

MEDIA RELEASE

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FUJITSU PARTNERS WITH SINGAPORE TO SET UP CENTRE OF EXCELLENCE FOR SUSTAINABLE URBANISATION

*Centre jointly driven by Fujitsu, A*STAR and SMU to turn Singapore into a “living lab”, using analytics and computational social sciences to develop solutions that address urban challenges*

Singapore and Tokyo — Fujitsu Limited, the Agency for Science, Technology and Research (A*STAR) and the Singapore Management University (SMU) have today signed a Master Research Collaboration Agreement (MRCA) at Fusionopolis. Under the MRCA, a five-year partnership which builds on the Fujitsu-A*STAR MoU signed in Japan in March 2013, the parties will invest S\$54 million in an Urban Computing and Engineering Centre of Excellence in Singapore to work together in addressing the multitude of challenges highly urbanized cities frequently face. The Centre is also supported by the National Research Foundation (NRF), Prime Minister’s Office, Singapore (Note 1).

With the world’s urban population expected to grow to 70 percent of the global population by 2050¹, cities 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. Increasingly, technologies based on the convergence of data analytics, complex system simulation, computational social science, and behavioural science will play game changing roles in addressing urban challenges.

The Centre will initially focus on the following projects, with further themes to be explored over the course of the partnership:

¹ Source: UNICEF Urban Population Map. 2012. <http://www.unicef.org/sowc2012/urbanmap/>

- i. **Dynamic Mobility Management:** To develop methods to understand and improve the dynamics of commuter traffic in large urban spaces, as well as manage crowds under extreme conditions and surges, using a new computing platform that combines research in sensing, data management and analytics, modelling and simulation, behavioural modelling and decision support.
- ii. **Maritime and Port Optimisation:** To study port operation optimisation and design of integrated logistics concepts managing inbound and outbound shipments from port to city, aiming to improve capacity without building new facilities.

The Centre will draw upon a diverse, yet complementary set of core strengths and technologies across the three organisations for solutions to urban challenges. A*STAR's Institute of High Performance Computing and Institute for Infocomm Research will contribute capabilities in big data including visualization and analytics, complex systems, modelling and behavioural science, capabilities in urban data exchange, and machine learning for urban challenges like transport and supply chain management.

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 leading-edge R&D capabilities from Fujitsu Laboratories to contribute to the Centre's various research themes.

SMU's expertise includes methods and software systems for planning, scheduling and decision making that combine artificial intelligence agent-based modelling 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.

Mr Tango Matsumoto, Corporate Executive Officer, EVP, and Head of Global Marketing, Fujitsu Limited, said: "The Urban Computing and Engineering Centre of Excellence offers a valuable and unique opportunity for us to engage in cutting-edge research and development by utilizing Singapore's living big data to the maximum, which synchronizes with Fujitsu's approach of Human Centric Innovation. Also, through this project, we aim to strengthen our relationship with Singapore and hope to contribute to the development of a safer and more secure society."

Dr Raj. Thampuran, Managing Director of A*STAR, said, “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. 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, said: “Through this Centre of Excellence and the related Corporate Lab @ SMU, we look forward to contributing our interdisciplinary knowledge and research from across our SMU schools and research institutes to solving complex urban and social problems. This will enhance SMU’s role in making a positive impact on society by making significant contributions to improving the quality of life of city dwellers. 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.”

The Centre is supported by the Urban Computing and Engineering Corporate Lab @ SMU, funded by the NRF, as the fourth laboratory to be established under the NRF Corp Lab@University Scheme (Note 2). The scheme supports Singapore’s autonomous universities in their conduct of industry-relevant research with companies as partners.

Notes to Editor:

1. The National Research Foundation (NRF), set up on 1 January 2006, is a department within the Prime Minister's Office. The NRF sets the national direction for research and development (R&D) by developing policies, plans and strategies for research, innovation and enterprise. It also funds strategic initiatives and builds up R&D capabilities by nurturing research talent. The NRF aims to transform Singapore into a vibrant R&D hub that contributes towards a knowledge-intensive, innovative and entrepreneurial economy. For more information, please visit www.research.gov.sg.
2. The NRF Corp Lab@University Scheme, launched by the National Research Foundation (NRF) in March 2013, supports the establishment of key laboratories by industries in our universities. The scheme seeks to strengthen Singapore’s innovation system by encouraging public-private R&D collaboration between universities and companies. It ensures that

universities achieve impact by developing cutting edge solutions to problems faced by industry.

Enclosed:

ANNEX A – Chinese Translation List

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About Fujitsu

Fujitsu is the leading Japanese information and communication technology (ICT) company offering a full range of technology products, solutions and services. Approximately 162,000 Fujitsu people support customers in more than 100 countries. We use our experience and the power of ICT to shape the future of society with our customers. Fujitsu Limited (TSE: 6702) reported consolidated revenues of 4.8 trillion yen (US\$46 billion) for the fiscal year ended March 31, 2014. For more information, please see <http://www.fujitsu.com>.

About the Agency for Science, Technology and Research (A*STAR)

The Agency for Science, Technology and Research (A*STAR) is Singapore's lead public sector agency that fosters world-class scientific research and talent to drive economic growth and transform Singapore into a vibrant knowledge-based and innovation driven economy.

In line with its mission-oriented mandate, A*STAR spearheads research and development in fields that are essential to growing Singapore's manufacturing sector and catalysing new growth industries. A*STAR supports these economic clusters by providing intellectual, human and industrial capital to its partners in industry.

A*STAR oversees 18 biomedical sciences and physical sciences and engineering research entities, located in Biopolis and Fusionopolis, as well as their vicinity. These two R&D hubs house a bustling and diverse community of local and international research scientists and engineers from A*STAR's research entities as well as a growing number of corporate laboratories.

For more information on A*STAR, please visit www.a-star.edu.sg.

About the Singapore Management University (SMU)

A premier university in Asia, the Singapore Management University (SMU) is internationally recognised for innovative research and teaching in the areas of Management, Social Sciences, Analytics and Computing, and for interdisciplinary work across these areas. SMU's educational programmes are known for their highly interactive and technologically enabled pedagogy in small class sizes.

Home to over 8,300 undergraduate and postgraduate students, SMU comprises six schools: School of Accountancy, Lee Kong Chian School of Business, School of Economics, School of Information Systems, School of

Law and School of Social Sciences, offering a wide range of bachelors', masters' and PhD degree programmes in various disciplines.

With an emphasis on generating rigorous, high-impact, multi-disciplinary research that addresses Asian issues of global relevance, SMU faculty members collaborate with leading international researchers and universities from USA, Europe, China and India as well as with partners in the business community and public sector through its research institutes and centres. SMU's city campus is a state-of-the art facility located in the heart of downtown Singapore, fostering strategic linkages with the business and wider community. For more information, please visit www.smu.edu.sg.

CHINESE TRANSLATION LIST

English Term	Chinese Translation
Fujitsu	
Mr Tango Matsumoto Corporate Executive Officer, EVP, Head of Global Marketing, Fujitsu Limited	松本 端午 全球高级副总裁兼全球市场营 销总裁 富士通集团
Mr Tatsuya Tanaka Corporate Executive Officer, SVP, Head of Asia Region, Fujitsu Limited	田中 達也 全球高级副总裁兼亚洲区总裁 富士通集团
Fujitsu Limited	富士通集团
Agency for Science, Technology & Research	
Dr Raj. Thampuran Managing Director A*STAR	Raj. Thampuran 博士 董事经理 新*科研
Professor Alfred Huan Executive Director Institute of High Performance Computing (IHPC) A*STAR	范清鸿教授 院长 高性能计算研究院 新*科研
Dr Lee Shiang Long Executive Director Institute for Infocomm Research (I ² R) A*STAR	李香龙博士 院长 资讯通信研究院 新*科研
Agency for Science, Technology & Research (A*STAR)	新加坡科技研究所 (新*科研)
Singapore Management University	
Professor Arnoud De Meyer President Singapore Management University	梅雅诺教授 新加坡管理大学校长
Professor Steven Miller Dean, School of Information Systems Singapore Management University	史蒂芬·米勒教授 信息系统学院院长 新加坡管理大学
Others	
Urban Computing and Engineering Centre of Excellence (CoE)	都市计算与工程卓越研究中心

Urban Computing and Engineering Corporate Lab @ SMU	新加坡管理大学都市计算与工程企业研究室
National Research Foundation (NRF) Prime Minister's Office, Singapore	新加坡国立研究基金会 总理公署