

Publication: Computerworld Singapore

Date: 15 October 2014

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PUBLISHED ON OCTOBER 15, 2014

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(From left to right) Suresh Sachi, Deputy Managing Director of A*STAR; Lim Chuan Poh, Chairman of A*STAR; Tango Matsumoto, Corporate Executive Officer, Executive Vice President, and Head of Global Marketing, Fujitsu Limited; and Professor Arnoud De Meyer, President of Singapore Management University at the signing ceremony for the Urban Computing and Engineering Centre of Excellence.

The Agency for Science, Technology and Research (A*STAR), Fujitsu Limited and the Singapore Management of University (SMU) announced today that it will be investing S\$54 million to set up an Urban Computing and Engineering Centre of Excellence in Singapore to address the multitude of challenges highly urbanised cities frequently face.

According to a UNICEF Urban Population Map, the world's urban population is expected to grow to 70 percent of the global population by 2050, causing cities to increasingly face challenges related to high-density living, such as efficient resource usage and traffic congestion.

Given these issues, the Centre's objective is to harness high performance computing capabilities to develop solutions for sustainable urban operations such as crowd mobility and transport engineering, with researchers using Singapore as a "living lab" to test-bed next generation solutions to real urban issues.

Specifically, the Centre will focus on three key areas: Dynamic Mobility Management, Maritime and Port Optimisation, as well as Urban Computing Platform.

Under this five-year partnership, A*STAR's Institute of High Performance Computing and Institute for Infocomm Research will contribute capabilities in big data including visualisation and analytics, complex systems, modeling and behavioural science, capabilities in urban data exchange, and machine learning for urban challenges like transport and supply chain management.

On the other hand, Fujitsu will contribute to the development of social innovation solutions, using big data analysis and high performance computing for integrating big data analytics and simulation. Fujitsu will also leverage its R&D capabilities from Fujitsu Laboratories to contribute to the Centre's various research themes.

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As for SMU, it will contribute its expertise in methods and software systems for planning, scheduling and decision making that combine artificial intelligence agent-based modeling and simulation, large-scale optimisation, mechanism design, behavioural economics and computational social science.

Research will be carried out across all three organisations on real urban challenges faced in Singapore. In addition to the team of engineers and researchers from Singapore and Japan, certain research projects will include SMU graduate and doctorate students.

"This collaboration with Fujitsu, A*STAR and SMU pushes the leading edge of public-private partnerships to solve major urban challenges confronting Singapore and many other modern cities today," said Dr. Raj Thampuran, Managing Director of A*STAR. "Such issues are complex and dynamic in nature and so a strongly multidisciplinary, multi-organisation approach is imperative where knowhow and talent from public institutions and companies are needed to address the problems facing the future of societies."

Professor Arnoud De Meyer, President of SMU, added, "By working together with A*STAR and Fujitsu, we further strengthen our well-known expertise to make sense of data at scale with analytics, to use data to better understand, model and predict human behaviour, and to create intelligent decision-making support tools for urban and maritime-related resource planning and allocation."