

Choosing effective solutions

Mr Ng Jun Yang derives a great sense of satisfaction in his job at the Defence Science and Technology Agency

by hazel tan

NO TWO days at work are the same for Mr Ng Jun Yang, a senior engineer for air systems programme centre at the Defence Science and Technology Agency (DSTA).

As a member of the DSTA team working on the M-346 aircraft, an advanced jet trainer for the Republic of Singapore Air Force (RSAF), Mr Ng could be evaluating engineering proposals or meeting defence contractors on project matters one day, and engaging RSAF personnel at airbases on another day.

Just a few weeks ago, he had the chance to participate in the Singapore Airshow 2014.

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— Mr Ng Jun Yang, senior engineer, DSTA

Says the 28-year-old: "During the Singapore Airshow, I had the chance to network with many suppliers, and got to learn about many cutting-edge innovative engineering approaches and solutions. As a project engineer, I also address and anticipate potential technical challenges during the project implementation phases."

Doing what he loves

Mr Ng's love of engineering was piqued after he joined the Singapore Youth Flying Club (SYFC) as a co-curricular activity in his first year at Victoria Junior College. Then, he had the chance to fly the Piper Warrior PA-28-161.

"I managed to get my private pilot's licence (aeroplanes) when I turned 18, even before I had a driving licence," he says.

"There was just something about flying that stirred something in me; to be able to fly in the sky alone, and to have all the dials and gauges around you keeping you safe felt electrifying."

From then on, Mr Ng spent hours clocking flight time, studying the aircraft and understanding how aircraft equipment and systems worked.

"I learnt what it takes to maintain and ensure that an aircraft is safe to fly. It was through aviation that I fell in love with engineering. I can draw on my flying experience to enable pilots to fly better as I can put myself in their shoes and understand their needs," he adds.

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It was therefore a logical choice for Mr Ng to pursue a career in air systems engineering after graduating with a Bachelor of Engineering (Aerospace Engineering) degree from Nanyang Technological University.

Mr Ng's job at DSTA lets him work on what he is interested in — managing aircraft system upgrades and acquisitions.

Travel and training opportunities

As a member of the M-346 project team, Mr Ng and his teammates enhanced the design and capabilities of the onboard mission systems as

well as led the concept development and integration of a full suite of ground-based training devices and aids.

Mr Ng describes the learning culture in DSTA as "very open". There are regular internal sharing sessions organised for engineers to share their experiences, lessons and innovative ideas with one another.

DSTA provides numerous training opportunities to help employees succeed and deliver excellence.

For example, Mr Ng was in Italy to oversee the technical reviews and ensure a smooth and timely delivery of the M-346 to the RSAF.

He has also travelled to Australia and France to conduct technical reviews and better understand the needs of the RSAF squadrons there. Such visits have given him first-hand insights into the aircraft performance and operating environments to develop more effective engineering solutions for the RSAF.

Flexibility and autonomy

Mr Ng says his job is "rewarding and educational", and there is a strong team spirit. He also has flexibility and autonomy in managing his work, and supervisors are on hand to provide guidance should he run into roadblocks.

"While the learning curve is steep, there is a great sense of satisfaction knowing I help to strengthen our country's defence," says Mr Ng, who is particularly proud to have contributed to the delivery of the M-346 aircraft and systems to the RSAF.

Insights gleaned from the project are shared with colleagues to develop new and better solutions for the Singapore Armed Forces.

"I also enjoy the exposure that DSTA gives in providing a macro perspective of engineering challenges and capability development trends. This is possible as our work as defence engineers requires us to understand how systems work together in unison, and not just one system in isolation," he adds.

To excel in the role of a defence engineer, Mr Ng must be able to think on his feet and possess the confidence to express his professional opinion.

Thinking out of the box is equally important to address engineering challenges in the defence industry.

"Last but not least, be critical. Never stop asking questions and seeking possibilities as they often lead to innovation," says Mr Ng.



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