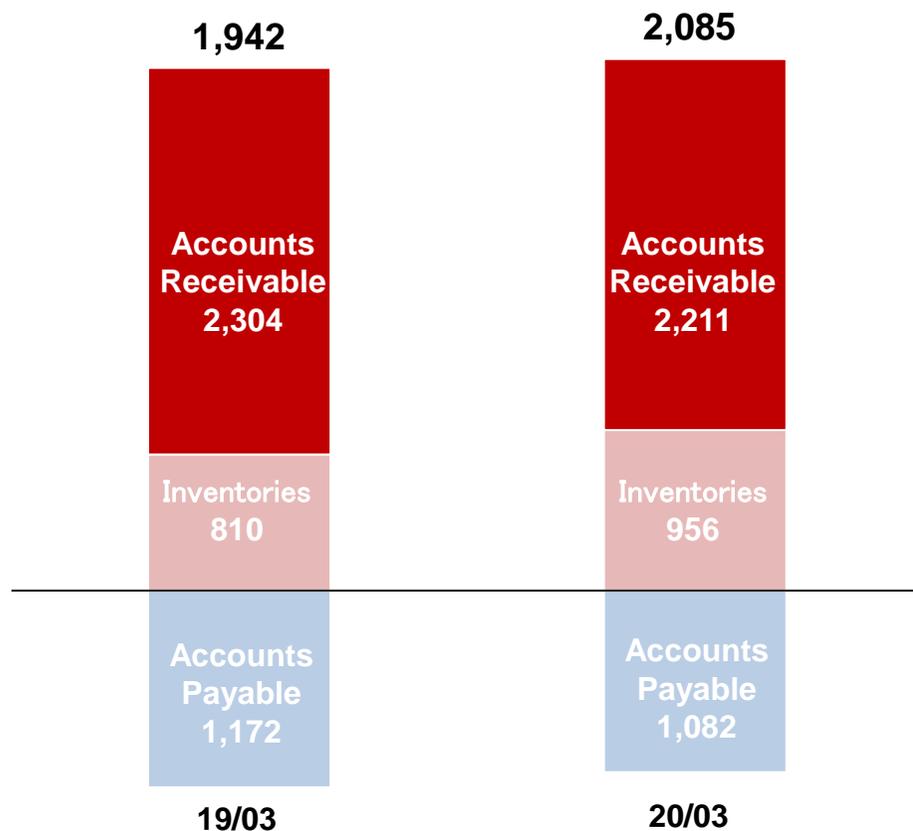
(100 millions of yen)

	20/03	Main factors	19/03
Net cash provided by (used in) operating activities	330	Profit before income taxes +242 Depreciation and amortization other than amortization of goodwill, amortization of goodwill +121 Working capital ▲89 Income tax paid ▲70	173
Net cash provided by (used in) investing activities	▲ 492	Proceeds from sales of investments in securities ▲446 Purchases of tangible and intangible fixed assets ▲123 Income from sale of investment securities +102	▲ 73
Net cash provided by (used in) financing activities	243	Increase (decrease) in long-term loans +243 Increase (decrease) in corporate bond +100 Cash dividends paid ▲57	▲ 89
Effects of exchange rate changes on cash and cash equivalents	▲ 18		1
Net increase (decrease) in cash and cash equivalents	63		12
Cash and cash equivalents at beginning of the year	440		428
Decrease in cash and cash equivalents resulting from exclusion of subsidiaries from consolidation	—		▲0
Increase in cash and cash equivalents accompanying consolidation	1		—
Cash and cash equivalents, at end of the period	504		440

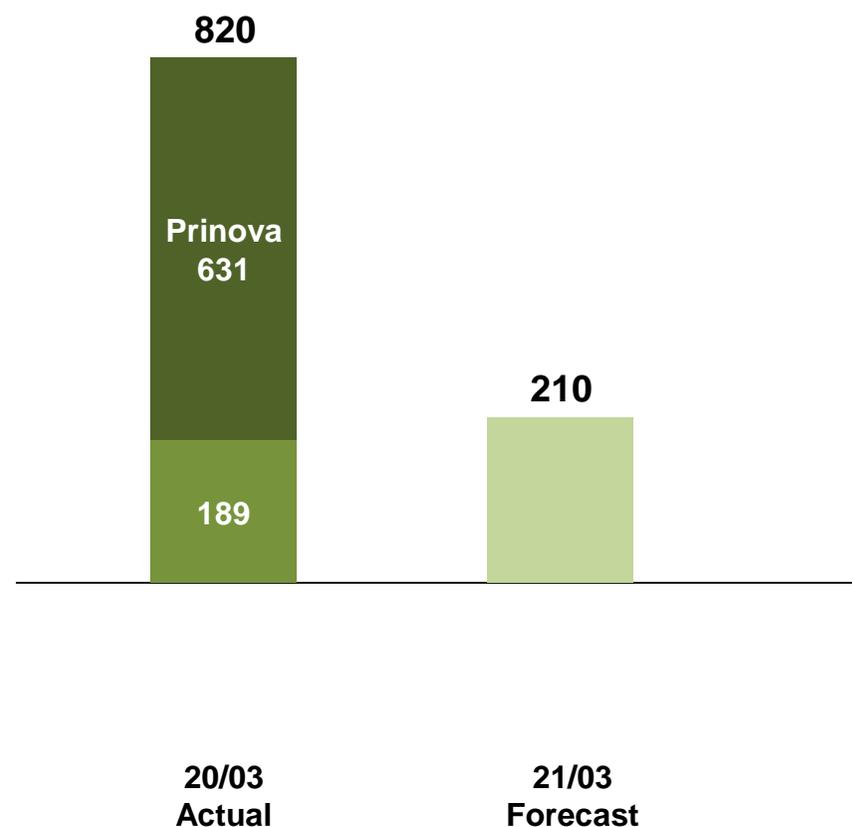
Working Capital and Investments

- **Working Capital:** New consolidation of Prinova Group, etc., led to increased working capital
We practiced thoroughgoing management to adjust inventory; reduced existing inventory (which excludes newly consolidated inventory)
- **Investments:** Stepped up investment in focus area of Life & Healthcare (for example, acquiring Prinova shares) and in acquiring new technology

Working Capital (100 millions of yen)



Investment (100 millions of yen)



*The investment noted above does not include cost in DX and leading-edge technologies

FYE March 2021 Earnings Projections

FYE March 2021 Earnings Projections

- We forecast sales and profits to decline because of the impact of the growth of the COVID-19 pandemic
- In the Life & Healthcare Segment, on the other hand, we foresee a material increase in sales. This will be driven by the Prinova Group, now able to contribute for an entire year, and by favorable trends in Europe/Americas, especially sales of vitamins, amino acids, and other products

[Assumptions]

- The economic impact of the COVID-19 pandemic will largely abate in the second half
- Foreign exchange rates: ¥106 to the U.S. dollar and ¥14.7 to the RMB

(100 millions of yen)

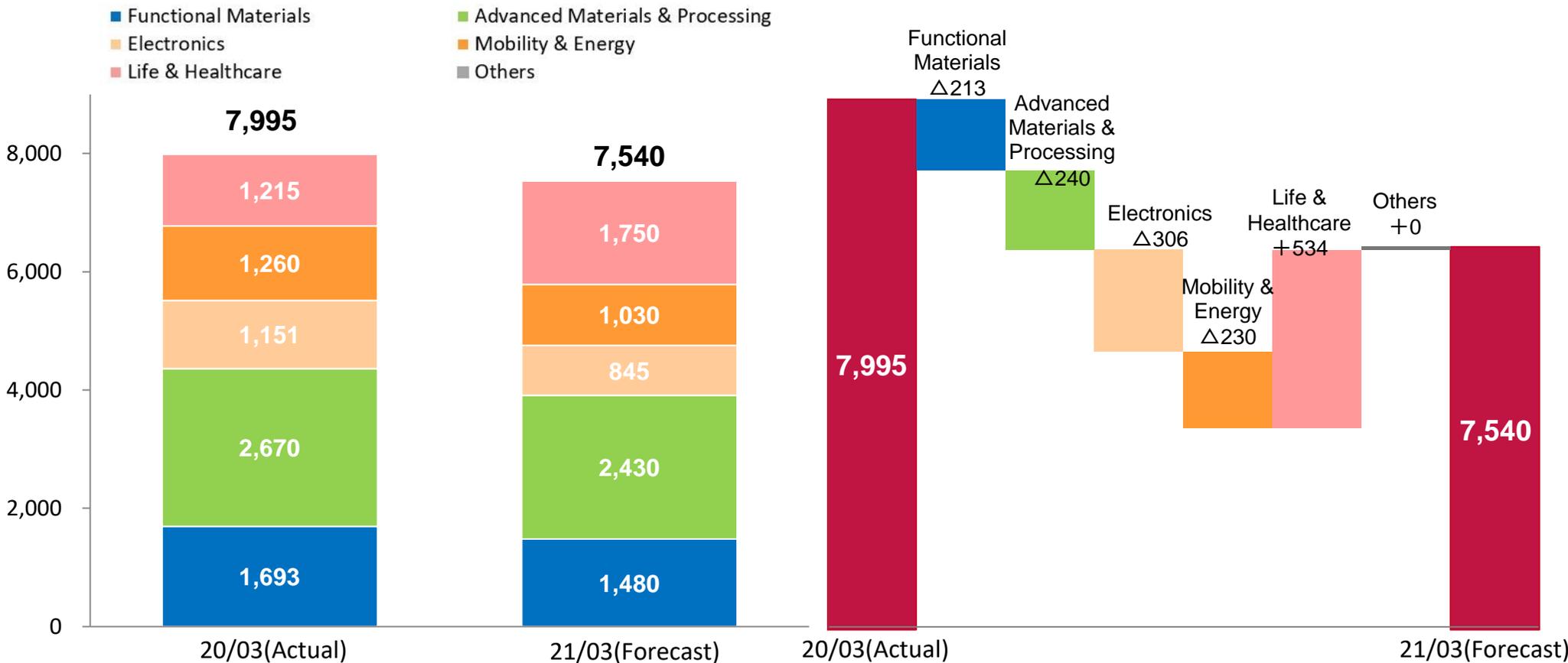
	20/03 Actual	21/03 Full Year Forecas	Change	Vs. PY
Net sales	7,995	7,540	△ 455	94%
Gross profit	1,049	1,070	+ 21	102%
<GP ratio>	13.1%	14.2%	+1.1%	—
SG&A expenses	857	920	+ 63	107%
Operating income	191	150	△ 41	78%
Ordinary income	190	155	△ 35	81%
Profit attributable to owners of the parent	151	125	△ 26	83%
US\$ Exchange rate (period average)	@ 108.7	@ 106.0	@ 2.7	strong yen
RMB Exchange rate (period average)	@ 15.6	@ 14.7	@ 0.9	strong yen

Net Sales Forecast (by Segment)

- **Advanced Materials & Processing:** Although we expect factory operation to gradually pick up, we anticipate global demand will be down in the OA, home appliance, electrical equipment, and electronics markets and forecast falling sales as sales decline for resins, dyes, inks, and digital print processing materials
- **Electronics:** Forecasting lower sales. Although sales of formulated epoxy resins will be comparable to those of last year for mobile devices and heavy electrical equipment, it is hard to foresee the market's direction
- **Life & Healthcare:** Though sales in the fragrances and cosmetics field (such as AA2G™) will be down, those in the pharmaceutical intermediates field will be robust. In the food ingredients field, sales of TREHA™ will be in line with the prior year, and having Prinova Group as part of the consolidated Group for the entire year will also boost sales, leading to higher sales overall

Net Sales by Segment (100 millions of yen)

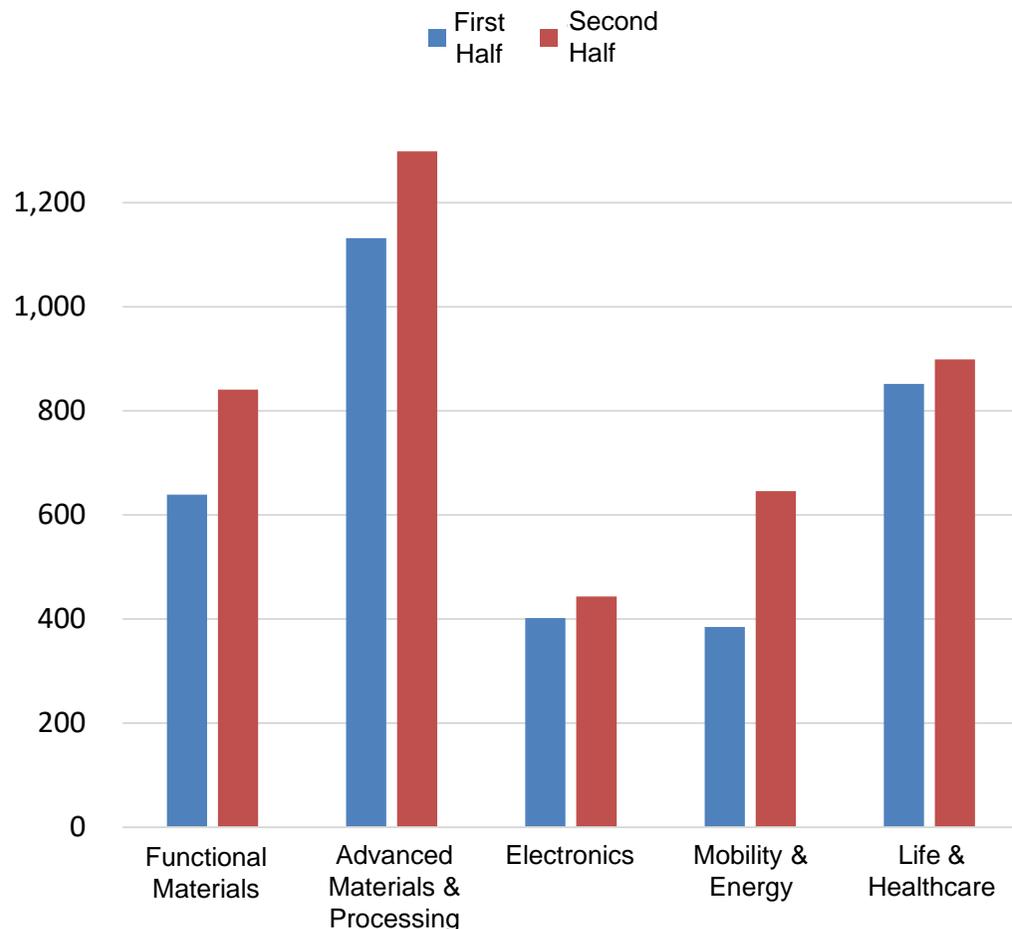
Change in Net Sales by Segment (100 millions of yen)



Net Sales Forecast by Segment, Comparison of First and Second Halves

- The first half will see big declines especially in the Functional Materials and Mobility & Energy segments, because of the impact of the COVID-19 pandemic. The automobile industry accounts for a high percentage of business in these segments.

Net sales forecast by segment, comparison of first and second halves (100 millions of yen)



Major markets/market conditions impacting the NAGASE Group because of the COVID-19 pandemic

Functional Materials:

Markets: Automotive, building materials, etc.
Market conditions: Price of naphtha

Advanced Materials & Processing:

Markets: OA, electronics, electrical equipment, paper manufacturing, etc.
Market conditions: Prices of polycarbonate and other resins, color formers

Electronics:

Markets: Displays, semiconductors, mobile devices, etc.

Mobility & Energy:

Markets: Automotive
Market conditions: Price of naphtha

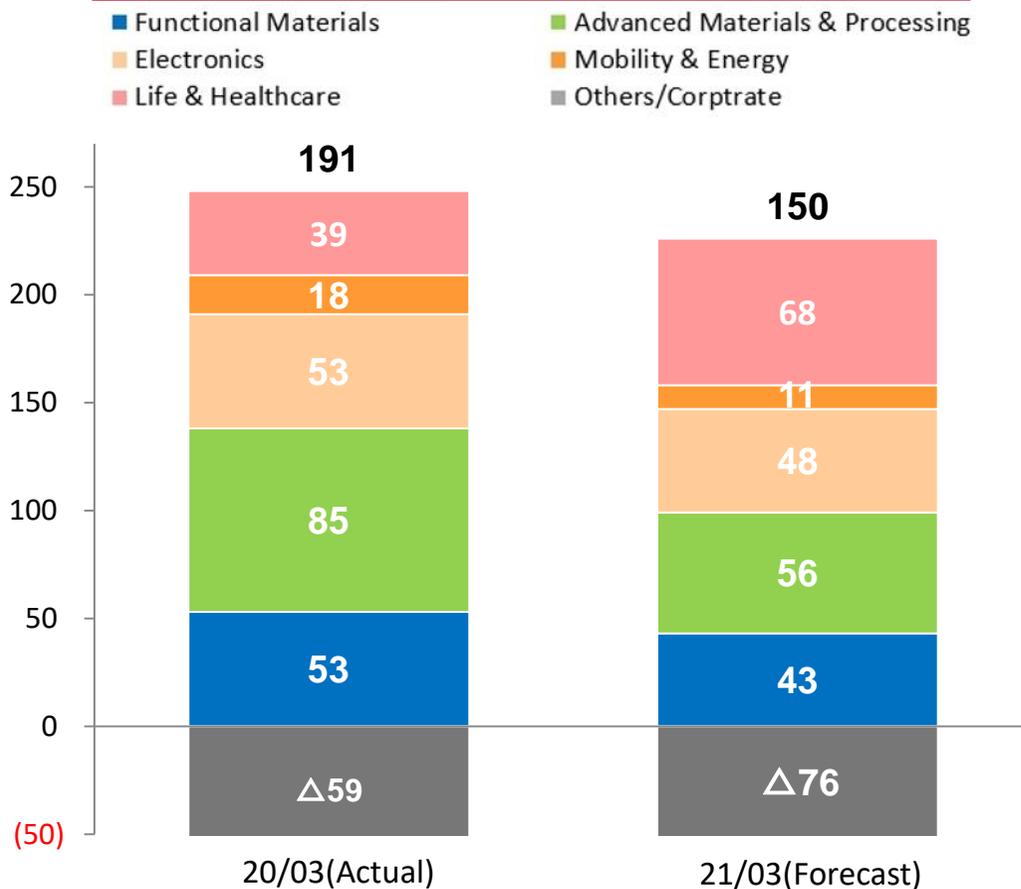
Life & Healthcare:

Markets: Food products, fragrances and cosmetics, sports nutrition, etc.
Market conditions: Price of starch, vitamins

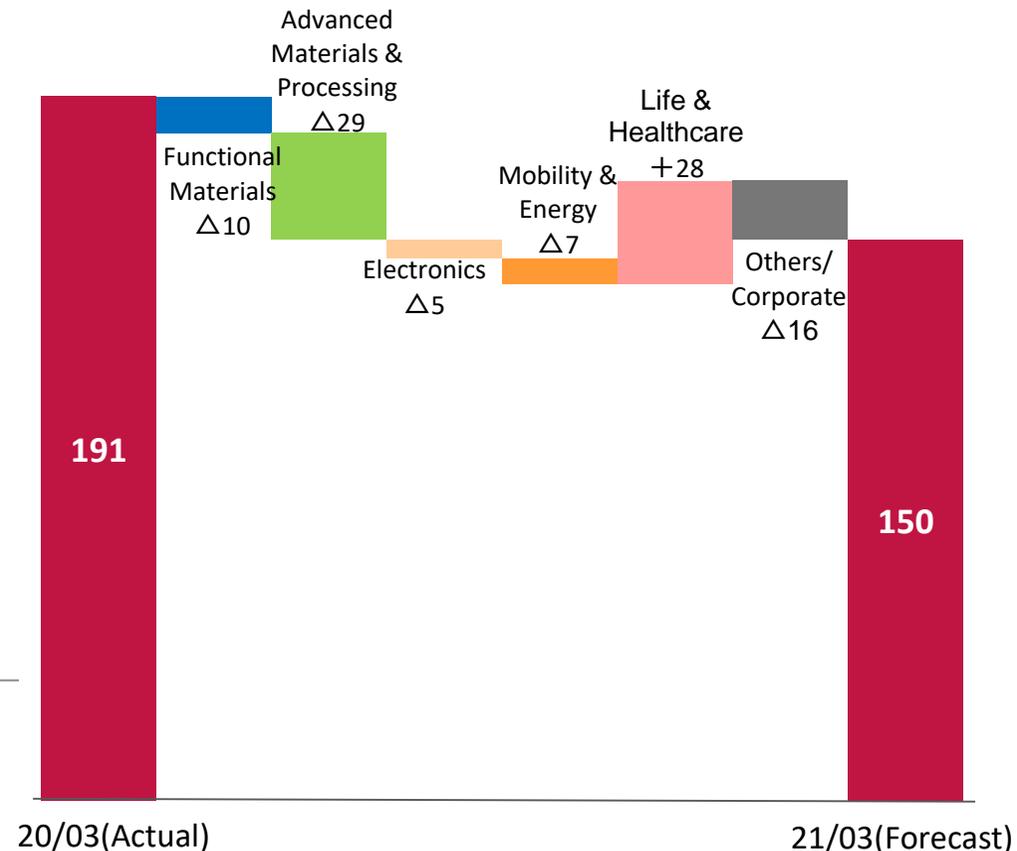
Operating Income Forecast (by Segment)

- **Advanced Materials & Processing:** Forecasting lower sales, as well as lower profits due to poorer income because of worsening market conditions in the digital print processing materials business
- **Life & Healthcare:** Higher sales and higher profits owing to factors such as Prinova Group contributing for the year as a whole
- **Other/Corporate:** Increase in costs due to promoting DX for medium- to long-term growth and stepped up investment in leading-edge technology

Operating Income by Segment (100 millions of yen)

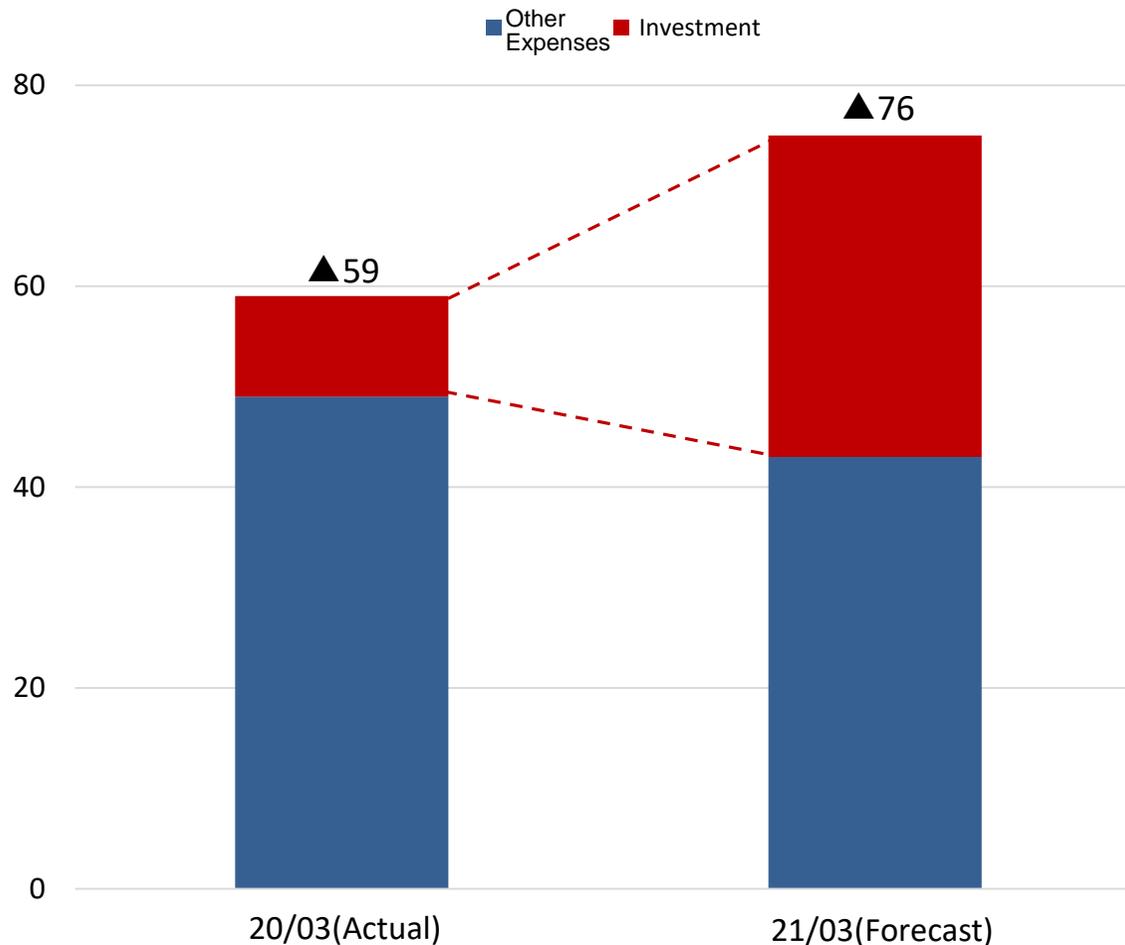


Change in Operating Income by Segment (100 millions of yen)



- Increasing investment for creating new value to offer, such as DX and materials informatics

Costs, by attribute (100 millions of yen)



Global Marketing Office

- Newly established, its purpose is to promote DX for the NAGASE Group as a whole, including development of MI Project and digital marketing
- Promotion of digital marketing

NVC Office (New Value Creation Office)

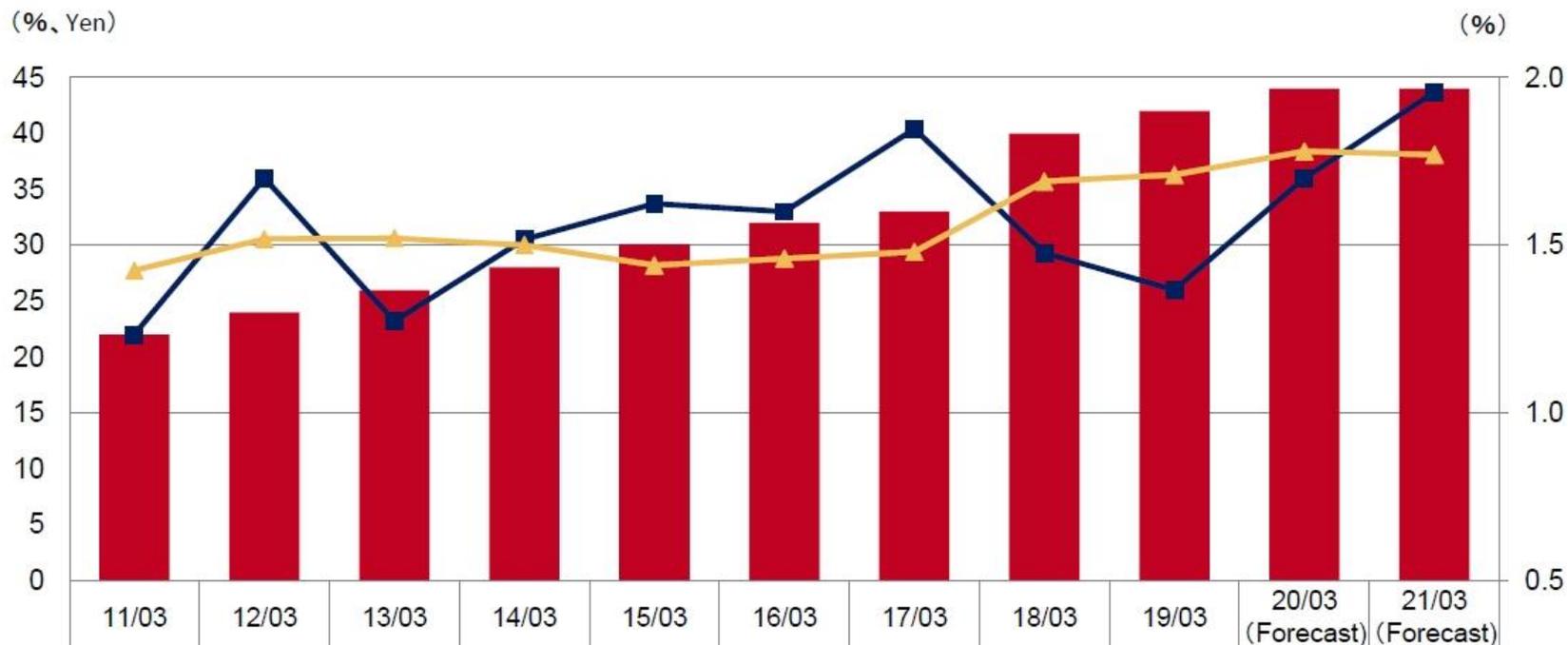
- Creation of new business models with leading-edge technologies
 - ⇒ Materials informatics (MI)
 - ⇒ Blockchain
 - ⇒ Axonerve™ algorithm search engine IP core, etc.

Next-Generation Information & Communication Project Team

- Creation of new business in the 5G market using NAGASE's elemental technology and networks

*Materials informatics (MI): Information science techniques that use data and artificial intelligence (AI) to efficiently search for new and alternative materials

- **Current fiscal year:** Expecting to pay dividends of ¥44 per share for the full year, consisting of a ¥22 per share interim dividend and a ¥22 per share year-end dividend
- **Next fiscal year:** Expecting to pay dividends of ¥44 per share for the full year, consisting of a ¥22 per share interim dividend and a ¥22 per share year-end dividend



■ Dividend per Share (left axis)	22	24	26	28	30	32	33	40	42	44	44
■ Payout Ratio (left axis)	22.0	36.0	23.2	30.5	33.7	33.0	40.4	29.3	26.0	36.0	43.7
— DOE (right axis)	1.42	1.52	1.52	1.50	1.44	1.46	1.48	1.69	1.71	1.78	1.77

*1 FYE March 2018 dividends include a special dividend of ¥5 per share.

*2 20/03 year-end dividend to be submitted for approval to general meeting of shareholders scheduled for June 2020

Toward a New Paradigm for the Post-Corona Era

We see the dramatic changes in the environment as a good opportunity for reform, and will work to create new value to offer our stakeholders from a long-term perspective

Changes in environment

- Spread of COVID-19 pandemic
Worries that containment will take a long time and there will be a second wave
- A new normal foreseen after the epidemic is contained
 1. Transformation of consumer behavior
 - ✓ Growing demand for safety, peace of mind, and health
 - ✓ Reconsideration of our mass-production, mass-consumption society
 2. Reconsideration of global supply chains
 - ✓ Geopolitical risks because of China/US friction and rising protectionism
 - ✓ Long-term slump in crude oil and petroleum product prices
 3. Permeation of digital transformation
 - ✓ Reconsideration of conventional sales and marketing activities
 - ✓ Transition to diverse working styles
 4. Changes in stock markets
 - ✓ Demand for engagement as an ESG issue
 - ✓ Reconsideration of financial strategy (stability, leverage)

A sense of values, reconsidered in light of dramatic changes in environment
Expectations for concrete action from the NAGASE Group

Response for now

- Response for FY2020
 - ✓ Consider stakeholders' safety and peace of mind
 - ✓ Secure supply chains
 - ✓ Strengthen risk management
 - ✓ Increase productivity of remote work

Medium- to long-term response

- Update long-term management policy
 - ✓ Put sustainability at the core of management strategy
 - ✓ Enhance value we offer to stakeholders and promote dialogue with them
- Update medium-term management plan
 - ✓ Step up pace of digital transformation
 - ✓ Expand functions, from materials procurement to offering solutions
 - ✓ Reconsider financial strategy supporting business activities

Identify value we offer to stakeholders
Create new value to offer

Progress of Mid-Term Management Plan *ACE-2020*

Accountability / Commitment / Efficiency



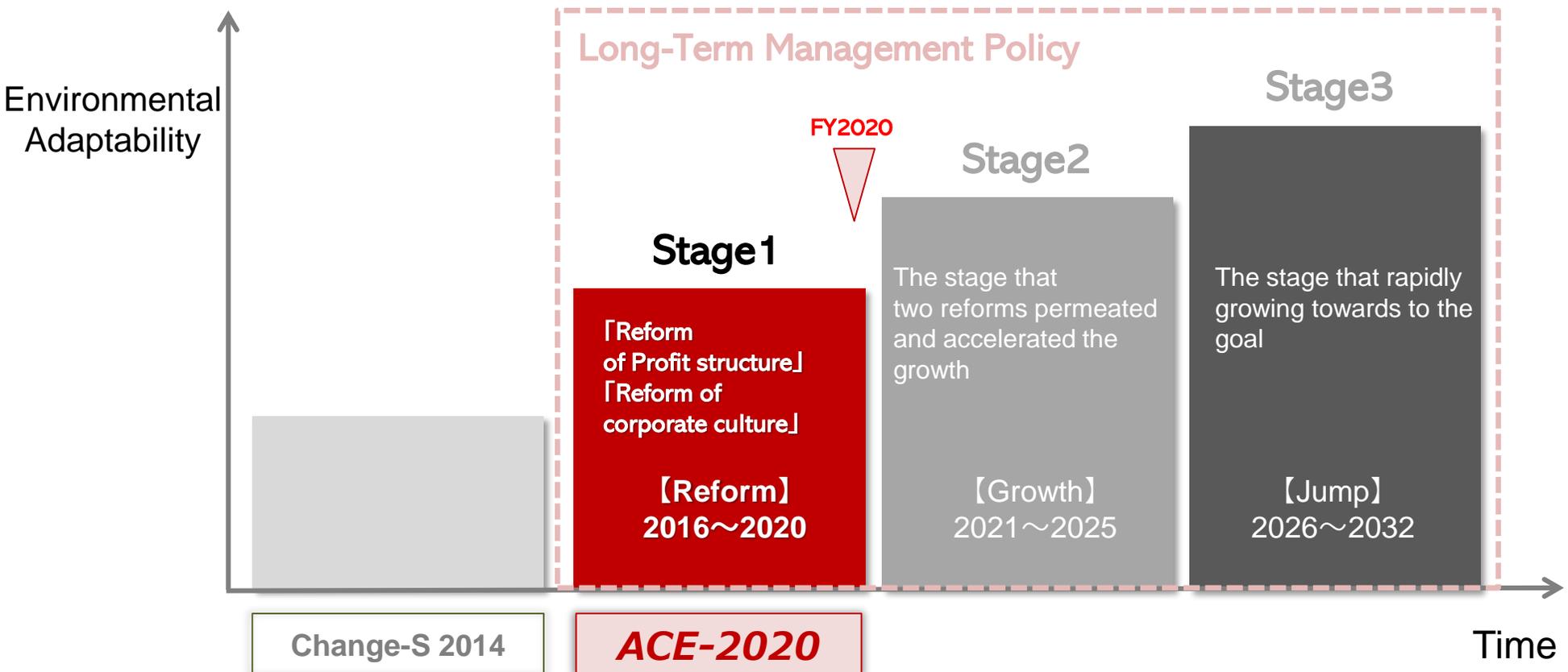
NAGASE Transforms from *Shosha/Trading* to *Business Designer*

Positioning of *ACE-2020*

To achieve our goal by 2032, the last year of Long-Term Management Policy, we divide 17 years of its term into 3 and start stage 1 as the beginning of the Mid-Term management Plan *ACE-2020*.

In FY2020 we will continue the fourth year of *ACE-2020* and continue reforming the business aiming for significant growth.

*Our goal: Normalization of the profit more than tripled.



NAGASE Transforms from “Shosha/Trading” to “Business Designer”.

NAGASE strings all the groups together to create and provide new value to the world through 6 key functions.

Leverage Group functions to achieve the quantitative and qualitative targets.



【6 Functions】

Reform Profit Structure

Portfolio Optimization

- Categorization of business and execution of strategy that matches with the area
- Replacement of asset and reallocation of resources
- Acceleration in investment that creates core business of group

Expand and Strengthen Revenue Base

- Accelerate globalization ” G6000”
- Improve manufacturing profitability

Reform Corporate Culture

Mindset

- Breed independence and responsibility
- Share the management’s message
- Thorough monitoring and PDCA

Strengthen Management Platform

- Pursue efficiency
- HR development

FY2019 Accomplishments

Categorization of business and execution of strategy that matches with the area / Replacement of assets and reallocation of resources

Focus Areas **Business domains where we expect further increase in profit**

[Life & Healthcare]

- Converted Prinova Group (USA) to a subsidiary
- Established NAGASE Food Ingredients Food Development Center (Xiamen)
- Established new Food Ingredients Department

[Electronics]

- Applied management resources to next-generation information & communication (5G) market
- INKRON: Started work on global business collaboration system

Base Areas **Areas that stably contribute to raising corporate value**

- Capital participation in wastewater, circulating water, and exhaust treatment business
- Focus on studying supply chains, starting with chemical supply
- Maintain plastics sales volume, especially high-function resins

Growth Areas **Areas we expect to transform into Focus Areas within 3 years**

- Establishment of digital transformation promotion system
- Start of development of digital marketing
- Materials informatics development proceeding smoothly
- Promoting research on rare amino acids

Improvement Areas **Areas in which drastic improvement in profit structure is immediately required**

- Decision to withdraw from unprofitable businesses

• Replacement of non-business assets

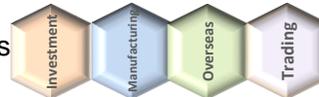
- Sale of cross-shareholdings

FY2019 Accomplishments

Converted Prinova Group (USA) to a subsidiary



Focus Area



At the kickoff (at Prinova)

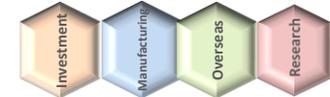
- Developed business with vertically integrated vertical supply chain, including food ingredients sales, formulation manufacturing, and contracted manufacturing of finished products
- Collaborating with materials development functions of Hayashibara, Nagase ChemteX, etc., with aim to provide new materials and solutions

Target markets

Food ingredients markets in Europe/Americas

Established NAGASE Food Ingredients Food Development Center (Xiamen)

Focus Area



China website

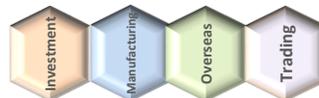
- Hayashibara application development lab *L'Plaza*, first overseas location for the company
- Established official account on WeChat and a China website for food ingredients, started operating them together
- Achieved communication in which we co-create with customers and helped build up a presence rooted in the local area

Target markets

China food ingredients market

Applied management resources to next-generation information & communication (5G) market

Focus Area



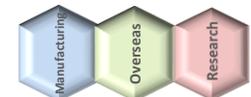
- Made 3D Glass Solutions, Inc., which has special glass processing technologies, an affiliated company, and are developing its technologies into elemental technologies for high-frequency devices
- Launched Next-Generation Information & Communication Project Team as a cross-segment organization, stepping up collaboration with Group network

Target markets

Next-generation information & communication (5G) market

Strengthened development of optical components for augmented/mixed reality (XR) applications

Focus Area



Optical waveguides

- INKRON began collaborations with SCHOTT (Germany), EV Group (Austria), WaveOptics (UK)
- Aiming to develop 300 mm glass wafer process enabling mass-production of optical waveguides

Target markets

Next-generation wearables market (Augmented reality (AR) and mixed reality (MR) applications)

FY2019 Accomplishments

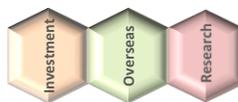
Step up pace of digital transformation (DX)

Established Global Marketing Office in April 2020
In charge of digital marketing, materials informatics, etc.

Growth Area

Start of development of digital marketing platform

- Secured human resources and set up base in the US to develop a digital marketing platform
- Established Global Marketing Group, which is pursuing development with a team of 20



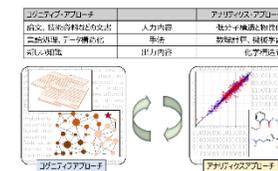
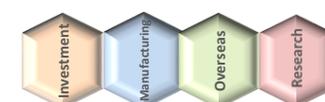
At the Philadelphia base

Target markets

Offer new solutions to existing markets

Materials informatics development proceeding smoothly

- Joint development with IBM (USA) began in FY2016; development project has been proceeding smoothly, and service is expected to begin in FY2020
- Utilizing artificial intelligence (AI) and the latest data processing technology, will offer cost- and time-saving solutions for development of new (or alternative) materials



An image of the platform

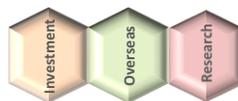
Target markets

Markets requiring new (or alternative) materials

Promoting research on rare amino acid ergothioneine

- Ergothioneine: a naturally occurring amino acid, found in fungi and other sources, with exceptional anti-oxidative capacity
- We aim to establish mass-production technology using a biological process as an alternative solution to chemical synthesis that has high cost and high environmental impact
- Selected as a NEDO^{*1} set-issue-type industrial technology development cost assistance project for FY2019

Growth Area



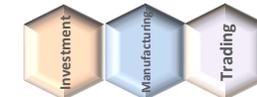
Target markets

Wide range of markets, including food products, cosmetics, and pharmaceuticals

Develop and promote businesses that benefit the environment

- Made Aience Inc., which works in wastewater, circulating water, and exhaust treatment businesses, an affiliated company
- Benefit the environment and achieve cost savings by using microbial metabolism to treat wastewater, organic solvents, and smoke and other exhaust without chemicals

Base Area



Target markets

Wastewater and exhaust treatment markets in Japan and overseas

*1: New Energy and Industrial Technology Development Organization

Reform Corporate Culture: Mindset/Strengthen Management Platform

ACE-2020 Issues

Mindset

- Build Accountability, Responsibility and Risk Awareness
Instill a shared vision of the mid-term management plan
- Thorough Monitoring and PDCA
Improve investment quality
- Share Management's Message
Create better communication

Strengthen Management Platform

- Pursue efficiency
Eliminate excess/duplication and increase efficiency of the organization/function
- HR Development

FY2016 to FY2019

Delegation of authority, review organizations company-wide

Strengthen monitoring system, create dashboard, review meeting structure

ACE-2020 Rolling update, company-wide questionnaires

Strengthen governance at overseas manufacturing operations

Use new-investment guidelines, M&A promotion project, venture capital

Branding activities (implement Top Management Tour), publish president videos, hold town meetings

Begin studying ESG activity disclosure policies

Back Office Functionality and Efficiency Project

Consolidate operations to NAGASE Business Expert for greater efficiency

Run operations under new HR system

Develop new technology through company-wide cross-departmental efforts (Technical Vitality Program)

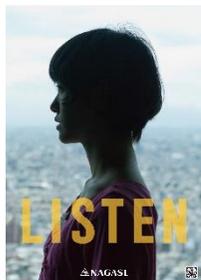
FY2020

Establish Group Management Committee

Probability evaluation/issue identification for new measures

Establish Group Manufacturers' Collaboration Committee

Establish Sustainability Committee
Set materialities, non-financial targets



Fiscal year slogan ("Listen") poster



Corporate PR image makeover



Distribution of video of President Conversation with Donald K. Thorp, President of Prinova USA



Top management visits a site Nagase ChemteX: September



Website sustainability page overhauled

KGI(Key Goal Indicator)

KGI	FY2018	FY2019	FY2020 (Plan)	FY2020 (Target)
Consolidated Sales Amount	807.7 Billion Yen	799.5 Billion Yen	754.0 Billion Yen	1.0 Trillion Yen or more
Consolidated Operating Income	25.2 Billion Yen	19.1 Billion Yen	15.0 Billion Yen	30.0 Billion Yen or more
ROE	6.6%	4.9%	4.0%	6.0% or more

KPI(Key Performance Indicator): Factor index to achieve KGI

Reform/Strategy	Measures	KPI (Index)	FY2018	FY2019	FY2020 (Plan)	FY2020 (Target)
Profit Structure Reform Indicator	Increase Focused Business (Portfolio Optimization)	*Operating Profit in Focus Area Growing Investment Distribution Ratio in Focus Area	12.6B Yen 82%	13.6B Yen 96%	15.3B Yen 64%	16.9B yen 35% <
	Accelerate Globalization (Expand and Strengthen Profit Structure)	*Overseas Group Sales	405.3B Yen	406.7B Yen	462.8B Yen	600 B Yen
		Sales Growth Rate in USA	118%	191%	340%	170%
	Increase Manufacturing Profitability (Expand and Strengthen Profit Structure)	* Operating Profit from Manufacturing * Break-Even Point Sales Ratio	11.6B Yen 76%	11.0B Yen 77%	11.4B Yen 77%	14.4B Yen 73%
Corporate Culture Reform Indicator	• Pursue efficiency (Strengthen Management Platform)	Consolidated Selling, General and Administrative Ratio	9.9%	10.7%	12.2%	9.4%
Financial Strategy Indicator	Investment	**Growth Investment	32.4B Yen	110.8B Yen	128.0B Yen	100B Yen
	Financial Structure	Rating (R&I)	[A]	[A]	[A] or more	[A] or more

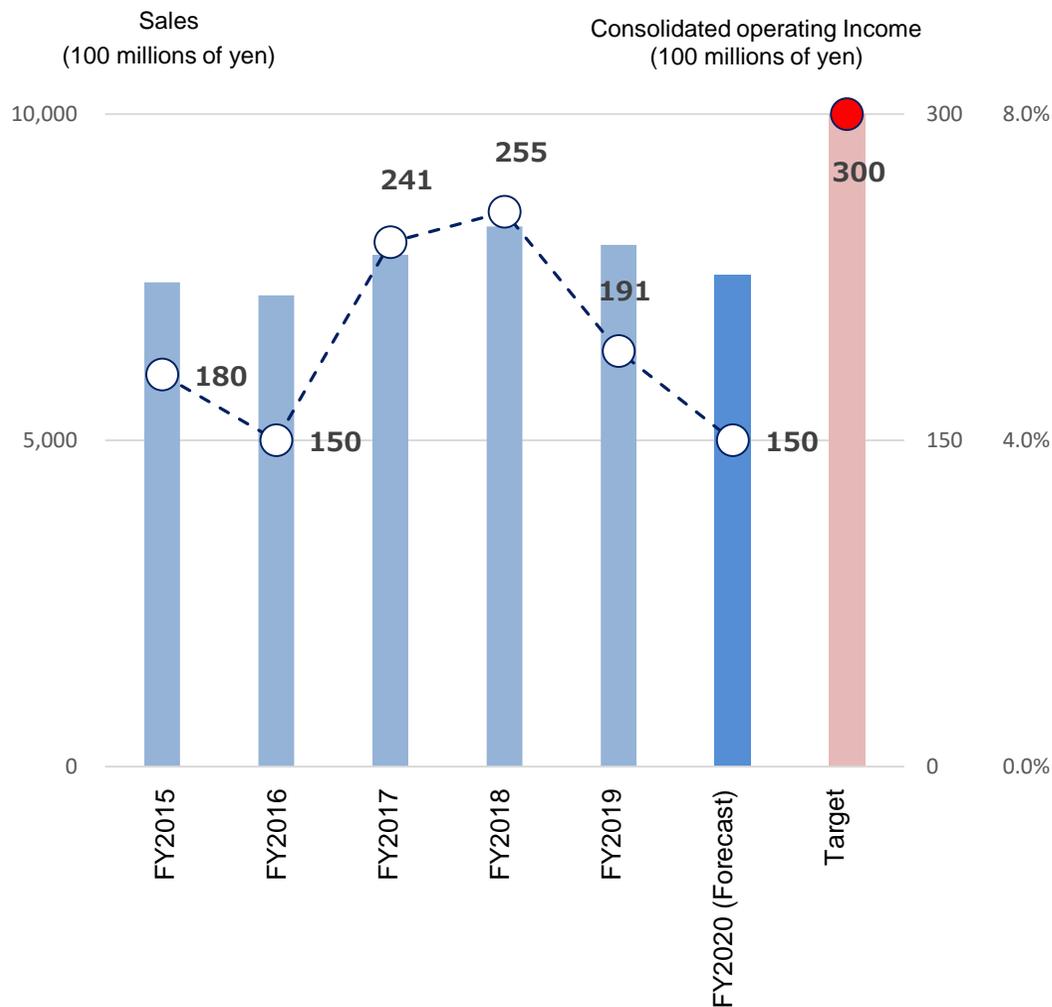
* The figures in this document are all management accounting data (simple sums)
It is different from the figures disclosed on the consolidated financial statement.

** Total numbers in 5 years

Appendix : Past Results and **ACE-2020** Target

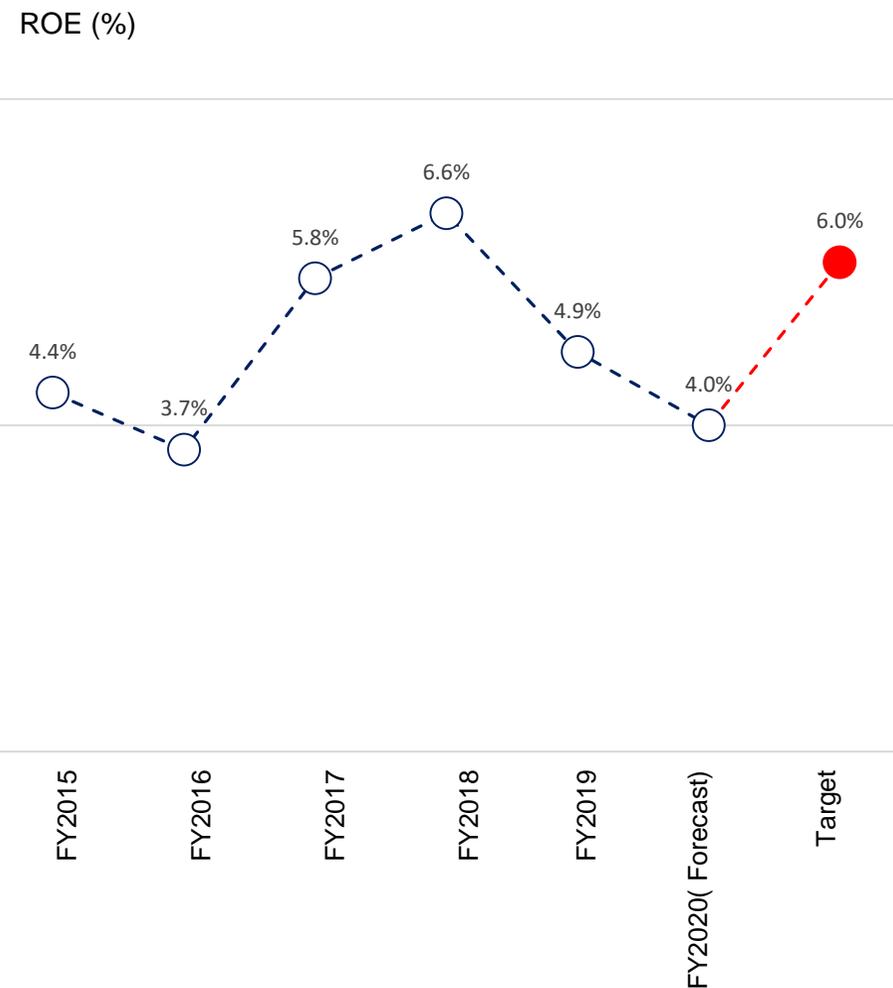
Consolidated Sales/Operating Income

1.0 Trillion Yen/30 Billion Yen or more



ROE

Normalize Over 6% at early stage



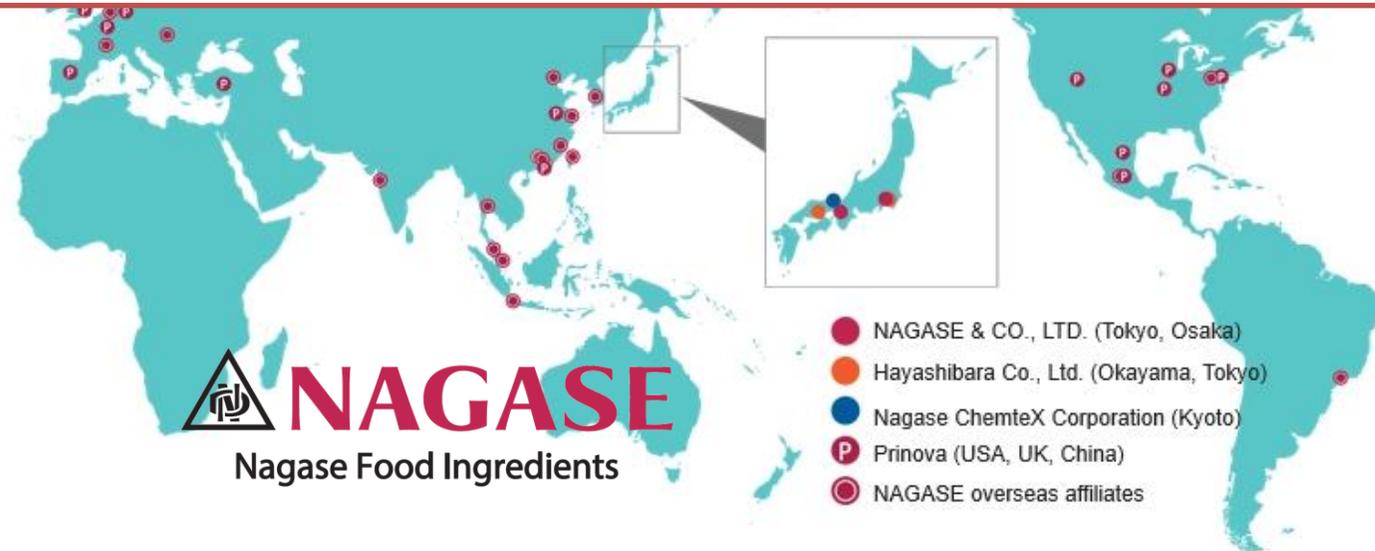
NAGASE Food Ingredients Business

**Koichiro Kojima, General Manager
Food Ingredients Department**

June 10, 2020

Overview of NAGASE Food Ingredients Business

Using its procurement, R&D, manufacturing, processing, and application development functions, the NAGASE Group offers a wide range of solutions globally so that people can enjoy healthier, richer lives through food.



Business design
R&D, food ingredients sale



Functional saccharide
production and sale
R&D and application
development



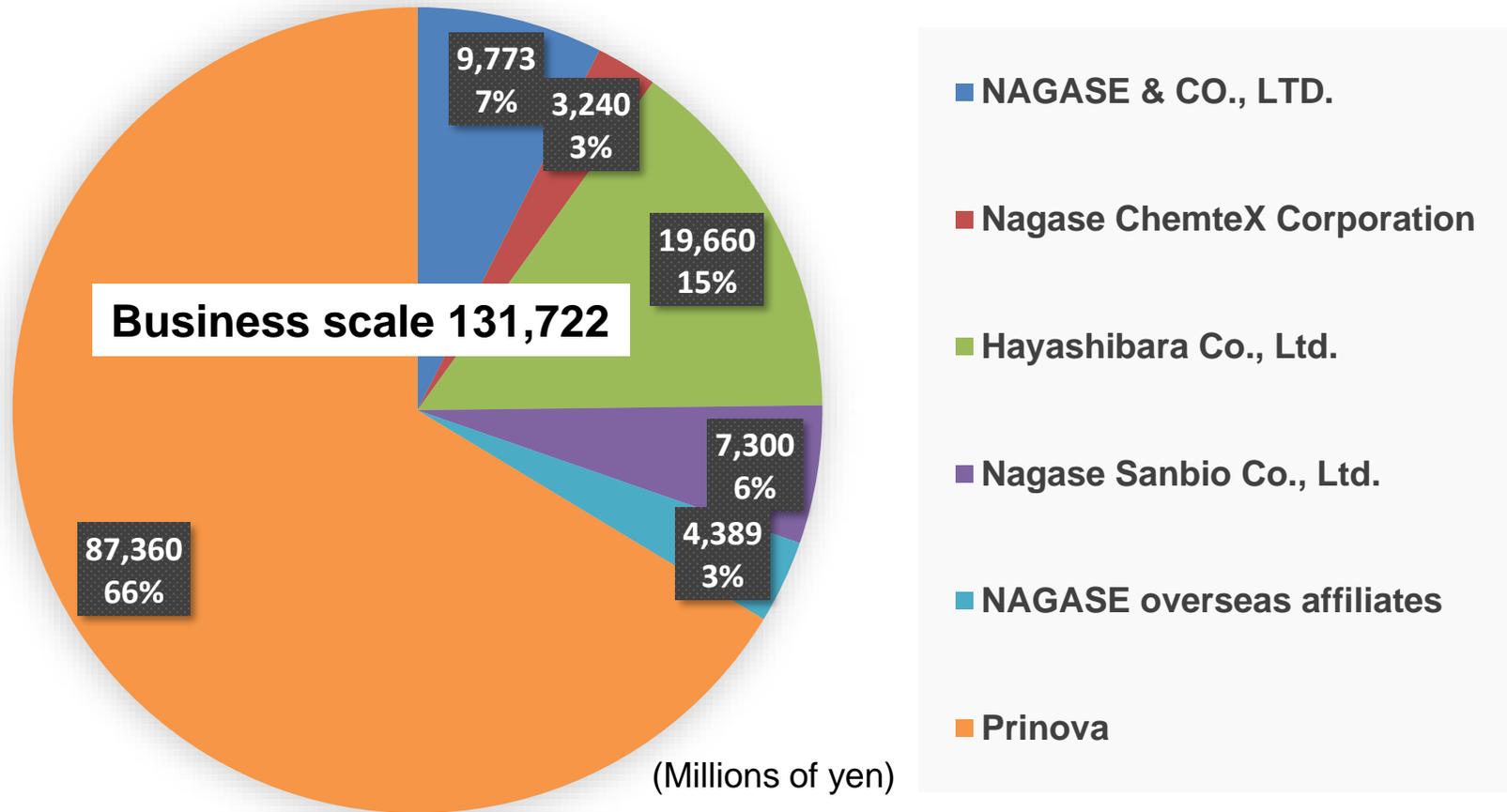
Enzyme production and
application development



Food ingredients sale, R&D,
premix and contract
manufacturing

Consolidated business scale: ¥131.7 billion (estimate for FYE March 2021)

*Consolidated business scale is found by simple totaling and does not match consolidated performance forecast.



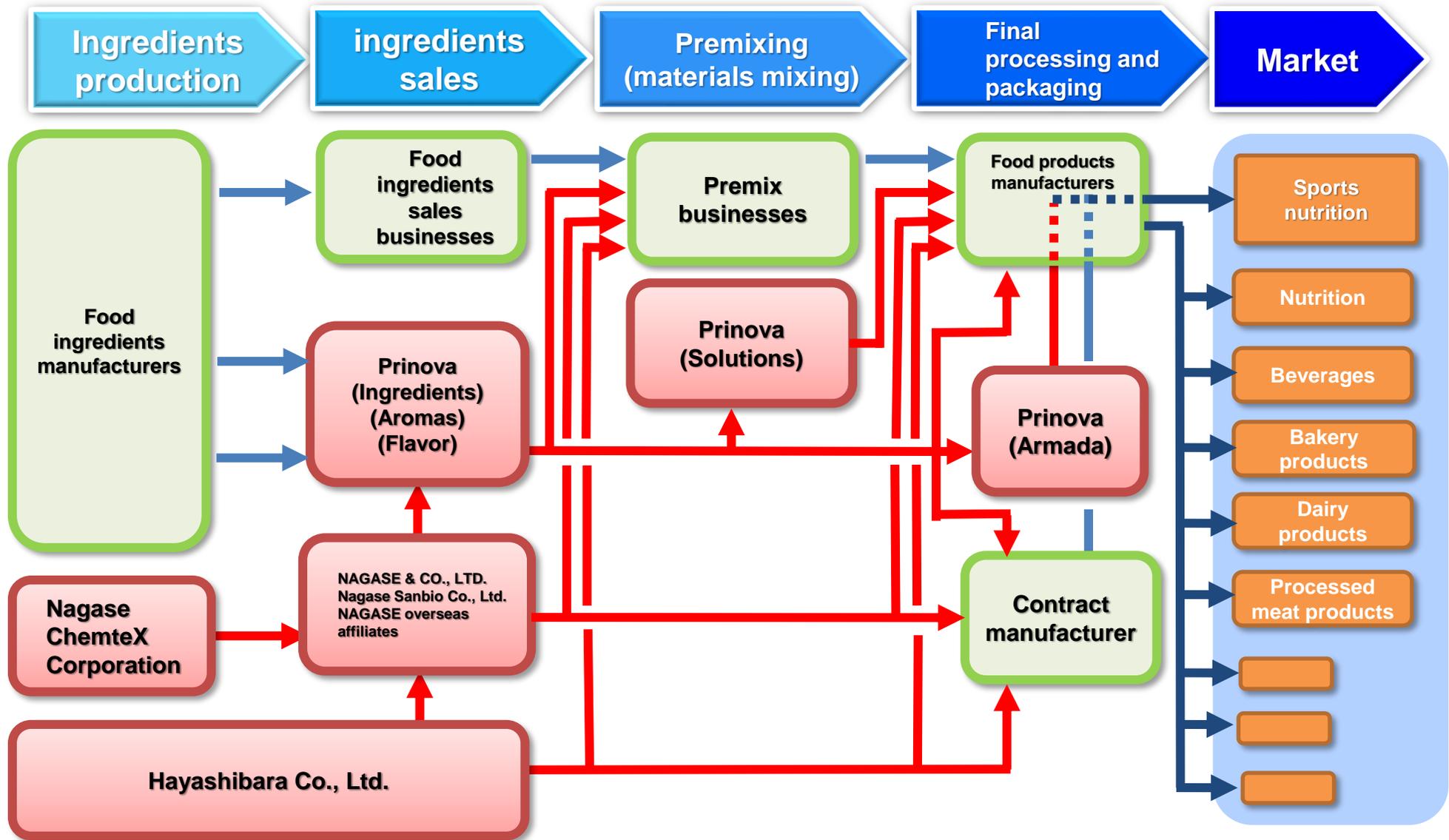
Estimate for FYE March 2021

This figure is found by simple totaling and does not match consolidated performance forecast.

Value Offered by NAGASE Food Ingredients Business



NAGASE Food Ingredients Business Supply Chain



A History of NAGASE Food Ingredients Business



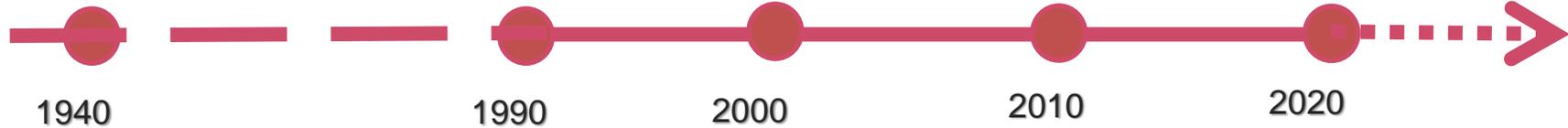
Hayashibara (Okayama Functional Saccharide Plant)

2012 Hayashibara acquired Gained domestic sales network and functional saccharides business, began expanding overseas



Prinoa head office

2019 Prinoa acquired NAGASE gains a food ingredients business platform in Europe/Americas and a foothold in premixes and sports nutrition



1939 Started Japan's first industrial production of enzymes, at Amagasaki, got foothold to subsequently enter food product enzymes business



Nagase R&D Center

1990 Nagase R&D Center opened in Kobe, started development of enzymes with actinomycetes

2007 Began production of enzyme product phospholipid, at Fukuchiyama

2012 Factory supporting kosher and halal diets completed, at Fukuchiyama



Nagase ChemteX Corporation (Fukuchiyama Office)



**Natural/
organic**

**Health/
beauty**

**Food
waste**

**Plant-
based
foods**

❑ **Product line expansion:**

Use Prinova's sourcing capacity
Search out new materials (M&A, biotech)

❑ **Strengthen application development:**

Clarify target applications in each region
Expand labs

❑ **Expand manufacturing function:**

Use premixes to expand proprietary products globally
Expand food additives/ingredients manufacturers

❑ **Focus on growth markets:**

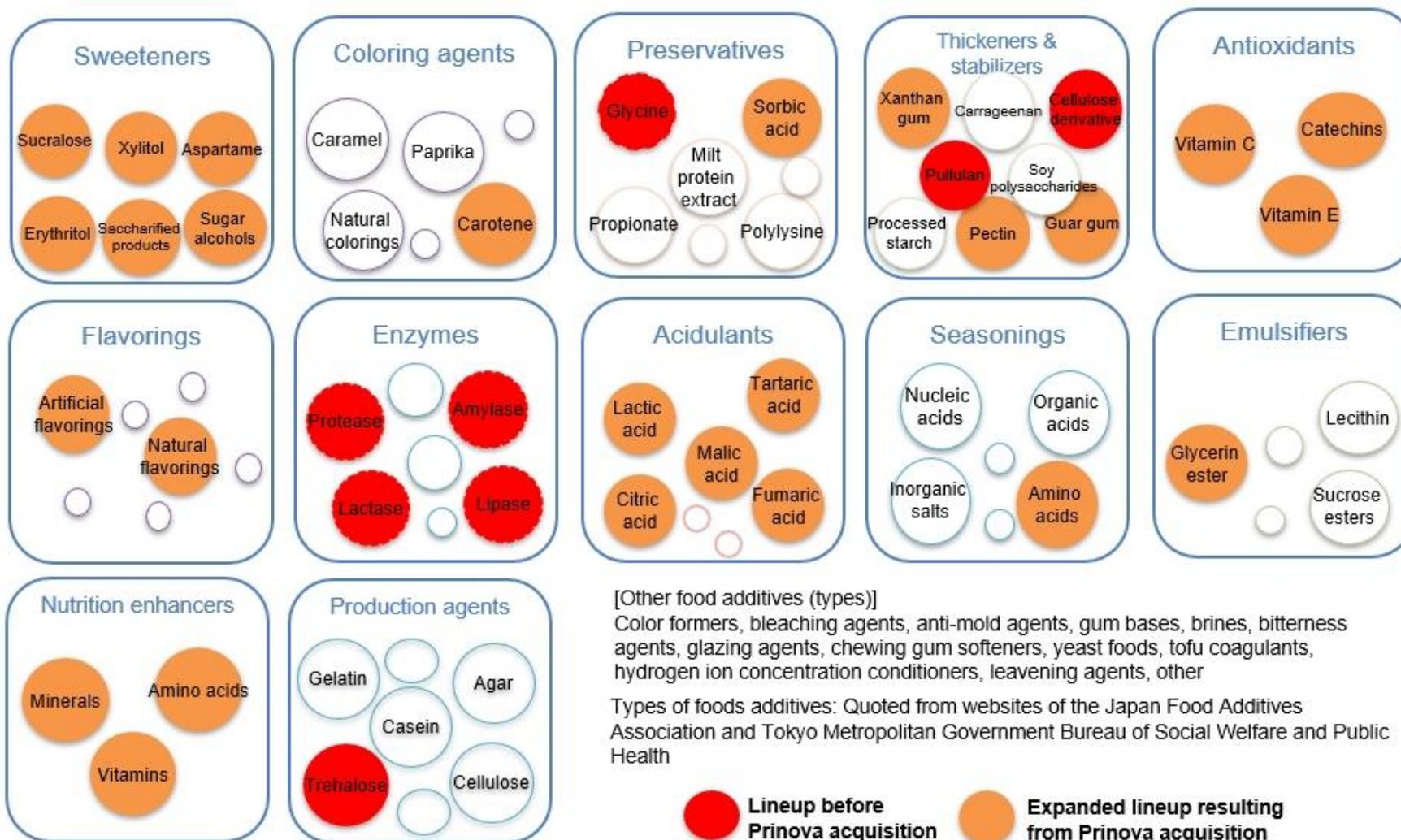
Sports nutrition, nutrition, beverages
Processed food products (bakery products, dairy products, processed meat products)



Expansion of Food Additives Lineup

Food additives market **¥4.7 trillion overseas, ¥300 billion in Japan**

(source: IHS MARKIT)



Expansion of Application Labs



● Japan

Hayashibara Co., Ltd., Okayama and Tokyo
Nagase ChemteX Corporation, Fukuchiyama

● China

Food Development Center
(Xiamen)
Opened in August 2019
Bakery products, traditional
sweets, beverages



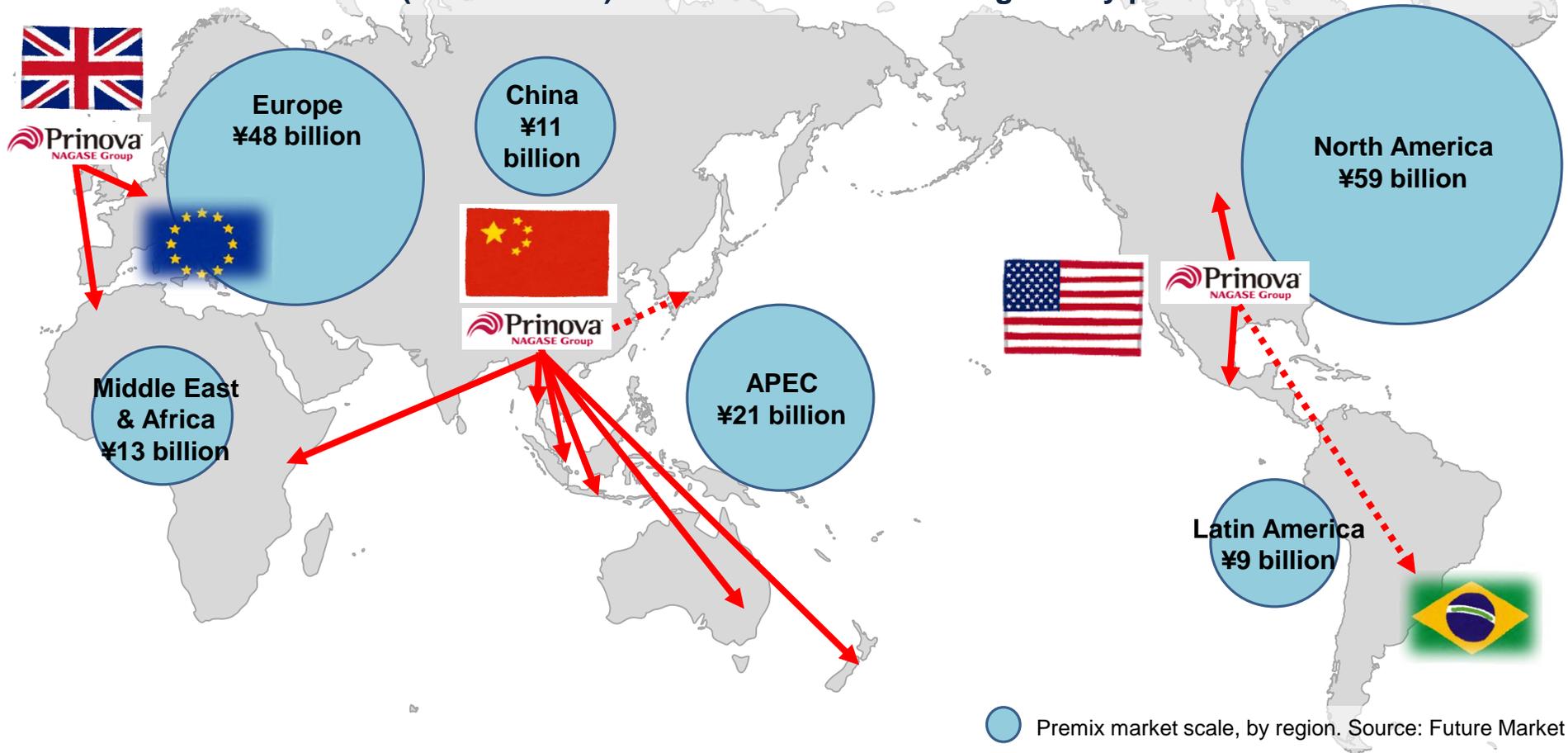
● Singapore

Regional Innovation Center
Opening planned for June 2020
Bakery products, processed meat
and seafood products



Global System for Premixes

- ◆ Premix market scale: ¥161 billion (growing to ¥230 billion in 2027)
- ◆ Have established three global hubs, considering adding two more
Sales ¥11.1 billion (¥24.9 billion if contracted sports nutrition business is included)
- ◆ Target applications: (short term) Sports nutrition, nutrition, beverages
(medium term) Processed foods including bakery products



● Premix market scale, by region. Source: Future Market Insight

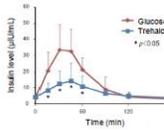


Multifunctional saccharide trehalose
Replenish energy during exercise

Low insulin secretion

Smooths out blood sugar spikes and drops

Tested on healthy Japanese subjects. Subjects took 25 g of either glucose or trehalose by mouth, then blood insulin and blood sugar levels were compared.



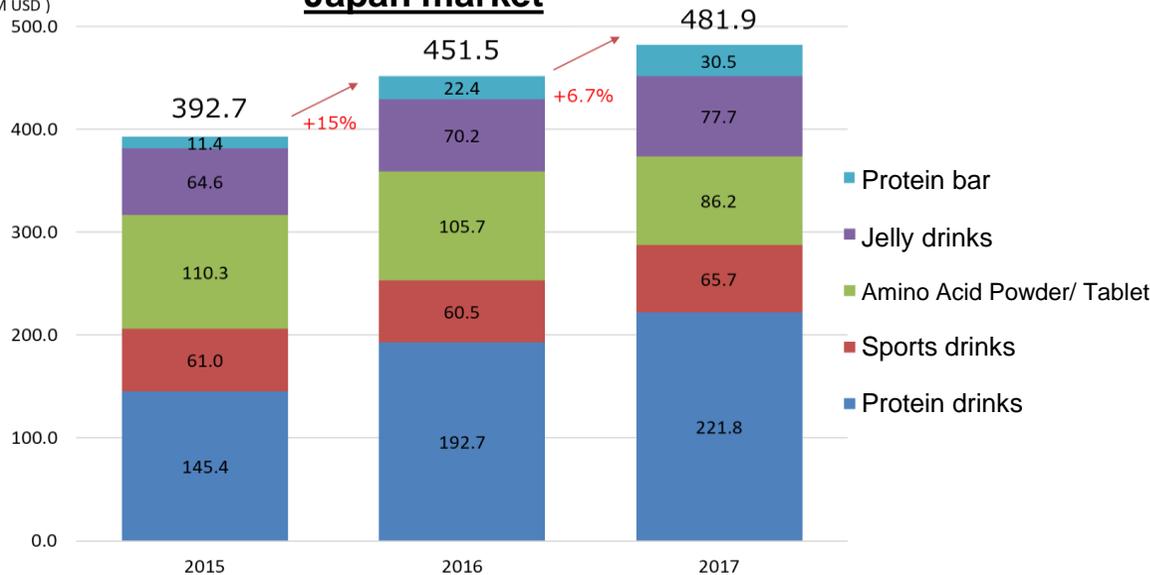
Subjects: 20 (10 men, 10 women)
Body weights: 67.3 ± 9.4 kg, BMI: 20.8 ± 1.4, Age: 1

Prinova's innovative spirit + The Group's unique functional materials

Sales start in the US!
Prinova's capacity to propose solutions and its premix technology + Hayashibara's materials



Japan market



(Source: Global Nutrition Group Analysis)



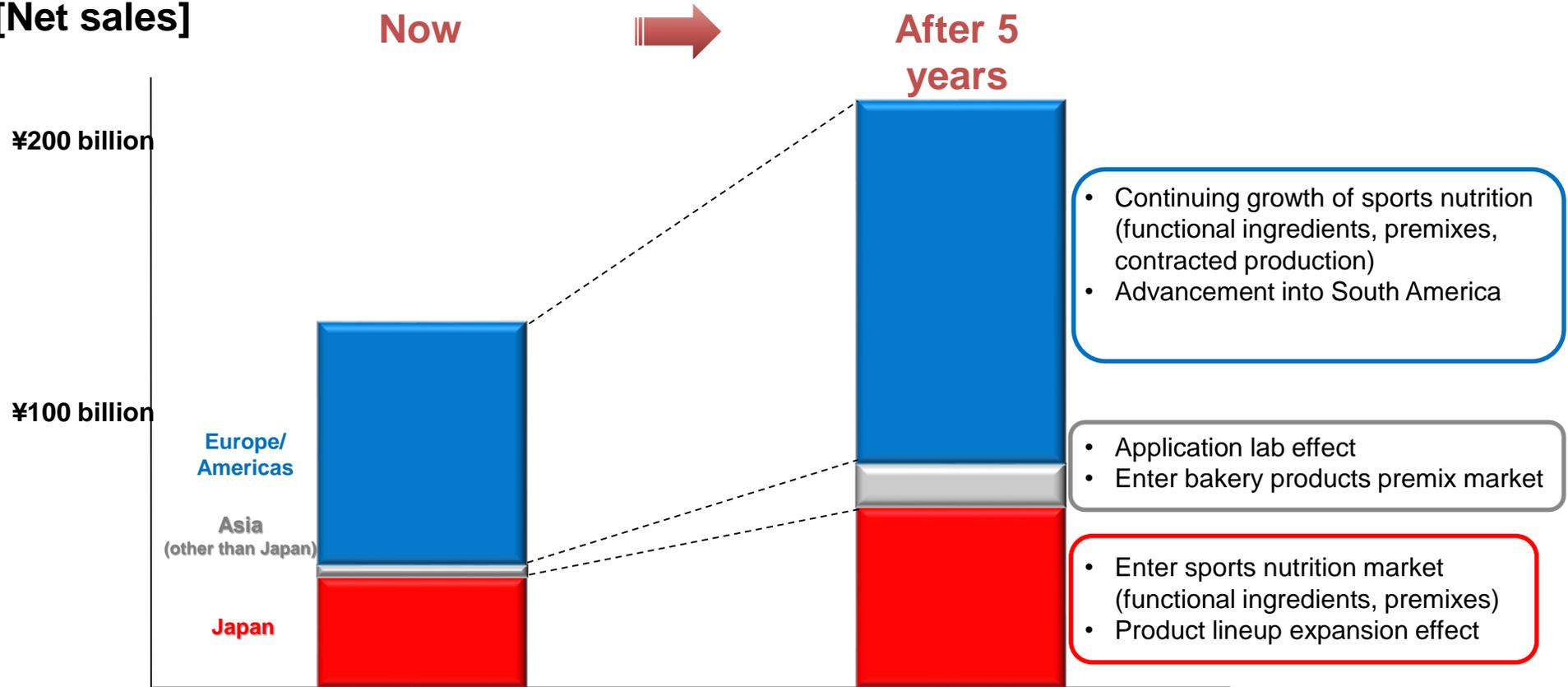
Brain-boosting ingredient *phosphatidylserine*

Mental support for golf performance

Subjects took either Lipamin® PS or a placebo for 42 days. Each group then hit golf balls from a point 135 meters from the green and the accuracy of ball flight was measured. Balls struck by the group that took Lipamin® PS flew more accurately. Lipamin® PS can improve concentration.



[Net sales]



Our aim is to realize a combination of product lineup expansion, stronger application development, manufacturing function expansion, and focus on growth markets to expand our business.

Contact us as indicated below if you have any questions or concerns about today's briefing or these materials.

Contact for inquiries:

Investor Relations Team, Corporate Administration Office,
Corporate Planning Department

Telephone: +81-3-3665-3028

Contact forms: <https://www.nagase.co.jp/english/contact/>

*Contact us by clicking the above URL, then fill in the required items under For inquiries about our financial information and other IR related topics.

(Reference) Information by Segment

<Net Sales/Operating Income by Location>

(100 millions of yen)

	FYE 03/20		FYE 03/21		
	Year Actual	Vs. PY	Year Forecast	Vs. PY	
Net sales	Domestic	1,577	95%	1,473	93%
	Overseas	558	95%	470	84%
	Eliminations	▲442	-	▲463	-
	Total	1,693	94%	1,480	87%
Operating Income	Domestic	40	95%	32	81%
	Overseas	14	99%	11	81%
	Eliminations	▲1	-	▲1	-
	Total	53	98%	43	80%

*Figures above are a combination of consolidated entities by location.
Inter-region eliminates are not reflected; adjusted provided in the eliminations column.
(Includes amortization of goodwill and technology-based assets)

FYE March 2020 Actual

Net sales

¥169.3 billion (94%)

- ◆ The Performance Chemicals business recorded slightly lower sales due to lower sales in coating raw materials and urethane materials as a result of lower automotive production in Japan and overseas.
- ◆ The Speciality Chemicals business recorded slightly lower sales overall, from decreased sales of both electronics chemicals for the semiconductor and other related electronics industries in Japan and overseas, and of industrial oil solutions.

Operating income

¥5.3 billion (98%)

- ◆ Lower profits due to lower sales

FYE March 2021 Outlook

- ◇ Although the 5G and environmental businesses will remain firm, we forecast that, as a result of factors like the COVID-19 epidemic, sales of coatings, urethane materials, processed industrial lubricants, plastic additives, and more for the automotive industry will decline and that business in electronics chemicals for the electronics industry and business in filters will be slow, and we project that sales and profits will be down overall

<Net Sales/Operating Income by Location>

(100 millions of yen)

		FYE 03/20		FYE 03/21	
		Year Actual	Vs. PY	Year Forecast	Vs. PY
Net sales	Domestic	1,749	99%	1,643	94%
	Overseas	1,653	96%	1,522	92%
	Eliminations	▲731	-	▲735	-
	Total	2,670	97%	2,430	91%
Operating Income	Domestic	54	106%	36	67%
	Overseas	30	97%	22	74%
	Eliminations	1	-	▲2	-
	Total	85	105%	56	66%

*Figures above are a combination of consolidated entities by location.
Inter-region eliminates are not reflected; adjusted provided in the eliminations column.
(Includes amortization of goodwill and technology-based assets)

FYE March 2020 Actual

Net sales

¥267.0 billion (97%)

- ◆ Sales rose in the Colors & Advanced Processing business overall. Though sales fell for industrial and packaging application plastic resins and conductive materials, sales of digital print processing materials rose in Japan and overseas
- ◆ The Polymer Global Account business recorded lower sales overall, mainly due to lower sales in Japan, Northeast Asia, and Southeast Asia.

Operating income

¥8.5 billion (105%)

- ◆ Despite reduced sales, increased profitability at the Company's manufacturing subsidiaries in Japan led to higher profit

FYE March 2021 Outlook

- ◇ We project sales and profits will fall overall. Although there are some domains in which sales will rise, the COVID-19 epidemic will slow the business in resins for the OA, electrical, and electronic industries, while sales of digital print processing materials, conductive materials, etc., will also decline

<Net Sales/Operating Income by Location>

(100 millions of yen)

	FYE 03/20		FYE 03/21		
	Year Actual	Vs. PY	Year Forecast	Vs. PY	
Net sales	Domestic	1,174	99%	1,005	86%
	Overseas	661	89%	558	84%
	Eliminations	▲684	-	▲718	-
	Total	1,151	94%	845	73%
Operating Income	Domestic	39	104%	35	89%
	Overseas	17	50%	14	80%
	Eliminations	▲3	-	▲1	-
	Total	53	73%	48	89%

*Figures above are a combination of consolidated entities by location.
Inter-region eliminates are not reflected; adjusted provided in the eliminations column.
(Includes amortization of goodwill and technology-based assets)

FYE March 2020 Actual

Net sales

¥115.1 billion (94%)

- ◆ Despite increased sales of photolithography materials and of formulated epoxy resins for mobile device electronic components and for semiconductor industries, the segment recorded lower sales overall driven by lower sales of precision processing-related, equipment-related, and display-related materials used in connection with intermediate processing in semiconductors and other applications

Operating income

¥5.3 billion (73%)

- ◆ Sales were down, and in addition there were lower profits due to factors like worsening profitability at certain overseas manufacturing subsidiaries

FYE March 2021 Outlook

- ◇ Although sales of formulated epoxy resins will be comparable to those of last year for mobile devices and heavy electrical equipment, equipment-related sales will be down given slowdowns in investment, and it is hard to predict the market because of such forces as the COVID-19 epidemic, so we project lower sales and profits overall

<Net Sales/Operating Income by Location>

(100 millions of yen)

	FYE 03/20		FYE 03/21		
	Year Actual	Vs. PY	Year Forecast	Vs. PY	
Net sales	Domestic	764	97%	659	86%
	Overseas	723	84%	606	84%
	Eliminations	▲227	-	▲235	-
	Total	1,260	90%	1,030	82%
Operating Income	Domestic	10	96%	4	40%
	Overseas	8	42%	7	91%
	Eliminations	0	-	0	-
	Total	18	62%	11	58%

*Figures above are a combination of consolidated entities by location.
 Inter-region eliminates are not reflected; adjusted provided in the eliminations column.
 (Includes amortization of goodwill and technology-based assets)

FYE March 2020 Actual

Net sales

¥126.0 billion (90%)

- ◆ The Mobility Solution business recorded lower overall sales, mainly due to lower sales in the resins business in Japan and overseas, despite higher sales in car electronics-related materials in Japan

Operating income

¥1.8 billion (62%)

- ◆ Lower profits, mainly due to lower sales.

FYE March 2021 Outlook

- ◇ We project lower sales and profits in the segment. Factors such as the COVID-19 epidemic have led to lower production volumes of automobiles. Together with the price drop of naphtha, this has lowered sales of resin in Japan and overseas and sales of materials and components for car electronics and others

<Net Sales/Operating Income by Location>

(100 millions of yen)

	FYE 03/20		FYE 03/21		
	Year Actual	Vs. PY	Year Forecast	Vs. PY	
Net sales	Domestic	1,044	100%	1,041	100%
	Overseas	468	318%	1,015	217%
	Eliminations	▲298	-	▲306	-
	Total	1,215	134%	1,750	144%
Operating Income	Domestic	67	93%	66	99%
	Overseas	19	300%	53	267%
	Eliminations	▲47	-	▲52	-
	Total	39	85%	68	171%

*Figures above are a combination of consolidated entities by location.
Inter-region eliminates are not reflected; adjusted provided in the eliminations column.
(Includes amortization of goodwill and technology-based assets)

FYE March 2020 Actual

Net sales

¥121.5 billion (134%)

- ◆ In the food ingredients field, sales of TREHA™ were up overseas, and we added sales from the Prinova Group, so sales were up overall. Sales were down in the skin care and toiletries sectors, with lower sales of products like AA2G™. In the medical and pharmaceutical field, sales of pharmaceutical raw materials and intermediates as well as medical materials increased, leading to higher sales. Sales were up in the business overall.
- ◆ The Beauty Care Products business recorded lower sales, driven down due to weak performance across all product categories.

Operating income

¥3.9 billion (85%)

- ◆ Although sales were up, profits were down, mainly due to worsening profitability at certain domestic manufacturing subsidiaries

FYE March 2021 Outlook

- ◇ We project sales will be down in the skin care and toiletries sectors, with lower sales of products like AA2G™, owing to the COVID-19 epidemic. Sales are projected to rise in the food products field, with the Prinova business performing well and sales of TREHA™ and other products similar to the year before. Firm performance is likewise expected in the medical and pharmaceutical field with rising sales and profits projected overall (the Prinova Group will be part of the consolidated Group for the entire year)



Bringing it all together

<https://www.nagase.co.jp/english/>

These presentation materials contain forward-looking statements based on assumptions, forecasts, and plans as of June 10, 2020. Actual earnings may differ from projections due to risks and uncertainties in the future global economy, competitive landscape, currency exchange rates, etc.