



### Nichirei Management Principles

#### Mission

### Focus on Lifestyles, and Provide True Satisfaction

#### Vision

Revised April 2019

We will continue to support good eating habits and health by leveraging our state-of-the-art manufacturing practices that optimize nature's bounty, along with our leading-edge logistics services.

#### **Guiding Principles**

- 1. Prioritize customers, safety, and quality
- 2. Ethical operations
- 3. Transparent management
- 4. Sustainable communities
- 5. Value creation

#### **Brand Slogan**

### **Creating Savory Moments**

#### Basic CSR Policy

#### The Nichirei Pledge - Working to Make Our Communities More Sustainable -

As a group of companies that provide value in the fields of food and health, the Nichirei Group strives to help communities solve the issues they face while creating new value for customers through its business activities. The Group gives full consideration to the economic, social, and environmental impact of its endeavors, and publicly discloses the details of its businesses to its stakeholders, in order to gain their understanding and promote further dialogue.

#### Create new value for customers

We strive to create new products and services, while helping customers and communities solve various issues through our business activities.

### Provide safe products and services

We ensure that everything we offer our customers is characterized by high quality and safety.

### Maintain a sustainable supply chain

We work to ensure that our supply chain is sustainable.

#### Reduce environmental impact

We strive to reduce the environmental impact of our operations, while giving full consideration to their potential effects on the global environment.

## Foster cooperative relations with communities

As a responsible corporate citizen, we foster close cooperation with local communities in the interests of the public good.

#### Continually enhance our workplaces

While promoting respect for the diversity of our employees, we continuously improve the workplace environment to enable every employee to make the most of his or her abilities and work with enthusiasm.

#### Support good corporate governance

We employ highly transparent, fair management practices, while ensuring that resources are properly allocated and management decisions are made in a timely manner.

#### Ensure strict compliance

We maintain high ethical standards, while complying with the laws and social norms of each country in which the Nichirei Group operates.

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#### **Editorial Policy**

The Nichirei Group considers the Nichirei Group Integrated Report 2020 to be an important tool for communicating with shareholders, investors and all of our stakeholders. We aim to communicate financial information, non-financial information and business strategies in an easily understandable way in order to facilitate a systematic understanding of Nichirei's corporate value and ideal state.

We hope readers also develop an understanding with regard to our efforts toward achieving sustainable growth, enhancing corporate value and resolving social issues through our business activities.

Amounts and percentages are rounded off.

#### Notes about Future Prospects

Statements in this report pertaining to future business performance and so on consist of rational judgments based on currently available information and contain a degree of uncertainty. Actual business performance may differ due to a variety of factors in the future.

#### Reporting Companies

Nichirei Corporation and its consolidated subsidiaries in Japan and overseas (As of March 31, 2020)

#### Reporting Period

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April 1, 2019 - March 31, 2020 (Some information from outside of this period is included)

#### Referenced Guidelines

- · GRI Standards
- · IIRC (International Integrated Reporting Council)
- · TCFD (Task Force on Climate-related Financial Disclosures)

September 2020 Issue Date

# Nichirei's History

Nichirei was established to provide a safe and reliable supply of food products during the postwar era, when food shortages were a serious problem. It has steadily grown while developing a variety of businesses to support Japan's dietary habits.

We will continue to support good eating habits and health by leveraging our state-of-the-art manufacturing practices that optimize nature's bounty, along with our leading-edge logistics services.

1940s to 1950s

1960s to 1970s

1980s to 1990s

Expanded business based on refrigeration

Established Nichirei brand

Group's history

1942

Established Teikoku Marine Products Control Company



Established Nippon Reizo Inc. as a private company



Changed company name to Nichirei

1946 Launched sales of Reika ice candy



Launched sales of frozen tempura set

1954

Launched sales of frozen chawan-mushi (savory egg custard) Cooked frozen foods pioneer

Launched at-sea exportation of marine products

1956

Launched meat and poultry business

1956

Provided frozen food to Antarctic expedition team



1960

Established Kamagaya Laboratory for research on agricultural and livestock products (establishment of a rotating poultry house)



Expanded into the biotechnology field



Created acerola drink, currently sold by SUNTORY **FOODS LIMITED** 

Developed long-distance frozen cargo vehicles

Created logistics network, contributing to "cold chain plan" spearheaded by



1970

Created Terrace Nichirei cafeteria for the Japan World Exposition (Osaka)



1988

Launched logistics business in Europe



Fishery company regulations, established marine products business and ice-making, cold storage and freezing business



#### 1964

Contributed to the Tokyo Olympic Games Provided large amounts of various frozen foods in the Olympic village



#### 1974

Launched Green Belt brand frozen family



Trends in Net Sales

Net Sales

#### 2000s to present

Creating new customer value Aiming for further growth

#### 2000

#### Enhanced quality assurance system

Enhanced management system and quality assurance in the wake of problems with agricultural chemicals residue in China-produced frozen vegetables and other issues

#### 2005

2008

Converted to a holding company structure

Established directly managed poultry farm

Started raising Junwakei chickens in Hirono Town.

#### • Establishment of the Nichirei Group Human Rights Policy

- Revision of the Nichirei Management Principles and Formulation of Long-term Management Goals toward 2030
- Revised remuneration system for Directors (excluding Outside Directors) and Executive Officers Revision of the Basic Policy on Corporate Governance (Revisions to capital policy and other protocols and adjustments to maximum terms of office for Outside Audit & Supervisory Board Members)
- Certified as a Sports Yell Company and a Tokyo Sports Promotion Company in FY2020
   Selected for the 2020 Health & Productivity Stock Selection

1 9 Character Launched transfer center operation

#### 1994

Launched sales of Shin-Renji-Seikatsu, one of the first microwaveable frozen food products



Launched sales of frozen food Honkaku-Itame Cha-Han (fried rice) for home use



Established fully integrated plant for

processed chicken products in Thailand

Constructed high-performance large refrigerated warehouses Introduced a seismic isolation system and other industry-leading technologies

#### 2019

Established bioscience business base for research, development and production



Global Innovation Center

Launched logistics business in



Full-scale operation of food plant optimal production and personnel planning automated formulation system



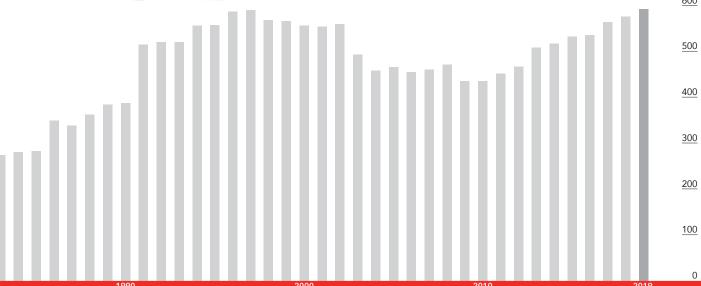
### 2019

Held a briefing session for recruiting of joint research and co-creation partners

### 2019

Support for victims and regions damaged by typhoon No. 19 in 2019

(Billions of yen) 600



### **Business Overview**

#### **Group Overall**

Note: Fiscal years (FY) indicate years ended March 31.

The Nichirei Group is expanding its business initiatives in areas, including marine, meat and poultry products; bioscience; and real estate. Its main focus, however, is on processed foods and logistics.

Each of the companies under the holding company—responsible for overall Group strategy—aims to create new value for customers through the flexible conduct of business and by planning to raise corporate value over the medium-to-long term.

#### Net Sales Distribution Ratio\* Operating Profit Distribution Ratio\* FY2020 FY2020 Processed Foods Processed Foods 37.4% 34.1% 52.9% 38.7% Net sales Operating profit Real Estate billion yen billion ven 0.8 % Marine, Meat and Poultry Marine, Meat and Poultry Others Products Products Real Estate 0.9% 25.5% 6.3% (Marine Products 10.9 %, Meat and Poultry Products 14.6 %) (Marine Products 1.4%, Meat and Poultry Products 2.9%) Others-0.9 %

#### **Processed Foods**

Note: Fiscal years (FY) indicate years ended March 31.

#### Description of Business

By intimately following the way people live, we contribute to the realization of a healthy and abundant society through food that is characterized by

seven basic values: healthy; enjoyable to eat; simple and convenient to prepare; delicious; safe; readily available; reasonably priced.

We will continue to refine our distinctive abilities and create superb value through frozen foods, retort pouch foods and wellness foods, in order to become the most trusted food company in the world.



in Japan

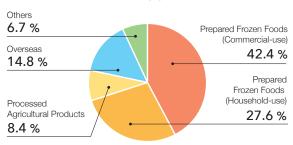


#### Sales Ranking of Frozen Foods Manufacturers

Ranking	Company	Net sales (billions of yen)
1	Nichirei	229.6
2	Ajinomoto	211.2
3	Nippon Suisan	193.4
4	Maruha-Nichiro	179.8
5	TableMark	108.0

Source: From a July 12, 2019 article in the Reishoku Nippo, which is published by Shokuhin Sangyo Shimbunsha Co., Ltd.

### Breakdown of Sales in the Processed Foods Business\*



\* Does not include eliminations within subsegments.

<sup>\*</sup> Monetary amounts and percentages have been rounded

#### Logistics

#### Description of Business

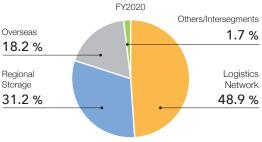
We are the largest domestic temperature-controlled logistics group. Our business comprises a logistics network, focused on transportation and delivery; a regional storage business responsible for our refrigerated warehouses functions; an overseas business section that handles operations in Europe, China, Thailand and Malaysia; and engineering services, which are responsible for matters from temperature-controlled logistics facility planning and design to maintenance management.

Throughout our supply chain, we provide high-quality service, including transportation and delivery, storage and processing.

All parts of our supply chain are linked by an advanced logistics information system to the design, construction and maintenance of logistics centers.



#### Breakdown of Sales in the Logistics Business\*



\* Does not include eliminations within subsegments

#### Top Company Ranking in Terms of Cold Storage Capacity

Top 5 Companies in Japan

Ranking	Company/Group Name	Capacity (thousands of tons)	Share (%)
1	Nichirei Logistics Group	1,490	10
2	Yokohama Reito	880	6
3	Maruha-Nichiro	660	4
4	Toyo Suisan	540	4
5	Chilled & Frozen Logistics Holdings	500	3

Note: As of April 2019 Source: Compiled by Nichirei based on Japan Association of Refrigerated Warehouses documents

#### Top Ten Companies Worldwide

in Japan

worldwide

Ranking	Company/Group Name (t	housands of ton	Main Countries s) of Business
1	Lineage Logistics	17,040	USA, etc.
2	Americold Logistics	13,120	USA, etc.
3	United States Cold Storage	4,210	USA, etc.
4	AGRO Merchants Group, LLC	3,100	USA, etc.
5	NewCold Advanced Cold Logistic	s 2,200	Netherlands, etc.
6	Nichirei Logistics Group	2,160	Japan, etc.
7	Kloosterboer	1,940	Netherlands, etc.
8	VersaCold Logistics Services	1,390	Canada
9	Interstate Warehousing, Inc.	1,310	USA
10	Frialsa Frigorificos	1,200	Mexico

Note: As of April 2020

Source: Compiled by Nichirei based on International Association of Refrigerated Warehouses document "Global Top 25 List"

#### Marine, Meat and Poultry Products

#### **Description of Business**

We promote the development of premium marine, meat and poultry products by utilizing our global procurement abilities and emphasizing freshness, deliciousness, safety, security, health and eco-friendliness. We also keep sustainability in mind, paying attention to resources and the environment while aiming to create better value for consumers.





#### **Bioscience**

#### **Description of Business**

We provide high-quality products and services in order to contribute to the physical and mental health of as many people as possible through biotechnology and we are highly engaged in the cell biotechnology field and the functional material field that utilizes the Nichirei Group's material procurement capabilities.



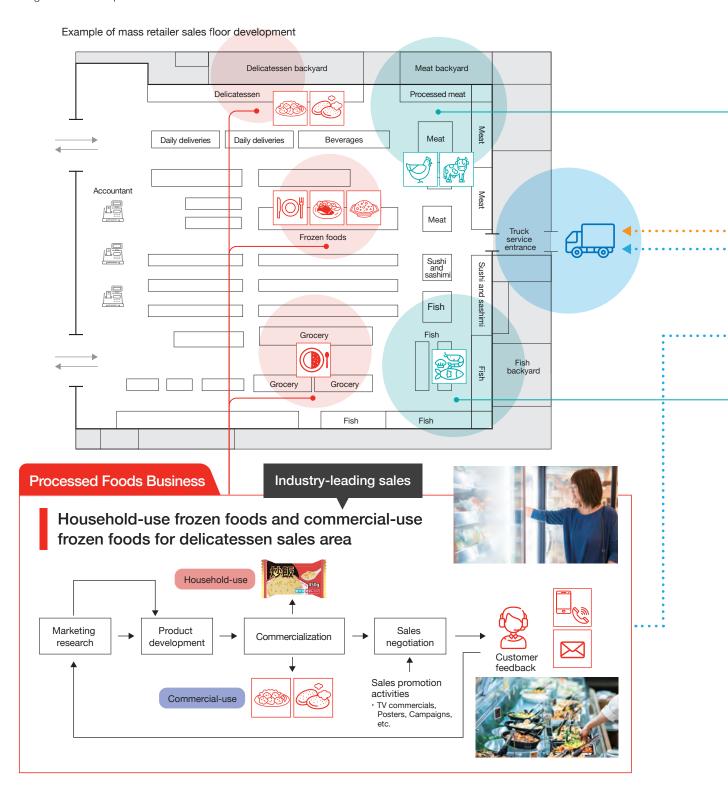
#### **Real Estate**

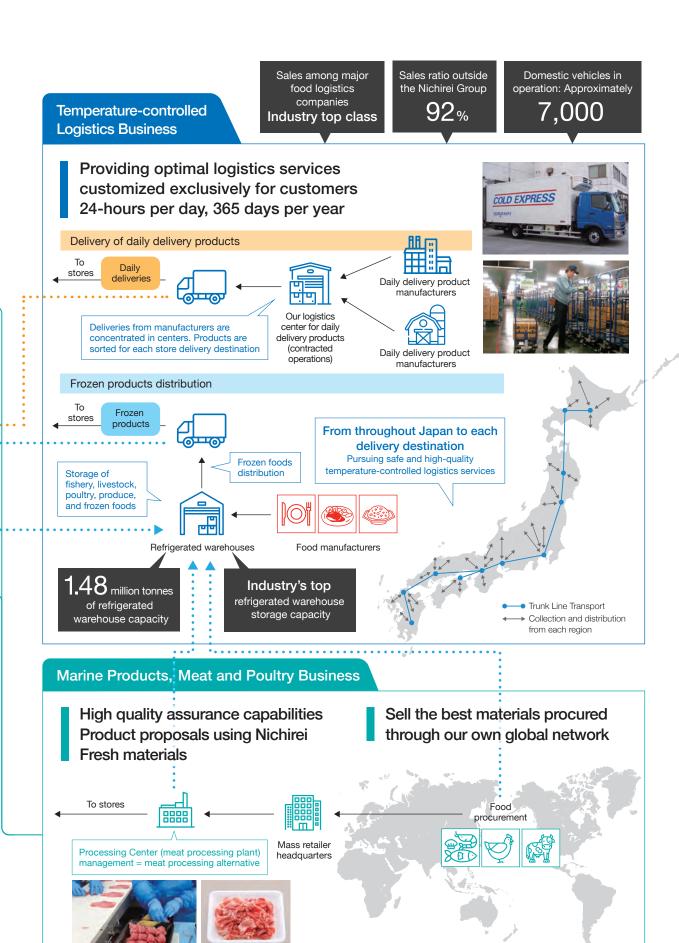
We rent and manage office building space to make the most of company-owned land.

# Nichirei Group Comprehensive Capabilities in Mass Retailers

In addition to providing household-use and commercial-use frozen foods and raw materials for fisheries, livestock, and poultry, Nichirei mainly focuses on business areas that support eating habits, such as temperature-controlled logistics, which handles the storage and delivery of foods.

For mass retailers, who constitute our main customers, we provide products to various sales floors, such as fresh foods, delicatessen and frozen foods, while enhancing efforts throughout the Group, such as conducting store delivery operations by region, in an effort to build long-term relationships of trust.







# Resolving Social Issues, Eyeing Further Growth

On December 1, 2020, we will celebrate Nichirei's 75th anniversary. And as I recall now, when I was appointed president, I announced our aim to be a Company that continues to do business for the next 100 years.

In fiscal 2020, we formulated what might be called a milestone in terms of long-term management goals toward 2030, and launched the new medium-term business plan WeWill 2021. We have identified materiality for realizing our vision for 2030, and have begun formulating measures and KPIs that need to be reflected in the next medium-term business plan.

Nichirei Group business activities involve a wide range of food which, by its very nature, brings with it a great social responsibility that forms a strong connection between the sustainable growth of the Company and the realization of a sustainable society. For this reason, the Nichirei Group will incorporate in its management strategy such approaches as will link business activities with the resolution of social issues.

As we face society and take on challenges without fear of failure, we shall continue to support people's good eating habits over the long term.

### Kenya Okushi

Representative Director, President Nichirei Corporation

Note: Coined word "WeWill" is the theme of Nichirei's present medium-term business plan. It represents plan initiatives and our strong intention to create our own future.

#### Results and Issues in the First Year of WeWill 2021

In the food industry, lifestyle changes continue to drive the externalization of food. Although the ready-made meal market has expanded, factors such as soaring labor, distribution, and raw material costs have caused increasingly severe hikes in expenses. In the area of food distribution, as labor shortages become more prominent, efforts to develop technologies and introduce equipment to save labor are accelerating.

Amid these conditions, in the first year of the medium-term business plan WeWill 2021, the Nichirei Group is working on measures, focused on our core businesses, that are aimed at realizing the creation of new value to support good eating habits and health.

In the processed foods business, enhanced sales promotion efforts, including television commercials broadcast throughout the fiscal year, resulted in favorable sales of cooked rice and processed chicken products, which are the mainstay categories of household-use frozen food.

In the logistics business, we were able to absorb cost increases stemming from labor shortages and other issues by improving operational efficiency and charging appropriately, while at the same time the amount of goods handled increased.

As a result, with the core processed foods and logistics businesses driving Group performance, net sales reached ¥584.9 billion, up 0.8 % year on year. By the same comparison, operating profit rose 5.2 % to ¥31.0 billion, while ordinary profit increased 6.4 % to ¥31.8 billion.

Loss on retirement of fixed assets due to equipment upgrades and increased removal costs resulted in a 1.7 % year-on-year decline to ¥19.6 billion in the profit attributable to owners of the parent.

With regard to capital investment, as demand was stronger than expected in our main business, we were unable to suspend production, and we had to postpone equipment upgrades due to high levels of operation at production plants. Bearing in mind the importance to our growth of capital investment, we will reorganize our plan for such outlays in fiscal 2021.

In addition, while we recognize that expanding overseas business is important, we also acknowledge that, as a result, business alliances and M&A may be affected by negotiations with partner companies, and so shall make the necessary adjustments to our plans starting in the second year of WeWill 2021.

### COVID-19 Brings a New Perspective

The social and economic environment has been undergoing drastic changes, due to the spread of the COVID-19 virus since March 2020. The Group has set up a countermeasures headquarters, as it places the highest priority on the health and safety of our employees and, in line with our social responsibility, is continuing its business activities to help prevent food shortages.

Demand for home-cooked and ready-made meals has increased as consumers refrain from dining out to avoid infection, although demand for commercial-use products in the food service industry has decreased significantly. We thus will continue to promote business that prioritizes the health and safety of our employees and respond as appropriate to customers facing difficulties.

In addition, I believe that what we eat is changing, and will become even more varied after COVID-19. Rather than simply going back to the way things were, markets will be created that are different from anything we have known up to now. And should some players create their own markets, that would be a chance to generate new business opportunities.

In such an environment, it is important to acquire the macro information necessary for management decisions, as well as to understand the micro changes perceived by those working in the field, and quickly to incorporate both in our business activities.

With the transition made to telework during the COVID-19 pandemic, I have come to realize the significant potential of communication tools. I am confident that it will become easier to exchange information in real time, while sharing information and collaborating with a sense of urgency will lead to the rapid delivery of new and abundant dietary items.

The spread of the pandemic also has provided us with an opportunity to reassess risks. Assuming disasters such as massive earthquakes and recent typhoons and heavy rains to be risks that hinder business continuity, we created business continuity plans (BCP) in recognition of the need to respond to each scenario. Also clear is the need to develop measures to counter infectious diseases such as COVID-19.

Based on recent experience, the Group will improve its BCP so as to be ready in the event of an outbreak of another infectious disease. It is important to anticipate change and adequately estimate risks when planning, ahead of new threats requiring us to employ a BCP.

### Creating New Customer Value

In the second year of WeWill 2021, the focus will be on creating systems and mechanisms to provide new value that will become the foundation of Group growth.

In 2017, Nichirei set up a body within its Strategic Planning department tasked with creating new business by exploring business models not bound by existing business areas or ways of thinking.

As a next step, we have begun to develop an innovation management system (IMS), in accordance with ISO 56002, intended to verify and evaluate the creation of a wider variety of businesses. The existing Business Innovation Group merged with the Technology Management Department, which oversees IMS, enabling them to work together.

With the new system in place, the Nichirei Group will be better able to discover and nurture new businesses from a long-term perspective. The system will increase our opportunities to utilize and support good ideas, focus our efforts on meeting challenges, and increase the accuracy of commercialization.



### **Identifying Materiality**

In June 2020, the Nichirei Group identified five material matters for implementing a management strategy that captures business opportunities and risks in order to achieve the long-term management goals sought by 2030.

Creating value in food and health

#### Nichirei Group Materiality

Strengthening food processing and production technology capabilities; enhancing logistics services

Realizing sustainable food procurement and resources recycling Climate change initiatives

Securing and developing a diverse array of human resources

The Nichirei Group, being in the food provision business, is intimately connected to society. We recognize that our business activities affect the lives of our stakeholders and society, and that we thus have tremendous social responsibility. This is the reason we believe that building relationships of trust with our stakeholders is essential and so, in 2017, we formulated our CSR basic policy, The Nichirei Pledge: Working to Make Our Communities More Sustainable.

Our purpose is to realize a sustainable society and the sustainable development of the Company. To ensure the links between business activities and the resolution of social issues are firm, we have determined it necessary to identify material matters and incorporate them into our business strategy.

All officers, including outside directors, participate in the identification process. We position business opportunities and risks as being proactive or reactive, and identify material matters from both perspectives. For proactive material matters, we provided all office holders with a questionnaire summarizing "social needs" and "affinity with business and willingness to execute." From this we created a rough draft.

Throughout this process, I realized that, as we resolve social issues, the Company will grow. While we can imagine growth in some areas, we are also aware of the potentially negative impact on corporate value of maintaining the status quo. However, I believe the successful management of negative issues can render them an opportunity to enhance corporate value.

Outside officers with insights in various fields have expressed opinions based on diverse values. One officer even asked: "In terms of resource recycling, can the business of food provision be described as stable and secure?"

We spent a considerable amount of time narrowing down our rough draft of proactive and reactive material matters. In our discussions, we were guided by our mission, vision, and the Nichirei Pledge, as well as all the resulting efforts and achievements. This is where I thought Nichirei truly distinguished itself.

We engaged in dialogues with experts concerning the rough draft, and the frank opinions expressed resulted in new perspectives, ideas, and advice that was incorporated into the draft.

One of the material matters we identified is climate change initiatives. The impact of climate change on the Group is significant, as we handle food products that are blessings of nature while, at the same time, the energy consumed by our logistics and food manufacturing activities impacts the environment.

Based on recommendations made by the Task Force on Climate-related Financial Disclosures (TCFD), the Group conducted scenario analyses and established Group environmental targets and measures aimed at reducing CO<sub>2</sub> emissions.

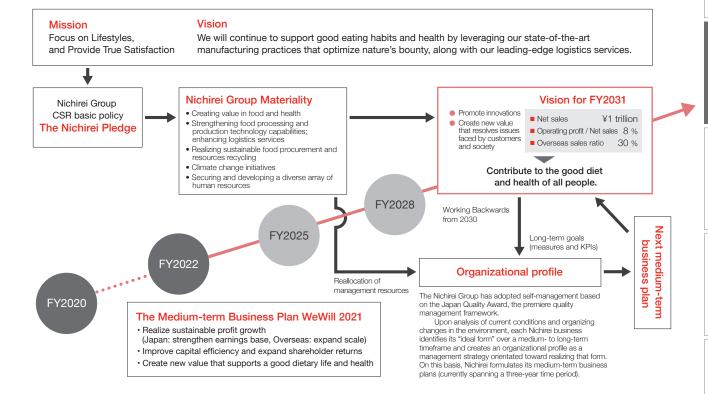
In June 2020, we announced our support for TCFD recommendations and participation in the TCFD Consortium, steadily intending to promote climate change-related initiatives.

Further, we will proactively respond to food loss, which is becoming a social issue. As a food manufacturer, we have already taken appropriate measures to dispose of waste at the production stage, and are making progress in reducing the amount of waste generated.

In future, we will focus efforts on measures including the creation of ideal supply chains to "Realize sustainable food procurement and resources recycling," one of our material matters.

The first action we can take as a Group is to design products and services. We will consider what can be done with existing products, as well as incorporate environmental considerations into the design of new products and services.

Further, we can achieve differentiation by creating something with added value that is unique to Nichirei. Creating products in this way can lead to initiatives by other supply chain companies, such as food suppliers and logistics companies. In the near future, I would like to proactively exchange opinions with related companies and take a series of steps aimed at reducing food loss.



### Vision for 2030—and the Next 100 Years

Human resources are the key to the Group's goal of creating new value and resolving environmental and social issues. When systems and mechanisms are created, it is the employees who use and apply them. Thus, it is essential to provide an environment in which each employee can devote themselves to their work with a sense of purpose. At the same time, we will continue to promote work style reforms and formulate Group goals (measures and KPIs) so that employees can take the initiative in tackling the five material matters.

This presents the Company with an opportunity to create measures under a major theme and so, together with Group companies, we are currently considering how Nichirei's unique aspects might be expressed in 2030. Rather than relying on existing processes and measures, I believe my role is to drive measures that are not merely extensions of current business activities.

This year, Nichirei celebrates its 75th anniversary; the year is also the centenary of the birth of frozen food in Japan. A hundred years ago, the value of frozen food lay in the fact that it could be delivered far away from its source without sacrificing quality.

Today, we not only guarantee quality, but also make it possible to put an abundance of food on dining tables in a limited amount of time, while at the same time supporting human health and healthy lifestyles. In order for Nichirei to continue supporting people's good eating habits over the long term, we must respond flexibly and quickly to changes in consumer demand and society.

Nichirei, as an organization driven by the independent actions of each employee, creates new customer value, conducts business activities, and helps resolve social issues.

# Nichirei Group Materiality Determination Process

In June 2020, Nichirei identified five material matters fitting its concept of materiality through which it would realize its vision regarding long-term management goals for 2030. All officers, including outside directors, participated in the process.

Viewing rising expectations for the realization of a sustainable society as a business opportunity, Nichirei will work with stakeholders to resolve social issues and enhance corporate value. To do so, we will continue to formulate goals (measures and KPIs) that link Group strategies and business strategies.

We will leverage our strengths as we develop business in fields that support good eating habits and health and work on the following five material matters.

Material matters	Group ideal mode
Creating value in food and health	Create new markets and customer value by taking on challenges outside existing business areas in both food and health
Strengthening food processing and production technology capabilities; enhancing logistics services	Further refine core competencies in food processing, production and logistics to resolve social issues and improve profitability through competitive advantages in global markets
Realizing sustainable food procurement and resources recycling	Resolving various social issues related to the supply chain, which is the foundation of our business, and contribute to sustainable food procurement and the realization of a recycling-based society
Climate change initiatives	As a food and logistics company that is greatly affected by climate change, we will work with stakeholders to counter global warming and reduce energy consumption throughout the supply chain
Securing and developing diverse human resources	Secure and develop a diverse array of human resources and foster an inclusive corporate culture to achieve sustainable growth

Nichirei will cultivate new business areas through innovation, further develop its core processed food and logistics businesses, and strengthen material procurement, which is essential if the supply of commercial products is to be stable.

Because we have designated initiatives related to climate change as being material matters, we have endorsed the Task Force on Climate-related Financial Disclosures (TCFD) and will apply this framework to our activities. In addition, to promote these efforts we will incorporate and implement specific measures to develop a personnel system and corporate culture that allow a range of human resources to play an active role.

#### Examination System

With the representative director and president responsible for execution, two projects involving materiality and climate change scenarios were implemented simultaneously between September 2019 and June 2020. We conducted repeated examinations while linking information from both parties.

The project to formulate the materiality was led by the executive officer who is the general manager of Strategic Planning, and was examined by members of the Board of Directors and all corporate officers, including executive officers.

The climate change scenario examination project was led by the executive officer who is the director, and who serves as the managing director in charge of the environment. This was done according to advice from experts and the framework recommended by the TCFD. The reviews themselves were conducted mainly with Technology Management staffers in charge of the environment, as well as each Group company's Strategic Planning department and the managers undertaking environment-related activities.

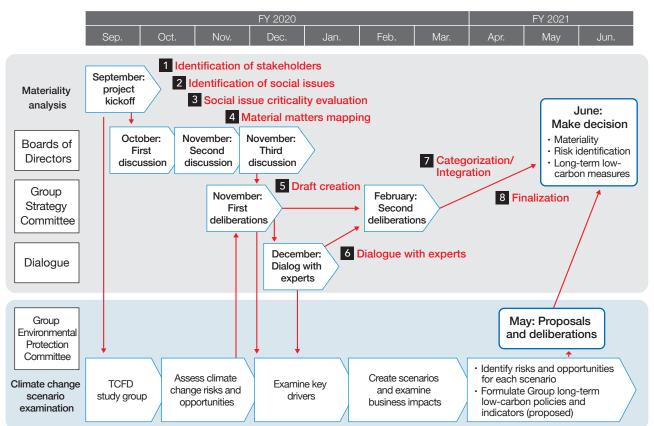


Climate changes

Relationship between Materiality and

#### Examination Schedule

Materiality Formulation and Climate Change Scenario Examination Project Grand Schedule



### Nichirei Group Materiality Determination Process

#### 1 Identifying stakeholders

Since our business domain is food provision, we are aware of our tremendous social responsibility, being involved, as we are, with many stakeholders and impacting their lives and society at large. For this reason, we have identified stakeholders based on the size of their demand and the degree of impact we have on society.

#### 2 Identifying social issues (risks and opportunities)

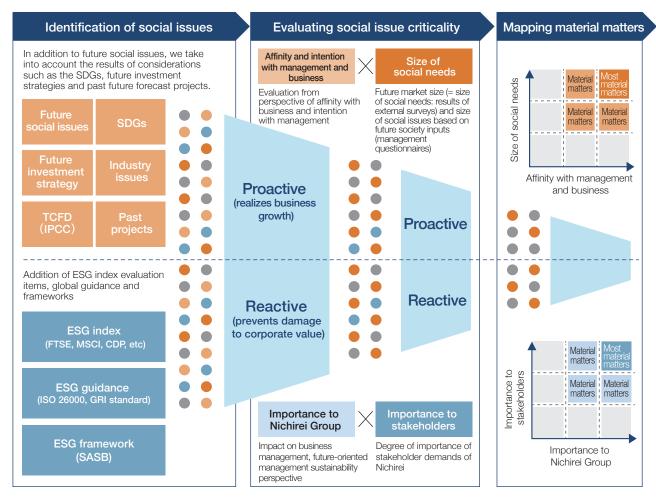
After pinpointing our stakeholders, we have identified social issues from future and global perspectives.

#### 3 Evaluating social issue criticality

We then evaluated the importance of those social issues, based on the fact that proactive measures result in business growth, and reactive ones prevent corporate value from being damaged.

#### 4 Mapping material matters

We mapped material matters that would require proactive and reactive steps to be taken and, in November 2019, held initial deliberations on the details of mapping during the Nichirei Group Strategy Committee meeting, at which we usually discuss overall management strategies.



References: United Nations Global Compact, United Nations Guidelines for Business and Human Rights, OECD Guidelines for Multinational Enterprises, ILO, Japan SDGs Action Plan 2019/2020, Ministry of Economy, Trade and Industry, TCFD Guidance, Society 5.0, etc.

#### 5 Creating drafts

We created separate drafts for those issues that would require a proactive or reactive approach.

#### 6 Dialog with experts

In December 2019, outside experts evaluated the validity of the drafts under consideration and exchanged opinions with Company corporate officers, including the president.

■ Experts

#### Keisuke Takegahara

Development Bank of Japan Inc. Executive Officer, Deputy Chief Research Officer,

Chief Manager of Sustainability Management Office, Corporate Planning & Coordination Department

Hidemi Tomita Lloyd's Register Japan K.K.

#### Yumiko Murakami

Organisation for Economic Co-operation and Development (OECD) Head, Tokyo Center

■ Nichirei Group (Nichirei Corporation)

#### Kunio Otani

#### Kenya Okushi

Takumi Taguchi Director, Executive Officer, in charge of Nichirei Group planning and management

#### Yoshifumi Kaneko Junji Kawasaki

Director, Executive Officer:

Representative Director, President, Nichirei Fresh Inc.

Director, Executive Officer, in charge of Nichirei Group technology management and quality assurance

members

Representative Director, Chairman Representative Director, President

#### Masato Takenaga

Executive Officer Representative Director, President,

#### Kazunori Miki (facilitator)

#### Masahiko Takenaga

Director, Executive Officer; Representative Director, President, Nichirei Foods Inc.

Director, Executive Officer; Representative Director, President, Nichirei Logistics Group Inc.

Kazuhiko Umezawa

#### Nichirei Biosciences Inc.

Executive Officer General Manager, Strategic Planning

#### Opinions of outside experts

#### I Granularity of future measures

· Efforts should be made, for example, to reduce CO2 emissions and switch to natural refrigerants to make developmental leaps part of a long-term strategy.

#### Timeline to 2030

- · Perspectives should be divided into two groups: new management-related goals and the means by which they are to be achieved.
- · A way should be devised to apply global standards, such as by using responsible business conduct as a guideline.

#### Sustainability

- Sustainable food production is linked to climate change response (CO2 reduction) through expanding agricultural productivity.
- In maintaining temperature-controlled logistics, RE100 may be difficult. One should be aware of any linkage among target items.
- · Since the food business is a high-risk industry, risks should be broken down in a way that is tied to particular areas of business.

#### Distinctive aspects of Nichirei

- The Company would benefit were its distinctive features put in a visual format. In addition to its processed foods, these features would include important issues related to temperature-controlled logistics, marine items, as well as meat and poultry products.
- Given that the company is a cold chain leader, one should be able to demonstrate distinctive aspects of Nichirei's temperaturecontrolled logistics within the TCFD framework. One might consider sending out a message regarding CFC issues.



#### I Quality assurance

- Quality and safety could be made the most important management issues.
- · This is currently a basic proactive item. However, should new risks arise, quality assurance could be positioned as a proactive risk factor needed to strengthen quality control.

#### **I** Ethics

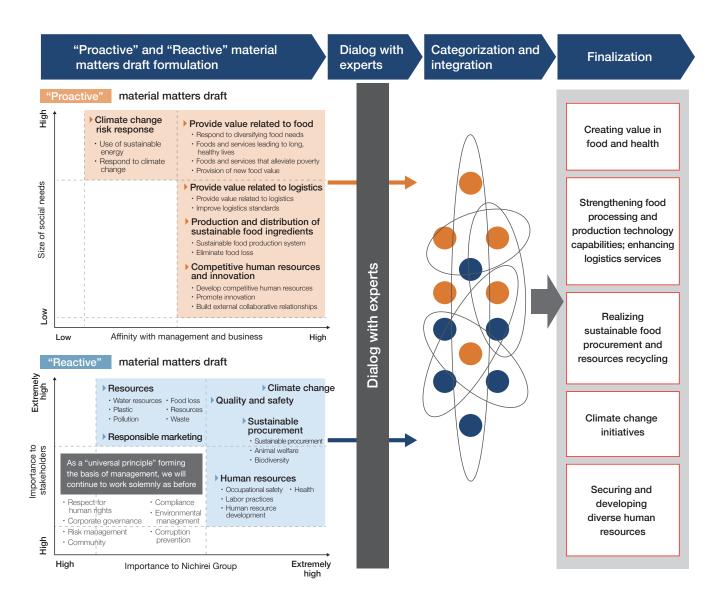
- There are still few Japanese companies making significant efforts in business ethics, which fact could lead to a competitive advantage for Nichirei.
- An ethical angle is missing in marketing. We should convey the message that Nichirei products are delicious and ethical by world standards.



### Nichirei Group Materiality Determination Process

- 7 Integration and narrowing-down
  - Based on opinions received from experts, we integrated and narrowed down material matters as proactive or reactive.
- 8 Finalizing the draft

In February 2020, at the second Group Strategy Committee meeting, after repeated deliberation on both the validity evaluation by experts and opinions on distinctive Nichirei features, agreement resulted in a draft containing five material matters



#### Designation of Materiality

In June 2020, five material matters were designated by the Board of Directors chaired by the Representative Director, Chairman. Nichirei has set long-term Group goals for climate change initiatives, and will continue to consider long-term goals (measures and KPIs) for the other four material matters.

We are discussing the five material matters with Group companies and will incorporate them into each of their business strategies through the formulation of an organizational profile.

### Ideas Inherent in the Materiality

Material matter	Ideas inherent in the materiality
Creating value in food and health	In Japan—which constitutes Nichirei's main market—changes are expected in the future, including reduced consumption reflecting the population decline, diversifying consumer needs, and the personalization of food and medical care. For the Group to continue growing in this environment, while building on the core areas of food and health, Nichirei will promote innovation and create new markets and customer value without being bound by the framework of existing businesses.
Strengthening food processing and production technology capabilities; enhancing logistics services	Expectations for frozen foods and temperature-controlled logistics are increasing in terms of meeting diversifying food industry needs and resolving new social issues. Through the utilization of new technologies such as AI, IoT and autonomous driving, we will realize our core competence of enhancing food processing and production technologies, and advancing logistics services, to establish a solid position in Japan and global markets.
Realizing sustainable food procurement and resources recycling	Sustainable food procurement efforts that take into consideration the environment and human rights are the foundation of our business, and are directly linked to the provision of customer value and to Group growth. This will also lead to the realization of a recycling-oriented society that circulates resources as much as possible, and to the strengthening of comprehensive business continuity management.
Climate change initiatives	While the entire planet is required to take measures to prevent global warming, as a food and logistics company greatly affected by climate change, Nichirei will accelerate efforts to reduce greenhouse gas emissions by setting long-term environmental targets. We aim to reduce CO <sub>2</sub> emissions 30% by 2030 compared with 2015 levels.
Securing and developing diverse human resources	Human resources are the Group's most important management resource. In addition to respecting human rights, fair labor practices and ensuring health and safety, which are standard, Nichirei will promote the creation of workplace environments in which human resources with diverse backgrounds can work. We will also develop an organizational culture in which employees can demonstrate their creativity through the development of human resource systems and the development of skills that will lead to the creation of new value and the resolution of social issues.

# Climate Change Initiatives

#### **Supporting TCFD Recommendations**



The effects of climate change are becoming increasingly serious and being blamed for frequent abnormal weather patterns and natural disasters. Together, these factors are impacting the food supply chain, on which is based the value provided by the Nichirei Group.

We recognize the importance of appropriately responding to risks posed by shifts in the external environment caused by climate change. On top of that, we are considering and preparing multiple scenarios in order to turn climate change into a business opportunity.

To this end, we are assessing climate change scenarios put forward by the Task Force on Climate-related Financial Disclosures (TCFD), created by the Financial Stability Board (FSB), an international body that monitors and makes recommendations about the global financial system.

As a result, the measures we introduce are based on four aspects of the recommended framework: governance, strategy, risk management, and metrics and targets. By conducting appropriate disclosures of associated information, we hope to continue building a constructive dialogue with our stakeholders.

It is in line with these ideas and because we support its recommendations that, in June 2020, we announced our participation in the TCFD Consortium.

#### Governance

In October 2019, we began analyzing climate change scenarios as an interdepartmental Group project, headed by the Representative Director, President. Since Director, Executive Officer is responsible for implementing climate change strategy, he leads the project and teams up with environmental personnel and joint project members from the Strategic Planning department of both the holding company and Group companies to discuss and evaluate risks and opportunities with reference to the United Nations Intergovernmental Panel on Climate Change's (IPCC's) Fifth Assessment Report (AR5, the climate change scenario currently in effect) and the Special Report on Global Warming of 1.5°C.

Through these activities, we identified the most important associated risks and opportunities based primarily on advice from outside experts.

In May this year, the Group Environmental Protection Committee, which reviews environmental policies and action plans, made proposals and conducted discussions concerning risks and corresponding countermeasures.

The committee's decisions were subsequently approved by the Board of Directors in June and are reflected in our current management strategy. The Group views climate change initiatives as one of the material matters in the achievement of its vision for long-term management goals toward 2030.

In future, the director-cum-executive officer in charge will report at least once a year on the progress of the initiatives at Board of Directors' meetings. Relevant strategies, goals, and plans will be revised as appropriate on the basis of the reports.

#### **Project Organization**

Project head

Representative Director,
President

Project for the establishment of materiality



Project for the analysis of climate change scenarios

Leader: Directors, Executive Officer
Responsible department: Technology Management

#### Departments participating in the project

- Technology Management, Nichirei Corporation
- Group Communication, Nichirei Corporation
- Strategic Planning, Nichirei Foods Inc.
- Strategic Planning, Nichirei Logistics Group Inc.
- · Strategic Planning, Nichirei Fresh Inc.
- Strategic Planning, Nichirei Biosciences Inc.

#### Strategy

Worldwide, the Nichirei Group is developing a range of food-centered businesses that it expects will be impacted by climate change. Based on recent baseline scenario analyses of how climate change might affect our business activities, we hope to achieve a greater understanding of the risks and opportunities that lie ahead and thus to incorporate appropriate responses into our management strategy based on the following activities.

#### 1 Selecting Scenarios for Analysis; Developing a World View

This involves assessing the impact of climate-related risks and opportunities under the baseline (3-4°C)1 and the 1.5°C scenarios.2

Baseline Scenario (Key Risks)	1.5°C Scenario (Socioeconomic Transition)
Storm surges; coastal flooding and rising sea levels; flashfloods; abnormal weather patterns; extreme heat; torrential rainfall; drought; water shortages; and deterioration in marine and terrestrial ecosystems	Decarbonization of energy; reduction of CO <sub>2</sub> emissions in demand sectors; spreading electrification of technologies; achievement of zero real emissions by 2050; particular focus on CO <sub>2</sub> as a greenhouse gas; increase in renewable energy-related investment; proper balance between sustainable development and the environment; and the implementation of decarbonizing technologies

Notes: 1. IPCC AR5: Physical risks 2. IPCC Special Report on Global Warming of 1.5 °C: Transition risks

#### 2 Assessment of Risk and Opportunity Materiality

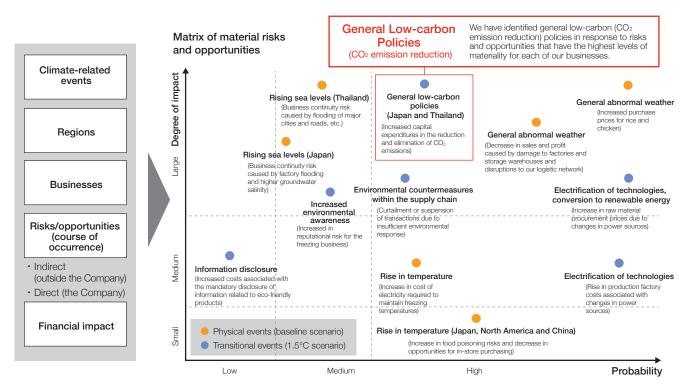
The risks and opportunities associated with each scenario are identified and their materiality is evaluated based on their potential impact<sup>1</sup> (on sales in each business) and probability<sup>2</sup> (the likelihood that a risk-bearing, climate-related event will occur).

Notes: 1. Degree of impact: This metric assesses the financial impact of businesses that are expected to incur impact from climate-related events.

2. Probability: In cases of physical risks, such as natural disasters, this metric assesses frequency of occurrence. In cases of transition risk, it measures the anticipated degree of risk.

### 3 Identification of Material Risks and Opportunities

Based on assessments of materiality, material risks and opportunities associated with each business are selected, and from among them those with a particularly large financial impact are identified as risks and opportunities facing the entire Nichirei Group.



### Climate Change Initiatives

#### 4 Material Risks and Opportunities by Business

Business		Risks		
	Chicken	senario	General abnormal weather	Reduction of agricultural and dairy production, and steep rise in purchase prices due to deterioration in quality
	Rice		Wodallo.	Difficulty in obtaining raw materials and production delays due to logistic network disruptions
ess	Shrimp	Baseline s	Baseline scenario	Reductions in production efficiency and volume and submerged aquafarms
Foods Business	Vegetables, marine products, and meat and poultry products	Flo risii	Flooding, rising sea levels	Submerged agriculture farms, aquafarms and processing factories     Difficulty in obtaining raw materials and production delays due to supply chain disruptions
	Common	1.5°C scenario	Low-carbon policies	Increased cost for measures for converting to renewable energy and equipment electrification, elimination of emissions
			Environmental countermeasures within the supply chain	Curtailment of transactions; higher cost of measures such as the maintenance of global certifications
Logistics		scenario	General abnormal	Damage to refrigerated warehouses and logistics centers
		Baseline scenario	weather	Difficulty securing human resources in disaster risk areas
		1.5°C scenario	Low-carbon policies	Opportunity loss caused by the slow increase of investment in natural refrigerants and the slow adoption of technological platforms such as electrical and low-carbon vehicles

Business	Opportunity			
	Baseline scenario	Changes in weather patterns	Increased demand for frozen and processed foods	
Foods Business	1.5°C scenario	Strengthening of environmental countermeasures within our supply chain	Increase demand for ethical products that are compliant with the SEDEX platform and are created using globally certified raw materials	
			Increase demand for the curtailment of food loss within the supply chain through the development of eco-friendly products and technological development	
		Increased environmental awareness	Develop and expand demand for products created using sustainable raw materials	
Logistics	Baseline scenario	General abnormal weather	Increase in sales thanks to customer base expansion achieved through strengthened disaster countermeasures and resilience	
	ario	ario	Modal shift	Cost reduction achieved through a modal shift that improves transportation efficiency
	1.5°C scenario	Increased environmental awareness	Increase in number of business partners due to higher evaluations as a company that actively discloses information related to environmental countermeasures	

Bioscience business is characteristically resistant to impact from climate change-related events. Accordingly, we have not currently identified any material factors in our bioscience business.

#### 5 Impact of a Future Carbon Tax

We estimate that, through 2030, baseline emissions will present an approximate total carbon tax burden of between ¥10.5 billion and ¥13.0 billion, for an annual average of between some ¥1.7 billion and ¥2.2 billion.

We expect that, by achieving our Group CO<sub>2</sub> emission reduction targets (decrease of 30 % from FY2016 levels by 2030), we can reduce this burden to between about ¥6.7 billion and ¥8.3 billion, down approximately ¥3.7–4.7 billion from the baseline level.

#### Estimated Group Carbon Tax Burden and Amount of Reduction (average during 2025–2030 and cumulative total)

(Billions of ven

			· (Billions or you)
	Burden (baseline)	Burden (upon achievement	Reduction of burden achieved upon fulfillment of emission reduction targets
	, ,	of emission reduction targets)	Compared to baseline
Cumulative total	Approximately 10.5-13.0	Approximately 6.7–8.3	Approximately 3.7-4.7
Average (2025–2030)	Approximately 1.7-2.2	Approximately 1.1–1.4	Approximately 0.6-0.8

Note: Carbon tax assumption: Estimated as 100 yen / dollar, assuming \$ 30 / t-CO<sub>2</sub> in 2025, \$ 75-100 / t-CO<sub>2</sub> in 2030, and assuming a fixed amount increase each year from 2026 to 2029.

#### Risk Management

Nichirei is a global operator of food-related businesses. Accordingly, we ensure that appropriate divisions manage the impact of a variety of risks (including climate change-related risks encountered through business activities) on business management, while adopting a holistic perspective and employing both rational and optimal methods.

The risks are also discussed and reviewed by the Group Risk Management Committee, which is chaired by the Representative Director, President.

We believe that risks associated with climate change scenarios are major and impact the entire Company. Thus, the Group Environmental Protection Committee, chaired by the Representative Director, President, reviews both physical and transition risks twice a year, based on information gleaned from relevant reports and experts' advice.

In addition, at least once a year the committee will review the Board of Directors' report produced by directors responsible for environmental management.

#### Indicators and Targets

We implement the following three measures to reflect our low-carbon policies, which constitute one of the Group's long-term environmental targets associated with the most significant risks identified by climate change scenarios.

#### Related press release

 $\\ \textcircled{$h$ https://www.nichirei.co.jp/sites/default/files/inline-images/english/ir/pdf\_file/news/20200624\_1e.pdf } \\$ 

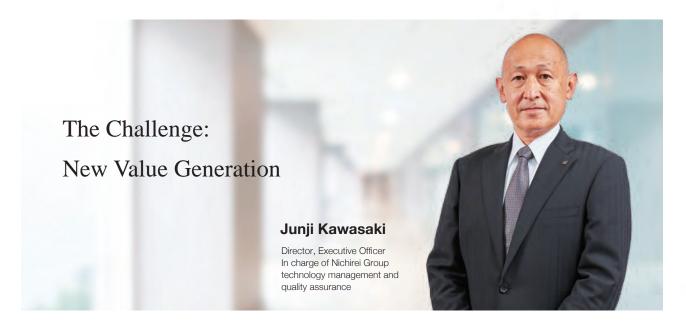
#### Nichirei Group Low-carbon Policies

Having endorsed TCFD recommendations, the Nichirei Group is promoting the following low-carbon policies.

Pillar of Low-carbon Policy	Overview	Target Scope
The establishment of long-term CO <sub>2</sub> reduction goals	• 30% reduction in CO <sub>2</sub> emissions (compared to fiscal 2016) in Japan, Scope 1 and 2 in 2030	Japan Scope 1 and 2
The promotion of CO <sub>2</sub> reduction countermeasures overseas	<ul> <li>Promote data collection and other efforts at overseas worksites</li> <li>Review and promote CO<sub>2</sub> reduction countermeasures at overseas worksites</li> </ul>	Overseas Scope 1 and 2
The promotion of CO <sub>2</sub> reduction countermeasures within Scope 3	<ul> <li>Promote data collection and other efforts within Scope 3</li> <li>Review and promote CO<sub>2</sub> reduction countermeasures within Scope 3</li> </ul>	Scope 3
Effective period: FY2022–2031 (10 years)		

Nichirei Group Integrated Report 2020

# **Creating Innovation**



Innovation is essential if we are to create new value and, by 2030, achieve the vision of our long-term management goals. As food and health become ever more important concerns and the need for Group-wide promotion of new value becomes increasingly evident, we have begun to create a mechanism with that in mind.

#### Company Innovation

The Group's long-term management goals formulated in FY2020 state that, "the Company will promote innovation to create new value that solves the problems of customers and society." Another of our goals is to achieve net sales of ¥1 trillion by 2030.

Enter into the picture COVID-19. The pandemic has significantly changed the world, the previously commonplace is gone, and the creation of new value is more necessary than ever.

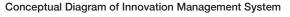
Nichirei believes that innovation is not limited to be innovative, but includes combining existing knowledge and resources to create new economic and social value. This can be achieved by transforming our core business model and creating new business opportunities.

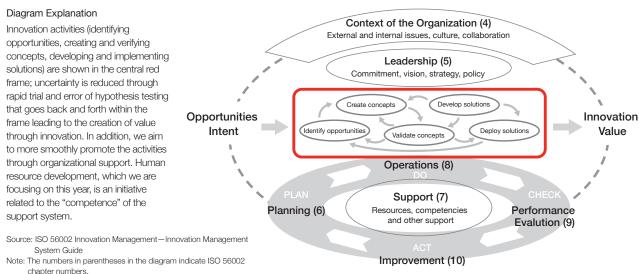
When it comes to realizing our long-term management goals, the one of the material matters is the creation of new markets and customer value by taking on challenges that don't adhere to our existing food- and health-related business areas.

#### **Producing New Value**

While the Nichirei Group already has taken on many challenges, we recognize the difficulty of continuing to do so in these times of uncertainty. We thus decided to discuss, with those in charge at the time, how in the past they had dealt with obstacles.

Over the course of nearly three months, we asked some 50 people about close to 40 challenges they had handled. We learned that, although these people had tried to generate ideas and take on challenges, they had tended to rush through their paces in order to achieve results quickly, rather than take a medium- to long-term approach. Further, the Company had not supported or nurtured their efforts.





It became clear that innovation is not achieved by one specific and capable individual. Rather, it is realized by all the Group's employees who, as ideas are generated, will pull together to support the taking on of challenges, resulting in greater innovation.

To this end, we must create a Company culture that fosters and nurtures challenges.

The mechanism currently being developed is based on ISO 56002, the 2019 internationally validated guideline for how to set up an innovation management system (IMS). We now are creating a Nichirei-specific IMS to reflect the Group's distinctive features.

The aim of our IMS is to provide organizational support for nimble trial and error attempts to cultivate ideas, from conception to fruition. The mechanism has two special features.

Regarding the first special feature, it is through the development of human resources that we aim to inculcate a shared awareness and understanding of innovation. At present, we are conducting workshops on how to use the Business Model Canvas (BMC), a tool for game changers that helps design thinking.

We expect that using the BMC strategic management building blocks as a common language will facilitate smooth communication among those engaged in innovating and those who support them, thereby enabling the entire Group to promote innovation activities.

Some 200 employees have attended BMC-related workshops to date, and our goal is to have 80 % of our employees participate in these over the coming five years.

The second special feature is the development of infrastructure to collect and refine ideas. We plan to stimulate innovation by encouraging new ideas and innovative techniques, refining and evaluating them for all involved to see.

### Future Developments

Societal issues related to food and health—including food loss, a super-aged society, and problems resulting from natural disasters—are diverse and complex. For this reason, we wish to make the best use of Nichirei resources and work together with our stakeholders, other companies (including ones in other industries), universities, and research institutes.

In the face of the major changes that society is undergoing, we believe that it is up to us to propose, from perspectives unique to Nichirei, the adoption of values that the world and consumers are demanding.

As innovation efforts are not quick to bear fruit, we plan to allow a little more time before the IMS currently being developed is used to establish a culture that will enable the entire Nichirei Group to create new value.

### Value Creation Process

#### External environment Input (source of **Business Model** (risks and opportunities) competitive advantage •:Opportunities ■:Risks Realize mission and vision Financial Capital Climate Change Demand for eco-friendly ¥390 billion ■ Total assets products and services ■ Equity ratio 47.3 % Resolution of social issues ■ Warming may cause Free cash flow (before dividend) changes in regions where ¥15.1 billion raw ingredients are produced Manufactured Capital ■ Increased cost of warming Creation of countermeasures new value ■ Production Factories 24 domestic factories, six overseas Supply Chain Management Storage Warehouse Capacity Demand for food traceability Utilization of collective abilities 1,480 thousand tons domestically, Demand for sustainable 550 thousand tons overseas raw ingredients Processed Foods ■ Cost of creating a Intellectual Capital sustainable supply chain Marine, Meat and ■ Response to plastic-related Production expertise **Poultry Products** ■ Technological strengths in cooking and processing Food Waste Logistics expertise Demand for frozen foods ■ Brand strength Demand for food supply adjustment function by Human Capital cold storage Most advanced Number of Employees Group-wide temperature-15.824 Health-consciousness controlled logistics Expert human resources in Japan Demand for health-con- Average employment longevity scious products (males) 17.0 years (females) 15.3 years Demand for food and medical care that is Product and Social and optimized for individuals Diverse human Relationship Capital development resources Decrease in Japan's capabilities ■ Sales network Population Logistics network Demand for simple and ■ Donations to social causes convenient food products (FY2019) ¥310 million resulting from changes in Financial household composition soundness Natural Capital Demand for new foods and services that address labor Global procurement network shortages for agricultural, meat and poultry and marine products ■ Lack of human resources and passing down technology and know-how Stakeholder

engagement

Innovation

Temperature-controlled

Logistics

Bioscience

Top share in

frozen foods

in Japan

Global

ingredient

procurement

Corporate Governance

Quality

assurance

ability

■ Shrinking markets caused

by changing demographics

<sup>\*</sup> Fiscal years (FY) indicate years ended March 31.

### Output

#### The Medium-term Business Plan **WeWill 2021**

Business strategy	Maximally leverage	rity measures overall Group o w customer val		
	Targets	FY2020	results	
		Processed Food	ds ▶ P. 35	
ategy	Expand existing businesses, create	Temperature-cor Logistics	htrolled ▶ P. 37	
	new growth drivers	Marine, Meat ar Poultry Product		
		Bioscience	▶ P. 41	
Investment strategy	Priority measures Allocate resources to achieve sustainable growth			
nt s	Target		FY2020 results	
trate	Total Group investmen	27,287million		
egy	Proactive capital investment to enhance competitiveness		▶ P. 31	
	Strengthen initiatives fra long-term perspective	▶ P. 31		
Finan	Priority measures Revise dividend standards to enhance shareholder return			
cial	Target	S	FY2020 results	
Financial strategy	Operating cash flow (3 cumulative forecast):¥	39,441 million		
3	ROE: 10% or higher m	10.9 %		
	Dividend: target from DOE 2.5 % t	3.1 %		
	Efforts to re	rity measures esolve social is ugh business	sues	
	Targets	Results		
ESG	For the second at the second	▶ P. 45		
SG	Environmental Impact		7 11 10	
SG	Creating New Value fo	r Customers	▶ P. 49	
SG				
:SG	Creating New Value fo	Supply Chains	▶ P. 49	

#### Long-term Management Strategy

Realization of long-term management goals toward 2030

- Net sales
- ¥ 1 trillion
- Operating profit / Net sales
- 8%
- Overseas sales

30%

#### Materiality

Creating value in food and health

Strengthening food processing and production technology capabilities; enhancing logistics services

Realizing sustainable food procurement and resources recycling

> Climate change initiatives

Securing and developing diverse human resources

#### Outcome (Value to create)

Create new markets and customer value by taking on challenges outside existing business areas in both food and health

Further refine core competencies in food processing, production and logistics to resolve social issues and improve profitability through competitive advantages in global markets

Resolve various social issues related to the supply chain, which is the foundation of our business, and contribute to sustainable food procurement and the realization of a recycling-based society

As a food and logistics company that is greatly affected by climate change, we will work with stakeholders to counter global warming and reduce energy consumption throughout the supply chain

Secure and develop diverse human resources and foster an inclusive corporate culture to achieve sustainable growth

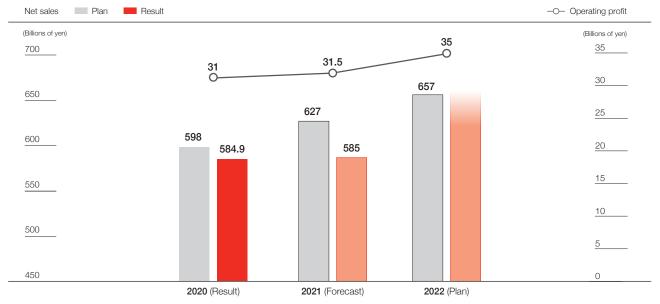
#### Medium-term Business Plan

# **WeWill 2021**

# Seek sustainable growth by raising profitability in Japan and expanding overseas operations.

### FY2020

#### ■ Consolidated net sales and operating profit



<sup>\*</sup> Fiscal years (FY) indicate years ended March 31.

#### Progress of Management Strategies in FY2020

▶ Business Plan Main Measures	▶ Progress
Raise profitability in Japan by transforming the business structure	<ul> <li>Mainstay Processed Foods and Logistics businesses are driving sales and earnings.</li> </ul>
Allocate resources to achieve sustainable growth	<ul> <li>Investments for growth and to strengthen the management foundation are slightly behind schedule.</li> </ul>
Expand scale of overseas operations	<ul> <li>Business in the U.S. and Europe is firm, but increasing the speed of expansion remains a challenge.</li> </ul>
Improve capital efficiency and expand shareholder returns	<ul><li>Continued increase in returns, with rise in the payout ratio</li><li>ROE of 10% or higher maintained</li></ul>

O Sales of household-use processed foods were positive, and logistics services (storage, transfer centers, etc.) continue to expand steadily, with operating profit up 5%.

O Loss on retirement of noncurrent assets has increased with renewal of facilities, resulting in a year-on-year declined in profit.

General

- 1. Realize sustainable profit growth
- 2. Improve capital efficiency and expand shareholder returns
- 3. Create new value that supports a good dietary life and health

### FY2021

#### FY2021 Main Measures

Adapt quickly to the changes in the business environment due to COVID-19, strengthen the business base, and pave the way for the final year of the medium-term business plan.



#### **Processed Foods**

- Impact from COVID-19 will mainly be on commercial-use demand, so we will secure earnings through expanded sales of household-use products, and improvements to the product mix.
- Develop new value-added products centered on individual servings and health consciousness.
- Improve and expand the production structure in Japan and overseas.



#### Logistics

- Effective facility utilization and smooth business execution during COVID-19 epidemic.
- Early startup of stable operations at large refrigerated warehouses in Nagoya and Yokohama.
- Make investments for growth to respond to changing business environment in Europe.



#### Marine Products

 Build a business model with both sustainable resource procurement and greater profitability.



#### Meat and Poultry Products

 Restore earnings for domestic chicken through optimization of procurement and sales.

#### Consolidated Target Figures

(Billions of yen)

	FY2020 Result	FY2021 Forecast	Variance	% Change
Net sales	584.9	585.0	0.1	0.0 %
Operating profit	31.0	31.5	0.5	1.5 %
Operating profit / Net sales	5.3 %	5.4 %	-	0.1 pt
Profit	19.6	20.0	0.4	2.0 %
EBITDA <sup>1</sup>	49.4	51.3	1.9	3.8 %
EPS <sup>2</sup>	147.16 yen	150.12 yen or higher	-	-
ROE	10.9 %	10 % or higher	-	-

Notes: 1.EBITDA = Operating profit + Depreciation expense (including lease, excluding goodwill)

2. EPS: Earnings per share

(As of August 4, 2020)

# Message from the CFO



# Despite Uncertainty, New Capabilities Will Arise

I supervise the Nichirei Group planning and management unit, which includes the finance division.

To help realize its long-term management goals toward 2030, I promote the Group's major objectives: ensuring a solid financial position is maintained, and motivating people—the most important management resource for business. At the same time, I facilitate the following of the investment PDCA cycle.

From a position that integrates Group financial and non-financial elements in the holding company, I focus on three perspectives, namely, our ability to perceive, collaborate, and unify.

I perceive present, assumed, and potential risks, and collaborate data with digital technology to make appropriate decisions. Then, unifying the direction of the Group with the five material matters items designated this year, we demonstrate the Group's comprehensive capabilities by creating synergies among businesses and divisions.

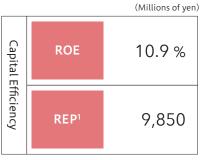
Corporate value encompasses both the economic and social values that are at the core of our management principles, namely, our mission—To Focus on Lifestyles, and Provide True Satisfaction.

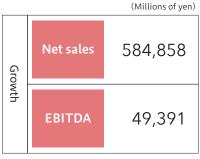
If finance is the foundation that supports the Group, then social value is its central pillar. With the foundation and main pillar firmly established, we will realize medium- to long-term growth and enhance the corporate value of the Nichirei Group. At the same time, we will effectively engage with internal and external stakeholders.

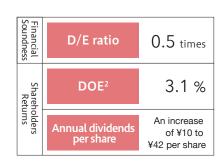
#### FY2020 Financial Results and Issues (Including COVID-19)

In fiscal 2020, profit attributable to owners of parent was slightly lower than the previous year due to extraordinary income and losses. As a result, it did not reach 20 billion yen. However, the operating profit was a record high ¥31 billion, marking a good start for the first year of the medium-term business plan. The operating cash flow increased ¥8.1 billion year on year to ¥39.4 billion, and my assessment is that financial indicators are in line with plans.

#### FY2020 Consolidated Results







Notes: 1. Our original indicator. Shows profit after deduction of capital costs.

At the same time, the capital expenditure was ¥27.3 billion, which is slightly behind our initial plans for investments aimed at strengthening our foundation, business innovations, and new developments. The total Group capital expenditure for fiscal 2021 (ending March 31, 2021) is expected to total ¥38.8 billion, as planned.

In addition, despite concerns about the spread of the COVID-19 pandemic, in the Logistics segment the Nagoya Minato Distribution Center (cold storage capacity: 37,294 tons) commenced operations as planned in April 2020, enabling us to establish a base for profit expansion in the Nagoya area.

Since we anticipate that financing conditions will continue to be uncertain due to the pandemic, we are considering increasing liquidity on hand for the time being.

#### WeWill 2021 Last Year Focus Points: Risk and Business Management

#### **Enhanced Risk Management**

So far this fiscal year, in order to enhance the disclosure of business and other risks—including actual and potential risks—we have analyzed the impact of each risk from business and financial perspectives and considered countermeasures.

We have designated responding to climate change to be a material matter and, as part of our response to the Task Force on Climate-related Financial Disclosures, we conducted an impact survey taking into consideration the frequency of climate change and its impact on business.

We have analyzed the degree to which our business and finances would be affected by extreme weather conditions, physical risks (such as floods and rising sea levels), transitional risks (such as legal and regulatory revisions), and environmental measures taken in the supply chain. Then we began to consider appropriate responses.

At the same time, potential risks in the supply chain must also be taken into account. In the food industry, there are invisible risks involving reputation and operations, involving human rights and environmental issues in a broad range of areas, from raw materials procurement to production processing and logistics.

We include these non-financial factors in our business activities and finances in order to facilitate comprehensive risk management. In addition, we carry out appropriate risk management for actual risks. Aware of the increasing scale of natural disasters, such as typhoons and torrential rain, we had been improving our business continuity planning system for use in the event of a disaster when, at the end of last fiscal year, the COVID-19 virus began to spread rapidly.

Having established a Group countermeasures headquarters and ensured safety throughout the entire supply chain—including that of Group employees—we continue to engage in the business of supporting food infrastructure such as food factories and logistics centers.

### Message from the CFO

This is the first time we have had to deal with an infectious disease that has spread so widely, so we have struggled a bit. Nevertheless, we will incorporate all necessary countermeasures.

The offensive tactic of creating new value is indispensable for enhancing corporate value. Nevertheless, I believe it is possible to adopt a defensive stance that minimizes negative risks and prevents corporate value from being damaged.

The current risk management system is described on page 68. We are now working to create a new risk management system. Under this system, we aim to be able to respond accurately and efficiently by covering risks that affect the entire Group, and then categorizing the corresponding items according to the Group's common characteristics and business characteristics. This new system is scheduled to begin operation in April 2021.

#### Data and Digital Technologies in Business Management

COVID-19 presents an opportunity to further accelerate various environmental changes.

In the field of business management, it is necessary to select and quickly incorporate information that is truly important into the decision-making cycle.

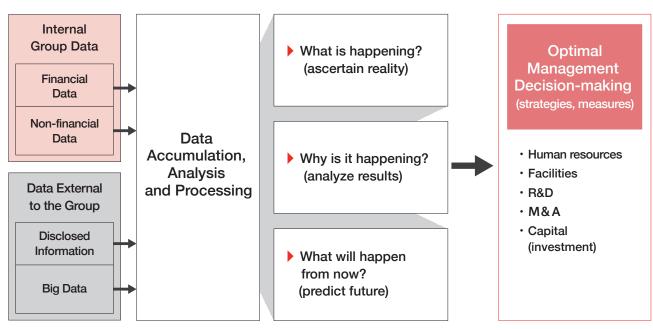
First, it is necessary to analyze and understand Group financial figures. By linking these to non-financial information, one is able to provide useful data to management and business companies.

In addition, it is necessary to combine this with data from outside the Group and develop it into a data source able to facilitate timely and appropriate decisions. Some external data are publicly available, some are difficult to collect, and some become useful with advanced analytical processing. It is also important to have a variety of sources of information.

In order to collect, analyze, process, and predict such data by making full use of AI and digital technologies, we must discover and develop human resources who have excellent data processing and system construction skills, and who can fully understand and analyze the Group's business characteristics and trends in lifestyles and markets. But, since it is people who create the mechanisms, we must find and develop human resources who understand the Group's business characteristics, as well as consumer and market trends.

These tasks take time to complete, so while drawing a grand design during this medium-term business plan period, I would like to proactively take on challenges without fear of failure in terms of the processes necessary for such important issues as expanding our overseas business.

#### Data and Digital Technologies in Business Management



#### Linking Materiality to Management, Business Strategy

The ultimate role of the holding company is to decide how to allocate management resources to enhance corporate value. Capital and people are our resources. In addition to actively investing to expand and strengthen our business foundation while responding to various issues, the capital allocation policy also focuses on efforts to realize a sustainable society.

Regarding capital expenditure, which is a material matter in terms of the allocation of funds, our medium-term business plan calls for capital expenditure of approximately ¥100 billion, of which 50% will be targeted for growth; 30% for infrastructure enhancement, business innovation, and new development; and 20% for rationalization and maintenance. In fiscal 2020, Group management engaged in earnest discussions and identified five material matters for achieving our vision for 2030. We will establish specific goals and KPIs for these five material matters, while keeping our management and business strategies consistent.

During fiscal 2020, confronted with risks including the expanding scale of natural disasters and the infectious disease COVID-19, we had no choice but to focus on defensive measures to prevent damage to our corporate value.

That said, at all times the focal point of resource allocation has remained whether it contributes to the enhancement of corporate value. In order to create a mechanism for obtaining the desired results, we will focus on the Group CSR basic policy, the Nichirei Pledge, and five material matters, and will invest resources with an emphasis on attaining a balance between offensive and defensive tactics, all while bearing in mind the stakeholders within and outside the Group, and allocations being made to financial and non-financial sectors.

#### Securing and Developing Human Resources

As the fifth material matter, we selected Secure and develop an array of human resources. Regardless of how well a strategy is constructed and mechanisms are created, it is people who think and act. Thus, in the discussion of material matters, Group management was unified in selecting this matter.

We are working on rebuilding our core personnel system as a tool to achieve this goal, and aim to commence operations in September 2021. The core system incorporates talent management functions (human resources development and appropriate allocation), and improves the efficiency of practical work such as payroll calculation and personnel changes.

We will create a system that makes maximum use of human resources and contributes to demonstrating the comprehensive capabilities of the Group.



### **Processed Foods Business**



#### Masahiko Takenaga

Director, Executive Officer, Nichirei Corporation Representative Director, President, Nichirei Foods Inc.

### The Taste of Happiness

By intimately following the way people live, we provide foods that ensure a healthier, more satisfying world.

#### President's message

To ensure growth in an era of drastic change, it is important to anticipate changes and continue taking on the challenge of creating new things.

We will continue to create new value in food and health, aiming for business growth and the resolution of social issues.

#### I Business Scale

- · Total assets: ¥128,407 million
- · Group companies: 21 companies (6 in Japan, 15 overseas) and Nichirei Technology Development Center (R&D Department)
- Employees (consolidated): 10,161 persons (1,870 in Japan, 8,291 overseas)
- · Food production factories: 19 facilities (15 in Japan, 4 overseas)
- · Main production facilities Mori Plant, Shiroishi Factory, Yamagata Factory, Funabashi Factory, Kansai Factory, Kyurei Inc., CHUREI, Co. Ltd., GFPT Nichirei (Thailand) Co., Ltd., Surapon Nichirei Foods Co., Ltd.

Market Environment ○ Stable trend in household-use market

#### (Billions of yen) Household-use Prepared Frozen Foods Frozen vegetables 506.1 500 70.1 400 436.0 300

Household-use Prepared Frozen Foods Market Scale

Source: Market scale calculated by INTAGE Inc. SCI consumer panel (Spending per 100 people on prepared frozen foods. Excludes purchases through consumer cooperatives.)

2016

#### Net Sales for Frozen Foods

(Rillions of you)

(Billions of yen)								
	FY2019	YoY	FY2020	YoY	Household-use: Commercial-use ratio			
Nichirei	226.6	2.7 %	229.6	2.3 %	39:61			
Company A	212.6	2.7 %	211.2	-0.8 %	57:43			
Company B	175.3	5.9 %	193.4	4.0 %	53:47			
Company C	178.2	-0.2 %	179.8	0.9 %	33:67			
Company D	111.6	-1.8 %	108.0	-2.7 %	55:45			

Source: Shokuhin Sangyo Shimbunsha Co., Ltd

#### **I** Business Details

200

Household-use prepared frozen foods Commercial-use prepared 28 % 42 % Processed agricultural products FY2020 sales composition 8 % Overseas Others 15 % 7 %

#### · Household-use Prepared Frozen Foods

[Main sellers] Volume retailers. drug stores and convenience stores





#### Commercial-use Prepared Frozen Foods

[Main sellers] Volume retailers (delicatessen), convenience stores restaurants and food services



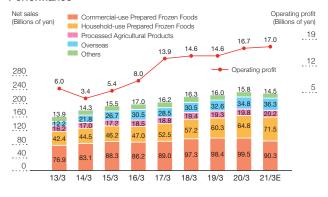


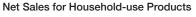
(Billions of yen)

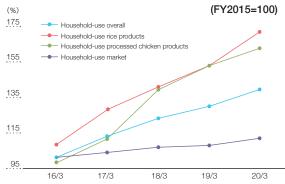
# Performance

- Favorable performance on expanded sales of processed rice products and processed chicken products
- In FY2020, sales rose for household-use prepared foods, driven by *Honkaku-Itame Cha-Han* (fried rice) and *Tokukara* (fried chicken). Operating profit increased 15% on expanded sales as well as contributions from the improved performance of affiliates.

#### Performance







# FY2021 Measures

External Environment Demand for household-use prepared foods is projected to expand due to COVID-19 pandemic while difficult circumstances continues in business for commercial-use prepared foods, mainly for restaurants.

# Japan

- Expand capacity and build an efficient production system by consolidating rice-based items and bolstering production lines.(Enhance existing lines at the Funabashi plant)
- Expand the Tokukara (fried chicken) production line (Thailand).
- Develop products to meet growing demand for at-home main dishes and individual servings.
- Enhance access to growth categories such as co-op delivery services and e-commerce business

# Overseas

• In North America, InnovAsian Cuisine expands sales of existing Asian frozen foods, and launch new products.

			FY2020		FY2021			
	Processed Foods	Result	YoY		Forecast	YoY		
		nesuit	Variance	% change		Variance	% change	
N	et sales	234.8	8.2	4 %	232.8	-2.0	-1 %	
	Household-use Prepared Frozen Foods	64.8	4.5	8 %	71.5	6.7	10 %	
	Commercial-use Prepared Frozen Foods	99.5	1.2	1 %	90.3	-9.2	-9 %	
	Processed Agricultural Products	19.8	0.5	3 %	20.2	0.4	2 %	
	Overseas	34.8	2.2	7 %	36.3	1.5	4 %	
	Others	15.8	-0.2	-1 %	14.5	-1.3	-8 %	
0	perating profit	16.7	2.1	15 %	17.0	0.3	2 %	

# I Capital Investment Status

# Capital Expenditures and EBITDA



# Topic

# Opened second plant at GFPT Nichirei in Thailand



Operations to commence in October 2020 (plan) ¥4.0 billion total investment

# Temperature-controlled Logistics Business



# To make our advanced temperature-controlled logistics, already the best in Japan, the global standard.

Pursuing innovative know-how and providing optimal solutions to social and customer issues. We will continue to earn customer trust and become an irreplaceable partner in temperature-controlled logistics.

# Kazuhiko Umezawa

Director, Executive Officer, Nichirei Corporation Representative Director, President, Nichirei Logistics Group Inc.

# President's message

As a food logistics company supporting everyday life, we will continue to promote work style reforms and maximize use of human resources. In addition, we engage in business innovation, establish business models as a solution company, expand overseas business and achieve stable growth even in uncertain environments.

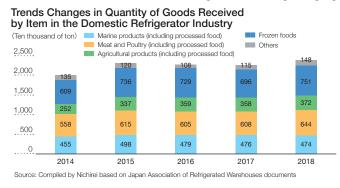
# I Business Scale

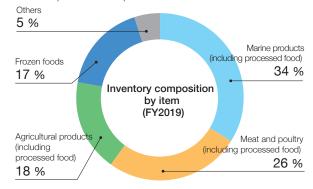
- · Total assets: ¥169,648 million
- Group companies: 22 companies in Japan, 15 companies overseas (affiliates: 6 companies in Japan, 2 companies overseas)
- Employees (consolidated): 4,237 persons (2,841 in Japan, 1,396 overseas)
- · Facilities: 115 in Japan, 23 overseas

(17 in Europe, 4 in China, 1 each in Thailand and Malaysia)

Main facilities
 Funabashi DC,
 Higashi-ogishima DC,
 Heiwajima DC, Osaka Futo DC,
 Osaka Shinnanko DC, Daikoku DC, Kansai XD, Koriyama XD

# **External Environment** O Strong demand for storage is ongoing, centered on imported livestock products and frozen foods.





# I Business Details

# Domestic Refrigerated Warehouse Facility Capacity

Domestic hemgerated wateriouse racility Capacity				
Area	Number of Facilities	Capacity (thousands of ton)		
Hokkaido	7	88		
Tohoku	4	64		
Kanto	18	544		
Chubu	10	195		
Kansai	14	278		
Chugoku/Shikoku	12	130		
Kyushu	14	176		
Total	79	1,475		

# Group strengths

Equipment and cargo collection capacity

- Largest storage capacity in Japan
- In addition to metropolitan areas offering a large amount of resources and strong location advantages, we also have warehouses in agricultural and livestock production areas.

Various services

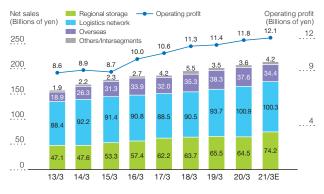
- Utilizing storage facilities and logistic networks nationwide, we develop total services, from storage and ancillary services to distribution
- We operate 36 logistic centers for major retailers
- Quality management, brand power
- Know-how enabling high-quality management
- ▶ Transact with approximately 5,000 companies annually based on the power of the Nichirei brand

(Billions of ven)

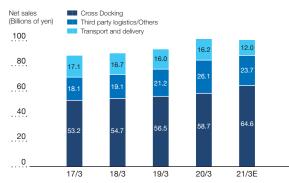
# **Performance**

- · Regional storage and Cross Docking (XD) were robust, stable growth continued
- In the previous fiscal year, profits increased due to inventories remaining at a high level and business improvements

# Performance



# Logistic Network Sales Breakdown



# FY2021 Measures

Market environment

•COVID-19 impact will slow cargo movements of commercial products, spurring a shortage of storage in metropolitan areas

Topic

•Due to structural labor shortages, transportation and warehouse work costs will continue to rise

- · Aim for stable expansion of profits by maximizing storage and transportation functions in metropolitan areas and regional facilities
- In the XD business, which has 36 facilities in Japan, we are responding to increases in volumes handled by mass retailers
- We plan to make capital investments and further promote business innovation to strengthen future competitiveness

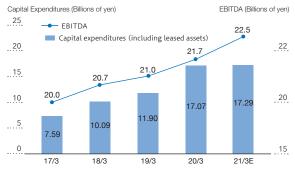
# Overseas

- In Europe, we will strengthen storage functions in port areas in the Netherlands and the United Kingdom, and establish transportation facilities in inland areas.
- In China, in addition to expanding the CVS distribution business, we will capture new demand for storage and transportation.

(billions of year)						
Temperature-		FY2020		FY2021		
controlled	Result	YoY		Forecast	Yo	ρΥ
Logistics	rioduit	Variance	% change		Variance	% change
Net sales	206.5	5.4	3 %	213.1	6.6	3 %
Subtotal	165.4	6.2	4 %	174.5	9.1	6 %
Logistics network	100.9	7.2	8 %	100.3	-0.6	-1 %
Regional storage	64.5	-1.0	-2 %	74.2	9.7	15 %
Overseas	37.6	-0.8	-2 %	34.4	-3.2	-8 %
Others	3.6	0.0	0 %	4.2	0.6	18 %
Operating profit	11.8	0.4	4 %	12.1	0.3	2 %
Subtotal	10.9	0.6	5 %	11.7	0.8	7 %
Logistics network	4.1	0.3	7 %	4.5	0.3	7 %
Regional storage	6.7	0.3	5 %	7.2	0.5	7 %
Overseas	1.2	0.0	1 %	0.9	-0.3	-27 %
Others	-0.3	-0.1	_	-0.5	-0.2	_

# I Capital Expenditures Status

# Capital Expenditures and EBITDA





# Marine, Meat and Poultry Products Business



# Yoshifumi Kaneko

Director, Executive Officer, Nichirei Corporation Representative Director, President, Nichirei Fresh Inc.

# Connecting Sea, Land and People

We continue to provide consumers with heartful satisfaction under the keywords fresh, delicious, safe, secure, health and eco-friendly.

# ▶ President's message

We will focus efforts on providing premium ingredients and expanding the handling of processed products, implement measures to obtain stable profits and work to resolve social issues to creation of a sustainable supply chain.

# Business Scale

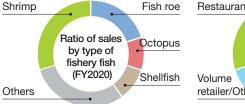
- Total assets: Marine products: ¥26,928 million Meat and Poultry: ¥18,949 million
- Internally-operated : 8 factories (7 in Japan, 1 overseas)
  - Marine Products 8 companies (2 in Japan, 6 overseas)
    - Marine products: 523 persons (216 in Japan, 307 overseas)
  - Meat and Poultry 5 companies in Japan
    - 476 persons in Japan
- · Main production facilities
- Marine products: Fresh Maruichi Inc., Trans Pacific Seafood Co.,LTD
- Meat and poultry products: Fresh Chicken Karumai Inc., Nichirei Fresh Process Inc.

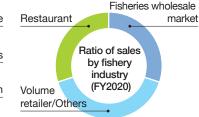
# Market Environment

# Marine Products Business

- · Although eating fish is becoming less common in Japan, global demand for marine products remains high.
- · The ongoing rise in market prices for some products has passed its peak and is on a downward trajectory

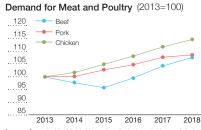
# Business Details (FY2020)



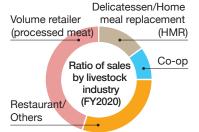


# Meat and Poultry Products

· Demand for chicken and pork remained firm due to growing health consciousness and a relative sense of cheapness



Chicken Ratio of sales Pork by type of livestock (FY2020) Beef



Main **Products** 



Large variety of natural and cultured shrimp



Wide range of sushi toppings



Amani-no-Megumi series (chicken, pork and beef)

# **I** Performance

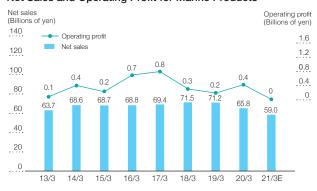


- Focus efforts on selling highly processed products, mainly the four major fish species, including the mainstay shrimp products
- Profit increased in the previous fiscal year due to sales of processed products for home meals replacements (HMR) and restaurants.

# Meat and Poultry Products Business

- Sales of fresh chicken and processed products for ready-to-eat meals remained strong, made thorough effort to focus on profitability of imported product sales
- In the previous fiscal year, we focused on selling processed products, but profits declined due to the impact of domestic chicken and imported pork market prices.

# Net Sales and Operating Profit for Marine Products



# Net Sales and Operating Profit for Meat and Poultry Products



# FY2021 Measures

Market environment Due to the spread of COVID-19, the handling of products for restaurants is decreasing, but the demand for at-home meals and home meals replacements (HMR) is expanding, mainly at volume retailers.

# **Marine Products**

 While focusing on sales for at-home meals and home meals replacements (HMR) where demand is strong, we will strive to secure profits by thoroughly implementing profit-oriented procurement and sales and cost controls.

# Meat and Poultry Products

- We will strengthen sales of fresh products for volume retailers, processed products for co-ops and processed products for home meals replacements (HMR), such as convenience stores.
- We aim to increase sales and profits by steadily meeting expanding demand for at-home meals and home meals replacements (HMR).

(Billions of yen)							
			FY2020		FY2021		
		Result	Yo	YoY		YoY	
		Result	Variance	% change	Forecast	Variance	% change
Ma Prod	Net sales	65.8	-5.5	-8 %	59.0	-6.8	-10 %
Marine Products	Operating profit	0.4	0.3	143 %	0.0	-0.4	-100 %
Meat and Poultry Products	Net sales	88.3	-2.7	-3 %	91.0	2.7	3 %
d Pouttry lucts	Operating profit	0.9	-0.5	-38 %	1.3	0.4	44 %

# Topic

# Enhancing Collaboration between Group Companies, Developing New Products

- We will provide fishery and livestock business premium ingredients to the processed food business and engage in collaborations to develop products leveraging the strengths of each business.
- In addition to supplying ingredients, we will share processing technologies and production functions with Group businesses in order to meet new demand in the future, while strengthening proposal capabilities throughout the Group.





(The photos are for illustrative purposes only)

# **Bioscience Business**



Through biotechnology, we provide new value that customers demand in order to contribute to the mental and physical health of as many people as possible.

# Masato Takenaga

Executive Officer, Nichirei Corporation Representative Director, President, Nichirei Biosciences Inc.

# ▶ President's message

In Nichirei Biosciences' business domain, market expansion and technological innovations continue. In seizing such opportunities, we will strengthen our competitiveness in existing fields and work to create innovation utilizing the Nichirei Biosciences Global Innovation Center to promote growth in Japan and overseas.

# Business Scale

- · Total assets (non-consolidated): ¥10,985 million
- Employees(non-consolidated): 98 persons

#### · Main Facilities:

Nichirei Biosciences Global Innovation Center (production and R&D base) Pathcom Systems Corporation (California, U.S.)

# I Bioscience Business Changes

1980s

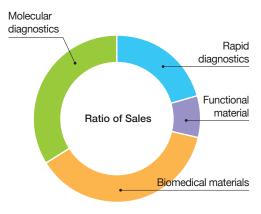
# Launched sales of byproducts in the meat products business

- Import and sales of fetal bovine serum required for cell cultures
- · Manufacture and sales of cow placenta extract effective for beauty

1990s

# Business expansion

- Import and sales of growth media used for cell culture (biomedical materials business)
- Sales of extracts and powders utilizing acerola (functional material business)
- Development, manufacture and sales of diagnostic agents using antibodies produced from cultured cells (molecular diagnostics and rapid diagnostics businesses)
- · Acquired a US medical device company



# I Current Medium-term Management Plan Measures and Progress

# Main measures

- Develop and commercialize next-generation diagnostic drugs and devices
- · Promote overseas business
- Create a business model that captures technological innovations and changing needs

# Progress

- Promote the development of in-vitro diagnostics for cancer and infectious diseases that utilize technologies for testing genes and proteins
- Sales of medical devices to the United States, Europe and China, and sales of animal serum for cell culture, mainly in the United States
- Promote new business construction by integrating technologies through joint developments (open innovation) with universities and corporations



# Bioscience business Growth Driver-Molecular Diagnostics

Strength

- Development and stable supply system of high-quality products that meet market needs in cancer diagnosis (companion diagnostics)
- Development and production of medical devices using immunostaining technology, one of the only such technologies in the world

Customer

Medical facilities for pathological examinations, universities and pharmaceutical companies for research and development

Strategy

Expand sales of competitive staining equipment and unique immunohistochemical staining reagents and diagnostic agents in Japan and overseas

# Pathological Examination Market and Domestic Market Share (immunostaining antibodies and devices)

# Market Scale<sup>1</sup>



# Domestic Share (2018)<sup>2</sup>

Sales company name	Amount (Millions of yen)	Share	
Company A	3,125	40.2 %	
Company B	2,240	28.8 %	
Nichirei Biosciences	1,545	19.9 %	
Company C	735	9.5 %	
Company D	25	0.3 %	
Other	100	1.3 %	
Total	7,770	100 %	

Notes: 1 and 2. Source: Compiled by Nichirei based on FUJI KEIZAI CO., LTD. documents





Histofine ALK iAEP® Kit



In-vitro diagnostics that enables patients to receive appropriate drugs or therapies by testing one's biomarkers or genes. Used to improve the efficacy and safety of certain drugs, and now several companion diagnostics are used to assess whether patients are eligible for molecular targeted cancer therapies.

# About Companion Diagnostics

# I Organization Information



Global Innovation Center



Molecular diagnostics business employees

# Business Strategy: Overseas

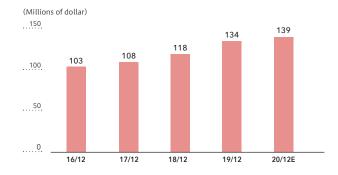
# **Processed Foods Business**

# Strategies to Boost Asian Food Sales in North America

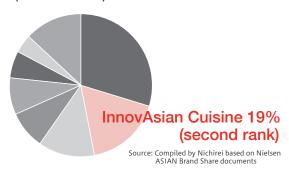
■ Overview of US-based InnovAsian Cuisine Enterprises, Inc.

	Household-use	Commercial-use		
Features	Product development capabilities based on market tren     Ability to sell to major US mass retailers	ds from an American perspective		
Main categories	Main dishes (processed chicken, etc.), cooked rice, such	as fried rice		
Main sales channels	Leading mass retailers, discount store frozen food sections	Volume retailers (delicatessen counters)     School and restaurant chains		
	Products for single serving meals centered on the most well-known Asian menus in the United States	Providing Asian food solutions mainly in the delicatessen section		
Products	RAMILY SIZE General Tso's Chicker  Use well ware than band all fair fair fair fair fair fair fair fair	GENERAL SUPER STEAM		

# **InnovAsian Cuisine Net Sales**



# U.S. Market Share for Asian Frozen Foods (as of March 2020)



# Marine, Meat and Poultry Products Business

# Strategies to Push Up Sales in Chinese, North American Markets

# To boost the development and sale of Japanese food products we will:

- Expand our lineup of processed marine products, focusing on sushi toppings
- Strengthen our overseas sales system
- Promote sales with area partners in emerging markets that have room to expand
- Promote sales of high-quality ingredients in China (for processed and unprocessed meat and poultry products)







# Temperature-controlled Logistics

# Promoting Comprehensive Logistics Services in Europe, Starting in the Netherlands

- · In the latter half of the 1980s, Nichirei entered the Netherlands in anticipation of the expansion of the EU's economic zone, and subsequently, expanded its business domain mainly through the execution of acquisition strategies
- · Focused on strengthening storage functions in major port areas, cross-border transportation and expanding logistics of mass retailers

Year	Company name	Capital	Business	Capacity (thousands of ton)	Features	
1988	Eurofrigo B.V.	€4,910 thousand	Cold storage (waterfront area, inland area)	233	The port area mainly stores import/export cargo (livestock products, etc.) to and from Europe. Includes an animal quarantine station	
1990	Hiwa Rotterdam Port Cold Stores B. V.	€2,270 thousand	·Cold storage (specializing in fruit juice)	186	Largest storage for juice brought into Europe     Also provide additional services, such as blending	
1989	Thermotraffic Holland B.V.	€500 thousand		_	In addition to Western Europe, delivery network expanded to	
1989	Thermotraffic GmbH	€1,200 thousand	temperature-controlled transportation, customs)	_	Central and Eastern Europe and Russia  Also handles pharmaceutical products that require strict	
2014	Thermotraffic UK Ltd.	£500 thousand		_	temperature control	
2004	Frigo Logistics Sp. z o.o.	PLN 11,800 thousand	Cold storage and temperature-controlled transportation	79	Entrusted with storage, sorting, and delivery operations for major retail stores	
Transports Godfroy S.A.S.	€152, thousand	·Cold storage and	47	Providing storage and transportation and delivery services for local		
2010	Entrepots Godfroy S.A.S.	€7 thousand	(actual forwarding)	47	manufacturers and wholesale and mass retailer centers	
	1988 1990 1989 1989 2014	1988 Eurofrigo B.V. 1990 Hiwa Rotterdam Port Cold Stores B. V. 1989 Thermotraffic Holland B.V. 1989 Thermotraffic GmbH 2014 Thermotraffic UK Ltd. 2004 Frigo Logistics Sp. z o.o. Transports Godfroy S.A.S.	1988 Eurofrigo B.V. thousand  1990 Hiwa Rotterdam Port Cold Stores B. V. thousand  1989 Thermotraffic Holland B.V. €500 thousand  1989 Thermotraffic GmbH €1,200 thousand  2014 Thermotraffic UK Ltd. £500 thousand  2014 Frigo Logistics Sp. z o.o. PLN 11,800 thousand  2014 Transports Godfroy S.A.S. €152, thousand	1988 Eurofrigo B.V. €4,910 thousand cold storage (waterfront area, inland area)  1990 Hiwa Rotterdam Port Cold Stores B. V. Cold storage (specializing in fruit juice)  1989 Thermotraffic Holland B.V. €500 thousand  1989 Thermotraffic GmbH €1,200 thousand  2014 Thermotraffic UK Ltd. £500 thousand  2014 Frigo Logistics Sp. z o.o. PLN 11,800 thousand  2004 Frigo Logistics Sp. z o.o. PLN 11,800 thousand  2016 Transports Godfroy S.A.S. €152, thousand  2017 Fortrenots Godfroy S.A.S. €7	Year         Company name         Capital         Business         (housands of for)           1988         Eurofrigo B.V.         €4,910 thousand         • Cold storage (waterfront area, inland area)         233           1990         Hiwa Rotterdam Port Cold Stores B. V.         €2,270 thousand         • Cold storage (specializing in fruit juice)         186           1989         Thermotraffic Holland B.V.         €500 thousand         • Forwarding (temperature-controlled transportation, customs)         — • Forwarding (temperature-controlled transportation, customs)         — • • • • • • • • • • • • • • • • • • •	

# Expansion of Business in China and Solutions Business in ASEAN

• Enhancing facilities in response to vigorous demand for temperature-controlled storage in China and Thailand

Country	Year	Company name	Capital	Investment ratio	Business	Capacity (ton)	Features
China	2004	Shanghai Fresh Line Express Co., Ltd.	\$3,930 thousand	82.4 %	Cargo storage, sorting and delivery     Temperature-controlled	3,694	Providing a one-stop service with product storage, transportation and delivery functions in three
Crima	2018	Jiangsu Fresh Flower Logistics Co., Ltd.	CNY 15 million		logistics-related consulting business	3,029	temperature zones (frozen, refrigerated and room temperature)
Thailand	2013	SCG Nichirei Logistics Co., Ltd.	THB 720 million	49.0 %	Cold storage and temperature-controlled	22,800	With the same equipment standards as Japan, we provide "Japanese quality" temperature-controlled logistics services overseas and in Thailand
Malaysia	2018	NL Cold Chain Network(M) SDN BHD	MYR 53,380 thousand		transportation	41,472	As the largest logistics company specializing in halal handling, contributes to halal logistics inside and outside the region as well as halal international transportation

# Main capital investments

Netherland

Expanded temperature-controlled warehouse in Rotterdam port area



Facility expansion in Maasvlakte (rendering)

Scheduled completion date: June 2021

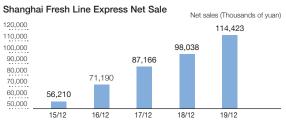
Total investment amount: approximately €17 million

Capacity: 14,000 pallets



Construction of Shanghai No. 2 Center (commenced operations in May 2020)





# On the Environment and Climate Change

The Nichirei Group has devised the Nichirei Group Environmental Policies focused on three priority issues: prevention of global warming, promotion of sustainable recycling, and living in harmony with nature.

Since Group activities span the entire supply chain—food factories, logistics centers, and other worksites—it must play a part in the environmental initiatives and activities of both its customers and business partners.

At the same time, the Group is aware of the substantial impact that climate change is having on its business, as its support of food-related infrastructure depends on natural ecosystems for raw materials. Accordingly, the Group and its business partners undertake the following:

- · Use energy efficiently in the production of food products
- · Cut greenhouse gas emissions by using more efficient temperature-controlled storage and transportation
- · Promote the use of renewable energy, from procurement and production, through to storage, logistics, and sales
  - Nichirei Group Environmental Policy
  - Nichirei Group Bio-diversity Policy
- https://www.nichirei.co.jp/english/csr/environment/concept.html
- Environmental management system
- https://www.nichirei.co.jp/english/csr/environment/system.html

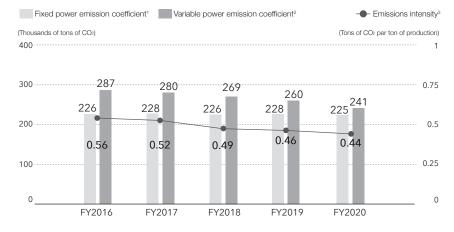
# Long-term Environmental Goals and Low-carbon Policies

We will implement low-carbon policies in response to one of the material matters (see page 15) and in pursuit of our long-term environmental goals. We will actively implement the three measures during the 10-year span extending from 2021 through 2030.

# Having endorsed TCFD recommendations, the Nichirei Group is promoting the following low-carbon policies

Pillar of low-carbon policy Overview Target scope					
The establishment of long-term CO₂ reduction goals	$30\%$ reduction in $CO_{\mbox{\tiny 2}}$ emissions (compared to fiscal 2016) in Japan, Scope 1 and 2 in 2030	Japan Scope 1 and 2			
The promotion of CO <sub>2</sub> reduction countermeasures overseas	Promote data collection and other efforts at overseas worksites     Review and promote CO <sub>2</sub> reduction countermeasures at overseas worksites	Overseas Scope 1 and 2			
The promotion of CO <sub>2</sub> reduction countermeasures within Scope 3	Promote data collection and other efforts within Scope 3 Review and promote CO <sub>2</sub> reduction countermeasures within Scope 3	Scope3			

# Nichirei Group CO<sub>2</sub> Emission Trends



# Notes:

- Fixed power emission coefficient: The CO<sub>2</sub> emission intensity unit of 0.412 [t-CO<sub>2</sub>/MWh] announced by the Federation of Electric Power Companies of Japan in FY2010, used nationwide.
- Variable power emission coefficient: Power conversion coefficient used by power companies in fiscal year utilized at each worksite.
- 3. Scope of power emission intensity: Nichirei Foods (Nichirei Foods-operated factories and affiliated factories in Japan) and Nichirei Fresh (affiliated factories in Japan). Excluding the following factories: Nichirei Foods: Nichirei Ice Inc.; Nichirei Fresh: Nichirei Fresh Farm Inc., Fresh Chicken Karumai Inc., Fresh Meat Sakudaira Inc.







# Purchase of Green Energy

As it promotes the use of renewable energy, the Nichirei Group has installed solar power generation equipment in plants, refrigerated warehouses and other facilities, while purchasing Renewable Energy Certificates (RECs).\* Each year since 2007, we have purchased certificates worth one million kilowatt hours (kWh) in biomass-generated power.

In addition, since March 2020, Nichirei Foods has

purchased ten million kWh worth of RECs to cover all the electricity used to power production lines for Honkaku-Itame Cha-Han (fried rice).

\* These represent units of environmental value (e.g., the reduction of CO<sub>2</sub> emissions resulting from the generation of electricity by using renewable energy sources) that can be bought and traded, allowing certificate owners to claim to have purchased electricity generated using renewable energy sources (offsetting).



# Solar Power Generation

The Nichirei Group has installed solar power generation equipment at all its Group companies. In FY2020, the equipment generated 2,068,000 kWh of electricity and helped reduce CO<sub>2</sub> emissions by 1,003 tons.

Nichirei Foods	Funabashi Plant     Nichirei Ice Inc.	
Nichirei Logistics Group	Sugito DC  Matsue DC  Kushiro DC  Sakishima DC  Kyokurei Inc. Daikoku DC	
Nichirei Biosciences	Global Innovation Center	

# Chlorofluorocarbon (CFC) Initiatives

# ■ Natural Refrigerants and Leakage Prevention

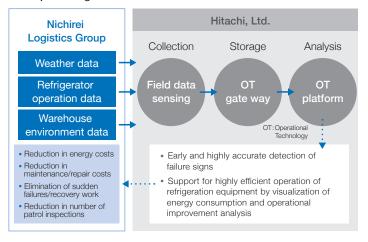
The Nichirei Logistics Group uses natural refrigerants in both new refrigerated warehouses and facilities that it enlarges, while encouraging the replacement of equipment that uses CFC refrigerant with that which uses natural refrigerant.

In addition, since FY2014, we have stepped up inspections at distribution centers nationwide to reduce refrigerant leakage from refrigerators and introduced highly sensitive detectors that are 10 times more accurate than conventional sensors.

Since September 2018, in collaboration with Hitachi, Ltd., we have been testing methods of predicting and diagnosing refrigeration equipment failure. We have done this at our Funabashi DC, using cutting-edge IoT technology to enhance the operation of equipment and maintenance efficiency.

By visualizing energy consumption data and analyzing operational improvements, refrigeration equipment can be more efficiently operated.

# Conceptual Diagram



# Receives Special Review Committee Award

Nichirei Logistics Engineering Inc. (representative director, president: Tsutomu Ito), which handles engineering operations for Nichirei Logistics Group Inc., won the Special Review Committee Award in the 22nd Protect the Ozone Layer, Prevent Global Warming Awards sponsored by the NK Industrial Research Institute, operated by the Nikkan Kogyo Shimbun, Ltd.

The award was received on September 12, 2019, in recognition of efforts to reduce CFC leaks and environmental impacts through the use of systems that predict and diagnose refrigerant leaks.

In addition to further reducing our environmental footprint and responding to customer demands, we plan to better oversee refrigeration equipment maintenance and repair plan proposals, so as to provide overall support that includes recommendations for energy conservation and cost reduction through low-price purchasing.



# Water Risk, Biodiversity, Using Less Plastic

# Water Risk Assessment

#### https://nichirei.disclosure.site/en/themes/88

To achieve its goal of building sustainable supply chains, the Nichirei Group recognizes the importance of water resources to producing raw materials and conducting business. At the same time, it is striving to conserve these resources and reduce its environmental impact.

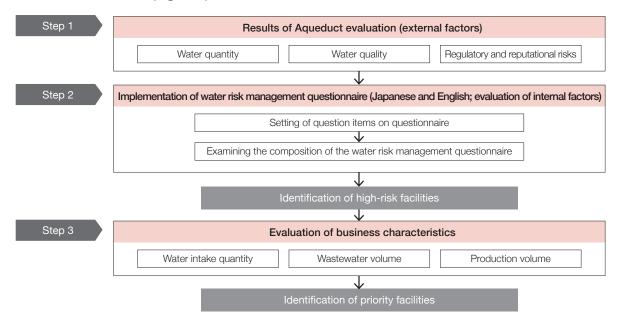
Realizing the importance of understanding local circumstances and the initiatives implemented at local facilities regarding water risks, Nichirei uses a third-party water assessment service to evaluate water risk at its facilities.

Our most recent assessments used Aqueduct,<sup>1</sup> a data platform run by the World Resources Institute. Questionnaires in English and Japanese were distributed at all Group facilities in Japan and abroad in order to better understand the initiatives they were implementing.

This water risk assessment covered 152 Nichirei Group facilities and looked at four indicators included in the Aqueduct Framework; water quantity, water quality, as well as regulatory and reputational risk (see figure 1).

Figure 1 illustrates the relationship between the number of Nichirei facilities located in water-stressed regions and their water intake. We will implement water risk reduction initiatives at three facilities (one in China, two in Thailand) found to be associated with extremely high water stress.

# ■ Water Risk Assessment (Figure 1)



# ■ Water Stress and Water Intake Quantity<sup>2</sup>

Maken aking a	Nh washa ay af fa alltina	Fiscal 2019 water intake quantity (m³/year)				
Water stress	Number of facilities	Surface water	Groundwater	Third-party assessment	Total	
Total	152	2,497,656	1,809,223	2,811,264	7,118,143	
Extremely High (80 % or more)	3	2,371,459	0	468,382	2,839,841	
High (40–80 %)	0	0	0	0	0	
Medium to high (20-40 %)	54	0	458,403	1,491,420	1,949,823	
Low to medium (10-20 %)	77	2,400	1,323,084	737,805	2,063,289	
Low (10 % or less)	18	123,797	27,736	113,657	265,190	

# Notes:

<sup>1.</sup> Offered by this international environmental NGO, the tool facilitates the evaluation of global water risk using position coordinates or addresses.

<sup>2.</sup> Excludes facilities to be scaled down, and overseas offices and warehouses











# **Biodiversity Initiatives**

# Fukushima: Environmental Research and Protection, Conserving Biodiversity

https://nichirei.disclosure.site/en/themes/89

Nichirei owns land near Lake Hibara in Fukushima Prefecture's Urabandai region. The Company supports research on the natural environment in the surrounding areas and environmental and biodiversity conservation based on that research.

Following the 1888 eruption of Mount Bandai, all vegetation disappeared from the Urabandai area, but more than 130 years on, one can see vegetation returning: red pine forests, white willows, reeded wetlands, and aquatic plant clusters in marshlands.

The red pine forests, planted by people who want to see the return of greenery, continue to spread.

But since the Company's land remains unforested, it provides a valuable area for observing the transition of virgin nature.

Nichirei has supported the research activities—carried out since FY2012 in the Urabandai area—by the Support Division for Projects in Natural Symbiosis and Regeneration at Center for Practical and Project-Based Learning, Graduate School of Symbiotic Systems Science and Technology, Fukushima University.

In FY2020 (ended in March, 2020), we supported an investigation of insect fauna inhabiting reed marshes in Urabandai area Nichirei-owned land, as well as a study into the diversity of plant species conducted with the goal of publishing a book on Urabandai flora.



https://nichirei.disclosure.site/en/themes/89

Since FY2004, the Nichirei Group has helped in the conservation and regeneration of the endangered orchid Cypripedium macranthos var. macranthos and other species through research on and the breeding of orchids and other plants in Fujimi-machi, Nagano Prefecture.

In FY2015, some artificially propagated orchids—of the genus Cypripedium macranthos var. macranthos—flowered and, in FY2020, they produced 32 blooms.

As a result, Nichirei entered into Biodiversity Conservation Partnership Agreement with the Fujimi-machi Atsumorisou Regeneration Committee in February 2019.

Under a three-year (April 1, 2019 to March 31, 2022) agreement, the Group will provide the technologies necessary for the conservation and regeneration of Cypripedium macranthos orchids and cover a portion of the costs.

Water quality survey in the Urabandai area wetland



New species Caenis sp.CU discovered in the survey





A Cypripedium macranthos var macranthos in bloom

# Reducing Container and Packaging CO<sub>2</sub> Emissions

Since 2006, Nichirei Foods Inc. has been striving to reduce the amount of plastic used for commercial frozen food product containers and packaging.

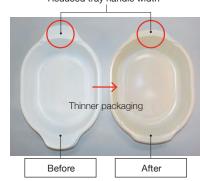
Most recently, the efforts have succeeded for containers and packaging used for seven target items. Some 200 tons less is now used compared with the amount previously used. Nichirei is still working to cut back the amount of plastic it uses to reduce even further its discharge of CO2.

# Past Plastic Reduction Initiatives

Fiscal year	Products	Measures		
Since FY2007	Imagawa-Yaki (Japanese waffle)	Elimination of trays		
Since FY2010	Yaki-Onigiri (grilled rice ball) 10-pack	Elimination of trays		
Since FY2012	Honkaku-Itame Cha-Han (fried rice)	Thinner packaging		
Since FY2015	Yaki-Onigiri (grilled rice ball) 10-pack	Thinner packaging		
Since FY2016	Honkaku-Itame Cha-Han (fried rice)	Thinner packaging (second time)		
Since FY2019	Ebi-Pilaf (shrimp pilaf) and Chicken-Rice (chicken rice)	Thinner packaging		
Since FY2020 Ebi-to-Cheese-no Gratin (shrimp gratin) and Ebi-to-Cheese-no Doria (shrimp rice gratin)		Thinner trays, reduced tray handle width		



Reduced tray handle width



# Food and Health: Creating New Value

Japan is currently facing concerns regarding shrinking consumer markets as the population declines.

Meanwhile, changes such as the diversification of consumer needs and the personalization of food and medical care are expected to progress ever faster.

Further, we must consider methods of responding to risks associated with unidentified infectious diseases such as COVID-19.

# Addressing Problems of Drug-resistant Bacteria

# Antibiotic-free Chicken

https://www.nichireifresh.co.jp/product/livestock/detail/?id=376

Chemical agents, such as antibiotics and synthetic antibacterials, are used in general broiler chicken farming to treat diseases, prevent the spread of illnesses due to farming conducted in tight spaces, and generate growth.

Nichirei Fresh Inc. has been selling antibiotic-free chicken since 2004. While vaccinated, our poultry is not exposed to chemical agents, including antibiotics and synthetic antibacterials, that could generate antibiotic-resistant bacteria.\* Instead, our poultry farming methods take full advantage of the innate immunocompetence of chickens.

Our farming technology takes into consideration the rearing environment and also applies its own expertise to poultry farming, thereby raising the natural immunocompetence of chickens and developing their natural resistance to diseases through the use of such substances as lactic acid, other probiotics, and plant-based herbal medicines that help maintain the health of chickens and boost their immunity.

Since the manure of chickens exposed to antibiotics affects soil bacteria and groundwater, the poultry farming methods used to produce antibiotic-free chicken also contribute to the natural cycles intrinsic to ecosystems.

# Reliable Management System: Inspections to Ensure Use of Antibiotic-free Chicken

Nichirei Fresh is performing its own inspections to ensure that poultry is antibiotic free. These inspections roughly break down into verification of production processes and product inspections.

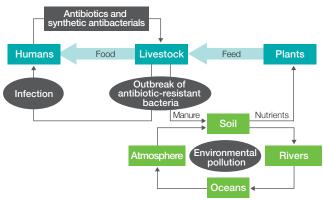
Personnel responsible for the inspections regularly visit production areas to verify that all production processes (from those in feed mills to those in breeding farms and processing factories) are being performed to the Company's standards.

In addition, the Nichirei Quality Assurance Division's Food Safety Research Center performs product inspections involving testing for antibiotic residue in special feed used in the production of antibiotic-free chicken and in final chicken products.

Nichirei Fresh ensures that quality control is adequate by inspecting all its processes, from the animal feed it uses to final product shipments.



# Antibiotic-resistant Bacteria That Threaten Ecosystem Cycles

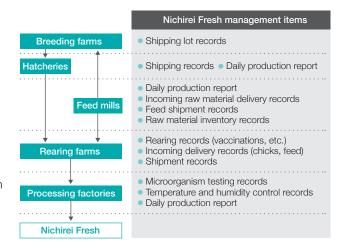


\* Drug-resistant bacteria: Protecting people from drug-resistant bacteria (not affected by antibacterial agents) is becoming an issue worldwide. Those with weakened immunocompetence who are exposed to such bacteria may not respond to treatment with antibiotics.

Drug-resistant bacteria have been found in livestock continuously exposed to chemical agents such as antibiotics and synthetic antibacterials. As a result of growing consumer interest in the United States, meat from animals not exposed to antibiotics is becoming increasingly popular.

We will continue to assess the issue of drug-resistant bacteria as we produce chicken that helps maintain human health.

# Quality Control: Antibiotic-free Chicken









# **Health Initiatives**

# Meat Production: Focus on Omega-3 Fatty Acids Amani-no-Megumi Meat

http://www.goodbalancemeat.jp/ (Japanese only)

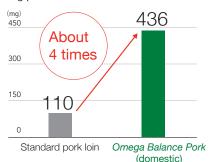
Nichirei Fresh produces and sells meat with a focus on omega-3 fatty acids, which are essential for human health. We have improved the balance of omega-3 and omega-6 fatty acids by giving chickens, pigs and cattle\* a formula feed that uses ingredients derived from flax, which is rich in  $\alpha\text{-linolenic}$  acid. As a result, we have developed tender meat that we have been selling since 2006.

Omega-3 fatty acids, abundant in blue-backed fish, flaxseed oil and wild sesame oil, are converted into eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) in the body. However, the diet of today's Japanese is often lacking in the essential fatty acids that cannot be made in the body, especially omega-3 fatty acids. Thus, Nichirei Fresh is helping support the health of its customers through the meat that appears frequently in everyday meal settings.

\* There are individual differences.



Comparison of amount of omega-3 fatty acid ( $\alpha$ -linolenic acid) that body can absorb from 100g pork loin



Source: Nichirei Fresh

# Food Shortage Response Initiatives

# Joint Research and Development Associated with Germinated Soybeans

ttps://www.nichireifoods.co.jp/news/2020/info\_id8335/

Recently, the search for alternatives to animal proteins has been receiving a large amount of attention due to a variety of factors, including the increasing world population, food issues caused by more frequent patterns of inclement weather, the need for measures to reduce environmental impact through better food production efficiency, and higher awareness regarding food diversity and health. In January 2020, Nichirei Foods invested in DAIZ Inc., a frontrunner in the search for alternative proteins that is conducting advanced research regarding soybeans.

The germinated soybeans that DAIZ Inc. owns and researches are delicious and nutritious and have the potential to resolve existing issues related to vegetable proteins, including peculiar flavors and unsatisfactory textures. Moving forward, we will conduct joint research and development aimed at creating new value along with DAIZ Inc.

# Provision of In-Vitro Diagnostics for Personalized Cancer Therapies

# ■ Companion Diagnostics

https://www.nichirei.co.jp/news/2018/321.html (Japanese only)

In 2014, Nichirei Biosciences became the first company to get an approval of manufacturing and marketing of "Companion Diagnostics", which can enable cancer patients to receive an appropriate therapy or drug depending on one's constitution and pathology, in Japan.

We contribute advancement of personalized medicine, which can enable patients to receive more effective therapies or drugs with fewer side effects, by using our accumulated immune-related technologies.



Histofine ALK iAEP® Kit

# Topic

# Japan's "conomeal kitchen" app

https://www.nichirei.co.jp/news/2020/357.html (Japanese only)

Many people are feeling stressed by having to plan meals and eat at home. With the spread of COVID-19 expected to bring an increase in opportunities for bulk food purchases, the Nichirei Group has recently developed an app—called the "conomeal kitchen" in Japanese—that suggests meal menus and preparation procedures to suit a variety of individual tastes. We believe that the eating habits of consumers will be enriched if they are able to quickly set the dinner table with dishes that match their personal preferences.





# New Technologies Improve Efficiency

Awareness of the need for good eating habits is growing among customers and society at large.

In its drive to further strengthen its core competence and proactively engage in the resolution of social issues, Nichirei will draw on such current production technologies as Al, IoT, autonomous driving, and robotics.

# Automated Optimal Production, Personnel Plan

https://www.nichireifoods.co.jp/news/2020/info\_id8338/
(Japanese only)

Nichirei Foods has collaborated with Hitachi, Ltd. to create a system that automatically formulates optimal production and personnel plans using Al. The system, introduced at four factories in Japan in January, uses advanced Al technology to reproduce and advance plans that experts have formulated based on complex constraints.

In addition to the legal regulations involved in creating personnel plans, these include a variety of other conditions must be considered, including individual abilities, overtime, and paid leave.

Until now, experts have relied on experience-based intuition to formulate plans based on these prerequisites. The new system, however, has allowed us to automate planning and achieve optimal solutions using AI, which takes into consideration prerequisite conditions.

As a result, the time now required for planning can be reduced to about one-tenth that of that formerly needed and, since non-expert employees can also engage in planning, the system is expected to contribute to work style reforms such as a reduction in the number of hours worked and more employees taking advantage of paid leave.

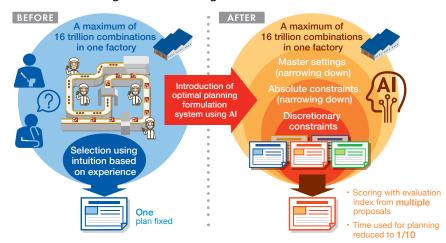
In recent years, as food manufacturers have been required to produce and supply products in response to fluctuations in demand, the system is expected to improve customer satisfaction by utilizing advanced digital technology and creating efficient production systems. The system is planned to be gradually used in other domestic plants.

Nichirei Foods will use digital technologies to promote further improvements in productivity, reductions in lead time and inventories, as well as work style reforms.



From a maximum of 16 trillion combinations in one factory, production plans encompassing daily production products and volumes for each line and personnel plans involving shift schedules are formulated automatically.

# **Production Planning Formulation Image**



# ■ Food Waste Reduction

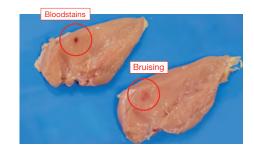
https://www.nichireifoods.co.jp/news/2018/info\_id5715/ (Japanese only)

In February 2018, in partnership with Kindai University, Nichirei Foods developed technologies powered by artificial intelligence (Al).

We maintain and control the quality of the ingredients for processed chicken products as we receive them, by using such sorting technologies as metal detection, X-rays, near-infrared rays, optics, and colors.

However, additional manual or visual inspection is often required, since the accuracy of these methods in distinguishing the quality of ingredients decreases depending on the position and angle of the foreign matter and impurities.

In the selection of the ingredients for cuts of chicken, in particular, the three major impurities that must be eliminated are bones, feathers, and bloodstains. Due to its ability to locate such impurities with pinpoint accuracy, Al-powered technology does not remove unnecessary amounts of impurity-free meat, leading to reduced food waste.







# Expiration Date Reader for Tablet Inspections\*

thtps://www.nichirei-logi.co.jp/news/2020/20200713.html

The Nichirei Logistics Group is in the process of introducing, at its bases nationwide, an Al solution to automatically read expiration dates on captured images. As part of the Group's efforts to fully digitize warehouse operations, tablet devices are being used to introduce Al and expand functionality.

Previously done manually, expiration date input now can be completed using Al. enabling highly accurate readings of 93% or more and fast processing speeds of about two seconds. This has led to improved quality control enabling anyone to capture expiration date images, simplifying overall operations, and facilitating stress-free work.

Nichirei Logistics is also collaborating with the Al solution's developer, Automagi Inc., to demonstrate image analysis.

Amid concern regarding labor shortages in Japan, the Nichirei Logistics Group will continue its efforts to realize sustainable logistics to support customer supply chains by promoting business innovation with the goal of digitization and efficiency.



\* Automated expiration date reader Al solution: Al-OCR (Optical Character Recognition/Reader) recognizes images using image preprocessing technology to identify the characters of the expiration date from the image and match the recognized expiration date with information in the cloud, to enable more accurate readings.

# Demonstration of Unmanned Forklift

Since January 2018, the Nichirei Logistics Group's Kyokurei Daikoku Distribution Center has been conducting demonstrations of unmanned forklift operations to move cargo in refrigerated warehouses. The aim is to save labor at refrigerated warehouse sites, given the industry-wide labor shortage.

Unmanned forklifts can be operated using a tablet device, making it possible for employees lacking physical strength or operating skills to use it without making mistakes. We thus plan to increase the number of warehouses where unmanned forklifts can be used, to shorten working hours and improve occupational safety and health.



Unmanned forklift operation

# ■ Truck Reservation System

## https://www.nichirei.co.jp/news/2017/298.html (Japanese only)

At distribution centers, truck deliveries are concentrated at certain times, and because the cargo on each truck is not known, smooth unloading and loading is hard, leading to long wait times for truck drivers and rising concerns in surrounding communities.

To alleviate and eliminate the problem of waiting trucks, in October 2017 the Nichirei Logistics Group launched an advanced truck reservation system.

The system allows the truck side (shipper or shipping company) to reserve a desired time for loading or unloading trucks, in line with the loading and unloading time slot framework at each distribution center.

We are attempting to improve efficiency through the introduction of a system related to procedures after trucks arrive, and involving the sending of cargo details from the truck side to the distribution center side ahead of time. The introduction of the system has led to reductions in the time required for unloading and loading, truck operations, and truck emissions ( $CO_2$  reductions).

