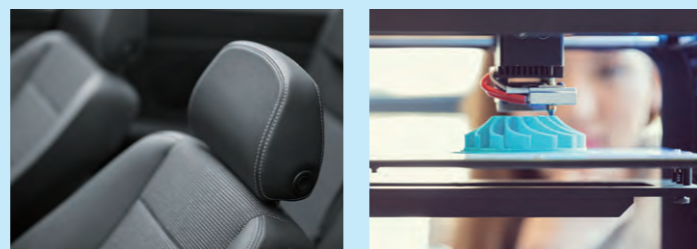


List of Businesses

Functional Materials Segment

»P40

- **Performance Chemicals Dept.:** Provides high-performance materials for the paint, inks and urethane industries. Also focused on developing sustainable products based on the key words "environment" and "bio," for which demand is quickly increasing.
- **Specialty Chemicals Dept.:** Having established businesses over many years in a diversity of industries, now handles more than 10,000 products. Is also expanding into new fields with a focus on business partners' elemental technologies.



Main Products and Services

Performance Chemicals Department

- Resin raw materials, resins, pigments, solvents, paint and ink additives, urethane materials, flame retardants, release agents

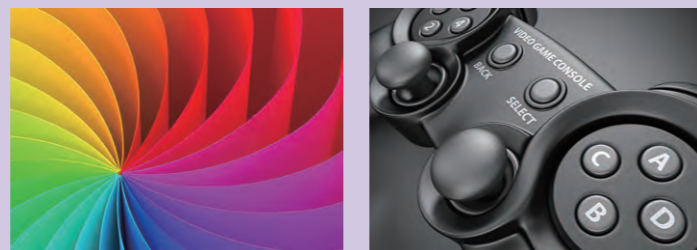
Specialty Chemicals Department

- Petrochemical products, raw materials for industrial metal-working oil solutions, surfactants and surfactant raw materials, environmental equipment and chemicals (wastewater, exhaust gas, energy conservation)
- Resin raw materials and additives, electronics chemicals, UV curing agent materials, chemical outsourcing coordination

Advanced Materials & Processing Segment

»P42

- **Colors & Advanced Processing Dept.:** Offers high-value-added products and services centered around color and function to a wide range of business fields, including the printing, film and LCD industries. Fully utilizes the Group's manufacturing, research and processing functions to meet customer needs.
- **Polymer Global Account Dept.:** With a well-developed sales network and national staff in Asia, works with global companies to sell resins for the OA equipment, game, electrical and electronics industries. Also focusing on biomass plastics and other eco-friendly businesses.



Colors & Advanced Processing Department

- Dyestuffs, colorants, pigments, additives, dispersion processing materials, 3D decorative services, conductive materials, functional sheets, films, adhesives, copolyester resins, endotoxin removal services, tempered glass, hygiene materials

Polymer Global Account Department

- Engineering plastics, commodity plastics, packaging materials and other plastics-related products

Electronics & Energy Segment

»P44

- **Electronics Dept.:** In addition to providing functional materials and their constituent components to the silicon wafer, semiconductor, electronic components and display industries, is working with partner companies to develop products that align with market and customer needs.
- **Information & Communication · Energy Office:** Provides technologies (materials, processes and equipment) and mechanisms for realizing new information communications and energy infrastructure in a smart society by leveraging the Group's product development capabilities.
- **Functional Resin Dept.:** Nagase ChemteX's modified epoxy resins, developed based on its formulation and compounding technologies, are sold in and outside Japan, with key fields including the electrical/electronics industry, mobility, the environment, energy and semiconductors.
- **Precision Process Materials Dept.:** Offers photolithography for displays and semiconductors, and high-performance materials for 3D printing, both in and outside Japan, based on Nagase ChemteX's formulation technology from the perspectives of precision cleaning, surface treatment, and photosensitive materials design.



Electronics Department

- Fine polishing abrasives, optical materials for displays, touch panel components, functional paints, conductive and insulating materials, adhesive and encapsulating materials, high-heat-resistant films, optical lenses

Information & Communication · Energy Office

- Storage battery systems, energy management systems, optical wireless communication devices, high-frequency devices, low dielectric materials, sensing modules, optical materials for XR, semiconductor and electronic device-related equipment

Functional Resin Department

- Formulated epoxy resins and related materials

Precision Process Materials Department

- Photolithography materials for flat panel displays and semiconductors, 3D printing-related materials

Mobility Segment

»P48

- **Mobility Solutions Dept.:** Will contribute to the realization of a safe, secure and comfortable mobility society by grasping the needs of the mobility industry, including automobiles, agricultural machinery, construction machinery and aircraft, and by pursuing new technological innovations and offering diverse solutions.



Mobility Solutions Department

- Automotive interior/exterior and functional components: Various resins, functional paints, adhesives, lightweight components, decorative components, HMI components
- CASE-related: xEV-related components, heat management components, battery materials, sensors, LiDAR devices, autonomous driving technologies

Life & Healthcare Segment

»P50

- **Life & Healthcare Products Dept.:** In the Life and Healthcare Product Business, we newly embarked upon Medical imaging field along with Pharmaceuticals and in-vitro Diagnostics field. And leveraging the entire NAGASE Group's capabilities such as R&D and manufacturing functions, we launched a new anti-aging agent to reinforce our product line in the Cosmetics and perfumery field.
- **Food Ingredients Dept.:** Provides a wide range of solutions for the processed foods and nutrition markets globally through the Group's research, manufacturing, processing, procurement, application development and regulatory functions. Contributes to healthy, enriched lifestyles through food.



Life & Healthcare Products Department

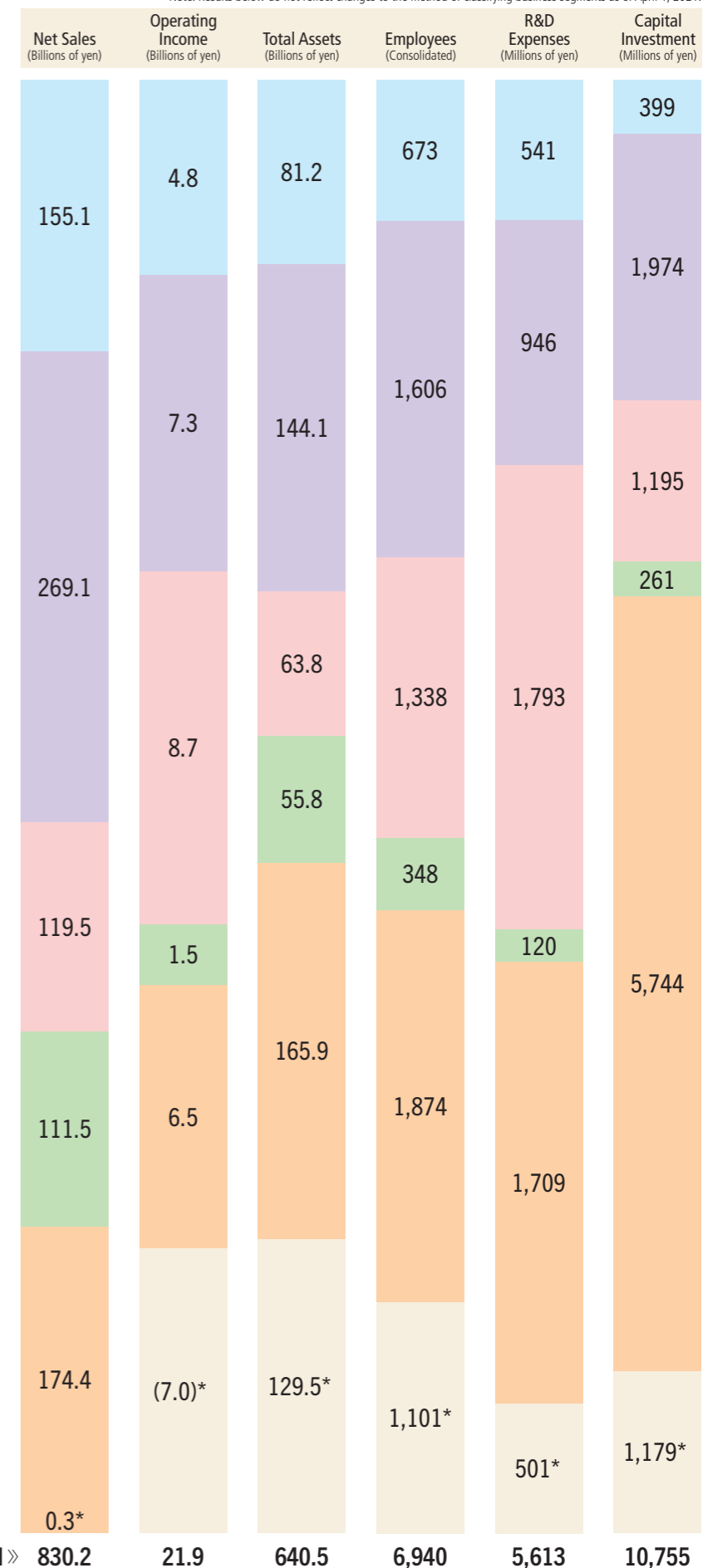
- Fragrances/cosmetics and household product materials, pharmaceutical raw ingredients and intermediates, in-vitro diagnostics, medical materials and equipment

Food Ingredients Department

- Food ingredients (TREHA™ and others, enzymes), functional ingredients, nutritional ingredients, premix (OEM/ODM), materials for agriculture, fisheries and livestock

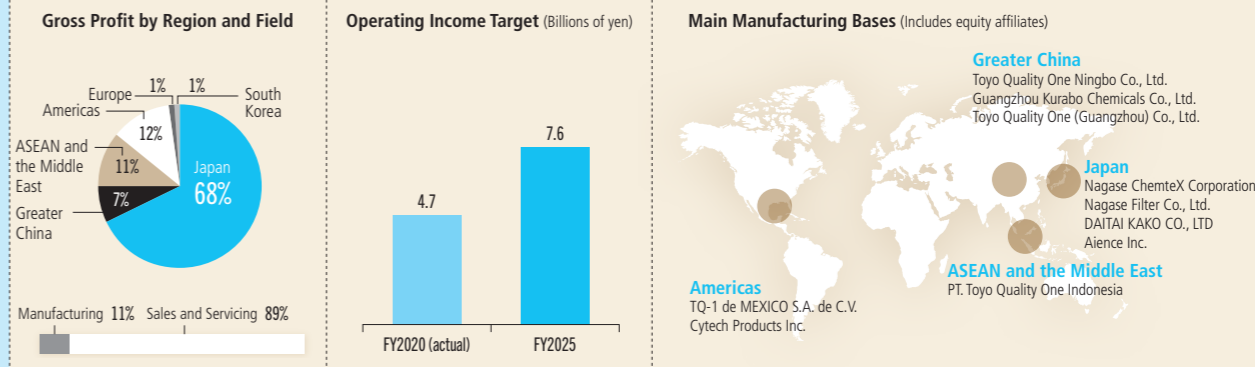
Key Indices by Segment

Note: Results below do not reflect changes to the method of classifying business segments as of April 1, 2021.



* Other/Corporate: Includes businesses not included in reported segments and eliminated inter-segment transactions, etc.

Functional Materials Segment



Note: Reflects organizational changes as of April 1, 2021.

Performance Chemicals Business

Business Opportunities

- Industry restructuring and development of DX, expansion of environment-related businesses
- Growth of markets in ASEAN and India

Business Risks

- Structural changes in Japan's petrochemical industry and move away from chemicals, U.S.-China struggle for supremacy

Strengths

- Strong presence in the paint, ink and urethane industries
- Knowledge of and global network in environmental and bioscience materials

Medium-Term Issues

- Measures for maintaining a supply chain that combine the perspectives of both BCP and environmental considerations

Looking one step ahead at the chemical industry while accelerating development of biomaterials



Tamotsu Isobe
GM, Performance Chemicals Department

Over the five years of ACE-2020, the previous medium-term management plan, the value of information using NAGASE's network saw a relative decline as advances in digitalization made it possible for anyone to quickly obtain a variety of information. Developments in IT have also increased demands for speedy results. In the upstream of the chemical industry, vertical integration of industries is accelerating, and there is a progressive shift from economic priorities to more ESG and SDG-conscious strategies.

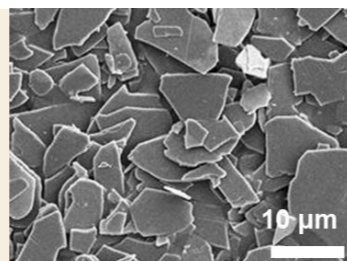
In terms of profit structure reforms, the entire department has adopted a stance of prioritizing high-performance, environmental and bioscience products. We made an acquisition in the U.S. to expand our overseas business, and acquired a platform to develop high-value-added business. Meanwhile, in terms of reforming our corporate culture, I feel we have been successful in fostering a sense of responsibility and autonomy with regards to numbers and results.

During the five years of the new medium-term management plan, ACE 2.0, key points in the Japanese market will be the shift to technologically specialized and eco-friendly products. Addressing increasingly diverse needs, differentiation through the use of AI, and transformation of the business from selling things to selling ideas will all become even more important. Using the three strategies of going deeper, offering true value, and evolving our business, we will actively incorporate new technology while looking one step ahead at the chemical industry. Using both internal and external resources, but also co-creation with our partners, we will focus our efforts on businesses that contribute to society, including the development of bio-specific raw materials.

Topics

Putting Comprehensive Strengths behind the Launch of New Business

We have entered into an agreement to be the exclusive sales agent for an alumina filler developed by DIC Corporation. Added in just small amounts, the company's newly developed flake alumina can achieve high thermal conductivity and high strength, and is expected to be in demand in a wide range of fields, including automotive technology and next-generation telecommunications (5G). We will provide technical support for sales development, expanding business domains through NAGASE's global network and strong sales capabilities.



Specialty Chemicals Business

Business Opportunities

- Addressing investments related to environmental and social issues, including the SDGs
- Growth in 5G/6G and electronics-related demand

Business Risks

- Geopolitical issues, natural disasters and supply stability in the supply chain, and changes in the value offered by trading companies

Strengths

- Business developed around composites, polymers and other technologies
- Unique technology-oriented sales and innovation capabilities

Medium-Term Issues

- Portfolio optimization and acceleration of global expansion
- Operational streamlining and human resource development

Aim for business growth by taking preemptive measures against supply risks and addressing the SDGs



Noriaki Arashima
Executive Officer
GM, Specialty Chemicals Department

The business environment in the petrochemical industry has changed dramatically in the past five years, and domestic petrochemical manufacturers have accelerated their shift from general-purpose to specialty products. The spread of the SDGs and DX are also major topics. Other changes I feel our department should not overlook are the growing demand for 5G/6G and electronics and semiconductor-related products, and the strong response of our business partners to technological innovations such as AI and EVs.

In terms of profit structure reforms, a sense of crisis was fostered regarding the dilution of the value we provide as a trading company, and we launched a number of new challenges in business investment and new business creation. In corporate culture reforms, some issues remained to be addressed in portfolio optimization and consolidated management with overseas bases.

In the next five years, we will continue to bring a sense of urgency to our efforts in business investment and new business creation. In anticipation of geopolitical issues typified by the struggle for supremacy between the U.S. and China, disasters due to climate change, chemical supply risks due to accidents and all other risks, we will work to secure new suppliers and manufacture specialty chemicals as a new challenge for the Group. Another important topic is investment in environmental issues, part of our effort to address the SDGs. Under ACE 2.0, the new medium-term management plan, we will be launching an Environmental Solutions section with the goal of business expansion and growth through helping our business partners solve wastewater, exhaust gas, energy conservation and other issues at their manufacturing sites.

Topics

Launch of Chemical Outsourcing Service

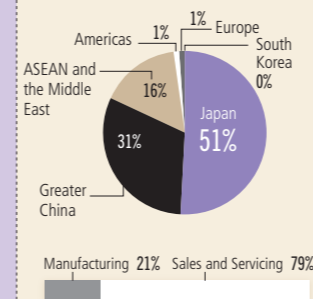
We have begun a service to provide customers with suggestions for optimal subcontractors based on a database of chemical and other product manufacturers. Utilizing the network of manufacturers we have cultivated over nearly 190 years will enable us to quickly propose a subcontractor who meets the customer's most detailed needs. Going forward, we will work with our overseas entities to also focus on developing subcontractors outside of Japan and further enhance our database.



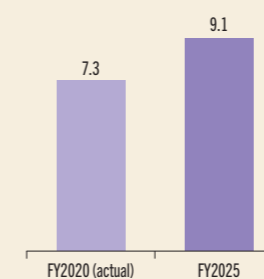


Advanced Materials & Processing Segment

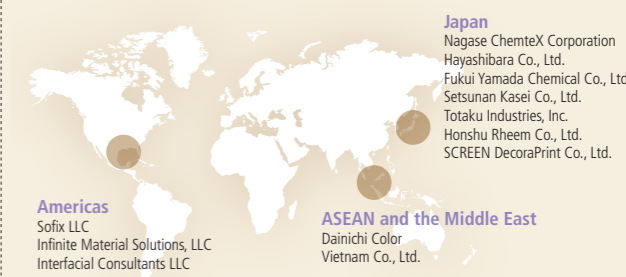
Gross Profit by Region and Field



Operating Income Target (Billions of yen)



Main Manufacturing Bases (Includes equity affiliates)



Note: Reflects organizational changes as of April 1, 2021.

Colors & Advanced Processing Business

Business Opportunities

- Developing a platform-like presence between companies and creating businesses that contribute to the global environment

Business Risks

- Establishing a presence as new technology becomes more widespread
- Instability of commercial rights in the corporate shakeout of the COVID-19 pandemic

Strengths

- Ability to propose technology, products, analyses and services based on our strong collaborative structure with Group manufacturing companies

Medium-Term Issues

- Shifting from selling "things" to selling "ideas"
- Transforming into an organization with initiative (independence and autonomy)

Improve profits through selection and concentration; aim to become a platformer between companies



Hayaki Goto

GM, Colors & Advanced Processing Department

During the five years of ACE-2020, the previous medium-term management plan, alliances, acquisitions, and the cancellation of alliances with business partners occurred at a faster pace than usual. In addition, environmental problems in China have driven a move to reevaluate the emphasis on imports of raw materials and to shift to high-quality domestic products. This trend has also been supported by ESG investing, with a major change being an increase in the number of customers placing greater value on quality rather than price.

In this context, to successfully compete in our fields of expertise, we have weeded out those organizations with no prospect for growth, engaging in a process of business selection and concentration. Our profit structure has improved significantly as a result. In terms of reforming our corporate culture, a sense that we should take pride in the work NAGASE does, and that we should earn a fair profit to contribute to society, has begun to take root. In addition, Group manufacturing companies such as Fukui Yamada Chemical Co., Ltd. have strengthened their sense of collaboration with other Group companies, fostering a new business development mindset.

With DX and blockchain gaining attention and the significance of the traditional trading company business model being called into question, we reorganized our department into teams with the goal of becoming a business-to-business platformer. We will also move ahead to create businesses that contribute to the global environment based on the key words "plastic recycling," "chemical recycling" and NAGASE biotechnology.

Topics

Reusing Plastic Tableware to Realize a Sustainable Cycle

Working with Ishikawa Jyushi Co., Ltd., manufacturer of plastic tableware made with Tritan™, we have begun working to build a sustainable cycle by recycling Tritan™ tableware and manufacturing and selling products using the recycled material. Until now, restaurants disposed of aged Tritan™ tableware as plastic waste, but we will promote the development of a recycling scheme that will allow them to be used again as fixtures, sundries and dishes.



Polymer Global Account Business

Business Opportunities

- Expanding value provided through the use of digital technology
- In-house development of environmental materials and development of wide-ranging applications
- Medium- to long-term supplier strategy

Business Risks

- Hollowing out of the trading company function and the spreading argument for the move away from petrochemicals
- Lockup of environmental materials by Chinese manufacturers

Strengths

- A wide-reaching base of operations in the Asia-Pacific region
- Strong partnerships with global companies

Medium-Term Issues

- Review of portfolio aimed at improving business profitability

Pursuing quality through portfolio replacement in focus businesses



Koichi Sagawa

Executive Officer
GM, Polymer Global Account Department

Changes in the business environment that we have faced over the past five years include a more prominent presence for Greater China with the rise of Chinese brand owners and EMS; a progressing reevaluation of supply chains due to the prolonging of problems between the U.S. and China and the impact of the COVID-19 pandemic, with an accelerated shift from China to ASEAN + India; and an increasing awareness of eco-friendly materials with the spread of ESG management. Since the department is greatly affected by changes in suppliers, we need to pay careful attention to the recent trend toward specialization and reorganization in the business segments of their competitive advantage. In terms of area strategy, we promoted an expansion of scale in Asia-Pacific, and expanded our business to Australia, South Korea and India. We are also seeing the results of streamlining through a reevaluation of our distribution bases and improvements in inventory management. In addition, with the shift of Chinese-owned businesses to ASEAN, out-out collaboration has become essential; we are working to promote diversity, in part by sending Taiwanese staffs to our ASEAN affiliates, while also building a more differentiated structure.

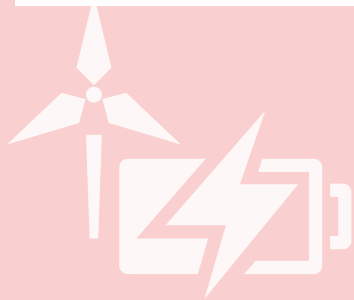
Looking ahead to the next five years, we believe it is important to promote digitalization to strengthen and reform existing businesses, and to develop sustainable environmental materials with an awareness of contributing to the formation of a decarbonized society. We would like to address these issues as quickly as possible. In addition, we will downsize or withdraw from non-focus areas and low-profit businesses, while on the other hand expanding our high-performance resins and super engineering plastics businesses with the goal of replacing our portfolio in pursuit of quality.

Topics

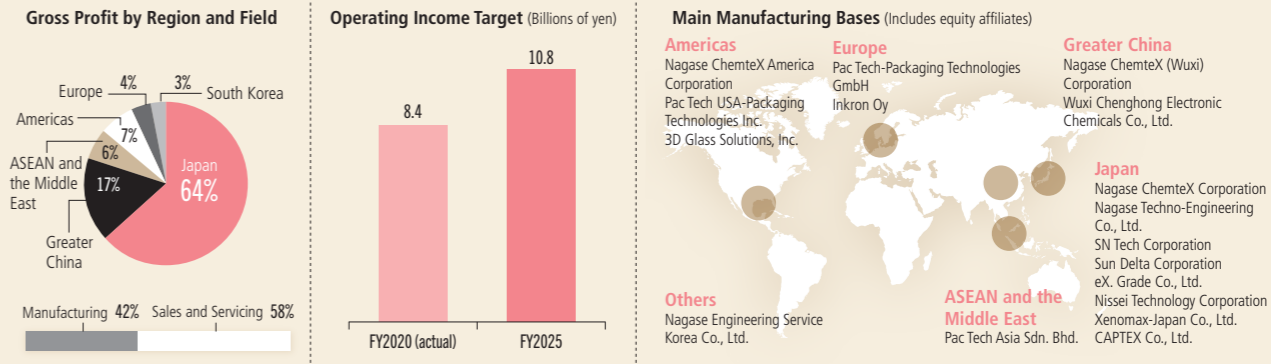
plaplat™ Communication Platform Opened

In the plastics business, we opened plaplat™, a platform to connect us with our customers. This allows customers to submit multiple requests for environmental surveys, estimates and others in one place, and to verify requests for progress with responses and their request history via a dedicated customer page. The first step will be to promote fast, reliable communication with domestic customers, with the goal of further expanding the services offered and expanding globally.





Electronics & Energy Segment



Note: Reflects organizational changes as of April 1, 2021.

Electronics Business

Business Opportunities

- Build a mechanism utilizing DX unique to a trading company
- Develop functional, unique base materials

Business Risks

- Loss of business opportunities due to delays in development of new products, competitors' efforts to utilize DX

Strengths

- Ability to offer complete solutions to customer needs
- A global network of R&D sites with unique technology

Medium-Term Issues

- Developing and launching new products in conjunction with changes in the business environment

Moving from a mid-stream to an upstream business; rapid product development that also utilizes DX



Hironao Makise
GM, Electronics Department

This department develops and sells materials for smartphones and tablet PCs, important mobile devices in an increasingly IoT-oriented world. Semiconductors and displays, the main components of these devices, continue to evolve day by day. The display industry, in particular, is divided between liquid crystal and organic EL displays, depending on the application. Our mission is to quickly grasp the technical issues behind each.

In semiconductors, we are accelerating development for the Chinese market, which is expected to grow in the future, and also expanding our business in the silicon wafer industry, which is the raw material for semiconductors. We are also strengthening our connections with mobile device manufacturers who produce the final products, and we are moving ahead with sales of functional materials for cases and the development of components. All of these industries require global activity centered on the U.S., South Korea, China and Taiwan, so we promote development in cooperation with our overseas entities.

During the five years of ACE 2.0, the new medium-term management plan, we will work to speed up product development while also utilizing DX. One specific step is our work to develop services utilizing IoT sensors. In addition, to address the sustainability movement, we have set up project teams within the department and are moving to develop measures.

Topics

Participating in an Investment in Nanosys Inc. Will Boost Handling of Advanced Electronic Materials

We invested in and became the distributor for Nanosys Inc. of the U.S., the industry's top manufacturer of Quantum Dots. Quantum Dots are unique semiconductor crystals used in optical films for displays and other materials to increase color performance. It is expected their share in the industry will grow further as a new technology for efficiently reaching the new color range standard being adopted for 4K and 8K broadcasts.



Information & Communication · Energy Business

Business Opportunities

- Needs in diverse high-speed communication-related devices, and expectations for storage battery and other systems in terms of the environment

Business Risks

- Delay in the arrival of the real 5G era
- Ensuring differentiation and competitive advantage against competing technologies

Strengths

- We provide products and services that balance improving customer profitability with social contributions

Medium-Term Issues

- Collaboration with Group companies in the development of proprietary products for the 5G/6G markets

Integrating next-generation information communications and energy businesses that contribute to the environment



Tetsu Iwanaga
GM, Information & Communication · Energy Office

This office was newly established to provide diverse services required by the advent of a smart society by integrating two organizations involved in next-generation information and communication and the energy business, which are expected to grow significantly going forward.

In next-generation information and communication, our main business is related to materials such as low dielectric materials and passive components indispensable in terminals and base stations for high-speed data communications such as 5G and 6G. Not limited to material sales, we will also focus on developing and providing applications that utilize smart glasses (AR/VR) and diverse sensing devices. In the energy business, we are conducting business with a view to contributing to the environmental areas of the SDGs through the development, manufacture, sale and contract assessment of battery modules, packs and energy storage systems at our Group company CAPTEX Co., Ltd. We are also developing applications to meet the needs of a smart society, including surveillance cameras based on optical wireless technology.

As an initiative under ACE 2.0, the new medium-term management plan, we will focus first on the field of next-generation information and communication and the development of original NAGASE products, as we keep an eye on moves in real 5G, which—it has been pointed out—is behind schedule. In the energy business, we will collaborate with CAPTEX Co., Ltd. and other Group companies to address the needs of a decarbonized and recycling-based society through efforts to contribute to the environment by providing storage battery systems, all-solid-state batteries and other products.

Topics

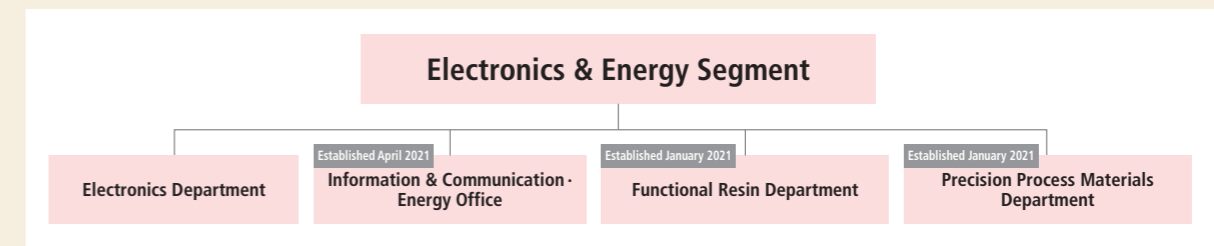
Joint Development of a Battery Panel for Storage Battery Systems for the Captive Consumption Market

We worked with Murata Manufacturing Co., Ltd. to jointly develop a battery panel for battery storage systems aimed at the captive consumption market, to be deployed alongside photovoltaic power generation systems at factories and other locations. This product offers safety, expandability to allow users to set the battery storage capacity, and a compact size for greater flexibility in installation. This will not only reduce costs by lowering electricity bills, and provide a reliable energy supply during disasters, but will also contribute to increasing corporate value by addressing decarbonization.



Organizational Structure Reforms Implemented with the Goal of Developing New Businesses

In April 2021, the Electronics Segment changed to become the Electronics & Energy Segment. In addition to the existing Electronics Department, the Functional Resin and Precision Process Materials Departments were newly established in January of that year, while a new Information & Communication · Energy Office was established to take on the energy-related businesses formerly classified under the Mobility & Energy Segment, resulting in a four-organization structure. In addition to the functions of a trading company, we will further strengthen the Group's development, manufacturing and sales systems to integrate our market orientation and technology base, and develop new businesses from a medium- to long-term perspective.



Functional Resin Business

Business Opportunities

- Business in the expanding fields of communications, the environment, energy, healthcare and others

Business Risks

- Commodification of the business environment and declining information inequality, greater difficulty in differentiation, reduction in new needs

Strengths

- Sales and technical capabilities cultivated in the formulated epoxy resin business
- Integration of market orientation and technology base through an integrated manufacturing and sales system

Medium-Term Issues

- Shrinking needs for formulated epoxy resins, and the difficulty of differentiating in a business with low barriers to entry

A new business format that leverages the strengths of both the manufacturing and trading company functions



Takayuki Hashimoto

GM, Functional Resin Department

The newly established Functional Resin Department was set up to focus primarily on the formulated epoxy resin business within the former Electronics Department, and is an integrated manufacturing and sales department with Nagase ChemteX Corporation. The business originated as a joint venture between the Swiss general chemical manufacturer Ciba (at the time) and NAGASE & CO., LTD. Nagase ChemteX Corporation, whose predecessor was Nagase-CHIBA—set up jointly by the two companies—undertook the manufacturing and development function, while NAGASE & CO., LTD. was responsible for the sales function. The objective for establishing the new department is to expand the business, create new businesses, and further to build a new role model that integrates the trading company and manufacturer with the base technologies of Nagase ChemteX Corporation at its core.

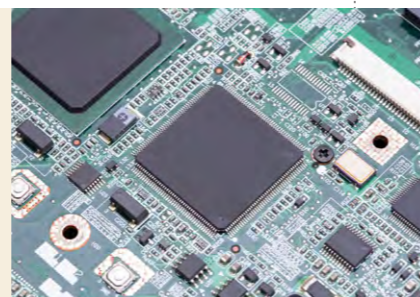
Formulated epoxy resins are used in a wide range of industries, including mobility, communications (ICT and telecommunications), semiconductors, electrical equipment, the environment and energy. Among these, encapsulating materials for semiconductors, for example, is a truly advanced field, while formulated epoxy resins for electrical equipment have had a large share since the days of Nagase-CHIBA. In a sense, the department is characterized by the coexistence of old and new technologies.

As we look to the future, it goes without saying that opportunity lies in the fields in which we excel, but at the same time they are also risks because competitors are looking in the same direction. To achieve our vision for 2032, we will create new businesses with a view to contributing to a sustainable society even as we work to improve the quality of our growth areas.

Topics

High-Performance Encapsulants to Support Advanced Semiconductor Manufacturing

Nagase ChemteX develops and deploys high-performance encapsulants with superior adhesion and heat resistance in both liquid and sheet forms to suit various applications. Most recently, we have been developing a-SMC (Advanced Sheet Molding Compound), a sheet material with new characteristics, by utilizing the NPIC (Nagase ChemteX Process Innovation Center), which was established in 2019 to take advantage of customer feedback in product development. It supports technological innovation in the fields of semiconductors, telecommunications and data processing.



Precision Process Materials Business

Business Opportunities

- Entry into the medical and healthcare fields which require precision processing
- The spread of additive manufacturing

Business Risks

- A shrinking market for LCD displays, difficulty in procuring raw materials, high costs, emergence of local manufacturers in China and elsewhere

Strengths

- Technological capabilities in precision cleaning, corrosion/anticorrosion control, fine patterning, UV curing control, etc.
- Rapid business development through integrated manufacturing and sales system

Medium-Term Issues

- Development of new industrial fields and value provided making full use of advanced technology accumulated to date

Rapid transformation of profit structure with new integrated manufacturing and sales system



Takashi Takeda

GM, Precision Process Materials Department

In the existing photolithography materials business, NAGASE & CO., LTD. was responsible for sales and marketing, while Nagase ChemteX Corporation handled research and development and production management. In contrast, the Precision Process Materials Department, which was newly established this year with the addition of new businesses, has set up a system for centralized management of both the sales function and the manufacturing and development function.

In the past, the mainstay of our business was process materials for the FPD industry, but as the main battlefield for this market shifts to China, the profitability of the business has begun to shrink. This fiscal year, the mission of this department is to diversify its profit structure by moving into new product groups, industrial fields and sales regions, taking advantage of the surface treatment, microfabrication, and high-purity material handling technologies in a clean environment that we have cultivated to date, while moving the business structure away from its focus on the FPD industry. We are increasing the weight placed on higher-value-added materials, and have begun initiatives in new industrial fields such as communications and optical devices, medical-related products and sporting goods. By region, most of our sales have been in Japan, but we will increase the ratio of overseas sales in the future.

Further, we will promote the pursuit of quality through manufacturing innovation via "additive manufacturing," a process that can contribute to the SDGs, and by enhancing the value we offer with a material converting process that breaks away from our business model of simply selling products in liquid form.

Topics

Success in Developing Highly Tough, Highly Resilient Rubber Resin for 3D Optical Molding

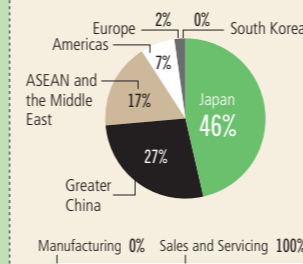
In recent years, optical 3D printers, which are capable of high-precision, high-volume production, have been gaining attention from a variety of industries as a new production method. The sports industry requires resins that offer both toughness and resilience. While it is generally considered difficult to achieve both, our department has succeeded in developing a high-performance resin material that balances both properties. We have already begun collaborating on 3D structures with several domestic and foreign sporting goods manufacturers.



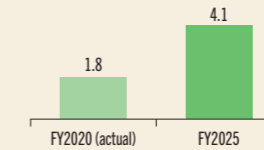


Mobility Segment

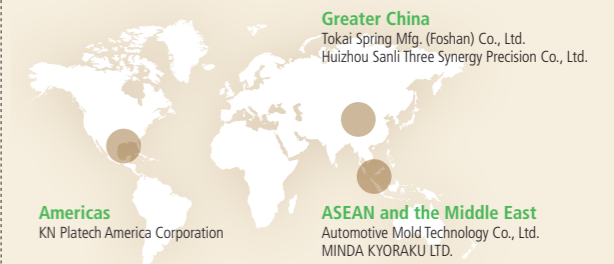
Gross Profit by Region and Field



Operating Income Target (Billions of yen)



Main Manufacturing Bases (Includes equity affiliates)



Note: Reflects organizational changes as of April 1, 2021.

Mobility Solutions Business

Business Opportunities

- Acceleration of electrification, market expansion in China and India, decarbonization, appearance of new mobility and MaaS

Business Risks

- Outflow of customers to overseas mega-suppliers

Strengths

- The ability to utilize our global network to discover high-function materials, products and technologies, and to build a supply chain that can offer a stable supply of those items

Medium-Term Issues

- Addressing changes in the business environment including new market entrants, shrinking of the domestic market, and the shift to light feed

Leading dramatic changes in the business environment to a variety of opportunities



Hiroyuki Ueshima
Executive Officer
GM, Mobility Solutions Department

The most significant change in the business environment over the past five years has been the acceleration of electrification, backed by the spread of CASE*. While automotive markets are growing in China and India, the domestic market is shrinking. The accelerated pace of electrification has led to a shortage of the rare earth raw materials used in batteries and other products, and to the problem of an overemphasis on certain production regions. This has led to an increase in the presence of overseas mega-suppliers and the emergence of platformers typified by GAFA.

The results of our profit structure reforms have included progress in replacing our portfolio, including the addition of electrification products from partner company ATECS Co., Ltd., and a shift from a focus on resins to materials and components. We are also withdrawing from unprofitable businesses. In terms of reforming our corporate culture, results include the cultivation of an atmosphere throughout the department of attempting to grow through friendly rivalry, and the expansion of our vision from automobiles to mobility in general.

Looking out at the next five years, the accelerated development of electrification, along with automation, represent major opportunities, and I believe NAGASE, with its strength in chemicals, will have somewhat of an advantage in the move toward decarbonization. In addition to the expansion of markets in China and India, we are also focusing on new mobility, including drones, agricultural machinery and aircraft. The department has already begun taking on the challenges of MaaS, including the platform business, driver monitoring systems and analysis of public transportation boarding and alighting data. We also intend to pursue quality in initiatives related to automated driving and the SDGs.

* CASE: An acronym for Connected, Autonomous, Shared & Services, and Electric.



Aiming to a Realize Next-Generation Mobility Life

The mobility industry is facing a "once-in-a-century revolution." In addition to offering freedom of movement, this will require the creation of new value in terms of safety and eco-friendliness. Our department will respond to diverse customer needs while focusing on the electrification of mobility, automated driving safety improvements, and the wider use of materials that match the needs of a decarbonized society, all in preparation for a next-generation mobility lifestyle in which people, things and data come and go.

Topics 1

Global Development of Electronic Components that Support Automobile Electrification

The level of attention being given to EV and hybrid vehicles continues to increase year by year in preparation for carbon neutrality by 2050. Under these circumstances, our department will work to globally develop products essential to the electrification of automobiles, including current sensing and power circuit components, through product development by SHT Co., Ltd., which is engaged in the development, manufacture and sale of electronic components. We aim to expand sales in Japan and overseas, focusing on current sensor cores that enable precise current sensing and newly developed choke coils that offer optimal characteristics for power circuits using SiC power semiconductors, which are expected to see more widespread use going forward.



Topics 2

Development of an Automotive Meter Lens Combining the Technologies of Partner Companies

Working with Fukui Chemical Industry Co., Ltd. and other partner companies, we developed an automotive meter lens that features both a three-dimensional shape and low reflectivity. In general, automotive meters are installed in the dashboard, but this product has no shade and protrudes above the dashboard to improve the design of the vehicle interior. While it was difficult to balance both a sense of unity with surrounding components and visibility, we were able to achieve this by combining the advanced technologies of the various companies involved.



Topics 3

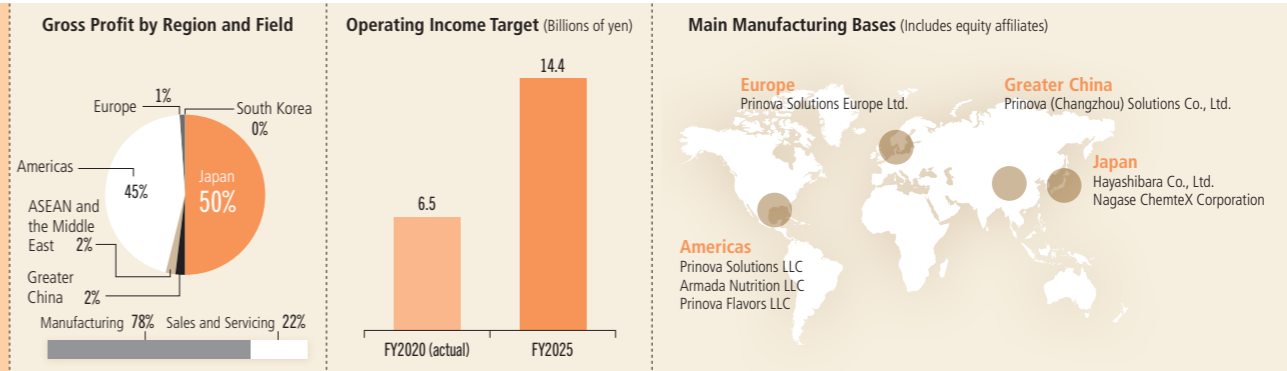
Aiming to Reduce Manpower in Factories by Introducing Automated Cargo Towing Vehicles

Today, many of our customers are facing the issue of labor shortages. To enable our customers to reduce manpower in their factories, we have introduced automated cargo towing vehicles manufactured by EasyMile of France. Going forward, we plan to adjust operational settings and conduct demonstrations on the premises of our Group companies, and beginning in fiscal 2022, to hold demonstrations in customer factories. In addition to vehicle sales, we will work to solve customer issues by offering a service business that includes operational management and maintenance.





Life & Healthcare Segment



Note: Reflects organizational changes as of April 1, 2021.

Life & Healthcare Products Business

Business Opportunities

- Creation of new services in collaboration with IT-related ventures

Business Risks

- Changes in the business environment outpacing the speed of structural reforms

Strengths

- Function to offer development proposals in the medical and pharmaceutical fields
- Ability to address and offer proposals regarding global regulatory and pharmaceutical affairs management

Medium-Term Issues

- An ambidextrous management approach achieved by deepening core businesses while creating new ones
- Development of a DX and sustainability-conscious business model

Shifting to a new business model by pursuing DX and sustainability



Bunji Ono

GM, Life & Healthcare Products Department

Sales in the cosmetic industry over the past five years peaked in fiscal 2018, and then began to stagnate due to COVID-19 following the decline in in-bound sales. On the other hand, changes in lifestyles caused by the pandemic boosted sales of household materials such as hygiene products and insecticides.

In the area of pharmaceuticals and diagnostic agents, sales growth of generic APIs was remarkable throughout the period of ACE-2020, the previous medium-term management plan, besides the robust sales of raw materials for original drugs and in-vitro diagnostic products. In addition to the acceleration of business development in the growing market for medium- and high-molecular weight drugs, we also launched a new service to predict drug efficacy and side effects by introducing unique artificial intelligence (AI) through the partnership with Karydo TherapeutiX. And in April 2021, the 3D CG simulation software, GRID, got an authorization for medical devices. We will engage in full-scale efforts to develop the market of medical imaging with our capital and business alliance partner Kompath Inc.

In terms of reforming our profit structure, improvement of efficiency of raw materials business in the cosmetic field is the most urgent issue. Under ACE 2.0, the next medium-term management plan, we will work on the optimization of profitability by installing rigorous inventory controls, reviewing the product portfolio and allocating human resources to the focus areas with thorough awareness of return on invested capital (ROIC).

Topics

Reducing the Burden of Examinations with CapsoCam Plus, a Capsule Endoscope for the Small Intestine

In January 2021, we began offering the CapsoCam Plus, a capsule endoscope developed by CapsoVision, Inc. of the U.S. Four compact cameras are installed in a capsule about three centimeters in length. It reduces blind spots with the world's first 360° panoramic imaging technology and makes it possible to record clear images of the convoluted small intestine. Since the capsule can be swallowed orally, it is said to offer a lower mental and physical burden on the patient compared to tube-type endoscopes.



Food Ingredients Business

Business Opportunities

- Maximizing the business model and use of products of the Prinova Group
- Changing business model due to the increasing awareness of the SDGs and DX

Business Risks

- Geopolitical instability in a status quo in which the ratio of food ingredients procured from China is extremely high

Strengths

- Comprehensive capabilities to offer proposals in materials, manufacturing, processing and applications
- The procurement capabilities and manufacturing and sales network of the Prinova Group

Medium-Term Issues

- Creating synergies between Group companies in response to portfolio changes resulting from the acquisition of the Prinova Group

Promoting integration with Group companies to create synergies



Koichiro Kojima

GM, Food Ingredients Department

The biggest change in our department's environment over the five years of ACE-2020, the previous medium-term management plan, was our 2019 acquisition of the Prinova Group, whose strength lies in their expertise in handling and formulating vitamins and amino acids. This has helped NAGASE build a major foothold in the global food ingredients business.

Meanwhile, there have also been changes in the external environment, including an increasing awareness of the SDGs, ESG and other sustainability issues, along with food loss and waste, low-carb, and the trending shift from animal-based to plant-based ingredients. The addition of Prinova, however, has allowed us to enhance our portfolio to align with these markets, and we see this as expanding our business opportunities. As people become more health-conscious, the market for nutrition—Prinova's area of specialty—is beginning to expand. The integration of Prinova and the NAGASE Group's business is steadily moving forward.

Over the five years of ACE 2.0, the new medium-term management plan, one focus will be to expand through innovation of the use of naturally-derived, plant-based food ingredients that can contribute to the SDGs, and to match the functions of the ingredients to local needs. And while we have yet to consider specifics, we will also continue to reform our business model through DX. In addition, as we currently rely heavily on China for procurement of ingredients, we are considering building a network of suppliers outside of China to reduce risk.

Topics

Began Offering DeltaGold, a Super Vitamin E

We began offering DeltaGold, an annatto-derived super vitamin E manufactured by American River Nutrition LLC of the U.S. This is a functional ingredient rich in super vitamin E-delta tocotrienols extracted from annatto seeds, and has already been commercialized as a supplement and other products in the U.S. In Japan, we aim to see the product contribute to care of the frail elderly and improvements in cholesterol.



Regional Strategy

Note: Employees in the consolidated corporate group as of March 31, 2021

Built on a foundation of chemistry the NAGASE Group is engaged in global business across a wide spectrum of industries. Utilizing the wide-ranging expertise accumulated through that network and experience, we provide a fine-tuned response to the needs of each country and region.

Greater China

Base established: 1971/Number of employees: 913

Expanding Our Network Across All of China through Our Businesses

As China's industrial structure and technology level are rapidly changing and becoming more advanced, we have integrated the reporting lines of all of our bases on the mainland and in Hong Kong to cover all of China in the Semiconductor, Mobility, Electronics, Life & Healthcare, Chemicals and Process Materials business segments. We aim to expand our business dynamically through active investments in cooperation with our Taiwan base as well.

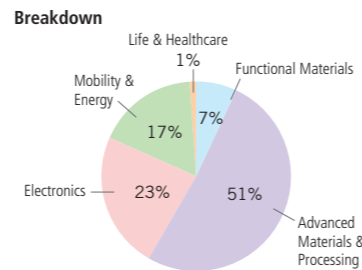
- Main Businesses**
- **Semiconductors** Leveraging the supply chain's information gathering expertise and local networking resources, we are leading the expansion of Chinese businesses through win-win relationships as an overseas manufacturing business consultant.
 - **Mobility** We will help develop smart mobility in China by quickly responding to technological advances in the industry and providing value-added products and services.
 - **Electronics** In such fields as next-generation displays, 5G and car electronics, we create high-value-added local communication businesses by uncovering needs using our strengths and providing solutions.

Topics In the fast-growing Chinese semiconductor industry, we hold the quarterly NAGASE Forum in collaboration with a local think tank, utilizing the personal connections and information gathering ability we have cultivated through full supply chain business development driven by our localized, specialized organization. The Forum provides information on cutting-edge materials and future trends, and each time is attended by about 100 people from both Japan and China.



Takahiro Okumura
Director and Executive Officer
In Charge of Overseas Overall
Operations and Business
Development
Greater China CEO
Europe CEO

Net Sales/212.6 billion yen (FY2020)



ASEAN and the Middle East

Base established: 1975/Number of employees: 716

Expanding Business Targeting Non-Japanese Customers

Supply chains are currently being reviewed on a global scale, triggered by the decoupling of the U.S. and China. In this region, we have been developing our automotive and chemical businesses based around our resin business, which has grown mainly around Japanese customers. Even more than before, however, we will accelerate the expansion of our business targeting non-Japanese customers. Further, in our business domains, we will also focus on Asia's food market, which is expected to expand. As part of our sustainability activities, we will also create regionally relevant businesses that contribute to solving social issues in the region.

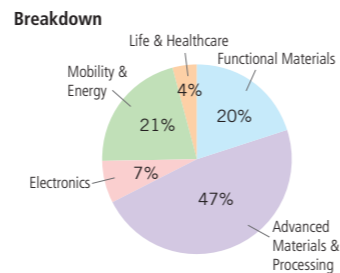
- Main Businesses**
- **PGA Business** We will expand our customer base by appointing personnel from Taiwan, South Korea and elsewhere, and promote a shift to sustainable business.
 - **Mobility** Our goal is to create regionally relevant businesses through involvement with regional advanced mobility.

Topics In addition to developing recipes and analyzing physical properties, the R&D base for the food ingredients business, which opened in Singapore in 2020, uses the web and social media to actively promote digital marketing. Even during the COVID-19 pandemic, we have achieved non-contact, efficient business execution by introducing applications via online seminars and by accessing customer issues digitally.



Eiroku Oki
ASEAN and India CEO
Regional Operating
Centre Leader

Net Sales/104.4 billion yen (FY2020)



Europe

Base established: 1980/Number of employees: 260

Working to Participate in Growth Fields While Utilizing Our Resources

As requirements for disclosure of information about chemicals and pharmaceutical raw ingredients become stricter, imports from outside the European region are expected to become even more difficult. At the same time, as a company even greater emphasis is being placed on reducing environmental impact and energy conservation. In order to differentiate ourselves as a solution provider, we will utilize the laboratory functions of our branch in Lyon, France branch for the cosmetics business, while focusing on innovative fields such as bioplastics, energy storage and organic food packaging materials.

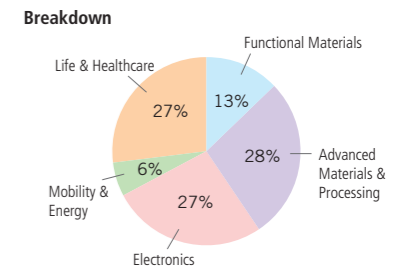
- Main Businesses**
- **Pharmaceuticals** We will focus on expanding sales of Hayashibara Co., Ltd. products within Europe, on exporting generic APIs to Japan, and on expanding our in-vitro diagnostic drug business in Europe.
 - **Mobility** We will focus on three businesses: EV battery-related, smart interiors and exterior trim products.
 - **Chemicals** Focus on biodegradable polymers and other recyclable products, while advancing the shift to new thermal paper materials.

Topics In Europe, interest in environmental protection and energy conservation has grown even stronger. Customer focus has shifted to environmentally friendly organic products that can reduce CO₂ emissions, and this is expected to open up demand in the chemicals market, which to date has been dominated by the major players.



Takahiro Okumura
Director and Executive Officer
In Charge of Overseas Overall
Operations and Business
Development
Greater China CEO
Europe CEO

Net Sales/42.7 billion yen (FY2020)



Americas

Base established: 1971/Number of employees: 1,212

Develop New Businesses that Contribute to Sustainable Growth

During the term of ACE-2020, the previous medium-term management plan, we actively invested in businesses and reevaluated our business portfolio, while promoting activities aimed at discovering the seeds of new, regionally-led businesses. Under ACE 2.0, the new medium-term management plan, our goal is to achieve sustainable growth over the medium to long term by creating new businesses originating in the Americas, utilizing the networks of Nagase Specialty Materials NA LLC and the Prinova Group, as well as the R&D capabilities of Interfacial Consultants LLC. We will also work to enhance Group synergies by expanding existing businesses.

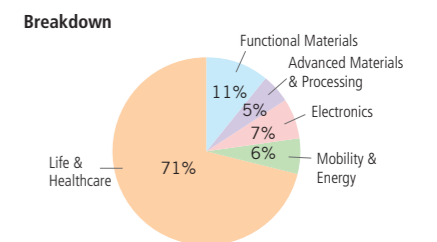
- Main Businesses**
- **Food Ingredients** We will utilize the NAGASE Group network to contribute to realizing a sustainable world where people live with peace of mind.
 - **Mobility** We will offer high-value-added services in response to changes in market conditions.

Topics Infinite Material Solutions, one of the Group's manufacturing bases, has introduced Caverna™, a PP resin with a water-soluble, hollow structure. It can be used as a filament for injection molding and 3D printers. It is expected that the product will be adopted in applications that take advantage of the product's features to achieve filtering performance, cushioning and weight reduction. We also use e-commerce to sell our products around the world, and aim to accelerate it globally utilizing the NAGASE Group network.



Takayuki Masuda
Executive Officer
Americas CEO
Nagase Holdings America
Corporation CEO

Net Sales/88.4 billion yen (FY2020)



South Korea

Base established: 1985/Number of employees: 38

Investing in the Electronics Field, which Continues to Leap Forward

Based on the sales of materials and components to leading Korean industries, we have been expanding the products of distinctive Korean companies that support the value chain overseas utilizing the Group's network. Under the new five-year plan, we will focus on the semiconductor, display and EV battery businesses. We will invest our resources in areas where Korea's sustainable growth can be expected in the face of global competition, including the materials industries related to these businesses.

- Main Businesses**
- **Electronics** We will connect the value provided by the Group to fields requiring cutting-edge technologies, including semiconductors and next-generation displays.
 - **Electronics Chemicals** We will source distinctive chemicals in the materials industry, which is expected to grow as part of national policy.
 - **Food Ingredients** We aim to develop new applications for the food ingredients and processed products manufactured by the Group.

Topics We have established a new infrastructure for just-in-time delivery to major semiconductor companies, and are playing a role in their supply chain management.



Kenji Sakai
Nagase Korea Corporation CEO
and COO

Net Sales/18.7 billion yen (FY2020)

