Parliament passes Bill for new science, tech agency

HTX will have 1,300 staff, consolidate Home Team's resources when set up in December

Lim Min Zhang

The Home Team Science and Technology Agency, which has been tasked with developing cutting-edge capabilities for security or life-saving operations, will be known as HTX for short, with "X" symbolising its role as a force multiplier.

The new agency will focus on areas such as surveillance, forensics, robotics and other unmanned systems, as well as chemical, biological, radiological, nuclear and explosive threats.

"HTX will build cutting-edge and transformative capabilities that will augment the Home Team far beyond our 27,000 regular and 54,000 national service and volunteer officers," said Second Minister for Home Affairs Josephine Teo in Parliament yesterday.

Targeted to be set up in December, HTX will group all the scientific and technological resources of the Home Team's various departments under one roof, said Mrs Teo when she presented the Home Team Science and Technology Agency Bill, passed yesterday, for debate.

The agency was announced by Deputy Prime Minister and Minister for Finance Heng Swee Keat during his Budget speech in February.

Mrs Teo said the HTX will initially be staffed by about 1,300 science and technology officers from different Home Team departments.

It will also work with the Immigration and Checkpoints Authority on the New Clearance Concept (NCC), which promises travellers greater convenience without compromising security, said Mrs Teo.

She said the NCC, to be launched in 2022, will need to incorporate several different domains of technology, including the capturing of biometric information and the use of smart sensors, such as cameras, to identify persons of interest.

Beyond systems and solutions, Mrs Teo said, HTX will better enable Home Team departments to adopt a "One Home Team approach" in joint operations to respond to a terror incident, for example.

Eight MPs spoke on the Bill, raising concerns such as the potential duplication of resources with other government agencies such as the Government Technology Agency, the Agency for Science, Technology and Research, and the Defence Science and Technology Agency.

Mr Patrick Tay (West Coast GRC) said that experts in different fields already serve in these existing agencies, adding: "Shouldn't we strengthen those existing agencies instead of having to set up another dedicated agency?"

In response, Mrs Teo said that the mission, operating environment and requirements of these agencies differ from those of the Home Team, and that there is enough scale within the Home Team to merit a dedicated agency.

"If we don't put (what is needed by the Home Team) as the focus of a dedicated agency, then you must run the risk that these are ancillary to other agencies," she said. "Then it will be a question mark whether you can build up sufficient capabilities in a short time to counter the challenges."

Privacy concerns were also raised. Mr Louis Ng (Nee Soon GRC) said that even as Singaporeans feel physically safe, they have become uneasy about giving away their data, with the spate of recent breaches involving government agencies.

Mrs Teo said that Home Team departments will continue to collect data in accordance with their statutory duties or to maintain their mission effectiveness.

She also said it is unlikely that HTX officers will collect personal data in the course of their duties.

But the agency will safeguard the Home Team's IT systems, and the data within, through the 24/7 MHA Security Operations Centre, which will provide immediate responses and investigations into cyber-security incidents and issues, she added.

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How robots, tech help Home Team officers in the field

Ms Tan Joe-Lin, who supervises a team of crime scene specialists, using a handheld 3D scanner that is used to document crime scenes. The scanner can examine hard-to-reach places and the user can immediately see what was scanned and redo it if need be, reducing the time taken to process a scene. ST PHOTO: GAVIN FOO

Robots can be stationed at protected areas to deter potential perpetrators, or be sent in to deal with dangerous situations such as bomb threats, but they will not replace Home Team officers, said a Home Affairs Ministry (MHA) official.

Mr Lee Guoming, senior assistant director for robotics, automation and unmanned systems at MHA's Science and Technology Group, said yesterday that officers perform roles that involve complex human interactions and relationships, which robots cannot undertake.

"As of now, robots do not have the capacity for emotional relationships, as well as the ability to understand the context of what the job requires, such as comforting the next of kin of a deceased," added Mr Lee, 38, who has worked at MHA for around seven years.

He will be among the officers joining the Home Team Science and Technology Agency, or HTX, which will be set up by December.

Second Minister for Home Affairs Josephine Teo told Parliament yesterday that there will initially be 1,300 officers from various Home Team departments in HTX.

Mr Lee, who graduated from the National University of Singapore in 2006 with a degree in mechanical engineering, said in a recent interview that the new agency will allow closer collaboration among experts from different fields.

"It's an exciting time for scientists and engineers because we get exposure to other technologies, for example, data science and AI (artificial intelligence)," he added.

"The fact is that any solutions we develop for the Home Team are unlikely to be on their own – they are likely to have different components."

Mr Lee said robots can be stationed at protected areas for perimeter security as they can provide a persistent presence that is not susceptible to human fatigue or error. "By using robots to enhance the presence in a protected area, we can ideally prevent crime," he added.

Ms Tan Joe-Lin, 34, who supervises a team of crime scene specialists under the Singapore Police Force's Criminal Investigation Department, will also be part of the new science and technology outfit.

She said technology has always been a game-changer in crime scene investigations.

For instance, a tablet-form, handheld 3D scanner introduced last year complements the existing 3D terrestrial laser scanner, mounted on a tripod, in documenting crime scenes.

"It is difficult to bring the larger terrestrial scanner into certain places, such as onto a large vessel.

"The handheld scanner allows us to scan hard-to-reach places, and we can immediately see what was scanned and redo it if need be, reducing the time taken to process a scene," she said.

Another example is the use of a portable kit to recover fingerprints at the scene instead of back at a lab as it was done in the past, which saves a few hours. These few hours right after a crime is committed could be critical, as, in some cases, the perpetrator might leave the country, said Ms Tan, who joined the police in 2012 and specialises in blood stain pattern analysis.

Ms Tan said her role at HTX will allow her to delve deeper into her specialisation and research technology that can improve crime scene investigation processes.

"At the end of the day, when the investigating officer comes to you and says, 'Oh, we've managed to catch the accused based on the DNA evidence that you found', or through fingerprint evidence that we uncovered, that itself is already great job satisfaction," she added.

Lim Min Zhang