

NUS-ISS Digital Futurist Challenge Finalists: First Prize Winners

Theme: Green & Sustainability

Team Name: BrotherNature

Members: Chow Yean Li, Denzel Lim, Hubert Loi, Low Zi Hao and Tay Ting Hui

Institutes of Higher Learning: Nanyang Technological University, National University of Singapore and Singapore Management University

With climate change being an existential threat to Singapore, having a long-term solution or strategy to address environmental threats and land scarcity is key to realising a resilient future for the citizens. Team BrotherNature envisions that in 2060, Singapore would have completed its fourth – and last – man-made mountain that will revolutionise living spaces and travel, eradicating the issue of submerged buildings and railway lines. This is alongside three other mountains: Mount North, South, and East, built in 2034, 2045, and 2054 respectively.

Known as Singapore's Elevate Populate Accelerate (SEPA), the project aims to create the world's first elevated city that rises above the impacts of climate change. The groundbreaking innovation consists of four man-made mountains each measuring 500m high, with a scale large enough to fit almost four times Singapore's population. The SEPA project is also expected to generate 50,000 jobs and contribute US\$100 billion to Singapore's GDP by 2070.

Theme: Health & Well-being

Team Name: B10 for Future SG (BFFs)

Members: Balaji Srinivasan, Chin Ngiok Yong, Cuithbert Lim and Xylon Lee

Institute of Higher Learning: Nanyang Technological University

Smart homes enabled by the Internet-of-Things (IoT) is a robust trend we see today. Team B10 for Future SG envisions a future in which Housing Development Board (HDB) flats are equipped with IoT solutions that support better health and well-being for residents. Smart Activation for Elders at Home (SAFE@Home) Singapore's first step towards large-scale public adoption of IoT that at the same time addresses the need to support the nation's ageing population. Via this programme, the homes of seniors are retrofitted with fall monitoring devices to detect emergencies early, and smart fridges to help them to eat healthier.

The Smart Monitoring & Omniscient Response Technology Home (SMORT Home) equips new BTO flats with more advanced IoT-enabled features. These include devices that optimise the home environment to facilitate mental well-being and better sleep, robot vacuum (ROBOCLEAN) that cleans the floor, purifies the air, and sanitises areas through the use of UV light, as well as an Automated Toilet Testing (ATT) toilet bowl that monitors hydration level and carry out wastewater testing, enabled by micro-lab technology to identify potential health risks.

Theme: Work & Learning

Team Name: Flow

Members: Benoit Chia, Chua Ming Rong, Isabelle Sim, Phang Hua Jian and Tang Yook Loong

Institute of Higher Learning: Singapore Polytechnic

In the world today, work and learning have evolved beyond skills and academia. Team Flow combines mentorship and emerging technologies such as augmented reality to address mismatched skill sets in the workplace, as well as help individuals make better-informed choices for their education and career.

Their proposed solution includes inculcating mentorship into the curriculum and creating a pedagogy that allows one to explore career and education choices in more dynamic, robust ways. They believe that practical, hands-on experience is an important aspect of mentorship that is often neglected. Therefore, in their proposed solution, they leveraged technology in the realm of the metaverse to enable such practical experiences and help individuals explore their career and education options in immersive ways that can aid their decision-making. They also seek to create a more inclusive society by ensuring that the disenfranchised communities – such as differently-abled people, students in boys/girls' homes, or ex-convicts – get the opportunity and access to the solution as well.

NUS-ISS Digital Futurist Challenge Finalists: Runner-Ups

Theme: Green & Sustainability
Team Name: Gaia's Will Members: Lee Jun Rong, Nah Jing Jie, Gerlynn Lee, Mallika Rawat and Nikki Lam Institute of Higher Learning: Ngee Ann Polytechnic Project Title: Agri Tech+
Team Name: ITEchies Members: Lai Shi Hua, Aston Ang, Amal Zikri Bin Azman, Liew Shan Yi and Shervonn Tan Institute of Higher Learning: ITE College East Project Title: Euremo – The Biomimetic Robotic Butterfly
Theme: Health & Well-being
Team Name: Fish Fish Members: Lee Yi Sheng, Ezra Chong and Zheng Wenhan Institute of Higher Learning: Ngee Ann Polytechnic Project Title: Virtual Companion
Team Name: The Visionaries Members: Kyla Chong, Elyse Lee and Seah Ru Yuan Institute of Higher Learning: Ngee Ann Polytechnic Project Title: Technochip
Theme: Work & Learning
Team Name: Futureengingers Members: Nicholas Tan, Sim Yew Chong, Liu Tianqi and Brendan Lim Institute of Higher Learning: National University of Singapore Project Title: dreamWork
Team Name: MALAHAKAJA Members: Dhakiya Muwaffiq Ubaidali, Li Meiyi, Hor Chia Jen, Kristen Naomi Fonseka and Cheng Hui Wen Institute of Higher Learning: Singapore Polytechnic Project Title: E-MERGE