



ADVANCED SYSTEMS AUTOMATION LIMITED

(Incorporated in the Republic of Singapore)

(Company Registration No. 198600740M)

Media Release

Lim Shrimp Organization Limited and Hewlett Packard Enterprise to jointly develop the next generation AI-powered Smart Aquaculture System

- Initial proof-of-concept is part of the roadmap towards a full-fledged Shrimp Farming Intelligence Centre.
- System to combine onsite monitoring equipment with cloud services to digitalize aquaculture farming and enable real time monitoring at traditional farms.
- Subscription based software-as-a-service targeted to deliver automated insights, reduce monitoring costs by at least half and cut turnaround time from days to minutes.¹
- Improved monitoring to enable more farms to practice high intensity farming, while aiming to raise shrimp survival rates from less than 50% to an estimated 70% – 80% at traditional farms.²
- Higher shrimp survival rates at low intensity farms expected to save industry approximately US\$4 billion to US\$5.8 billion of lost production per year, representing an estimated 8.5% to 12% of annual global shrimp and prawn aquaculture production.³

Singapore, 9 September 2024 – Advanced Systems Automation Limited (“**ASA**”), a company listed on the Singapore Stock Exchange is pleased to announce that Lim Shrimp Organization Limited (“**LSO**”), a 50%-owned indirect subsidiary of ASA, has entered into a collaboration agreement with Hewlett Packard Enterprise (“**HPE**”) to co-develop,

¹ Based on expected pricing of system against monetary and time cost of a traditional farmer collecting water and shrimp samples and delivering them to a local laboratory for testing.

² Survival rate of less than 50% is obtained from 12 March 2024 article by rethinkpriorities.org, “Pre-slaughter mortality of farmed shrimp”. Accessed at <https://rethinkpriorities.org/publications/pre-slaughter-mortality-of-farmed-shrimp#:~:text=Mortality%20rates%20are%20high%20in,deaths%20a%20day%20on%20average> on 8 September 2024.

³ Based on global shrimp and prawn aquaculture production of US\$47.3 billion in 2022 as obtained from FAO. 2024. FishStat: Global aquaculture production 1950-2022. Accessed on 8 September 2024.

demonstrate and test an initial decision intelligence proof-of-concept (“**PoC**”) for a Shrimp Farming Intelligence Centre (“**SFIC**”).

The SFIC will aid in the digitalization of aquaculture farming, where the collection of big data and application of modern analytics and artificial intelligence can be expected to reduce costs and improve operating procedures at participating farms. Many traditional farms suffer from low shrimp survival rates due to the late detection of disease and water anomalies. Traditional ponds yield only 0.6 tons per hectare per year of shrimp, compared to 10 tons for semi-intensive and 30 tons for intensive systems.⁴ Through high frequency monitoring, farmers can implement timely measures such as changes to feed formulations, adjustments to the frequency of water changes and the timing of harvest, to maximize survival rates.

The entire SFIC will be developed over four broad phases, starting with the decision intelligence PoC to analyse water quality based on data collected from farms and recommend solutions if any anomalies are detected. Periodic alerts will also be sounded until the issue is resolved. Under Phase 2, more artificial intelligence (“**AI**”) engines will be introduced to enhance decision making and to provide a wider range of solutions, including the use of computer vision and deep learning to detect diseases and monitor shrimp growth.

The SFIC will thereafter be pilot launched in over 1,000 tanks producing approximately 10,000 tonnes of shrimp per annum at a shrimp farm that is being developed and operated by LSO in Malaysia. In the fourth and final phase, the SFIC will be launched as a private cloud service for commercial users.

Mr. Peter Fleming, CEO of LSO, said, “The SFIC will transform traditional aquaculture farming by enabling timely, cost-effective and modern monitoring of water and shrimp quality at even the smallest farms. It will leverage using the latest technological tools, including cloud services and data analytics.”

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About Lim Shrimp Organization Limited

Lim Shrimp Organization Limited (“**LSO**”) is an aquaculture organization involved in the management and operations of, and the technology licensing of operational know-how and expertise to, aquaculture farms to improve food security and livelihoods around the world. Offering a platform for sustainable aquaculture, LSO aims to disrupt the aquaculture market through its intellectual property portfolio, superior sourcing and international market access capabilities. LSO is a 50% owned indirect subsidiary of Advanced Systems Automation

⁴ ADB document, Infrastructure Improvement for Shrimp Aquaculture Project (RRP INO 55020-001), Economic and Financial Analysis, accessed at <https://www.adb.org/sites/default/files/linked-documents/55020-001-efa.pdf> on 8 September 2024

Limited, which is listed on the Catalist Board of the Singapore Exchange Securities Trading Limited.

About Advanced Systems Automation Limited

Advanced Systems Automation Limited (“**ASA**”) is principally engaged in the manufacturing of automated equipment for the semiconductor industry. On 2 August 2024, ASA completed the acquisition of 100% of LSO Organization Holdings Pte. Ltd. which in turn owns 50% of LSO and diversified into the aquaculture industry. ASA believes the aquaculture industry is poised for sustained growth particularly in light of the growing consumer demand for healthy, clean and sustainable aquaculture seafood in USA, European Union, United Kingdom, Australia, ASEAN, and China

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*This announcement has been prepared by Advanced Systems Automation Limited (the “**Company**”) and its contents have been reviewed by the Company’s sponsor, ZICO Capital Pte. Ltd. (the “**Sponsor**”), in accordance with Rule 226(2)(b) of the Singapore Exchange Securities Trading Limited (“**SGX-ST**”) Listing Manual Section B: Rules of Catalist.*

This announcement has not been examined or approved by the SGX-ST and the SGX-ST assumes no responsibility for the contents of this announcement, including the correctness of any of the statements or opinions made, or reports contained in this announcement.

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