Value Creation Process

Supporting a Sustainable Society with Specialty Products and Services

External Environment

Global
- Demographic changes
- Climate change
- Geopolitical risks

Japan
- Labor and workforce shortages
- More diverse dietary preferences
- Growing awareness of safety, reliability, and health

Inputs

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Financial Capital
- Stable financial base

Intellectual Capital
- Unique R&D organization
- High ratio of R&D expenses to net sales

Human Capital
- Human resources who can address the needs and challenges of customers and society
- Free and open-minded corporate culture

Social and Relationship Capital
- Partnerships with suppliers and business partners
- Industry-academia collaboration
- Relationships with communities

Manufactured Capital
- Unique manufacturing technologies
- Production facilities worldwide

Natural Capital
- Natural materials
- Energy and water resources

Material Issues

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Business Model

Sustainable Value Chain

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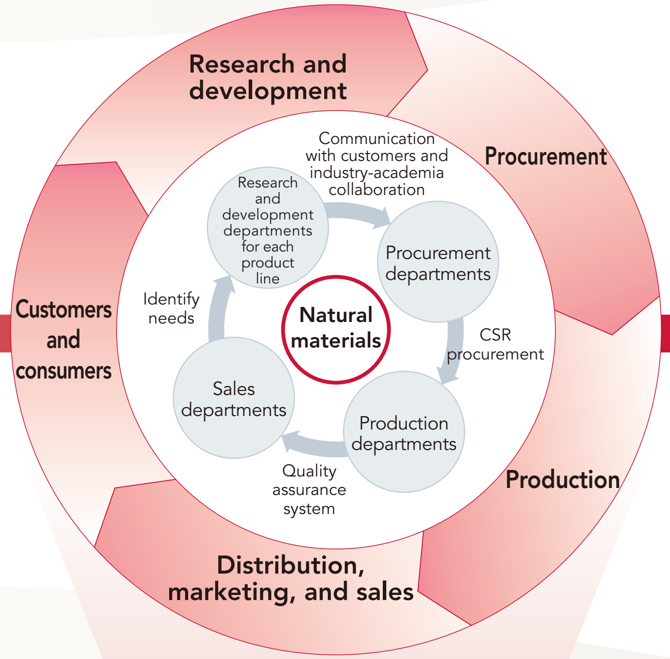


Core technologies
acquired in natural vitamin A production

DNA → Philosophy Pages 2–4

Outputs

Providing Specialty Products and Services

Food
Specialty: Making the most of materials
- Seaweed
- Extracts and seasonings
- Salad dressings

Improving Agents
Specialty: Resolving issues
- Food-improving agents
- Chemical-improving agents

Healthcare
Specialty: Enhancing quality of life (QOL)
- Vitamins
- Functional food product ingredients
- Microcapsules

Outcomes

Customers
- Making consumers healthy and happy at the dining table

Shareholders and Investors
- Sustainable growth and shareholder returns
- Timely and appropriate information disclosure

Business Partners
- Sustainable profits for both parties
- Strong partnerships that help resolve social issues

Employees
- Providing a healthy, energetic work environment

Communities, Government Organizations, and Research Institutes
- Contributing to the revitalization of regions and communities

Environment
- Contributing to the creation of a decarbonized, recycling-oriented society

Medium- to Long-Term Vision

Achieving growth by supporting a sustainable society with specialty products and services

Material Issues

We reviewed our material issues in 2024. We identified eight material issues that we consider priority management issues, and the Management Meeting and the Board of Directors have approved them.

Our objective is to increase corporate value while creating environmental and social value through initiatives related to our material issues.

Process for Identifying Material Issues

Step 1 Identify and summarize social issues we need to address

- Drew on the SDGs and other inspirations to identify social issues and trends
- Clarified the relationship between business and social issues and trends

Step 2 Submit outcomes to senior management for discussion and create draft

- Drew on interviews and discussions with senior management to identify business opportunities and risks for each social issue and trend
- Created draft

Step 3 Evaluation by external experts

- Obtained third-party opinions on the draft by interviewing two external experts

Hidemi Tomita
Managing Director, LRQA Sustainability Co., Ltd.

Mika Takaoka
Professor, College of Business, Rikkyo University

Step 4 Approval by the Board of Directors

- Finalized the draft
- Presented the draft to the Board of Directors

Riken Vitamin's Material Issues

Technology-Based Value Creation

Create value through research and development

As a research and development-oriented company, we focus on the development of new technologies, new applications, and new products that support a sustainable society.

9.4／9.5

Provide safe and reliable products

We provide safe, high-quality products and appropriate information that reassures customers.

12.8

Contribute to health and a rich dietary life

We contribute to health and a rich dietary life for all people by providing specialty products and services.

2.2

Contributing to the Global Environment

Contribute to the transition to a circular economy

We promote the transition to a circular economy with products and technologies that help reduce food loss and environmental impact.

12.2／12.3

Address climate change

We help to mitigate climate change by providing products that reduce greenhouse gas emissions and promote decarbonization. We also promote the development of technologies for adapting to climate change.

13.1／13.3　14.2

Well-Being for People and Society

Build a resilient supply chain

Together with our stakeholders, we aim to build a resilient supply chain with careful consideration of human rights, the environment, and biodiversity.

8.7　12.2

Promote diversity and inclusion

We aim to be a company that can generate sustainable growth by respecting diversity and employing and developing the capabilities of all individuals.

5.1／5.4／5.5　8.5　10.3

Provide a safe and healthy working environment

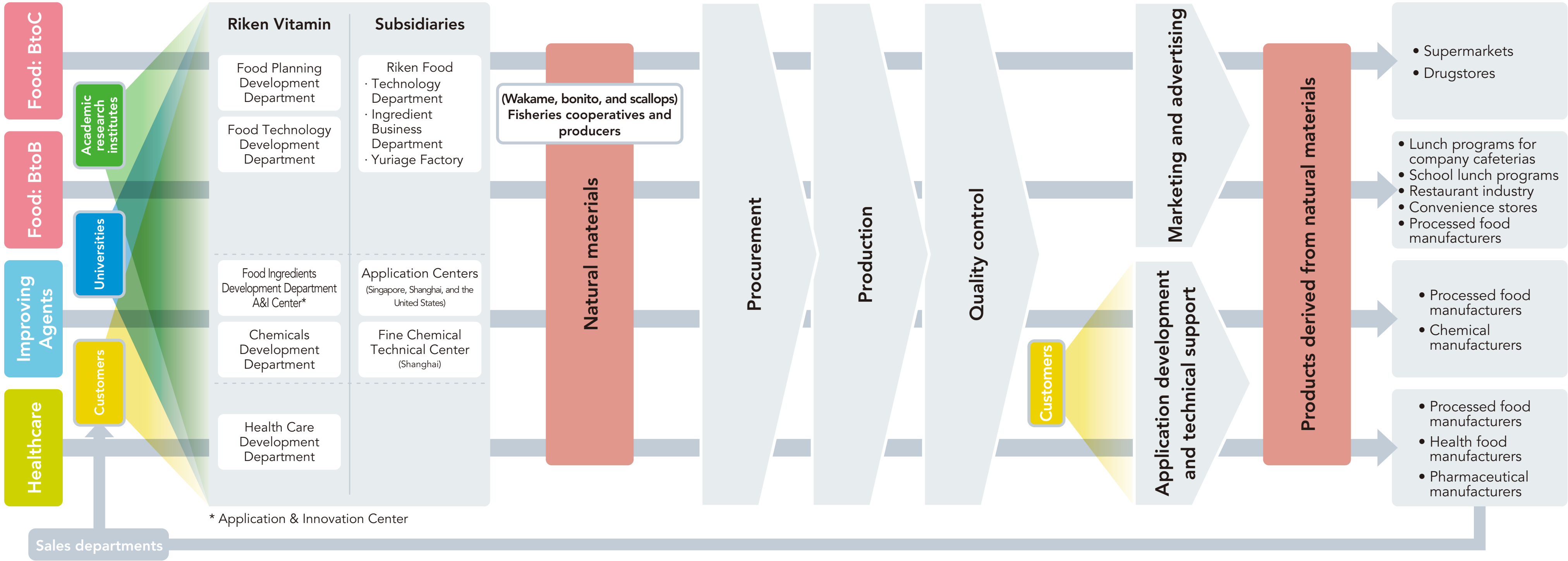
As a company that contributes to health and nutrition, we provide a safe and healthy environment in which employees can work with confidence and motivation.

3.4　8.8

Value Chain

Creating Added Value with Technologies That Make Effective Use of Natural Materials

	Research and development	Procurement	Production	Distribution, marketing, and sales	Customers and consumers
Overview	With roots in RIKEN (the Institute of Physical and Chemical Research), we focus on research and development based on our Corporate Philosophy of "contributing to people's health and nutrition with technologies and products that make effective use of natural materials, thereby contributing to society."	We have a procurement network for natural materials, including marine resources. Our procurement network, coupled with in-depth knowledge of natural materials, enables us to operate in a wide range of businesses.	Our core technologies that originate in our initial vitamin A business involve extraction, refining, and concentration. Our molecular distillation technology, which is a concentration technology, has contributed significantly to the diversification of our business portfolio.	In the improving agents business, we communicate with a wide range of customers to gain an understanding of their issues and needs, and then provide proposal-based sales and customized product development.	Our products are widely used in three markets: food, improving agents, and healthcare. As a result, we have an extensive customer base and are able to make a variety of proposals to our customers.
Strengths	Research and development strengths	Supply chain for natural materials	Technologies that make effective use of natural materials	Ability to provide solutions	Broad customer base Household food brands



* Application & Innovation Center

Enhancing Our Value Chain

Main types of capital for each activity and initiatives to further enhance them

	Research and development	Procurement	Production	Distribution, marketing, and sales	Customers and consumers
Strengths	**Research and development strengths**	**Supply chain for natural materials**	**Technologies that make effective use of natural materials**	**Ability to provide solutions**	**Broad customer base Household food brands**
	• Unique R&D organization • High ratio of R&D expenses to net sales	• An improving agent production base in Malaysia that provides procurement advantages • Strong ties with fisheries cooperatives and fishermen	• Businesses based on core technologies that make effective use of natural materials • Statistical analytics by the Food Analysis & Research Group	• Accurate identification of customer issues based on relationships of trust • Effective solutions based on extensive R&D	• Diverse value propositions by leveraging knowledge gained from our customer base and a wide range of business operations
Capital Relevant to Our Strengths	Financial Capital	Financial Capital	Financial Capital	Financial Capital	
	Intellectual Capital	Intellectual Capital	Intellectual Capital	Intellectual Capital	Intellectual Capital
	Human Capital			Human Capital	
	Social and Relationship Capital	Social and Relationship Capital	Social and Relationship Capital	Social and Relationship Capital	Social and Relationship Capital
			Manufactured Capital		Manufactured Capital
		Natural Capital	Natural Capital		
Material Issues Relevant to Our Strengths	Create value through research and development Provide safe and reliable products Contribute to health and a rich dietary life	Contribute to the transition to a circular economy Address climate change		Provide safe and reliable products Contribute to health and a rich dietary life	
	Build a resilient supply chain / Promote diversity and inclusion / Provide a safe and healthy working environment				
Initiatives to Enhance Our Value Chain	**Unique R&D organization** • Accumulate knowledge in R&D departments for each product line • Share knowledge within the Group through research presentations • Ensure collaboration among the A&I Center and overseas application centers **High ratio of R&D expenses to net sales** • Ratio of R&D expenses to net sales: 3.8% Tokyo Stock Exchange, Prime Market (Food Sector) Average for 66 companies excluding Riken Vitamin: Approximately 1.0% Note: Data for FY2024	**Initiatives for stable procurement** • Support large-scale wakame aquaculture in cooperation with a fishing company and fisheries cooperative • Stable procurement of seaweed by supplying seedlings • Strengthen cooperation with suppliers **Enhance internal organization** • Collaboration with procurement departments during development	**Raise production capacity at overseas factories** • China: Construction of new food-improving agent factory (Started operation in May 2025) • United States: Expansion of pork extract manufacturing facilities (Scheduled to start operation in summer 2026) **Reorganize factories in Japan** • Tokyo Factory: Construction of vitamin-mix facility (Scheduled to start operation in December 2025) Note: Entire project scheduled for completion in FY2027	**Provide a wide array of solutions** • Enhance ability to make proposals Develop sales personnel with broad product knowledge through interdepartmental personnel transfers • Expand range of proposals Two approaches for proposals: Reduction of loss during production and reduction of final product disposal **Enhance ability to make proposals outside Japan** • Opened Riken Vitamin USA Application Center (June 2024) • Ended production of commodity chemical products in China Concentrating resources on providing high- value-added products	

Enhancing Our Value Chain 1: Research and Development

Promoting Industry-Academia Collaboration for Medium- to Long-Term Basic Research

Research and development → Procurement → Production → Distribution, marketing, and sales → Customers and consumers

Strength Unique R&D System with High Ratio of R&D Expenses to Net Sales

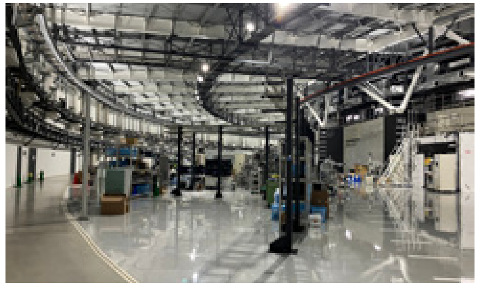
Elucidating the Mechanism of Action of Improving Agents Using NanoTerasu, a Next-Generation Synchrotron Radiation Facility

NanoTerasu is one of the world's leading synchrotron radiation facilities. It is located on Tohoku University's Aobayama New Campus, and has been operational since April 2024. The facility uses X-rays with high directionality and brightness exceeding one billion times that of sunlight, enabling observation of the fine internal structures of materials, their elemental composition, and the chemical states of elements—such as valence and bonding—at micro- to nano-scale resolution.

Riken Vitamin is a member of a coalition of parties with priority access to NanoTerasu. Through a joint research agreement with Tohoku University, we utilize NanoTerasu to analyze the effects of improving agents on food and chemical products. By elucidating the mechanisms of action of improving agents, we aim to develop new technologies and products, and expand the applications of existing ones.


Entrance to NanoTerasu


An experiment underway

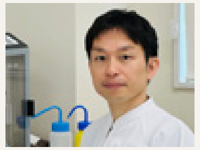

Inside NanoTerasu


Experimental equipment

Examples of Research Performed at NanoTerasu

As an example of our research projects, we are conducting synchrotron radiation measurements to elucidate the mechanism of action of emulsifiers in the bread-making process. Emulsifiers are used worldwide as improving agents in bread-making. Although they have been studied using various approaches, their mechanism of action remains insufficiently understood. Our approach is to use X-ray scattering (SAXS/WAXS, XPCS) and X-ray absorption/emission spectroscopy (XAS/XES) on bread and wheat flour gels to analyze the internal structural changes caused by adding emulsifiers. Due to the limited number of prior studies involving synchrotron radiation measurements on bread, we must advance our research through trial and error. Nevertheless, we expect to obtain unique data not accessible through conventional methods.

Joint Research Projects at NanoTerasu



Takanori Abe
Food Ingredients Development Department

Food typically contains moisture and has a heterogeneous structure. In fact, these characteristics play a crucial role in the overall sensory experience, including taste, texture, and appearance. On the other hand, moisture content and heterogeneity make precise measurement difficult. At NanoTerasu, we are working on new measurement techniques, but food measurement is anything but straightforward, and the challenges are endless. However, the process of solving these challenges through in-depth discussions with our joint research partners is proving to be a valuable opportunity to deepen our understanding of food.

At the same time, this research has given us valuable opportunities to work with engineers from our chemical division, which we feel is contributing to stronger collaboration across divisions.

I love working on research like this, and look forward to making many exciting discoveries.

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Enhancing Our Value Chain 2: Production System

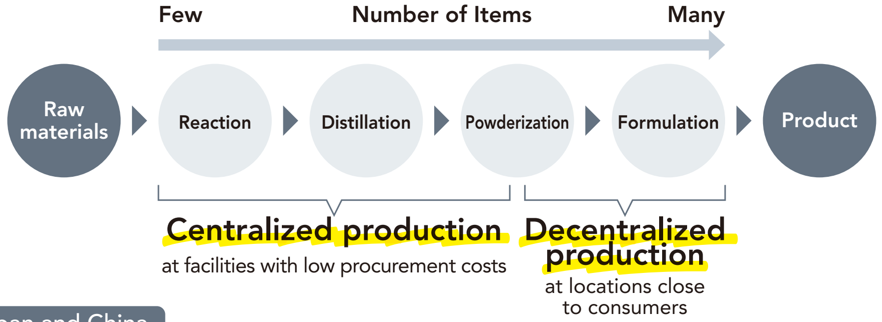
Leveraging Local Characteristics to Optimize the Production System

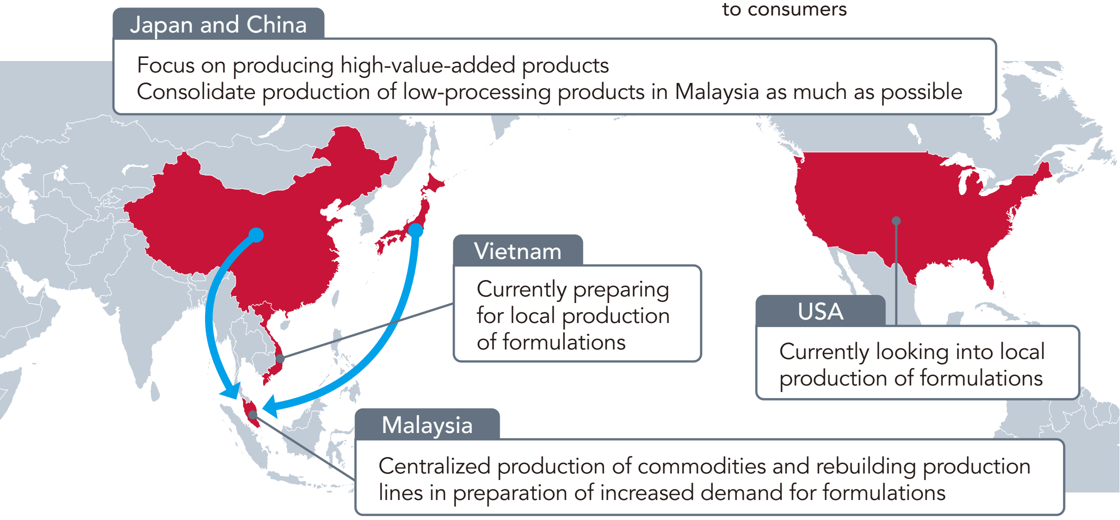
Research and development > Procurement > **Production** > Distribution, marketing, and sales > Customers and consumers

Strength Businesses based on core technologies for the effective use of natural materials

Restructuring Our Improving Agent Production Systems

In addition to clarifying the roles of our existing improving agent production facilities (in Japan, Malaysia, and China), we are also planning to start local production of formulations in Southeast Asia and North America, where demand for highly processed formulations is strong. Our aim is to build a production system that is both sustainable and cost-effective, while also maintaining the ability to respond flexibly to customer needs. We will do so through the strategic use of centralized and decentralized production based on processing levels and number of items.





Upgrading Production Systems

Takeo Yotsuzuka
Managing Executive Officer

Historically, we have tended to view domestic and overseas business as being separate. If we are to achieve sustainable growth, however, it is vital that we optimize Group operations by leveraging the local characteristics of each production facility. That is why we have embarked on a fundamental restructuring of our improving agent production system.

For instance, we will enhance competitiveness by concentrating the production of low-processing commodity products in regions with low procurement costs. Conversely, specialty products requiring a lot of processing and small-lot, multi-variety production will be decentralized and performed at facilities closer to customers to enable a more flexible response to their needs. Having defined each facility's role, we can then assign products to appropriate facilities and make investments conducive to those roles.

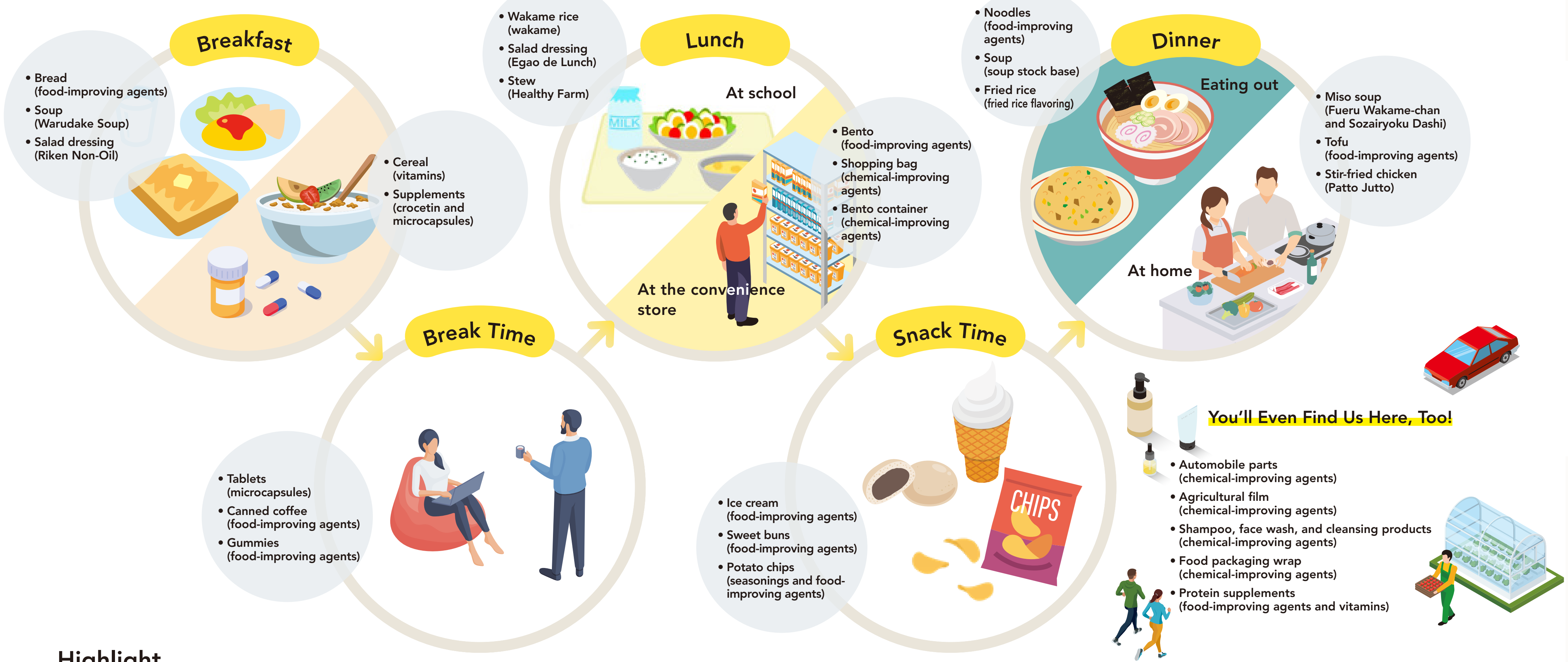
For example, while Rikevita (Malaysia) will handle the centralized production of commodity products, we will also need to boost production of specialty products for the Southeast Asian market. To that end, Medium-Term Management Plan 2027 provides for investment of approximately ¥5 billion for upgrading the formulation plant. Our aim is not merely to expand capacity, but to introduce new equipment that can save on labor and promote the evolution and advancement of our production technologies.

Projects like this require talent with a long-term, global perspective. Accordingly, we plan to increase the number of employees with overseas experience and pursue borderless operations to cultivate talent capable of managing a global supply chain.

Feature 1: Expanding Riken Vitamin's Value Creation

Diverse Value Propositions Based on a Broad Range of Businesses and Proven Ability to Provide Solutions

Riken Vitamin Is All Around You



Highlight

Quicker and tastier

Patto Jutto Series
Pre-seasoned frozen meal kits that let you freeze meat and cook it without thawing. The ideal time and cost saver for today's busy dual-income households.

Making everyday life more convenient

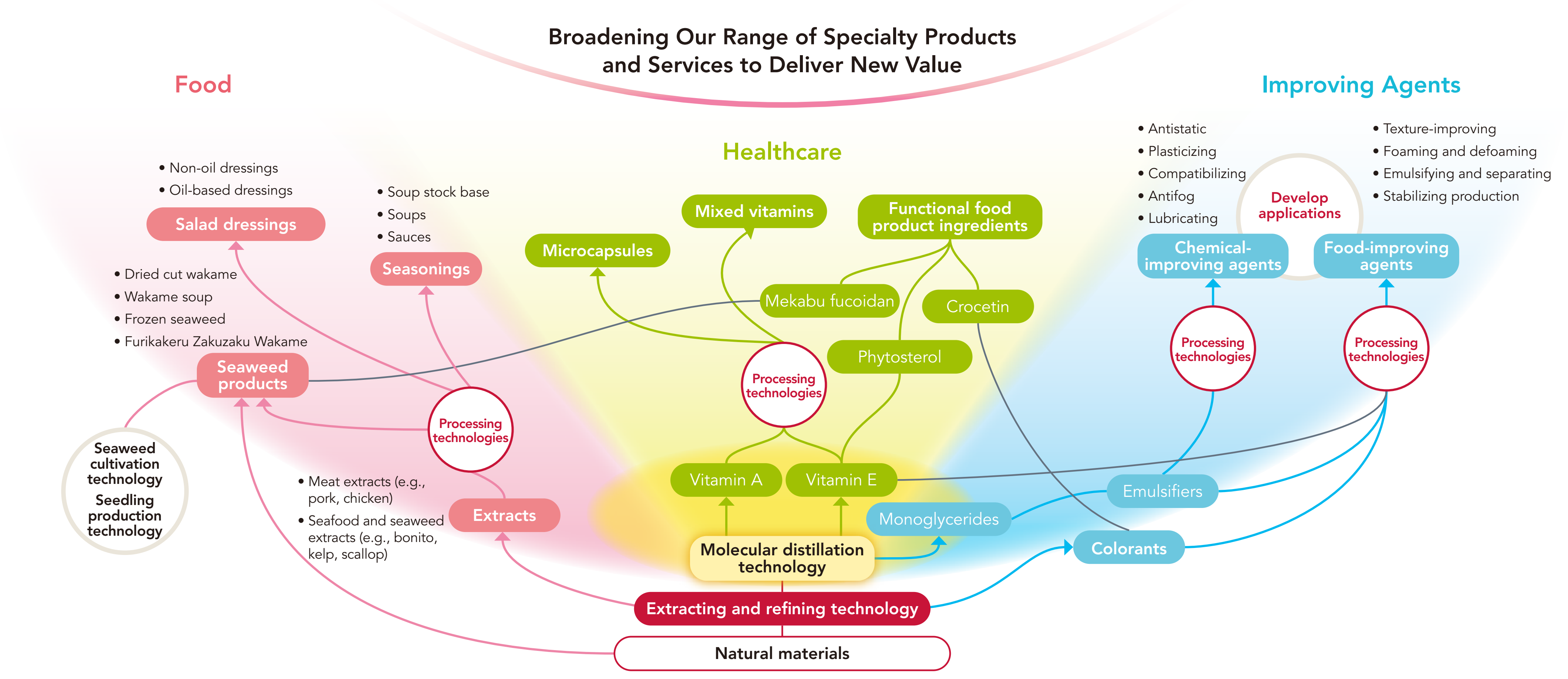
Compatibilizing Agents
Improving agents that compatibilize (i.e., make a uniform blend of) fillers like wood flour with plastics. These agents are used in items such as wood deck materials, where they improve the compatibility of resins and fillers, thereby enhancing product strength and durability.

For everyday health

Crovit (Crocetin)
A standardized ingredient for functional food containing crocetin, a healthy component found in gardenia fruit. Crocetin is reported to support sleep quality and eye focus.

Feature 2: Riken Vitamin's Technology

At Riken Vitamin, we leverage proprietary specialized technologies—including extraction and purification, molecular distillation, and processing—in diverse businesses spanning food, healthcare, and improving agents. Integrating these technologies to generate synergy that enhances added value enables us to develop products that meet new market needs. We will continue to build on the technologies we have developed over many years of business diversification, while developing new technologies to create new value.



Extracting and refining technology

Extract Useful Components

We make effective use of various components found in natural products as raw materials to create our diverse range of products.

Molecular distillation technology

Concentrate for Higher Purity

We isolate and recover specific components to improve quality and stability.

Processing technologies

Add Value

We can deliver in a range of forms—e.g., powder, solution, capsules—to meet a wide variety of needs.