

R&D-based approach to sustainable growth

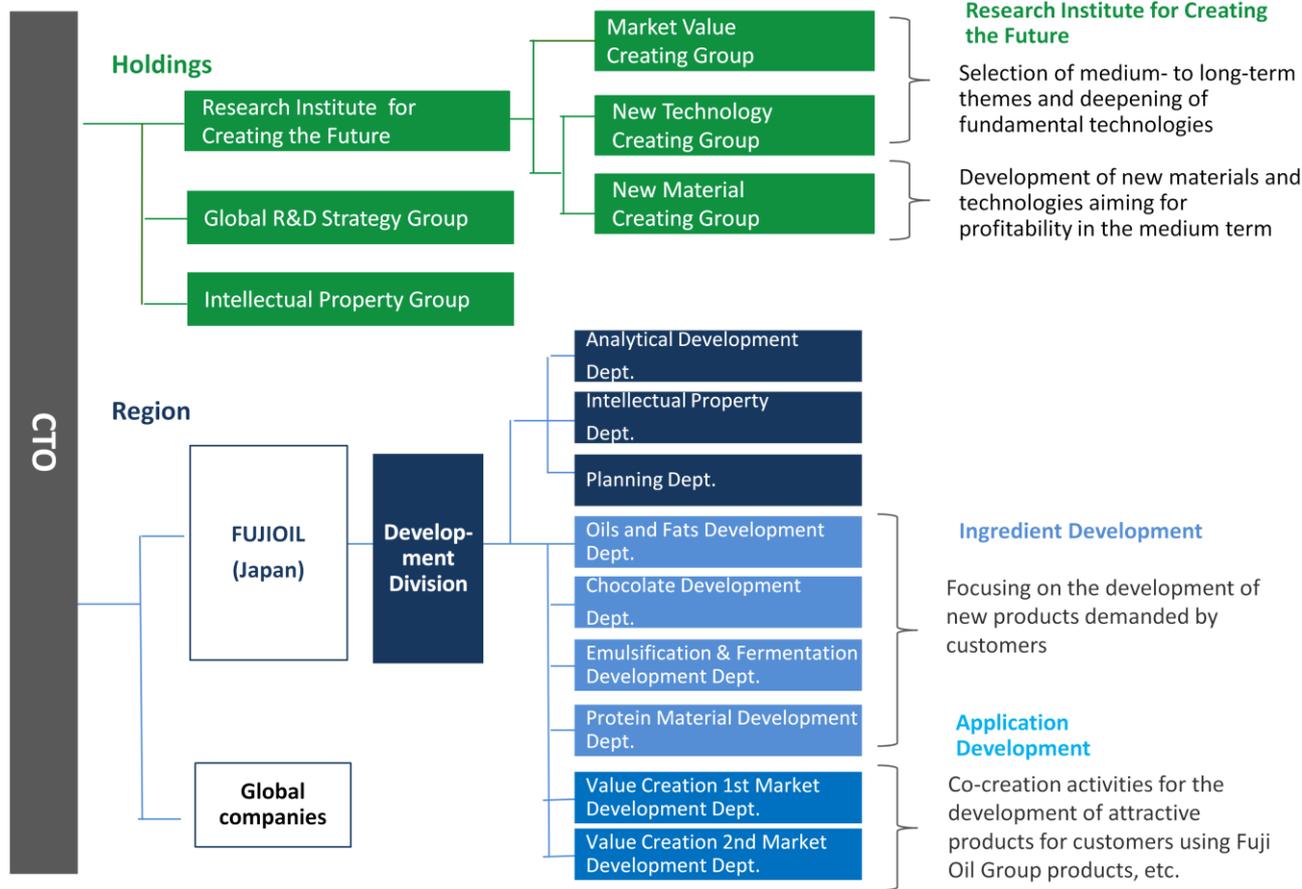
~Fuji Oil's Technology and Planting the Seeds for
Medium- and Long-Term Business~

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I will explain in the following four sections.

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1. Organization
 2. Competitive advantage supported by technology
 3. Approach to new business creation and sustainability
 4. Enhancement of human and intellectual capital for technology
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Organization



1. Organization

-The CTO oversees R&D: He is responsible for the Research Institute for Creating the Future, which is under the direct control of Holdings, as well as for Ingredient development in each business area, and manages R&D strategies for the entire group.

-The IP strategy is also important for global management. In addition to the organizations in each business area, we have a global intellectual property function within Holdings.

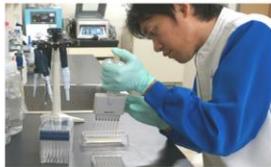
-The Research Institute for Creating the Future's mission is to promote management sustainability, which is a different perspective from that of Ingredient Development in each area.

-The Research Institute includes a group that aims to embed a marketing perspective in R&D, and is responsible for planning future visions and sustainable technologies for the Fuji Oil Group.

In addition, we are actively participating in academic institutions and global consortiums to develop advanced technologies to create new technologies that will be profitable in the future.

Technology management system: Collaboration with R&D functions

Research Institute for Creating the Future (Basic research)



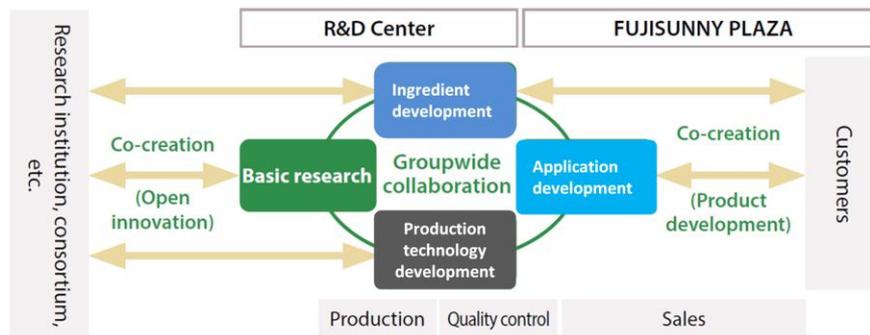
Ingredient development



Production technology development



Application development



-Ingredient development involves matching customers with ingredients, while application development involves co-creation with customers through proposal-based sales. The production engineering department is responsible for setting up factories and designing plants.

-The FUJISUNNY PLAZA, a place for co-creation with customers, is one of the characteristics of Fuji Oil's research and development. Currently, the FUJISUNNY PLAZA is located in Japan, Asia, and China, but we are considering establishing Fuji-Sunny Plazas and R&D bases in the United States and Europe in the future.

-The largest number of research personnel is located in Japan, followed by Asia and Oceania. As the human resources are allocated unevenly in Japan, we are planning to correct the situation in global areas.

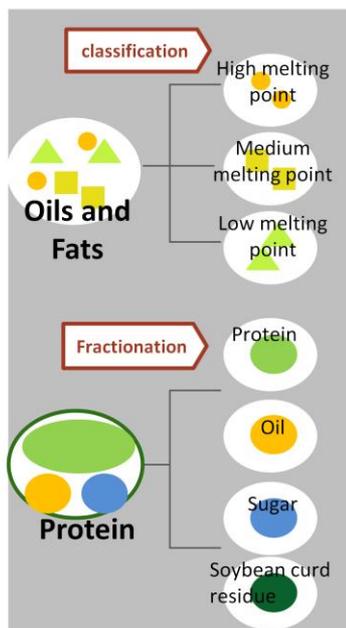
-Ingredient development and application development will expand the base of the current business model.

The Research Institute for Creating the Future will quantify and clarify future consumer needs based on the vision of society in 2030 and 2050. Then, by incorporating specific technological areas into our business, we will accumulate earnings through new business models.

Philosophy of technology : Divide, assemble, substitute

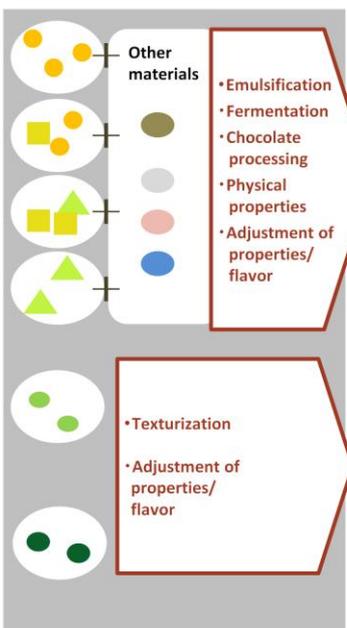


Divide

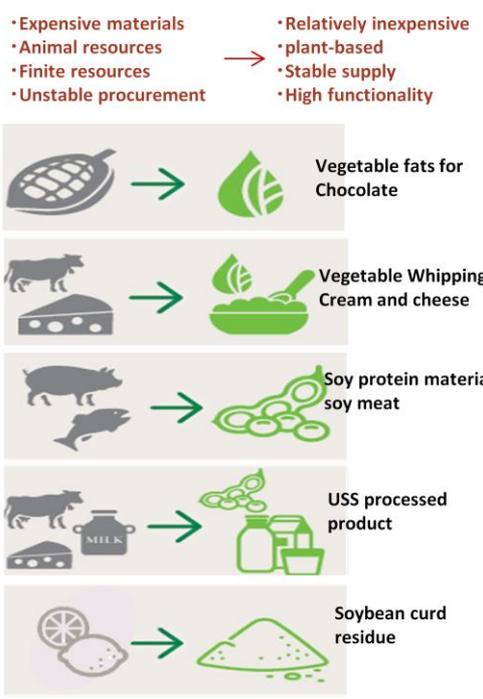


Highly effective utilization without waste
= the concept of upcycling

Assemble (readjust processing)



substitute



2. Competitive advantage supported by technology

-The philosophy of our technology is based on the following core points.

- Separate" the ingredients of food materials.
- To understand the characteristics of the separated ingredients, and to mix or combine them to "assemble" them.
- To add new values and functions through these processes.

-Another of our philosophies and values is to substitute existing products with new ones.

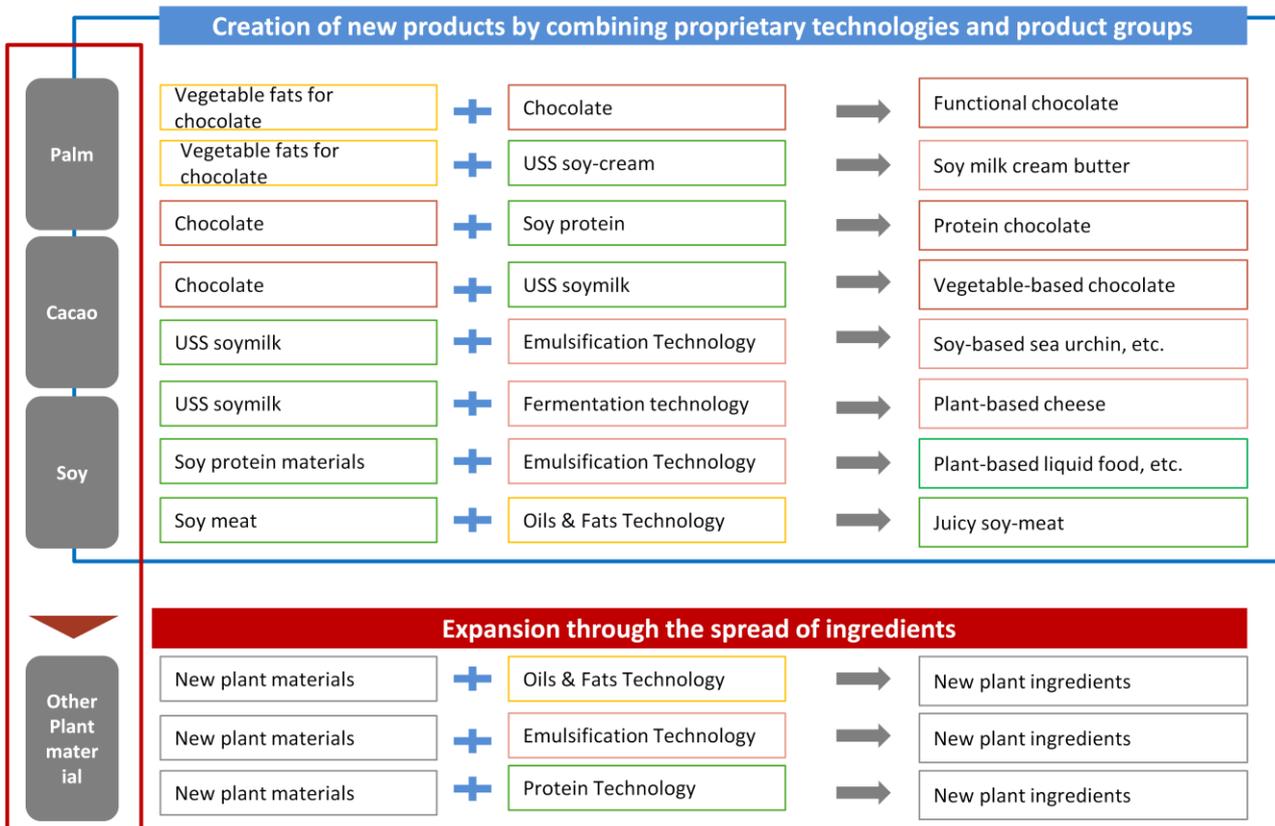
-We are proposing solutions using plant-based ingredients.

-We have been providing customers with deliciousness, functionality, novelty and stories, and consumers with food pleasure, deliciousness and health.

-In the future, we need to go even further and provide value to society. In other words, we will approach from the aspect of technological development how to respond to the uneven distribution of food resources and the use of plant-based materials to further reduce the environmental burden.

Advantage: Ability to create differentiated products that are difficult to imitate

Ability to create product groups that meet diversifying needs and issues to be resolved

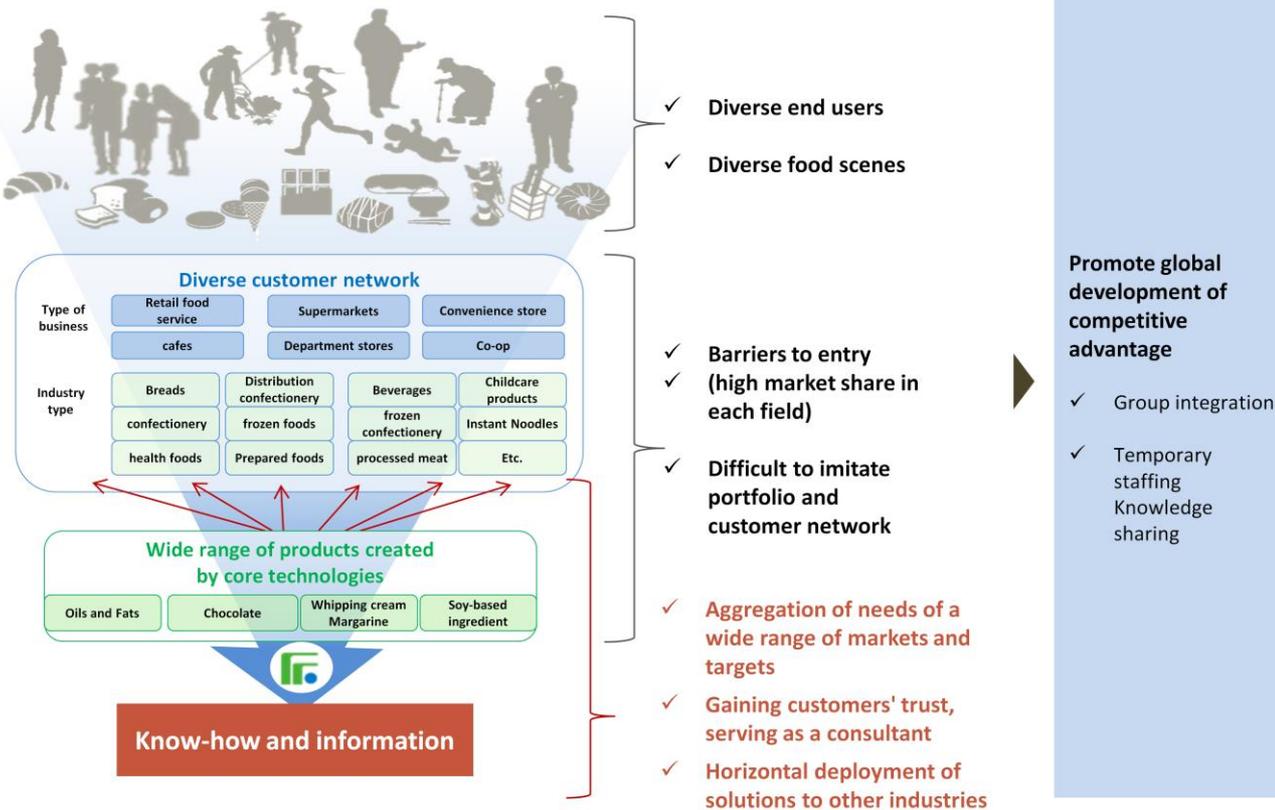


-One of the characteristics and advantages of our company is that we are able to create ingredients that meet diversifying needs by possessing and combining a variety of proprietary materials.

-In addition to palm, cocoa, and soybeans, we also conduct in-depth research on other leguminous plant materials, and the possibilities of materials that can be created by combining unique materials, technologies, and products are extremely wide.

Advantage: Development by leveraging portfolio

Competitive advantage of Fuji Oil (Japan)



-One of the characteristics of Fuji Oil's business model is that it has a mechanism for creating new technologies and materials through relationships and co-creation with customers.

Transformation: Enhancement of global network

- **Global R&D cannot be promoted without diversity.**
- **Diverse human resources with different values working toward a common goal**

TIEM Technical Information Exchange Meeting

A meeting of all R&D personnel in the same business worldwide for the following purposes

- **Sharing of technology and market information**
- **Sharing of information on new products and technologies**
- **Improvement of R&D employees' skills**
- **Improvement of communication among group companies**

R&D working team

Establishing a working team to address global research issues that are difficult for individual companies to solve, and working to speed up the resolution of these issues



4. Enhancement of human and intellectual capital for technology

-As part of our global expansion, we are focusing on expanding the Japanese technological capabilities we have accumulated in Japan to other business areas.

We are also working to share the needs of each business area and meet or incorporate them with Japanese technologies.

-To strengthen the Americas, we are promoting the development of global strategic products and the enhancement of human resources by improving the skills of local staff.

Transformation: Open Innovation

- Building industry-academia consortia with domestic and overseas research institutions, and participating in overseas consortia
- Aiming for innovation and new value creation

→Main theme categories

(1) Speed up new business: Acquisition of technology for PBFS

(2) Acquire technologies that we do not have: Upstream approaches to social issues such as climate change

Europe.....① ②

- Participation in Foodvalley NL



- Participation in Plant Protein in Cheese, an industry–government–academia consortium organized by NIZO



- Participation in PlantPROMISE, an industry–government–academia consortium organized by Wageningen University & Research



China.....① ②

- Joint research on delicious and healthy food with Huadong Hospital of Fudan University and Northeast Agricultural University

Japan.....① ②

- Invitations to university faculty members through a cross-appointment system with Ibaraki University
- Participation in OPERA (Program on Open Innovation Platform with Enterprises, Research Institute and Academia)



Southeast Asia and Oceania.....① ②

- Joint research with the Institute of Chemical and Engineering Sciences (ICES), a research institute in Singapore



- Joint research with CSIRO (Commonwealth Scientific and Industrial Research Organisation), a national research institute in Australia



Americas.....②

- Participation in Nutrition Capital and promotion of joint research and investment with startup companies



-We are focusing on human resource development through synergies with external organizations.

-We are accelerating open innovation, such as participation in consortiums and startup sourcing, from the perspective of how to get our technologies out of the country as quickly as possible and how to incorporate technologies from around the world as quickly as possible.

-We are also promoting human resource development by assigning human resources to these activities.

Change: Startup Sourcing

- Aiming to create the next generation food industry-

Same as P9

「Food Tech Studio」

- An initiative to create a new food business through Scrum Ventures.
- Creation of new businesses through co-creation by Japanese companies
 - +Accelerate global new business development
(Startup sourcing mainly in North America)

<https://www.foodtech.studio/>



 **FUJI OIL HOLDINGS INC.**

