

## NTU SINGAPORE AND DELTA ELECTRONICS ESTABLISH S\$24 MILLION LAB FOR ADVANCED ROBOTICS

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### NTU Singapore and Delta Electronics Launch S\$24 Million Lab to Advance Robotics and Tackle Labor Shortages

Nanyang Technological University (NTU Singapore) and Delta Electronics, a global provider of IoT-based Smart Green Solutions, have joined forces to establish the Delta-NTU Corporate Lab for Advanced Robotics. With a budget of S\$24 million, this collaborative lab will focus on developing next-generation technologies over a three-year period to address labor shortage challenges in the manufacturing and intralogistics industries.

The new lab, supported by Singapore's National Research Foundation's Research Innovation and Enterprise (RIE) 2025 plan, aims to advance collaborative robotic systems to meet the demands of Industry 5.0 and alleviate the manpower crunch resulting from an aging workforce and declining birth rates. The research will involve the creation of human-touch inspired robots capable of adjusting their grip to handle various materials, along with the development of smart sensing, radar, and 3D sensor systems to enable autonomous mobile robots (AMRs) to operate in dynamic environments like hospitals and warehouses.

The launch event for the joint lab was attended by Mr. Alvin Tan, Minister of State for the Ministry of Trade & Industry, Professor Ho Teck Hua, President of NTU, and Mr. Yancey Hai, Chairman of Delta Electronics. Professor Ho emphasized the lab's alignment with NTU's strategic vision of leveraging digital and advanced technologies to drive real-world innovations and improve learning and living experiences.

Yancey Hai, Chairman of Delta Electronics, expressed his honor in deepening the long-term collaboration with NTU. He highlighted the significance of the Delta-NTU Corporate Lab for Advanced Robotics in leveraging Delta's expertise in smart manufacturing and autonomous mobile robots to develop essential technologies for the next generation. He also emphasized the potential impact of the lab's innovation milestones on various industries, Singapore's long-term resilience, and the quality of life for its citizens.

This joint lab builds upon the success of the Delta-NTU Corporate Laboratory for Cyber-Physical Systems, launched in 2016 with a focus on smart manufacturing and smart learning. Notable achievements from the previous collaboration include patents related to universal smart navigation systems for logistics robots and learning analytics technology for the education industry. These innovations, initially piloted on NTU's Smart Campus, are now being scaled up for wider industry adoption.

The establishment of the Delta-NTU Corporate Lab for Advanced Robotics marks an important milestone in NTU and Delta Electronics' partnership. The collaboration has yielded significant outcomes, including patents and research publications, supporting NTU researchers and graduate students, and enhancing the capabilities of the Delta Research Centre in Singapore. The lab will capitalize on the intellectual property and expertise developed during the initial collaboration to address the complex needs of various industries.

Co-Director of the Delta-NTU Corporate Lab for Advanced Robotics, Associate Professor Andy Khong, expressed enthusiasm for the partnership's expansion into advanced robotics research and development. The joint research team aims to develop cutting-edge solutions that address real-world challenges sustainably, aligning with NTU's Sustainability Manifesto and its goal of fostering global partnerships for sustainable development.

Professor Quek Tong Boon, Chief Executive of the National Robotics Programme (NRP), welcomed the NTU-Delta partnership and emphasized the importance of developing differentiated robotics capabilities for the manufacturing and logistics domains in Singapore and beyond. The collaboration between higher education institutions and industry is seen as a crucial aspect of Singapore's growing robotics ecosystem.