Singtel partners NTU, A*STAR to develop AI, data analytics, robotics and IoT

S$42.4 million R&D lab to be set up

Singapore, 4 December 2017 – Singtel today signed agreements with Nanyang Technological University, Singapore (NTU Singapore) and the Agency for Science, Technology and Research (A*STAR) to spearhead R&D efforts in emerging technologies that will support Singapore's transformation into Smart Nation and help enable the country's digital economy.

Under a five-year partnership, Singtel, NTU Singapore and the National Research Foundation Singapore (NRF Singapore) will establish a S$42.4 million corporate lab, to be called Singtel Cognitive and Artificial Intelligence Lab for Enterprises (SCALE@NTU), to develop applications for use in the areas of public safety, smart urban solutions, transportation, healthcare and manufacturing. The partners, through their collective expertise and resources, aim to accelerate innovation in the fields of AI, advanced data analytics, robotics and smart computing.

Mr Bill Chang, Chief Executive Officer, Group Enterprise at Singtel, said, "This collaboration marks a significant step for Singtel to develop intellectual property in emerging technologies to support enterprises in their digital transformation and Singapore's Smart Nation objectives. As businesses face the rising threat of technological disruptions, companies are constantly seeking innovative ways to gain deeper insights through data analytics, better engage their customers and transform their operations through digitalisation. To help companies address these challenges, we are stepping up our R&D efforts to develop deep capabilities in these focused areas."

The research by SCALE@NTU aims to resolve various challenges faced by cities in keeping their infrastructure facilities in tip top running condition. With the use of smart sensors embedded with AI, city governments can analyse data from infrastructure facilities and can decide to conduct maintenance works only when necessary to achieve optimal performance for these assets. This would help cut operating costs for cities that currently spend significant amounts on routine maintenance, whilst not compromising on infrastructure quality and performance standards.

Professor Lam Khin Yong, NTU's Acting Provost, Chief of Staff and Vice President (Research) said, "For Singapore to achieve its Smart Nation vision, we have to keep pushing the frontiers of AI and develop innovative ways to process, analyse and utilise big data. This is how the

collaborative effort between Singtel and NTU on cognitive computing will make a huge impact, improving productivity for businesses while making our cities smarter and more efficient."

Over the next five years, this partnership is expected to expand the product range of Singtel and its regional ICT subsidiary NCS. Some 100 researchers from Singtel and NTU will work at SCALE@NTU, while another 200 research engineers, graduate and undergraduate students will also be trained in the lab. The collaboration builds on NTU's strong expertise in AI and data science, with the university ranked world No. 2 by Nikkei and Elsevier for having the most-cited research papers in these areas.

Mr George Loh, NRF Singapore's Director (Programmes), said, "This latest collaboration between Singtel and NTU underscores the significance of developing research expertise and capabilities in advanced analytics for Singapore to be a leading provider of smart city solutions. The lab will provide a platform for researchers and engineers from both academia and industry to work together to translate cutting-edge research into digital solutions and offerings by our companies, while nurturing a pipeline of digital talent who can drive Singapore's Smart Nation journey."

Singtel and A*STAR will also work together on projects including smart building automation systems, robotics and Internet of Things (IoT) applications that could help boost operating efficiencies in various industries. Robots can be deployed to handle biohazardous waste, allowing companies to deploy their employees to undertake higher value-added jobs. Such technologies can be tested on Singtel's NarrowBand-IoT and 5G mobile network in a model factory to be set up by A*STAR next year.

Professor Tan Sze Wee, Executive Director of the Science and Engineering Research Council at A*STAR, said, "Public-private partnerships and open innovation pave the way for successful projects that could benefit the Singapore economy and lives of Singaporeans. In this age where disruptions are emerging rapidly, such joint collaborations are all the more valuable. A*STAR is happy to partner with Singtel to drive R&D in the latest technologies towards applications across industries."

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About Singtel

Singtel is Asia's leading communications technology group, providing a portfolio of services from next-generation communication, technology services to infotainment to both consumers and businesses. For consumers, Singtel delivers a complete and integrated suite of services, including mobile, broadband and TV. For businesses, Singtel offers a complementary array of workforce mobility solutions, data hosting, cloud, network infrastructure, analytics and cyber-security capabilities. The Group has presence in Asia, Australia and Africa and reaches about 670 million mobile customers in 22 countries. Its infrastructure and technology services for businesses span 21 countries, with more than 428 direct points of presence in 362 cities.

For more information, visit www.singtel.com.
Follow us on Twitter at www.twitter.com/SingtelNews.

About Nanyang Technological University, Singapore

A research-intensive public university, Nanyang Technological University, Singapore (NTU Singapore) has 33,500 undergraduate and postgraduate students in the colleges of Engineering, Business, Science, Humanities, Arts, & Social Sciences, and it's Interdisciplinary Graduate School. It also has a medical school, the Lee Kong Chian School of Medicine, set up jointly with Imperial College London.

NTU is also home to world-class autonomous institutes – the National Institute of Education, S Rajaratnam School of International Studies, Earth Observatory of Singapore, and Singapore Centre for Environmental Life Sciences Engineering – and various leading research centres such as the Nanyang Environment & Water Research Institute (NEWRI), Energy Research Institute @ NTU (ERI@N) and the Institute on Asian Consumer Insight (ACI).

Ranked 11th in the world, NTU has also been ranked the world's top young university for the last four years running. The University's main campus has been named one of the Top 15 Most Beautiful in the World. NTU also has a campus in Novena, Singapore's medical district.

For more information, visit www.ntu.edu.sg

About the National Research Foundation, Singapore

The National Research Foundation (NRF) is a department within the Prime Minister's Office. The NRF sets the national direction for research, innovation and enterprise (RIE) in Singapore. It seeks to invest in science, technology and engineering, build up the technological capacity of our companies, encourage innovation by industry to exploit new opportunities that drive economic growth, and facilitate public-private partnerships to address national challenges.

Under RIE2020, NRF is committed to create greater value in Singapore from our investment in research, innovation and enterprise through 1) closer integration of research thrusts, 2) stronger dynamic towards the best teams and ideas, 3) sharper focus on value creation, and 4) better optimised RIE manpower.

For more information, visit www.nrf.gov.sg/RIE2020

About the Agency for Science, Technology and Research

The Agency for Science, Technology and Research (A*STAR) is Singapore's lead public sector agency that spearheads economic oriented research to advance scientific discovery and develop innovative technology. Through open innovation, we collaborate with our partners in both the public and private sectors to benefit society.

As a Science and Technology Organisation, A*STAR bridges the gap between academia and industry. Our research creates economic growth and jobs for Singapore, and enhances lives by contributing to societal benefits such as improving outcomes in healthcare, urban living, and sustainability.

We play a key role in nurturing and developing a diversity of talent and leaders in our Agency and Research Institutes, the wider research community and industry. A*STAR oversees 18 biomedical sciences and physical sciences and engineering research entities primarily located in Biopolis and Fusionopolis.

For more information, visit https://www.a-star.edu.sg/