

FACTSHEET

Memorandums of Understanding/Intent with Institutes of Higher Learning

One of GovTech's strategic objectives is to lead the digital transformation for the public sector to realise citizen-centric services for a Smart Nation. To achieve this, GovTech works with public sector agencies, Institutes of Higher Learning (IHL), Research Institutes (RI), commercial entities and citizens, in the co-creation of solutions for deployment. In the process, GovTech seeks to build capabilities within organisations and develop an ecosystem of partnerships for the co-creation of solutions.

Creating an Eco-system for the Co-creation of Solutions

Within this ecosystem, public sector agencies will share challenges they face via problem statements at thematic workshops, sharing days and one-to-one consultation clinics organised under GovTech's InnoLeap programme. These allow GovTech to understand the challenges facing public sector agencies and citizens so as to be able to explore innovative solutions with the IHLs, RIs and commercial entities for adoption. Solutions that are commercialised will also provide commercial entities with potential opportunities.

Benefits to the different stakeholders include:

- Universities and RIs will be able to build their research capabilities by looking into possible solutions for challenges faced by public sector agencies.
- Polytechnics and commercial entities will be able to obtain practical experience managing such translational R&D projects and build technological capabilities. For commercial entities, this also means business opportunities should the solutions be deployed for public sector agencies or commercialised locally and overseas.
- ITE will be able to build their capabilities through its involvement in the project maintenance.
- Students from IHLs working on such projects are able to obtain practical research and project work experience.

Signing of Memorandums of Understanding/Intent (MOU/MOI) with IHLs

This set of MOU/MOIs demonstrates GovTech's commitment to work with the IHLs to develop the ecosystem by enhancing the capabilities and competencies of the students, IHLs and commercial entities through learning and business opportunities, led by public sector demand.

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Beyond the opportunities to co-create technological solutions, GovTech will raise interest in technological education and participation by co-organising events such as conferences and competitions, as well as provide opportunities for students to gain hands-on experience through final-year projects, internships and attachments. Over 300 estimated students will be trained through these efforts as part of the MOU/MOIs.

Opportunities with the IHLs

- Singapore Institute of Technology

Potential Projects:

1. Cyber-physical security vulnerability assessment and penetration testing (e.g. Ethical hacking, which aims to mitigate the threat of attack by finding loopholes before attackers do)
2. Smart assisted healthcare to enable active ageing (e.g. enabling elderly patients to self-administer physiotherapy exercise, which will help improve the patient to physiotherapist ratio)

- Singapore University of Technology and Design

Potential Projects:

1. Automated detection and execution of security measures to protect wireless network from adversary attacks (e.g. enabling proximity secure services in Internet of Things (IoT) wireless networks)
2. Adaptive network management protocol (using machine learning-based context aware techniques) to improve IoT system energy efficiency and robustness

- Nanyang Polytechnic

Potential Projects:

1. Using machine learning to enhance accuracy of abnormality detection for video analytics systems (e.g. improving accuracy level for actual public sector specific use cases)

- Ngee Ann Polytechnic

Potential Projects:

1. Video analytics, specifically, facial recognition technology for contact tracing (e.g. locating elderly with dementia, tracking of people during epidemic outbreaks, purposes for homeland security)

- Republic Polytechnic

Potential Projects:

1. Agile mobile application development (e.g. for crowd seating management and bus tracking that were used during National Day Parade)
2. Education through gaming technologies (e.g. Virtual Reality game to improve awareness of fire safety, 3D interactive games to encourage interaction between neighbours in public housing)

- Singapore Polytechnic

Potential Projects:

1. Using SP's user-centric Conceive, Design, Implement and Operate framework to address public sector agencies' challenges and develop solutions for deployment (e.g. development of past projects like the Ministry Of Manpower's Automatic Card Scanning Machine)

- Temasek Polytechnic

Potential Projects:

1. Smart office optimisation projects (e.g. smart room booking system, smart power distribution box for energy management, indoor air quality monitoring, and smart sanitization)

- Institute of Technical Education

Potential Projects:

1. Using immersive technologies (Augmented Reality, Virtual Reality, Mixed Reality) in teaching



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