



CTO
SECTION

Rapid Transformation of Our R&D in Anticipation of a Post-COVID-19 Society

At the Fuji Oil Group, we are proceeding with “the establishment of an R&D network conducive to a global company” and “the introduction of new technology and businesses that serve as the pillars of future growth” based on our awareness that these measures must be taken immediately in order to address our current state of business and the urgency with which we must respond to changes in society. In addition to changing our mindset to focus on our DNA of pursuing innovation, embracing challenges, and resolving social issues, we have been making steady progress on implementing a global collaborative framework.

Regarding “the establishment of an R&D network conducive to a global company,” we are energetically promoting the exchange of technology throughout the Group and are strengthening our teamwork with the regional leaders of R&D, with the aim of maximizing synergy in each region or business and enhancing profitability for the Group as a whole. In addition, 2021 will see the opening of Global Innovation Center Europe (GICE), the Group’s fourth R&D center. Through the promotion of open innovation with universities and the research groups of multinational companies, GICE will serve as a hub for identifying cutting-edge sustainable technologies as well as for creating new businesses.

As for “the introduction of new technology and businesses that serve as the pillars of future growth,” we have been working together with the Ingredient Development Division to commercialize and generate revenue from a technology developed by the Research Institute for Creating the Future that emulates the deliciousness and satisfaction afforded by animal-based foods through the power of plants. We are also working to identify the sectors that the Group should engage in, taking the view of our future society into account, and we will utilize such themes in our medium- to long-term strategies.

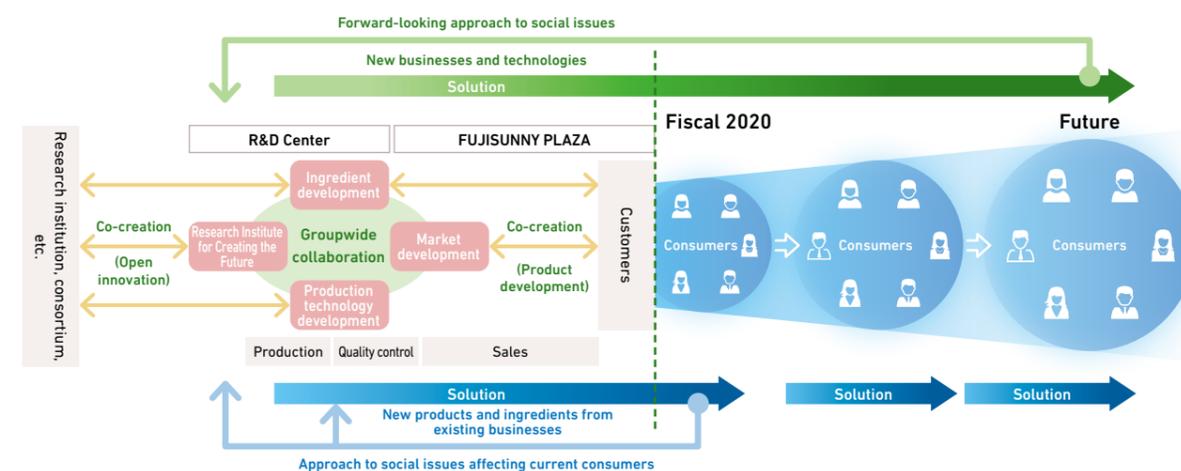
The COVID-19 pandemic, which has wreaked havoc across the globe, has fueled significant changes to consumer awareness and behavior. The rapidness of these changes has surpassed our expectations and, for that reason, the Group must step up the pace of its reforms in order to keep up with the rest of the world. These changes, however, are viewed as an opportunity to expand our business, and we will look to build an organization that can respond quickly to a wide spectrum of areas, ranging from the short term (increasing profitability of core businesses) to the long term (creating future technologies). We intend to continue to manage our business on the basis of technology. We endeavor to enhance our reforms in order to maximize the benefits produced through our differentiated technologies.

Haruyasu Kida

Haruyasu Kida
Senior Executive Officer
Chief Technology Officer (CTO)

Research and Development

Short-Term and Long-Term Approaches toward the Resolution of Social Issues



By approaching social issues from both short-term and long-term perspectives, we carry out research and development (R&D) aimed at the creation of new products, new technologies, and new businesses that deliver Plant-Based Food Solutions. Moreover, in a bid to promote technological innovation, we are stepping up our open innovation efforts with universities and research institutes in Japan and overseas, as well as co-creation with customers.

Fuji Oil is also stepping up its R&D through the close collaboration of its Research Institute for Creating the Future and its ingredient development, market development, and engineering development teams.

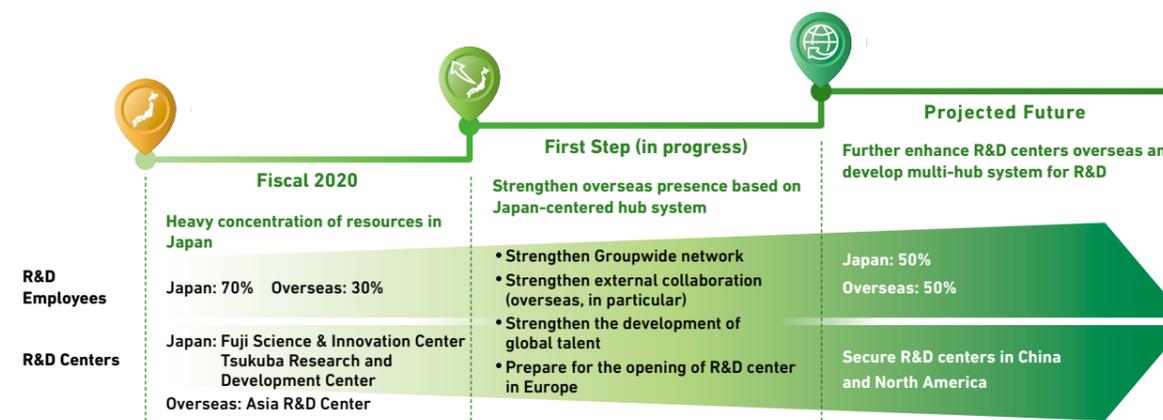
Forging an R&D Structure That Facilitates Group Growth

As society and industries undergo rapid changes to their structure on a global scale, companies are called on to contribute to the resolution of social issues, as exemplified by the realization of the SDGs. We will enhance the Group’s ability for collaborative creation with the goal of resolving such global issues. Specifically, our initiatives include the restructuring of our organization in Japan, the strengthening of our Groupwide network, and the emphasis on strong external ties. The most important of these is our overseas initiatives, which include the development of our first R&D center in Europe, participation in consortiums outside of Japan, collaboration with start-up companies based overseas, strengthening of the development of global talent, and other activities.

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1. Establishment of an R&D Network Conducive to a Global Company



① Resolving Issues through the Strengthening of the Group's Global R&D Network

Innovation is created when employees from various backgrounds who have different values work together toward a common goal. At the Fuji Oil Group, we share information on global issues and work to resolve them by holding Technical Information Exchange Meetings (TIEMs) on a regular basis and organizing R&D working teams for critical issues.

TIEM (Technical Information Exchange Meeting)

TIEMs are meetings that bring together R&D personnel working in similar businesses from around the world with the goal of sharing technology and market information, exchanging information on new products and technology, refining the skills of R&D staff, and improving communication between Group companies.

R&D Working Teams

R&D working teams engage in the swift resolution of global research-related issues that are difficult to resolve through the capabilities of a single company.

Efforts of the Working Team toward Quality Enhancements



VOICE of Representative

Mike Boalen

Fuji Vegetable Oil, Inc. Research and Development Chemist

We have assembled a cross-sectional team to resolve the issue of contaminants in oils and fats. With support from our colleagues at Palmaju Edible Oil in Malaysia, we successfully established new analytical methods. With this capability, we are exploring the implementation of mitigation strategies and timely analyses within our facility.

Our continued success depends on the ability of each Group company to collaborate as a team. We will actively engage in efforts to foster innovation so that we can continue to build solid relationships throughout the Group.

② Promoting Open Innovation and Developing Talent Worldwide Industry-Academia Collaboration Consortia

In an effort to gain further momentum to resolve social issues, the Fuji Oil Group actively promotes open innovation across the globe. We will develop industry-academia collaboration consortia with research institutions worldwide and participate in other consortia overseas with a view to promoting technological innovation.

Main Objectives of Open Innovation

- 1 Expedite the growth of new businesses: Acquisition of technology for PBFS, etc.
- 2 Acquire technology currently not in the Company portfolio: Exploring new technologies and ingredients attuned to the needs of the natural environment and the resolution of social issues



Opening of Fuji Oil Global Innovation Center Europe in Fiscal 2021



VOICE of Representative

Liz Kamei, Ph.D.

FUJI EUROPE AFRICA B.V. Director of Open Innovation & External Partnerships

Global Innovation Center Europe (GICE), the Group's first R&D center in Europe, located in Food Valley, the Netherlands, will begin operations in the second half of fiscal 2021, as a part of our efforts to firmly establish a global research structure. The Dutch Food Valley, a region where members of the food industry have converged, is designed to function as a global innovation hub for the gathering of information, the development of new technology, the exchange of technology with key clients, and other activities. Our participation in the activities of Food Valley will further support the Group's ongoing growth. Through such open innovation, we aim to create new value for the Fuji Oil Group and form win-win relationships with our business partners.

③ Promoting Study Abroad and Overseas Training Programs

Our R&D personnel are actively assigned overseas to study or receive training with the aim of gaining information from abroad, building a global network, and acquiring and cultivating their global perspectives.

Employees have been assigned to the University of Copenhagen (Denmark) and Wageningen University & Research (the Netherlands) thus far.

Global Perspectives Spurred by Studies Overseas



VOICE of Representative

Naoki Shirota

Fuji Oil Co., Ltd. Co-creation Technology Development Section New Technology Department

I studied abroad for 10 months at the Graduate School of the University of Copenhagen. During my first six months, I attended special courses on state-of-the-art dairy science and technology, while the latter half of my studies was focused on joint research on the theme of identifying metabolic pathways in lactic acid bacteria acting on plant-based protein. The paper I wrote on this topic after returning to Japan was published in *Food Chemistry*, an international food science journal. The experience I gained overseas has not only expanded my knowledge but has also strengthened my awareness of international trends, which in turn has enhanced my R&D capabilities.

2. Introduction of New Technology and Businesses That Serve as the Pillars of Future Growth

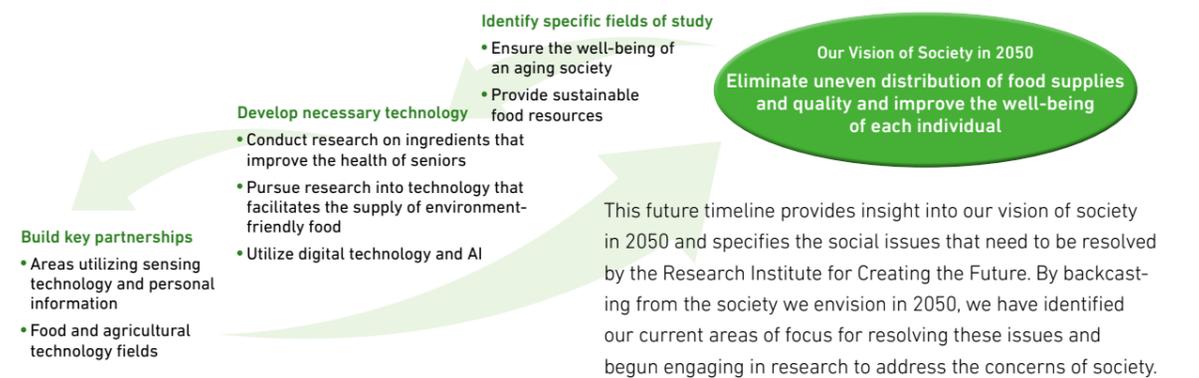


Akihiro Nakamura

Executive Officer Research Institute for Creating the Future

Our Ambitious Pursuit of Resolutions to Social Issues by 2050!

At the Research Institute for Creating the Future, we assess the issues associated with society, the environment, and humanity that will emerge in 2050 and engage in research themes that contribute to resolving the concerns of society. In fiscal 2021, Fuji Oil was reformed into an organization tasked with the missions of exploring sustainable food resources, creating new and delicious plant-based food ingredients and new technology, developing food ingredients that contribute to people's well-being, and verifying the social value of new technology based on *Kotozukuri* (creating movements). This past year, we developed and launched MIRACORE™, a technology brand that emulates the deliciousness and satisfaction afforded by animal-based foods in plant-based material. We plan to roll out this technology to food markets across the globe for use in Japanese, Western, Chinese, and Asian cuisine. In addition, we have been elevating the quality of our industry-academia collaboration initiatives by strengthening our partnerships with organizations outside the Group. We are also exploring the possibility of partnering with start-up companies overseas and creating synergy with the distinctive technologies of the Research Institute for Creating the Future, as well as incorporating AI into our R&D activities.



Participation in Food Tech Studio - Bites!

Speed and timing are of the utmost priority in R&D. Start-up companies overseas that actively incorporate digital transformation into their businesses are keenly aware of the needs of the times and update their business model accordingly. The Research Institute for Creating the Future is pushing forward with open innovation and has partnered with Food Tech Studio - Bites!, a global community of start-up companies operated by U.S.-based Scrum Ventures. By establishing partnerships with Japanese corporations and coordinating with start-up companies, we will develop new technologies together and build a new business model that adheres closely to the needs of each market.

