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ASIA EDITION

A*STAR, JTC and Science Centre Singapore organise one-north Festival 2019

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Ã¢â?¬Å?The Future of Everyone: Innovating for a Sustainable PlanetÃ¢â?¬Â• was a public event for all age groups to immerse in science and technology through fun interactive activities and presentations focused towards ensuring a sustainable future for our next generation



The one-north festival is a celebration of research, innovation, creativity and enterprise. On 13th and 14th September 2019, Agency for Science, Technology and Research (A*STAR), JTC and Science Centre Singapore, organised an event to invite the public to immerse themselves in science and technology through fun interactive displays, inspiring talks by scientists and media creators, exhilarating science performances and behind-the-scenes tours for the whole family.

This year's one-north Festival is focused on how we can innovate for a sustainable planet, and address challenges facing our precious earth such as global warming, environmental pollution and dwindling resources. The festival explores how technology can be used to transform the way we live and ensure a sustainable future for our next generation.

EVENT HIGHLIGHTS

1. **Lead the Change You Seek**

- To witness the best ideas in conceptualising innovative solutions for today's societal and environmental challenges, at the Grand Finals of the A*STAR-ESSEC Business School Innovation Pitch Competition 2019! Aspiring science and technology technopreneurs across all Junior colleges, Polytechnics, Independent and International schools have competed in a series of qualifying rounds to showcase fresh ideas and business cases to create a sustainable living environment. Shortlisted teams pitched in their ideas at the Grand Finals at one-north Festival on 13 September, and won exciting prizes.

2. **Hear from the Experts**

- **Technology for sustainability** – Saving Mother Earth: Green Technology for Gaia

Dr Loh Xian Jun from A*STAR's Institute of Materials Research and Engineering shared his newly invented materials for green technology to address issues on climate change, greenhouse emissions and rising sea levels along with a glimpse of exciting cutting-edge applications like carbon capture and new biodegradables, and how these can be integrated in the new circular economy.

- **Sustainable cooling systems** – Staying Cool the Sustainable Way

Research showed that average households spend about 30% of its electrical bills on air-conditioning alone and by the year 2100, energy demand in dense cities is projected to reach 72%! Staying cool can now be done through passive window cooling technologies and the regulating of infra-red radiation to mitigate heat enveloping buildings. These technologies require neither energy input nor do they contribute to more carbon emissions. Join Dr Lim Yee Fun from A*STAR's Institute of Materials Research and Engineering shared about the work IMRE is doing to lower power consumption and bring about a more eco-conscious mind-set.

- **Future Foods** – Growing Seafood From Cells, without Animals

Dr Sandhya Sriram, CEO & Co-founder of Shiok Meats Pte. Ltd highlightedon the harmful antibiotics, chemicals and hormones in seafood. She also spoke about how new innovations and technologies can possibly replace farmed and wild-caught shrimp, and disrupt the $40 billion global shrimp market.

3. **Let's X-periment!**

- **X-periment!** exhibition was held in conjunction with the Singapore Science Festival to celebrate the latest developments in Science, Technology, Engineering and Mathematics (STEM). Organised by Science Centre Singapore and A*STAR, X-periment! featured interactive displays and activities that allowed free interaction with scientists and innovators in and beyond the one-north community. With the theme "The Future of Everyone", exhibition booths focused on innovations for a sustainable planet. Exhibits featured included the following amongst some 30 others:

- **Data-driven Insect Tech** by Protenga – Exploring Insect farming systems as potential new food sources and sustainable protein production.

- **Magic Lab** by A*STAR's Institute of Chemical and Engineering Sciences – Participants aged 6-12 get to put on their lab coats to make slime, learn about vanishing plastics and manipulate dyes in milk using soap.

- **Punggol Digital District:** A Smart & Sustainable Next-Generation District by JTC. Situated in Punggol Coast, the Punggol Digital District (PDD) is envisioned to be a vibrant and inclusive district underpinned by cutting-edge technology, as well as urban and social innovation which make everyday living more convenient and sustainable.

- **Autonomous Vehicles** by Advanced Robotics Centre, NUS – The Advanced Robotics Centre (ARC) in NUS has been working on multiple autonomous technologies to advance the robotic frontier. Witness the state-of-the-art autonomous wheelchair that offers the physically handicapped more autonomy in travelling.

- **Eating and breathing science** – X-periment! presented inflatables that resemble our Lungs and Digestive System! These inflatables will help children explore, discover and learn about these vital organs in our body.

- T**ours of A*STAR's laboratories** helped visitors to explore every day work process and innovative developments by scientists which benefits daily lives. Tours of laboratories in the one-north area helped visitors to witness at firsthand how research is conducted at facilities like the National Supercomputing Centre Singapore (NSCC), the NanoBio Lab, the Model Factory@SIMTech, and Genome Institute of Singapore.

4. **'Wonder Changes the World' Magical Science Show**

The one-north Festival presented the 'Wonder Changes the World' Magical Science Show, hosted by Jason Latimer, a series champion of BBC One's The Magicians, the recipient of Siegfried & Roy's Masters of the Impossible Award, and bestowed with magic's highest honour, "Grand Prix 'Best Overall' World Champion of Magic." As a scientist, Jason is the creator of "Impossible Science", the academic platform uniting magic and science to inspire wonder in education.

5. **A Slimy Record Attempt**

Creation of “Singapore’s Largest Slime Installation” where members of the public are encouraged to be part of setting the record by helping load a giant 3m-long “This is Science” structure. By spotlighting slime as part of a record-setting attempt this year, the aim is to make science accessible and spark an early interest in Science Technology, Engineering and Mathematics (STEM) by showcasing the amazing chemical properties found in such a fun and versatile toy.