NSL FOODS
The Happy Taste Creator

Product Development Guidelines

for Promoting Sustainable Health and Well-being

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1 Vision, Mission and Product Development Strategy

Vision

"The heart of happiness lies in deliciousness. A global leader in food innovation for consumers worldwide."

Mission

- To develop innovative products without boundaries.
- To achieve world-class manufacturing standards while remaining environmentally friendly.
- To foster happiness and engagement within the organization.
- To adapt to change and continuously improve for sustainable growth.
- To be a trustworthy organization guided by good corporate governance and sustainable development principles.

Business Objective

To be a leader in food innovation by developing a diverse range of high-quality new products, becoming one of the first choices consumers think of and remember as "The Happy Taste Creator."

3E Corporate Strategy

1) Engagement

Build strong customer relationships to their full potential and expand joint product and service development to achieve sustainable growth together. Emphasize long-term joint business planning; for example, hot sandwiches co-developed with key customers, delivering more than 1.2 million delicious experiences to consumers each day.

2) Expansion

Create value for Thailand's food industry and progress toward becoming a sustainable food manufacturer for the world. Expand into international markets through multiple sales channels by exporting a diverse range of processed products, including Thai desserts in retort formats, ready-to-eat retort rice bars, snacks, flavored crispy rolls, beverages, coconut water, and coconut milk products.

3) Exponential Growth

Drive growth on the foundation of an innovation-led organization by advancing product research and development through food science and modern production technologies. Respond to evolving consumer needs by delivering new product and service options, including health-oriented products, Food Solutions, and Food Services that address customer requirements, create added value, strengthen customers' and partners' market competitiveness, and generate new outcomes for Thailand's food industry.

What NSL Means by "Health-Conscious Products"

- Manage nutrients that should be limited, such as sugar, fat, and sodium, at levels appropriate to the product category and serving size.
- Enhance nutritional value by considering protein, dietary fiber, grains, vegetables, or other beneficial ingredients as appropriate to each product.
- Design portion size and energy content appropriately to support balanced consumption while maintaining taste, convenience, and a positive consumer experience.
- Ensure product safety and communicate responsibly through accurate and transparent nutrition information and claims that comply with applicable laws and standards.

Support for the Sustainable Development Goals

SDG 2: Zero Hunger — End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.

2.1 End hunger and ensure that everyone, especially people who are poor or in vulnerable situations, including infants, has access to safe, nutritious, and sufficient food.

SDG 3: Good Health and Well-Being — Ensure healthy lives and promote well-being for all at all ages.

3.c Increase health financing and the recruitment, development, training, and retention of the health workforce in developing countries.

SDG 12: Responsible Consumption and Production — Ensure sustainable consumption and production patterns.

12.1 Implement the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, with all countries taking action and developed countries taking the lead, taking into account the development and capabilities of developing countries.

Impacts, Risks and Opportunities

1) Health-Conscious Products

Changing health and consumption trends are leading consumers to place greater emphasis on quality, safety, nutritional value, and transparency of product information. Demand is also growing for foods that address specific health needs, such as low-energy foods, high-protein or high-fiber foods, plant-based foods, and products for vulnerable groups, including young children, older persons, persons with disabilities, and people with chronic illnesses.

For NSL Foods, these changes represent both business risks and opportunities that may affect customer confidence, brand image, and competitiveness. The Company therefore takes a comprehensive approach to product development, from raw material selection and formulation design to production process control, quality and safety verification, and accurate, clear, and compliant labeling and nutrition information.

At the same time, the health-oriented consumption trend is an important opportunity to build on NSL Foods' research and development capabilities and create products with greater nutritional value that respond to more diverse consumer needs. This broadens consumer choice, improves access to safe and health-appropriate food, and supports the well-being of consumers and society, while creating opportunities to expand the customer base, grow the health-product market, and strengthen long-term business growth.

2) Products Promoting Thai Identity

The growing popularity of Thai food and products that reflect local culture creates an important opportunity to transform Thai ingredients, flavors, culinary wisdom, and food identity into contemporary, convenient products that can reach wider consumer groups in both domestic and international markets.

Product development must, however, preserve identity and quality alongside safety standards, consistency of raw materials, cost considerations, and commercial manufacturability. Failure to maintain authentic taste, quality, or Thai character could reduce product differentiation and credibility.

For NSL Foods, this is an opportunity to leverage its food innovation and R&D capabilities to add value to Thai food and ingredients, create new products that reflect national identity, support domestic raw materials and producers, expand the customer base, and strengthen the competitiveness of Thai food products in international markets.

Operating Approach

NSL Foods is committed to developing products that are safe, nutritionally valuable, and responsive to consumers' health needs. The Company places importance on every stage, from raw material selection and formulation to production and accurate, transparent labeling.

The Company promotes the research and development of alternative products that help reduce sugar, fat, and sodium while increasing value from protein, dietary fiber, grains, and vegetables. It also continually monitors nutrition and food-innovation trends to provide suitable choices for different consumer groups.

In addition, NSL Foods applies quality control, verifies nutrition information, listens to consumer feedback, and continuously uses the results to improve products and plans, supporting consumer well-being and sustainable business growth.

Strategy for Promoting Health-Conscious Product Development

Products and Services

- Expand the variety of health-oriented and alternative products across bakery, ready-to-eat foods, snacks, and Food Service offerings.
- Conduct joint R&D on formulations with partners/customers, focusing on reducing sugar, fat, and sodium to appropriate levels while maintaining product taste and quality.
- Enhance nutritional value through ingredients such as protein, dietary fiber, grains, vegetables, and plant-based ingredients.
- Develop products for specific consumer groups, such as people managing their weight, older adults, and consumers seeking plant-based or health-oriented foods.
- Select high-quality, safe raw materials and consider ingredients from responsible, standards-compliant sources.
- Control product quality and food safety throughout the process, while providing accurate, transparent, and easy-to-understand labels and nutrition information.
- Develop convenient product formats and access channels so consumers can more easily choose foods suited to their lifestyles and health needs.
- Collaborate on product R&D with research organizations, academic institutions, partners, and customers to apply knowledge, technology, and market needs to commercially viable health-food innovations.

Example of Health-Conscious Product Development: Labb Chicken Breast & Perilla Seed Rice Bar

NSL showcases Thai high-protein rice innovation, "KHOW THANG: The Next-Gen High-Protein Rice Bar (Labb Flavour)," selected as a finalist for the THAIFEX – Taste Innovation Show 2026. NSL developed a ready-to-eat, high-protein rice bar combining chicken breast with "perilla seeds," a Thai superfood, and fortified with BCAAs and L-Carnitine to provide energy and appeal to health-conscious consumers. The distinctive Labb flavor reinterprets Thai culinary identity in a modern form that is tasty, convenient, portable, and delivers well-rounded nutritional value in one product.

Strategy for Promoting Thai Identity Products (NSL Soft Power to Thai Taste Horizon)

1) Rationale

Thailand has a strong advantage in "Thai Food," one of the 11 dimensions of the government's Soft Power strategy aimed at promoting Thai culture globally, creating greater economic value, and enhancing the country's image.

NSL Foods is one of the food innovators bringing Thai cuisine to consumers in new formats, such as frozen mango sticky rice, frozen basil rice, and processed Thai desserts, using modern production technologies and international quality standards. This aligns with the policy to promote Thai Food Soft Power through "Innovation x Tradition." Under the concept "NSL Soft Power to Thai Taste Horizon," the Company aims to shape the image of "modern Thai food" as delicious, safe, and convenient, using NSL innovation as a key mechanism to build pride and sustainably expand Thai food onto the global stage.

2) Business Opportunities for Thai Desserts in Global Markets

In 2025, Thailand's exports were valued at approximately USD 339.6 billion, or THB 11.14 trillion, an increase of 12.9% from the previous year, reflecting the competitiveness and international market potential of Thai products.

Within the agro-industrial product category, which includes processed foods, confectionery, bakery products, and ready-to-eat foods, Thailand's 2025 exports were valued at approximately USD 24.38 billion, up 4.1%. Wheat products and other prepared foods accounted for approximately USD 3.16 billion, ranking third among agro-industrial products and representing 12.94% of the category's export value.

This trend creates an opportunity for NSL Foods to build on its expertise in bakery, confectionery, ready-to-eat foods, and food innovation, particularly by developing products that combine Thai food identity (NSL Soft Power to Thai Taste Horizon), convenience, nutritional value, and international safety standards, thereby expanding opportunities in overseas markets.

3) Objectives

Build a new image of Thai food as world-class innovative food, while leveraging Food Soft Power to generate income and opportunities for Thailand. Position NSL's food innovations as ambassadors of Thai cuisine internationally by connecting "Thai food culture" with "processing technology" to meet the needs of modern consumers.

4) Target Audiences

- Young Thai consumers interested in convenient, health-conscious foods.
- International consumers who enjoy Thai flavors but seek greater convenience.
- Restaurants, hotels, and food-service businesses seeking high-quality ready-to-use Thai menu solutions.
- Investors and business partners interested in importing/distributing innovative Thai food products.

5) Key Project Activities

1. **Thai Taste Innovation Showcase**
    - Showcase NSL's Thai food innovations at trade fairs (e.g., THAIFEX, Anuga) and through roadshows in target countries.
    - Demonstrate the use of NSL products in contemporary Thai dishes.

2. **Communicating Thai Food Culture through Digital Media**
    - Produce videos presenting innovative Thai dishes together with the story and heritage behind each menu.
    - Promote content through YouTube, TikTok, Instagram, and NSL's platforms.

3. **Thailand Ready to Eat Lab**
    - Organize workshops or collaborations with renowned chefs, food researchers, and international chefs to develop new menu items using NSL products.
    - Give young people and vocational culinary students opportunities to create new dishes using NSL products.

6) Expected Outcomes

- Elevate recognition of Thai food in formats that are convenient, modern, innovative, and still retain the distinctive identity of Thai flavors.
- Strengthen Thailand's image and Soft Power potential, particularly in the area of food culture.
- Increase opportunities to develop and expand innovative Thai food products into international markets.
- Encourage younger generations to appreciate, be inspired by, and participate in preserving, extending, and creatively developing Thai food culture sustainably.

Thai Identity Product (Thai Soft Power): KHOW THANG Rice Bar by NSL Foods

KHOW THANG rice bars are an example of transforming domestic resources into commercial products that reflect Thai identity by combining creativity and local wisdom with Thailand's Soft Power concept. The product uses Thai rice as its primary ingredient and is developed into rice bars with flavors and fillings that represent the diversity of Thai cuisine, such as mango sticky rice, durian sticky rice, and Som Tam Thai. Beyond promoting Thai values and identity on the global stage, the product also adds value to Thai rice and supports local economies in a sustainable manner.

Awards and Recognition

Product Development for Sustainable Health and Well-Being

Prime Minister's Export Award 2025 – Outstanding Exporter

NSL Foods Public Company Limited received the Prime Minister's Export Award 2025 in the "Best Green & Sustainable Exporter" category. The award reflects the commitment of NSL Foods PLC and its affiliate, NSL Intertrade (2023) Co., Ltd., to expanding into international markets while embedding sustainable development (ESG) across all dimensions and advancing the BCG (Bio-Circular-Green Economy) model throughout the value chain. The Company delivers high-quality products to international standards and conducts R&D to meet the needs of consumers worldwide.

First Runner-Up, 2024 Outstanding Innovation Award – Economic Category

Under the "Thailand Synergy for Thai SMEs – 7 Innovation Awards 2024" collaborative innovation initiative, the KHOW THANG rice bar transformed plated meals into a bar format that can be conveniently held and eaten without the rice breaking apart or crumbling. Made from a variety of rice types, it was developed so that jasmine rice and Riceberry rice can retain a bar shape while preserving delicious taste, with vegetable or meat fillings based on different dishes. The product is designed for the fast-paced lifestyles of modern consumers and can be heated in a dedicated rice-bar oven for just three minutes before serving.

First Runner-Up, Thai Rice Innovation Award 2024 – Industrial Category

The KHOW THANG rice bar received the award in the Thai Rice Innovation Competition organized by the Thai Rice Foundation under Royal Patronage in collaboration with the National Innovation Agency (Public Organization).

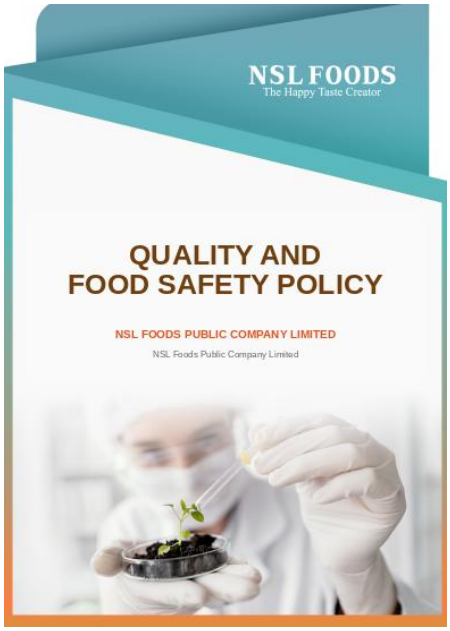
The recognition reinforces NSL's position as an innovation-driven organization, developing ready-to-eat foods from plated dishes into convenient, easy-to-eat, satisfying bar formats suited to modern lifestyles.

2 Quality and Food Safety Policy

NSL has established a Quality and Food Safety Policy to affirm its commitment to producing and developing high-quality products that are safe for consumers and comply with applicable requirements and laws. The Company continuously improves the effectiveness of its quality system, ensures on-time delivery, and strives to achieve the highest level of customer satisfaction.

5 Key Implementation Guidelines

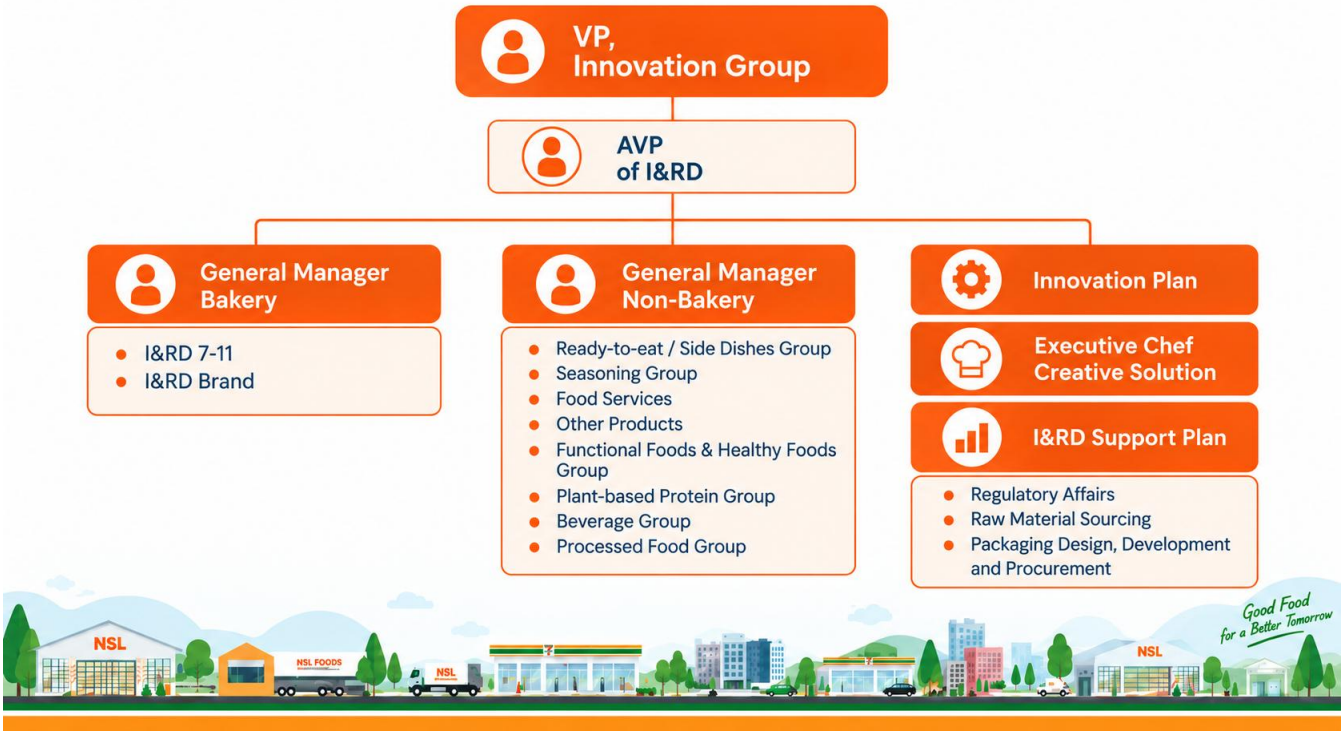
01	Produce and develop high-quality, safe products	Set objectives and evaluate performance; control processes, reduce waste, and continuously inspect and review the system.
02	Maximize customer satisfaction	Conduct satisfaction surveys and respond to complaints quickly and effectively.
03	Deliver on time	Plan production and delivery and effectively monitor shipment status.
04	Ensure product quality and safety	Inspect raw materials and processes; apply GHP/HACCP; identify and control risk points; and investigate and correct issues when they occur.
05	Continuously improve the effectiveness of the quality system	Review the system; train employees in quality, safety, and new technologies; and maintain readiness of backup systems.



Read the full policy: Click here

3 Innovation, Research & Product Development Structure (Innovation & R&D)

In 2025, NSL restructured its "Innovation & R&D" function to increase operational agility, streamline management processes, and improve R&D cost management efficiency. The restructuring also consolidates and further develops knowledge in bakery, food, and beverages into intellectual property, strengthening competitiveness and supporting the Exponential Growth target by 2030.



Role of Innovation, Research & Product Development in Product Development

- Apply Customer Taste Profile & Preference data together with Data Analytics to support consumer-trend analysis, new product development, and the identification of future business opportunities.
- Integrate collaboration with customers and relevant functions to develop a diverse product portfolio aligned with market needs, particularly products serving health-conscious consumers.
- Build employee capabilities in production technology, research and development, and food science, covering both savory and sweet food products, to strengthen the organization's innovation capabilities.
- Link R&D processes with the management of cost, quality, safety, commercial-scale production, and responsible marketing so products can be manufactured and commercialized efficiently.
- Manage, monitor, and evaluate product development through the monthly Sales & Operations Planning (S&OP) process, with systematic performance reporting against targets to the Executive Committee (ExCom).

4 Food Safety Standards

Standard		Description	Importance to Product Development
ISO 9001:2015		Quality Management System	Helps establish consistent processes and controls for documents, objectives, quality, and continual improvement.
GHPs & HACCP		Good Hygiene Practices and Hazard Analysis and Critical Control Point System	Controls the production environment, identifies hazards, and manages critical control points that may affect food safety.
FSSC 22000		Food Safety Management System	Strengthens the food safety management system by integrating management elements and prerequisite programs.
ISO 22000		Food Safety Management System Standard	Integrates communication, risk management, and controls throughout the food chain.
Halal Product		Halal Product	Confirms compliance with Halal requirements for raw materials, processes, and related management.

5 Health-Conscious Product Development Targets

Modern consumers increasingly prioritize health while still expecting taste, convenience, and products that fit fast-paced lifestyles. NSL therefore identifies health-conscious product development as a key R&D direction and part of the Company's sustainability goals.

Health-Conscious Product Development Target (NPD)

2030 Target	2025 Performance
(Target Year)	(Base Year)
5	**2**
Products	Products

Guiding Principles for Defining "Health-Conscious Products"

- Put consumers at the center by considering the needs and specific characteristics of target groups, such as requirements for protein, dietary fiber, energy, consumption convenience, and age-appropriate suitability.
- Balance nutritional value and taste so products support health while also delivering a positive eating experience and encouraging sustained consumer choice.
- Design ingredients and formulations systematically, considering quality, safety, nutritional appropriateness, raw material availability, cost, and commercial manufacturing capability.
- Develop and test products jointly with customers and business partners to ensure alignment with market needs, practical applicability, and potential for business scale-up.
- Communicate information accurately and responsibly by clearly and transparently presenting ingredients, nutritional value, and product benefits without misleading consumers.

2025 Examples

NSL continuously develops new products, such as Imitation Crab Salad with Seafood Sauce and Fried Rice with Grains, leveraging Thai rice and expanding opportunities in both domestic and international markets.

Health-Conscious Products

Product Name: Imitation Crab Salad with Seafood Sauce (Co-developed Product)

Product Features and Health Benefits

Imitation Crab Salad with Creamy Seafood Dressing is a ready-to-eat meal combining imitation crab, a variety of vegetables, and wakame seaweed. It is flavorful and convenient to eat, providing approximately 90 kcal per tray with only 2.5 grams of fat.

The vegetables and seaweed provide dietary fiber, vitamins, and minerals, while imitation crab provides protein. The product is suitable for consumers seeking a light meal or a lower-energy snack.

Product Name: Fried Rice with Grains

Product Features and Health Benefits

Fried Rice with Grains (Vegetarian Fried Rice with Grains) is a plant-based ready-to-eat meal combining rice, grains, and a variety of vegetables, such as corn, carrots, and peas. It offers an easy-to-enjoy taste and convenient format and is suitable for consumers who want to reduce meat consumption or choose plant-based foods. Grains and vegetables provide dietary fiber, vitamins, minerals, and carbohydrates for energy, helping diversify nutritional intake in each meal. It is a convenient meal option made with a variety of plant-based ingredients.

6 Product Design and Responsible Communication Criteria

NSL Foods has established product development guidelines that consider quality, safety, nutritional value, consumer suitability, and practical manufacturability, together with the appropriate selection of raw materials and packaging.

For communication, the Company places importance on ensuring that ingredients, nutrition information, claims, and label information are accurate, clear, transparent, and compliant with applicable laws and standards. Statements that could mislead consumers or create expectations beyond the product's actual attributes are avoided, supporting informed consumption choices and building long-term trust.

Nutrition **Clear and verifiable nutritional rationale** Define key nutrients or product value propositions based on consumer needs and supporting information.	**Taste** **Maintain taste and eating quality** Test taste, aroma, texture, and consumer acceptance before finalizing the formulation.	**Food Safety** **Safe throughout the product shelf life** Control raw materials, hazards, allergens, critical points, and storage conditions.
Convenience **Fit for consumer lifestyles** Design portion size, heating/eating methods, and packaging for clarity and convenience.	**Transparency** **Accurate, transparent, and non-misleading information** Labels, advertising, and claims must comply with requirements and be supported by evidence.	**Sustainability** **Consider sustainability** Reduce losses, source ingredients responsibly, and design packaging appropriately.

7 Support for Educational Institutions and External Organizations in Safety, Quality, and Product Development

The Company partners with stakeholders across sectors to provide consultation, share perspectives, and stay informed of evolving needs. It also provides support through funding and company experts to assist organizations in improving product safety and quality, as well as production standards. These initiatives aim to help small enterprises develop toward medium scale, strengthen the skills and knowledge needed to operate their businesses, and broaden entrepreneurial perspectives across various dimensions of business management.

Mr. Somchai Atsawapianan shared perspectives in the EXECUTIVE TRANSFORMATION FOR SUSTAINABLE AGRO-INDUSTRY BUSINESS, Cohort 2

In collaboration with the Faculty of Agro-Industry, Kasetsart University

NSL supports Thai food innovation through the FoSTAT Food Innovation Contest, a nationwide platform for student food-product innovation.

In collaboration with FoSTAT (Food Science and Technology Association of Thailand)

NSL advances the Plant-Rich 30 project from concept to action at GCNT Expo 2026

In collaboration with the Plant 30% Leaders Club, SWOC., and the Thai Chamber of Commerce

8 Mechanism for External Stakeholders to Submit Product-Related Complaints

NSL Foods has a systematic mechanism for listening to feedback and managing complaints from customers and consumers. The Company aims to respond quickly and resolve issues related to product quality, service, and food safety, while using the information received to continuously improve products and operations through the following channels:

- Telephone: +66 (0)2 525 8520-1, +66 (0)2 149 9436-9
- Online channels:
    - Email: contact@nslfoods.com
    - Website: https://nslfoods.com or via the "Contact Us" menu
    - Facebook: NSL Foods Public Company Limited