Tata Consultancy Services and Singapore Management University Announce Extension of SMU-TCS iCity Lab Partnership

Singapore Government grant recognises successful joint venture in developing intelligent community care solutions for senior citizens

Singapore, 9 September 2014 (Tuesday) - The SMU-TCS iCity Lab (iCity Lab), a Singapore Management University (SMU) and Tata Consultancy Services (TCS) joint venture focused on research and development of intelligent city solutions, is proud to announce that SMU and TCS have agreed to continue the partnership for another three years to undertake a number of research initiatives and projects. These will include developing technology solutions specifically tailored to the needs of senior citizens in Singapore under a research grant secured from the Government of Singapore last week for the SHINESeniors Project.

The iCity Lab was established in August 2011 within the SMU School of Information Systems as a three year research collaboration whereby SMU and TCS would work together on research related to intelligent cities. Over the last three years, the Lab has achieved its major research objectives and accomplished several flag-ship projects across the intelligent city domain, including a deep focus on ageing and chronic disease management, as well as personalised community healthcare services.

The SHINESeniors (**S**mart **H**omes and **I**ntelligent **N**eighbours to **E**nable **S**eniors) Project is an iCity Lab-initiated effort to make community care services effective through innovations in care delivery by leveraging Information and Communications Technology (ICT). Sensor-enabled homes will be developed in support of ageing-in-place for senior citizens living in Singapore. Through SHINESeniors, it is hoped that the cost of care delivery will be lowered significantly given the lower reliance on manpower. SMU-TCS iCity Lab will be working with multiple stakeholders, including several government agencies and community partners, to implement the project over three years.

Professor Steven Miller, Dean of School of Information Systems and Vice Provost (Research) at SMU said, "Singapore faces major challenges in providing care and support for our senior citizens due to the fact that the number of post-retirement people aged 65 and older is increasing faster than that of the working population age of 20 to 64. From a demographic perspective, this means Singapore's "old-age support ratio" is decreasing – for each senior citizen, there is a smaller number of working age people to provide social and economic support. This is the core challenge we are now

concentrating on at the iCity Lab. We conceptualised and designed the SHINESeniors Project to help Singapore tackle some of the challenges relating to this situation. We can contribute by leveraging our expertise in urban information management, in data analytics, and in bringing ICT and people together in helpful and harmonious ways. Through the iCity Lab, we look forward to continue working closely with TCS to undertake socially relevant and impactful research for these types of real world challenges."

The iCity Lab will be working with SMU's well-known Living Analytics Research Centre (LARC) for data analytics support. In addition, SMU's School of Social Sciences will contribute to the SHINESeniors project by working on a related longitudinal survey, and by contributing to the analysis of collected data from social science perspectives.

As the core technology collaborator in the SHINESeniors Project, TCS's contribution will include building a home-care platform with emphasis on the analytics module. It is a software solution that has sense-making algorithms for detecting and understanding elderly mobility patterns, which can then be used for remote monitoring and analysis by doctors and community caregivers. The TCS home-care platform will have the ability to personalise the appropriate community care plan, plan for social service support needs, and situation-specific community-care response protocols for each individual elderly person. Furthermore, the platform will integrate information about related support services for the elderly provided by various other social service and health care groups in order for all of those using the platform - both elderly "clients" and care providers - to have a more holistic and integrated ability to care for the elderly who are ageing in place in their homes and communities.

Mr Vish Iyer, President of TCS Asia Pacific, based in Singapore, said "With the rapid proliferation of IoT technologies, we are today in a connected universe. Leveraging TCS' core strengths, the SMU-TCS iCity Lab aims to design and develop a sustainable living environment for seniors in Singapore, thereby uplifting their current lifestyle. This research will lead to the development of an end-to-end personalised care delivery platform from sense making to emergency response services. Our collaboration with SMU has yielded fruitful results over the years. I am confident these researches have been useful and have brought about a positive impact to our society."

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About Tata Consultancy Services Ltd. (TCS)
Tata Consultancy Services is an IT services, consulting and business solutions organization that delivers real results to global business, ensuring a level of certainty no other firm can match. TCS offers a consulting-led, integrated portfolio of IT, BPS, infrastructure, engineering and assurance services. This is delivered through its unique Global Network Delivery Model™, recognized as the benchmark of excellence in software development. A part of the Tata group, India's largest industrial conglomerate, TCS has over 305,000 of the world's best-trained consultants in 46 countries. The

company generated consolidated revenues of US $13.4 billion for year ended March 31, 2014 and is listed on the National Stock Exchange and Bombay Stock Exchange in India. For more information, visit us at www.tcs.com.

About Singapore Management University
A premier university in Asia, the Singapore Management University (SMU) is internationally recognised for its world-class research and distinguished teaching. Established in 2000, SMU's mission is to generate leading-edge research with global impact and produce broad-based, creative and entrepreneurial leaders for the knowledge-based economy. SMU education is known for its highly interactive, collaborative and project-based approach to learning, and for its technologically enabled pedagogy of seminar-style teaching in small class sizes.

Home to over 8,300 undergraduate and postgraduate students, SMU is comprised of 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. SMU offers a wide range of bachelors', masters' and PhD degree programmes in the disciplinary areas associated with the six schools, as well as in interdisciplinary combinations of these areas.

SMU has an emphasis on generating rigorous, high-impact, and relevant 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, centres and labs. SMU's city campus is a state-of-the art facility located in the heart of downtown Singapore, fostering strategic linkages with business, government and the wider community. www.smu.edu.sg

About SMU-TCS iCity Lab
SMU-TCS iCity Lab is a joint initiative between Singapore Management University and Tata Consultancy Services, a leader in the global marketplace and among the top 10 technology firms in the world. The partnership combines TCS' industry leading IT services expertise and culture of innovation with SMU's globally recognized excellence in research and education in social sciences, management, analytics and computing in partnership with both the public and private sectors.

Both SMU and TCS are known for their ability to integrate IT with business in ways that creates innovative IT solutions that meet public and private sector management needs. The lab will work together with selected partnering cities in China, India and other rapidly developing ASEAN countries to create urban management solutions. www.icity.smu.edu.sg

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