Challenges | Global Tuna Resource and Market Size
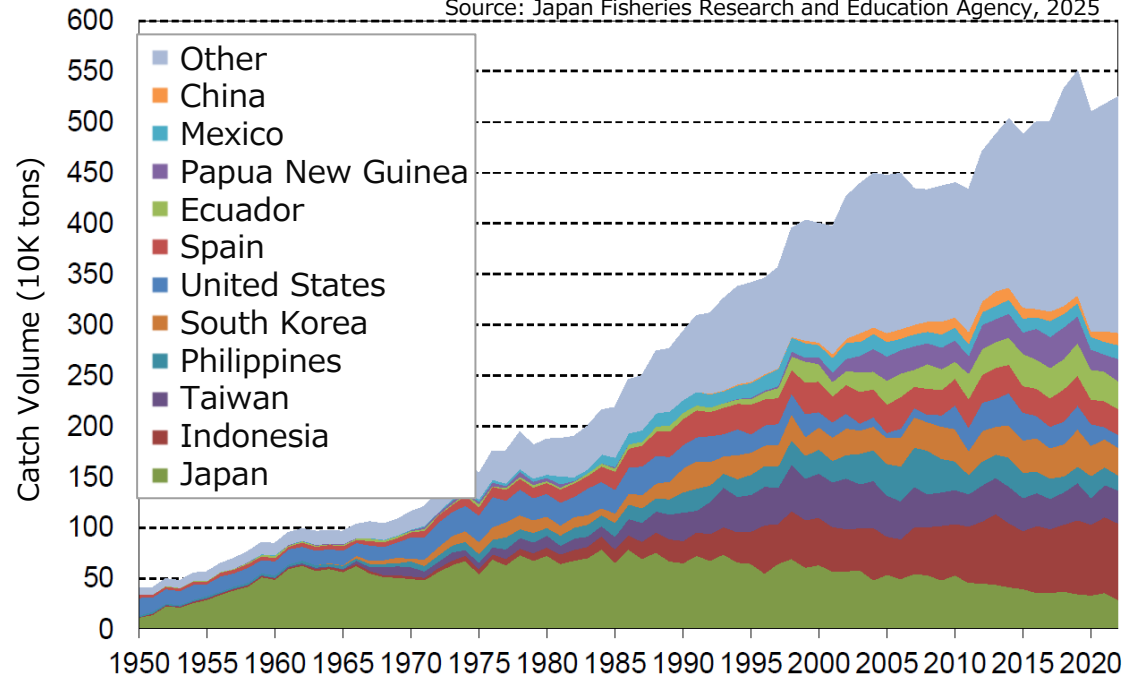
- Global tuna catches have increased by 25% in the past 20 years, and international quality demands for tuna are increasing annually.
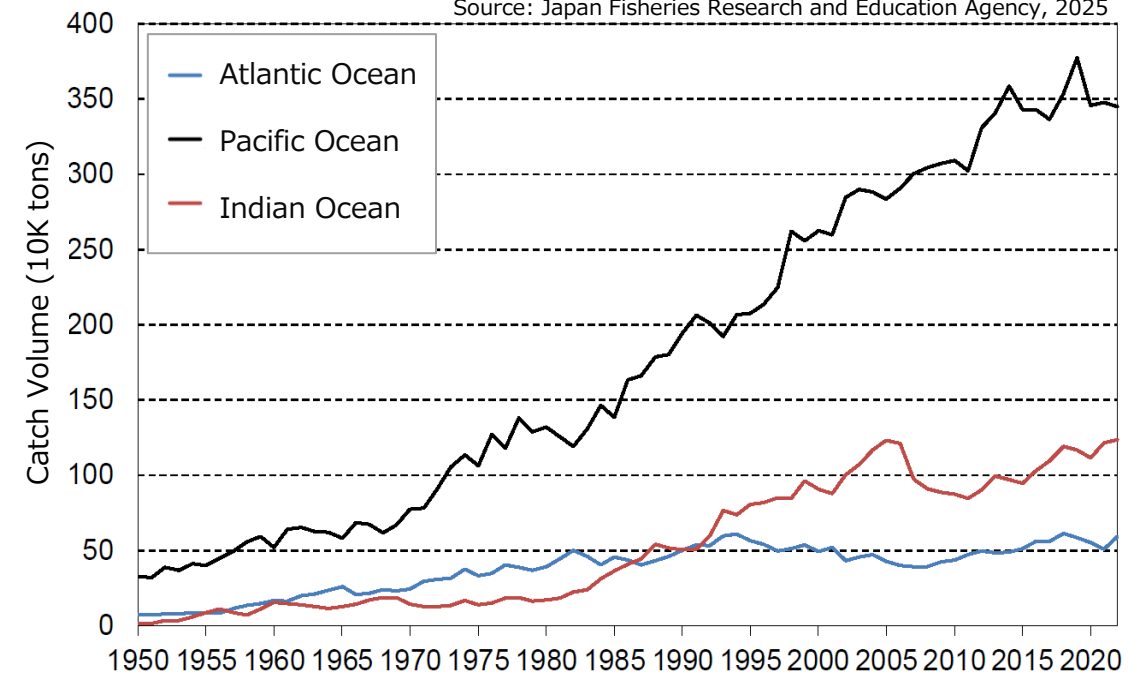
Trends in Tuna Catches by Major Country/Region

Source: Japan Fisheries Research and Education Agency, 2025

Trends in Tuna Catches by Major Ocean

Source: Japan Fisheries Research and Education Agency, 2025

The global tuna market is growing year by year and is currently valued at 5 trillion yen (33 billion USD).

Challenges | Challenges Facing Tuna Distribution and Market

- Enhanced value through accurate inspection and labor savings in the tuna distribution process.

Production

Distribution / Processing

Sales / Consumption

Catch → Market → Whole-sale / Storage → Processing → Retail → Consumption

It is extremely difficult for seafood trading companies and processors to inspect frozen tuna completely and accurately
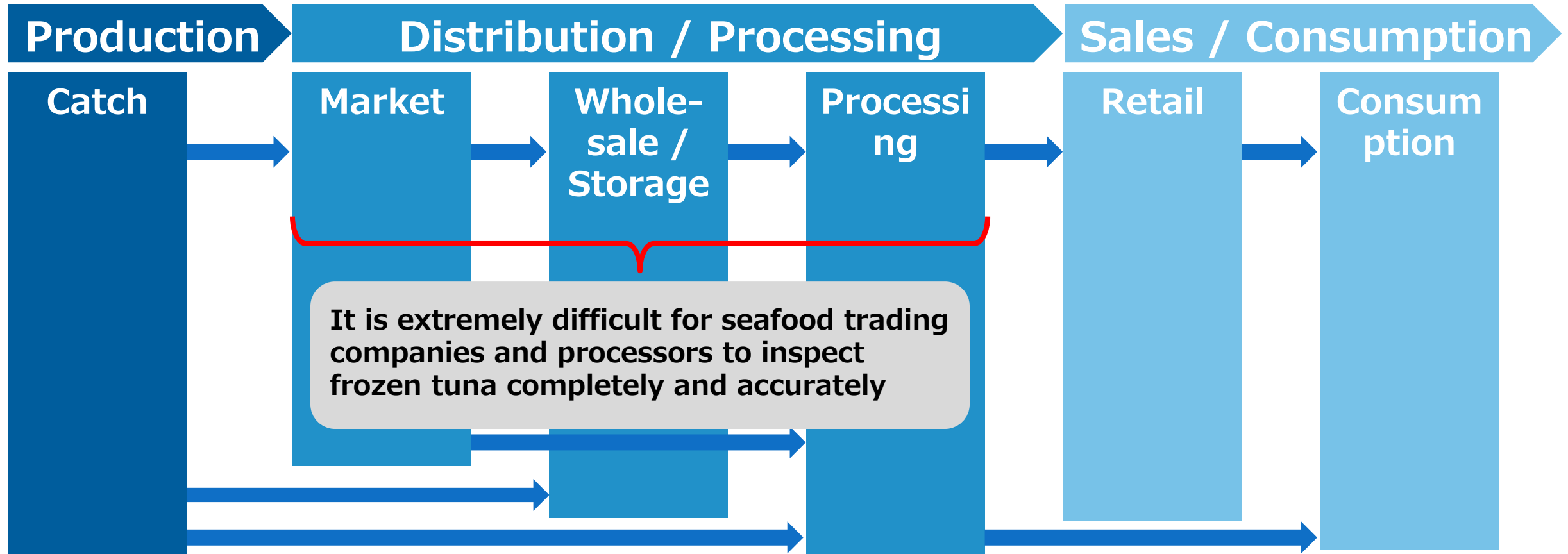
Challenges | Challenges Related to tail-cut selection

- Three challenges in the tail-cut selection process, which is essential for tuna inspection.

Cutting the tail of frozen tuna with a power saw.

Arranging the cut tails one by one and thawing them in hot water.
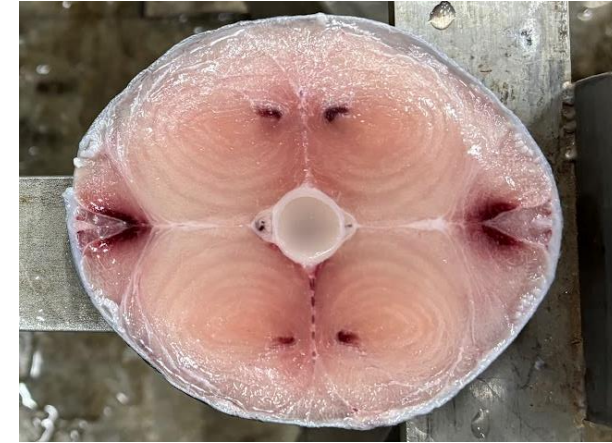
Experts visually assess fat content, etc., from the cross-section.

Hazardous Work

High Workload

Requiring Expertise

Photo Source: Yaizu Suisan Web Site "Knowing Yamafuku"
URL : https://www.yaizu-yamafuku.co.jp/policy/

Background | Collaboration between Fujitsu and IsedaTec

Fujitsu recognized the potential of Ultrasound Analysis AI, but device development was necessary for practical implementation in society

Fujitsu and Ishida Tec met through Owned Media.

Fujitsu PR note Top Page
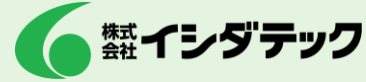(As of March 25, 2025)

IsedaTec note Top Page
(As of March 25, 2025)

Initial meeting in March 2024, followed by discussions.

Collaboration began in April 2024.

Ishida Tec Co., Ltd.

- A device manufacturer headquartered in Yaizu City, Shizuoka Prefecture, that develops, designs, and manufactures food and pharmaceutical manufacturing equipment.
- Established as a private company in 1948. Holds 82 cumulative patents and 62 utility model registrations.
- Currently developing AI selection systems for processed seafood products and brewing ingredients.

IshidaTec Yaizu Plant

Food Manufacturing Equipment (Products)
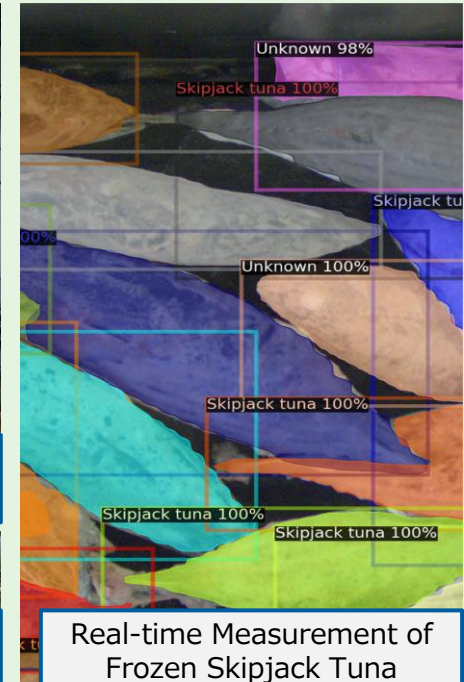
Real-time Measurement of Frozen Skipjack Tuna

Company Overview | SONOFAI INC.

SONOFAI is a manufacturing/engineering startup based in Shizuoka Prefecture, aiming to be a partner in inheriting the skills of master craftsmen through digital technology.

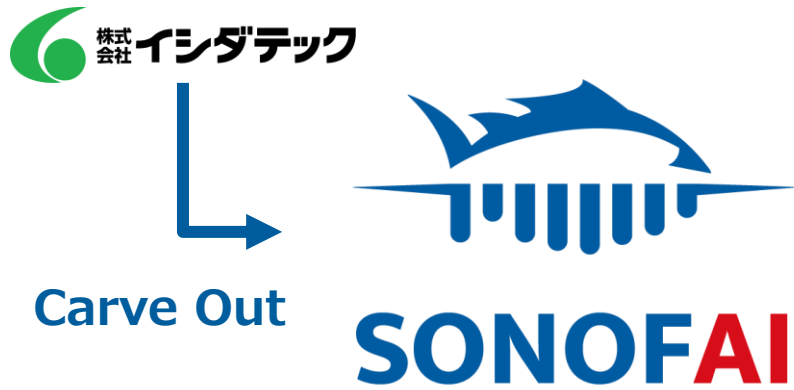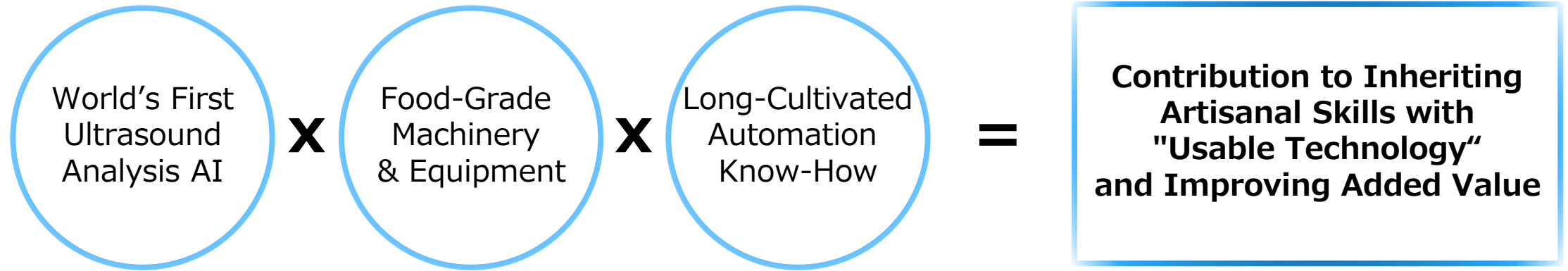**World's First Ultrasound Analysis AI** X **Food-Grade Machinery & Equipment** X **Long-Cultivated Automation Know-How** = **Contribution to Inheriting Artisanal Skills with "Usable Technology" and Improving Added Value**

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Carve Out

SONOFAI

Sonofai Inc.

Establishment	December 16, 2024
Capital	5,000,000 yen
Location (HQ)	355 Sakamoto, Yaizu City, Shizuoka Prefecture (within IshidaTec Co., Ltd.)
CEO	Hisashi Ishida

Logo: Expresses analog skills digitally. The colors are based on the sea of Yaizu, which nurtures fisheries and marine industries, and Fujitsu Red, which represents technology supply.

The company name "SONOFAI" is derived from: "SONO," which means "sound" in Latin; "F" from "Frozen Fish" and "Fujitsu"; and "AI" representing Artificial Intelligence. Subsidiarily, it also implies "Son of AI," meaning the offspring of AI realized by AI.

Development

SONOFAI

Template version P01_2 2025.3.23

Development | Pieces Needed for AI Social Implementation

- SONOFAI promotes the project by inheriting Fujitsu's Ultrasound Analysis AI technology and Ishida Tec's equipment.

FUJITSU

Ultrasound Analysis AI License Grant →

Stock Acquisition Rights + License Fee ←

SONOFAI

Development and Provision of Fat Content Inspection Equipment for Frozen Fish →

Customers (Fisheries Industry, etc.)

Equipment Purchase + Maintenance Fee ←

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Manufacturing of Inspection Equipment →

Manufacturing Cost ←

Research Prototype (Fujitsu, Tokai University)

Commercial Prototype (IshidaTec)

Product | "SONOFAI T-01" World's First Ultrasound Analysis AI device

Scheduled to be available domestically in June 2025
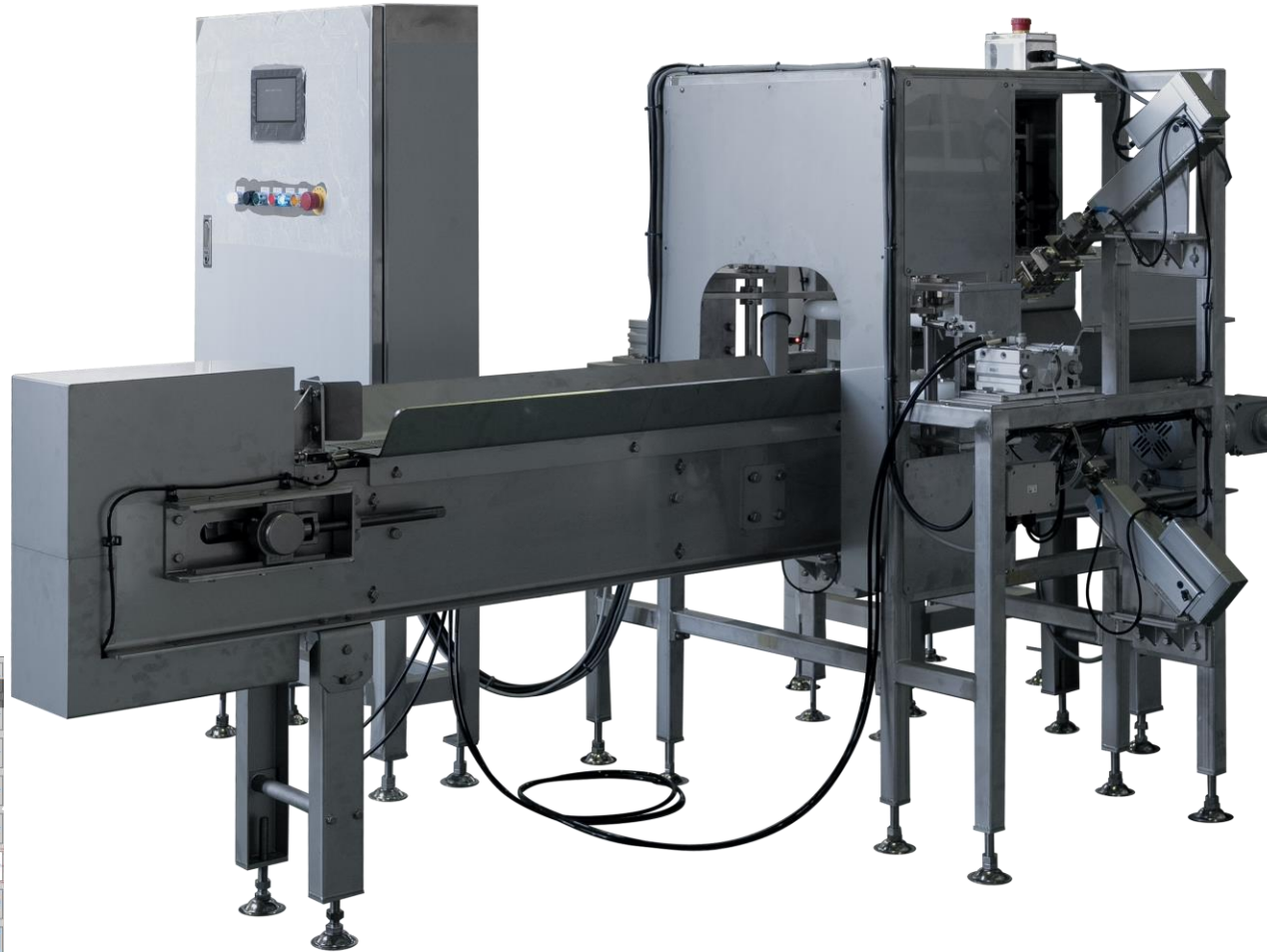
Ultrasound Measurement Device
SONOFAI T-01

Basic Material:
   Stainless Steel
Dimensions:
   W2700 x D1450 x H1600 (mm)
Compatible Size:
   10kg - 20kg
Compatible Fish Species:
   Albacore Tuna
Processing Capacity:
   5 fish / minute

Equipped with Ultrasound Analysis AI

Solution | Ultrasound Analysis AI

In a collaborative effort, Tokai University, renowned for its research on tuna flavor, and Fujitsu, a leader in Ultrasound Analysis AI[1], are proud to announce a world-first non-destructive testing of frozen tuna. (December, 2023)
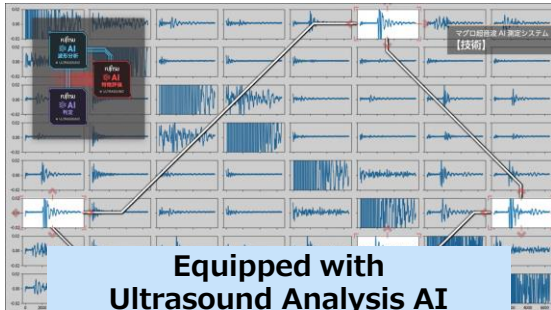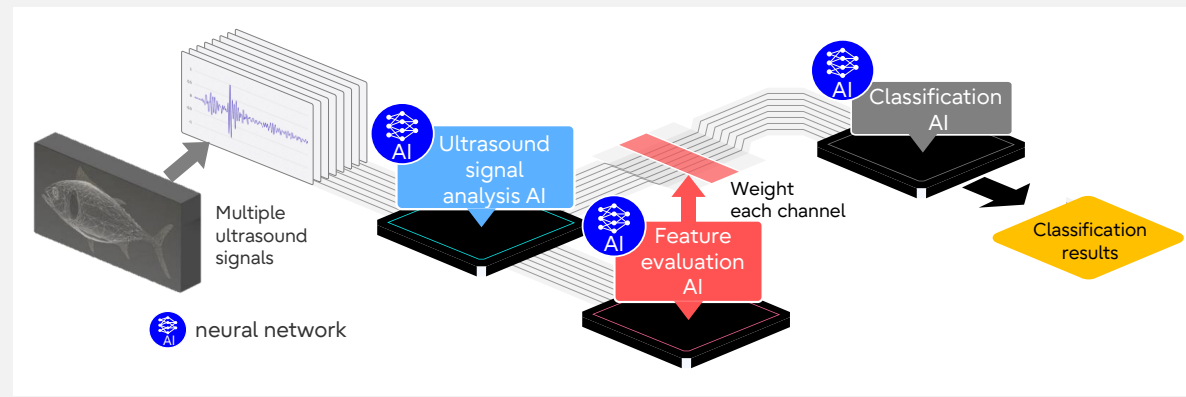
[1] Ultrasound Analysis AI: Core Technology of AI Service "Fujitsu Kozuchi"

High-Precision Inspection for Frozen Products

- Ultrasound inspection is a safe and cost-effective non-destructive method, but data analysis has been challenging due to the large amount of noise.

- By using low-frequency ultrasound, we have achieved non-destructive inspection of frozen products, which was previously impossible.

Multiple ultrasound signals

Ultrasound signal analysis AI

Feature evaluation AI

Weight each channel

Classification AI

Classification results

neural network

Accuracy Exceeding Tail-Cut Selection

- Performance is enhanced by weighting and analyzing the multichannel signals based on the magnitude of noise.

- Compared to chemical analysis results, our AI successfully determined the fat content with an accuracy exceeding that of tail-cut selection.

Accuracy (%)

- NN (1 signal): 70.5
- NN (8 signals): 75.1
- New Algorithm: 80.0
- Tail-cut Selection: 78.9

NN : Neural Network

Product | Addressing Challenges
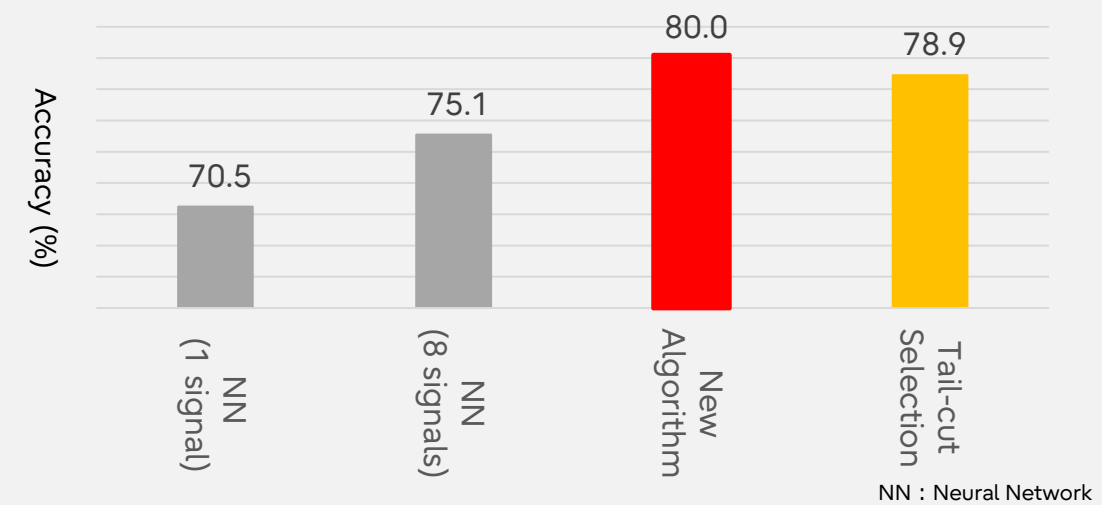
- SONOFAI T-01 addresses all challenges

Full Inspection   **Increased Efficiency**   **AI-driven Profitability**   **Standard-ization**   **Safety**

Product | Value Proposition

- This technology enables the automation and acceleration of the selection process, making **comprehensive inspection**, previously unfeasible due to human resource constraints, a reality.

- This reduces lost revenue from **high-value products being sold at lower price points** and facilitates the increased supply of **high-quality, high-value-added albacore tuna**."

- Furthermore, this innovation reduces hazardous tasks, **improving the occupational health and safety environment for workers**.

Product | Process Transformation

- Using the SONOFAI T-01 can reduce the time required for tail-cut selection by up to approximately 80%. (based on hearing results from a fisheries company)

Traditional Method
- Time: 60 sec per fish
- Personnel: Multiple
- Specialized Skills: Required (Tail-cut, Visual sorting)

Tail-cut → Thawing → Visual sorting

Time Required: 60 sec per fish

Ultrasound Analysis AI
- Time: 12 sec per fish
- Personnel: 1 person
- Specialized Skill: Not required (Non-destructive)

Place on device for 12 seconds

Time Required: 12 sec per fish

- Achieves an 80% reduction in inspection time.
- Enables 100% inspection.
- Increases the availability of high-value products.

Illustration : Fujitsu

What's Next

Outlook | Functionality Expansion and Domestic & International Deployment
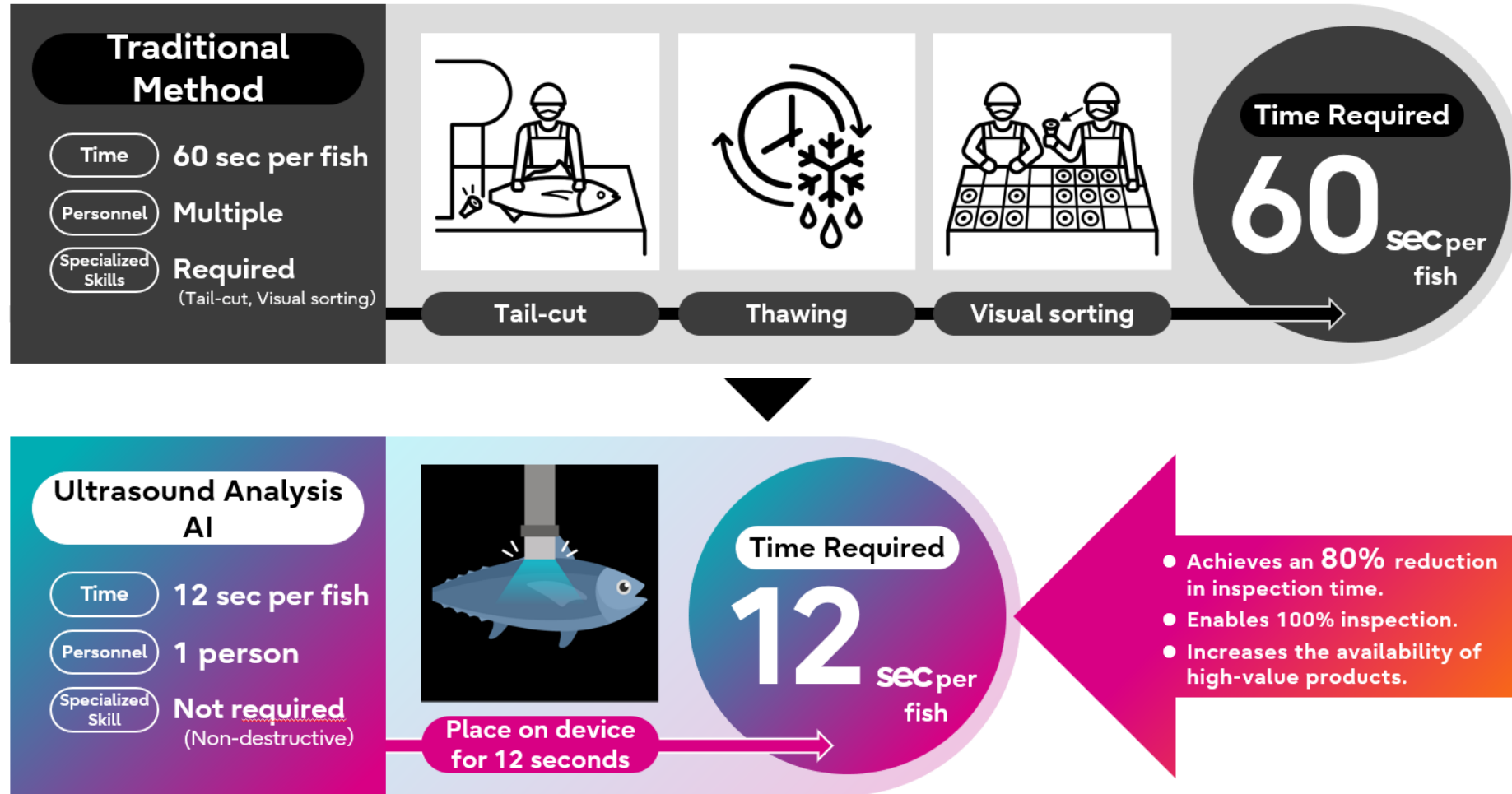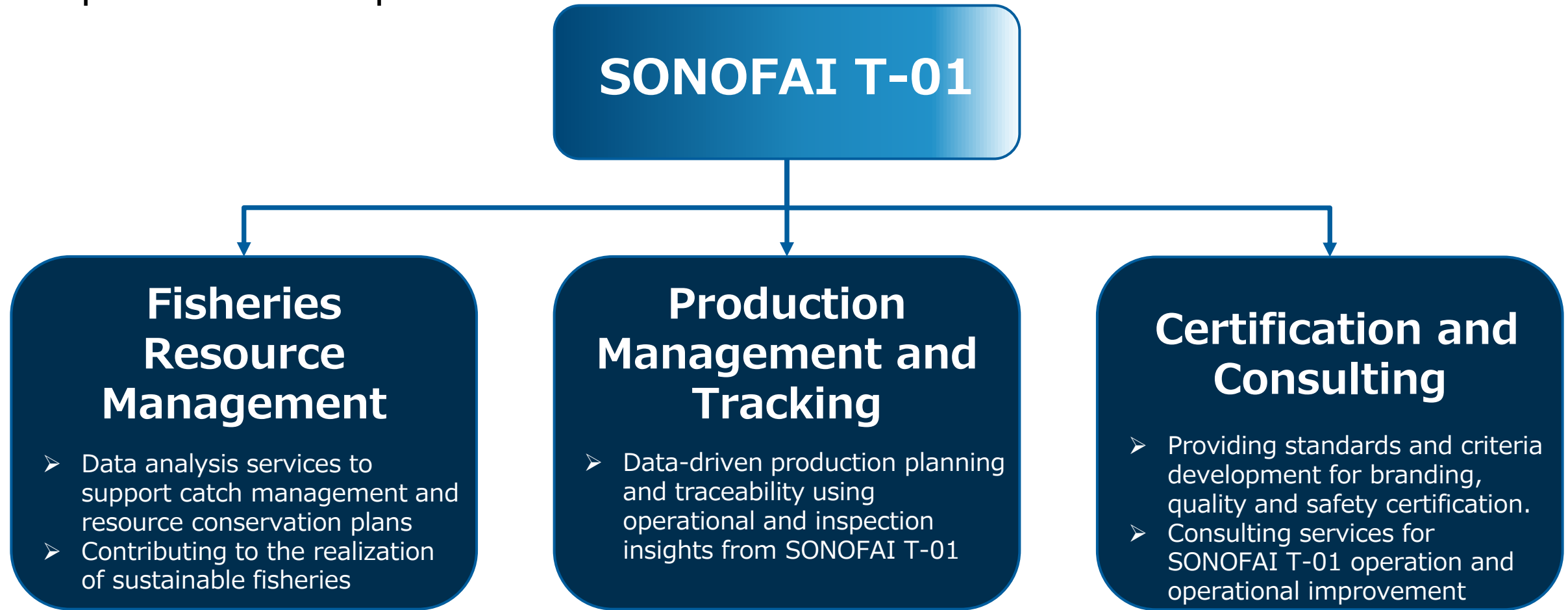
- We plan to sequentially expand the range of supported fish species and add new features, aiming to provide 100 units globally within the next five years.

		FY2025	FY2026	FY2027
Fish (Tuna) Species	**Albacore**	◯	◯	◯
	Yellowfin		◯	◯
	Bigeye			◯
	Skipjack		◯	◯
Evaluation Function	**Fat Content**	◯	◯	◯
	Freshness		◯	◯
	Flesh Quality [1]		◯	◯
Expansion Function	**Handling**	Automated Sorting Before / After Device	Batch Processing (Transport / Logistics Management)	
	Data Collaboration	Remote Management / Collaboration	Data Collaboration with SONOFAI's Proprietary AI	

[1] Flesh Quality : A comprehensive indicator that encompasses firmness and elasticity, which affect texture and taste.

Outlook | SONOFAI T-01 as a Catalyst for Growth in the Fisheries Sector

- Contributing to sustainable industrial development through various services and products, starting with the "SONOFAI T-01".
- Updates will be provided online.

SONOFAI T-01

Fisheries Resource Management

➢ Data analysis services to support catch management and resource conservation plans
➢ Contributing to the realization of sustainable fisheries

Production Management and Tracking

➢ Data-driven production planning and traceability using operational and inspection insights from SONOFAI T-01

Certification and Consulting

➢ Providing standards and criteria development for branding, quality and safety certification.
➢ Consulting services for SONOFAI T-01 operation and operational improvement

- Exhibiting at FOOMA JAPAN 2025 (World's Largest Food Manufacturing Expo)

FOOMA JAPAN 2025: https://www.foomajapan.jp/

Tokyo Big Sight: http://bigsight.jp/visitor/

Partner in inheriting master craftsmanship through digital technology; standardizing Japan's food quality management.