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Sonofai revolutionises frozen tuna inspection with Fujitsu AI tech

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Enabling automated, non-destructive inspection ensures consistent quality and maximises value

Figure 2. Tuna quality assessment

Enabling automated, non-destructive inspection ensures consistent quality and maximises value

Fujitsu Limited and Sonofai Inc., Ishida Tec Co. and Tokai University announced the launch of an automated inspection device that determines the fat content of frozen albacore tuna in a non-destructive manner. The device, which deploys Fujitsu's AI technology, is being launched by Sonofai Inc., a Japanese startup dedicated to preserving artisanal techniques through digital innovation. Ishida Tec Co., Ltd., a manufacturer of food processing equipment, and Tokai University, which is driving innovation in the food processing industry, also contributed to the collaboration. Sonofai will launch the newly developed inspection device SONOFAI T-01 in June 2025, initially targeting the seafood processing industry and fisheries cooperatives in Japan before expanding globally. This effort comes against the backdrop of a sustained increase in demand for high-quality tuna around the world, with the Japan Fisheries Research and Education Agency noting a 25 per cent rise in the last 20 years.

The SONOFAI T-01 leverages Fujitsu's ultrasound analysis AI technology, a core engine of the Fujitsu Kozuchi AI service, and is the first device of its kind that can determine the fat content of frozen tuna in a non-destructive manner. This enables automated, highly accurate fat content assessment without the need for human visual inspection. Conventional methods of assessment rely on skilled workers visually inspecting thawed cross-sections of the tail, which is a labor-intensive, time-consuming process and prone to inconsistencies due to variations in individual judgment and a shortage of skilled personnel.

The device allows for a complete inspection of the tuna in 12 seconds and can be operated by one person, offering potential labor and operational efficiency savings of up to 80 per cent. By enabling rapid screening of large quantities of frozen tuna, the device reduces the burden on skilled workers, significantly improves the efficiency of the selection process, and contributes to reducing costs and addressing labor shortages. It also allows for greater accuracy and reduces the opportunity cost of mislabeling the high-value, fatty "bintoro" portions of the fish.