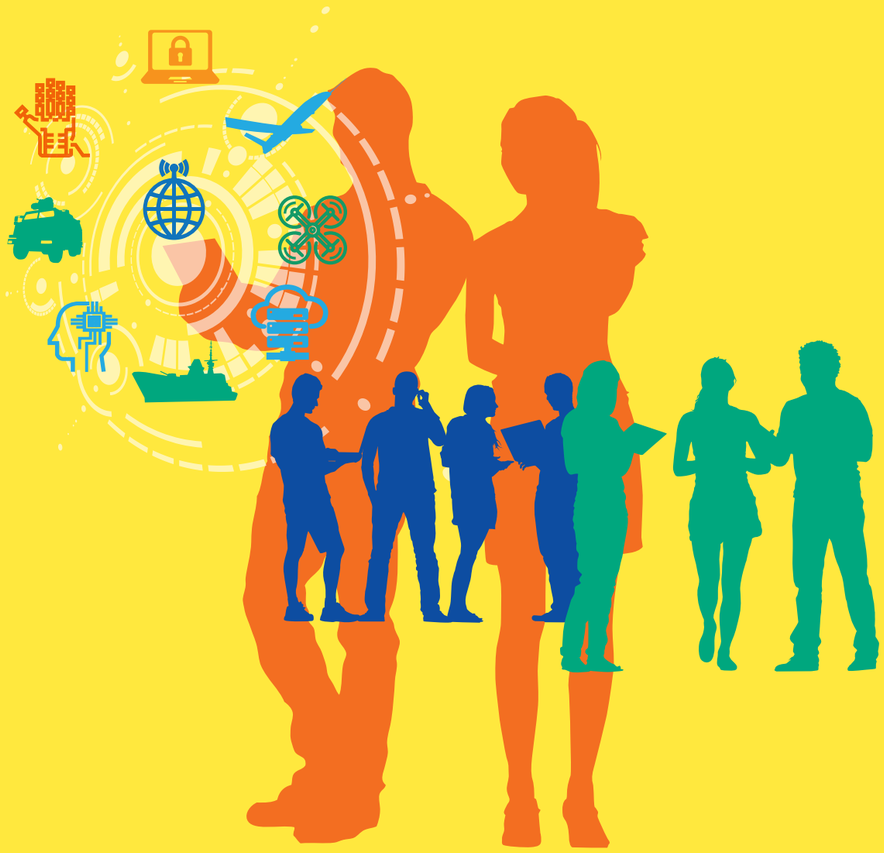

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"With the simulators operationalised, more soldiers can now train realistically for a wider range of battlefield scenarios. Moments like this keep me going in my work as a defence engineer."

Eileen Kwan Sze Ying
Networked Systems Programme Centre
Defence Science and Technology Agency
Bachelor of Engineering
(Electrical & Electronic Engineering),
Nanyang Technological University

DRIVING THE FUTURE OF DEFENCE ENGINEERING

Starting out as a young virtual racing game enthusiast, Eileen Kwan now takes the wheel in designing and developing advanced simulation systems for Singapore's defence at DSTA.

As a child, Eileen could often be found honing her virtual driving skills at the arcade. This hobby sparked her initial fascination with the machine she was in—a racing simulator. She was then exposed to more advanced simulators while working at the Science Centre Singapore before she started university. "I was working in customer service, but would ask to be rotated to staff the simulators on exhibit," she reveals. This eventually grew into a passion for simulation systems, which now drives her career as a defence engineer with DSTA.

Her first project when she started work in 2010 was to develop simulation systems for the Republic of Singapore Air Force's (RSAF) training school. Working with her team, Eileen successfully delivered an intuitive training system for air traffic controllers that simulated the actual air traffic control tower environment. She saw this project through from start to finish, from initial system design to conducting acceptance tests on site.

Currently a Project Lead at DSTA's Networked Systems Programme Centre, Eileen is in charge of delivering mechanised and motorised simulators for the Singapore Armed Forces (SAF) Armour Simulation Centre (ASC). The multi-disciplinary DSTA team, in collaboration with defence partners, developed simulator cabins that would enable Armoured Platforms crew to hone their gunnery and driving skills in a realistic and safe virtual environment. The simulators are also easily reconfigurable to support various armoured platforms and training requirements.

On the challenges of the ASC project, Eileen explains: "In managing this project, I had to level up my understanding of systems integration and engineering as well as armour operational concepts and training requirements."

Her colleagues helped her overcome these challenges by sharing their technical expertise and knowledge. Eileen also engaged her SAF partners frequently to understand the systems and their requirements, and spent time to learn how these systems were operated and used.

Eileen cites the official opening of the ASC as one of the most memorable moments in her career, as she was able to witness the hard work of her team culminate in the delivery of a leading-edge training capability for the SAF.

She was also heartened to witness soldiers putting the simulators to actual use. "With the simulators operationalised, more soldiers can now train realistically for a wider range of battlefield scenarios, including those that could not be simulated during live-firing sessions. Moments like this keep me going in my work as a defence engineer," she shares.

Eileen enjoys working in the defence sector because of the cutting-edge and innovative technology she gets to work on. "You won't feel bored. I get to visit camps, airbases, and see fighter planes take off on the runway right in front of me," she enthuses.

She also likes the culture of knowledge sharing and mentorship in DSTA, and appreciates opportunities to develop herself holistically. For example, she was sent overseas for a simulation training course in 2011, where she gained valuable insights and built up her technical proficiency. She also attended in-house milestone courses organised to develop staff's technical, business and leadership competencies in a structured manner.

Her advice for people who are keen to join the industry? "Keep an open mind. Be willing to explore and be amazed at the things that you can learn from different people."