

20 *things
to
know about*

DSTA

TWO AWESOME DECADES OF
DEFENCE TECHNOLOGY
AND ENGINEERING





SHARED PURPOSE

On 15 March 2000, eight entities in the Ministry of Defence (MINDEF) merged into one Defence Science and Technology Agency (DSTA), forming a new statutory board to give Singapore's defence force the technological edge.

Twenty years on, we have evolved but continue to respond quickly to changing environments – staying true to our mission to harness and exploit science and technology to strengthen our nation's defence!

"We recognise the importance of incorporating advanced technology for the Ministry of Defence and the Singapore Armed Forces. To do this well, we need DSTA to be adaptive and agile, and able to embrace commercial technology."

**DSTA Chief Executive
Tan Peng Yam**

Interview with The Straits Times at the
Singapore Defence Technology Summit 2019



GLOBAL SUMMITS

The Singapore Defence Technology Summit was a hit among the international tech community!

Delegates from 25 countries traded views in exciting domains like artificial intelligence (AI), cybersecurity, space, and more in 2018 and 2019.

Expect more dynamic exchanges of knowledge at Tech Summit 2021!



"Leading defence technology policy makers, scientists and engineers came from all around the world...in many of them, you are able to get stars, who are at the front edge of emerging technologies, such as deep machine learning, neuroscience, nano satellites and others... I think their presence here speaks volumes and has paid you the ultimate compliment to the standards of our defence science and engineering."

**Minister for Defence
Dr Ng Eng Hen**

Defence Technology Prize Award Ceremony 2019



PINNACLE AWARDS

At DSTA, what matters most are our people!

We encourage everyone to imagine possibilities, challenge norms, and harness science and technology in innovative ways.

We are stoked to receive all 3 pinnacle Business Excellence awards in a short span of forty months in the last twenty years!



Innovation Excellence Award in 2014

People Excellence Award in 2016

Singapore Quality Award in 2017

CONNECTED

COMMITTED

TH

INDUSTRIAL REVOLUTION PUSH

The rules and playing field in tech are ever-changing, but so are we.

Our engineers are at the forefront of technological progress – harnessing emerging and digital advancements in AI, data analytics, machine learning, cybersecurity, and advanced robotics.



Protecting defence networks with content scanning engines, data analytics, visualisation capabilities and security assessment tools in the Cyber Security Operations Centre 2.0.



In tandem with our Singapore Armed Forces (SAF) partners, we stretched the potential of augmented reality to boost efficiency and effectiveness on board frigates!

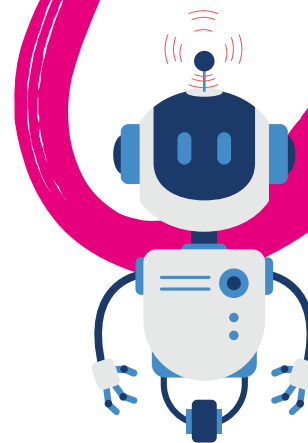


Training smarter with a command and control centre integrated with AI and analytics during Exercise Forging Sabre 2019, an integrated strike exercise conducted in the United States.

GUIDING VALUES

Integrity, Professionalism, Excellence, Respect, and Teamwork - these values are part of our DNA.

We believe in empowering our people, embracing a shared vision, and creating meaningful work.



Mission

DSTA shall harness and exploit science and technology, and provide technological and engineering support, to meet the defence and national security needs of Singapore.



Vision

Inspired people, bringing innovation to all we connect.



Values

Integrity, Professionalism, Excellence, Respect and Teamwork

INSPIRED

TOP ENGINEERING FEATS VOTED BY THE PUBLIC

Bold, determined and with a can-do spirit, our people delivered many innovative and impactful projects including 6 of Singapore's Top 50 Engineering Feats, achieved over its first 50 years:



Air Command and Control Hub: Tracks aircraft movement around Singapore and warns against potential threats.



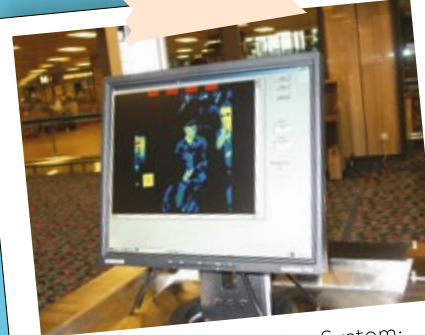
Bionix Infantry Fighting Vehicle: First armoured IFV designed and tailored for the specific needs of our Army - providing it a leap in mobility, firepower and protection.



Floating Platform: Hailed as the world's largest, with a 27,000-seater viewing gallery on shore.



Singapore Assault Rifle 21: Highly accurate, easy-to-use and ergonomically designed to suit the average Singaporean soldier's build.



Infrared Fever Screening System: Thermal scanners that screen large groups of people for fever, used as a first line of defence against the spread of epidemics.



Underground Ammunition Facility: The ground-breaking UAF opened up new possibilities in the use of underground space in land-scarce Singapore! Safety codes for the facility were adopted by NATO.

BOLD

GOING THE WHOLE YARDS

10 /10 TEAMWORK

Our work goes beyond defence!

We support wider Public Service initiatives, manage key projects as well as provide expertise as an Engineering Centre of Excellence for Command, Control and Communications.



Coordinating security with the Integrated Ops Centre (IOC) at National Day Parade 2019. Fusing multiple data sources such as weather and traffic reports, the IOC makes it easier to share information and coordinate tasks.

Fine-tuning key capabilities of the Ministry of Health's Crisis Information Management System, which synergises healthcare crisis management.



Enhancing Singapore's marine firefighting capability! We work closely with the Singapore Civil Defence Force to manage the acquisition of new vessels, from the contracting to the design and delivery of firefighting vessels.

Unwinding with a game of soccer after a day's work, or showcasing talents at the Gala Dinner - having a good time is easy with the right company around!

#teamDSTA is strong in our sports teams, interest groups, even a band.

And we take time to volunteer and contribute to worthy causes together!



FUN

/11 SINGLING OUT A MEANINGFUL CAREER



Everyone has unique strengths and abilities - so, at DSTA, everyone has a personalised career development plan too!

The Staff Development Framework, launched on 11 November 2011, helps staff to drive innovation, forge strong collaboration and make a positive difference at work with a custom mix of workshops, courses, and mentoring programmes.



STOREYS ADDED TO CREATE THE DSTA INTEGRATED COMPLEX

Designed and built to encourage teamwork, the DSTA Integrated Complex gives ideas space to flow.

Get momentum going in the modular workspaces, developers' labs, and breakout corners for discussion.

Need a break? Take a breather at the Sky Café, or recharge at a cosy nook in the Information Resources Centre.



No one pantry is the same, and it's a place for colleagues to gather, have fun, and share ideas!



Chilling over coffee at the Sky Café.



Besides the Information Resources Centre, there are many collaborative work spaces for huddles and team discussions.

EMPOWERED

FOR

13 YEARS OF KEEPING DREAMS AFLOAT AND COUNTING

Initially meant as an interim National Day Parade (NDP) venue for 5 years, The Float @ Marina Bay has been an iconic part of the Singapore skyline for the past 13 years!

Besides helping to develop the Floating Platform and its seating gallery, our engineers also help to stage NDP every year, overseeing construction works, sound and power systems to fireworks safety.

Up next, the platform will transform into NS Square, a vibrant events and entertainment space for the public which also commemorates national service!



CREATIVE

WINNING TEAMS AT INAUGURAL BRAINHACK

More than 1,500 students gathered to learn, play and code with friends at BrainHack 2019 to level up skills in AI and cyber!

In our quest to ignite imaginations and impart skills on the wonders of science and engineering, we introduce the latest tech areas in our outreach activities and learning programmes.



BrainHack 2020 is slated to be bigger and better!



Since 1992, the Young Defence Scientists Programme has played host to budding engineers and scientists.



Students gain insights into the myriad of opportunities at DSTA that span diverse tech and engineering domains.

MINUTE OFFICE WORKOUT? NO PROBLEM



It's easy to find motivation and workout buddies with a variety of fitness facilities and programmes.

Whether it's hitting the office gym, joining group workouts and health talks, or enjoying sports with fellow enthusiasts, #DSTAFitFam finds ways to live healthy!



Staying fit and winding down at the gym after a day's work.



Our cycling team pedalling strong!



Brainstorming with 3000 minds during the annual Innovation and Staff Dialogue Day!



Embracing the spirit of hackathons with our SAF partners – ideate, create!

16 YEARS OF CURATED LEARNING

The DSTA College was set up in 2004 to tap the collective wealth of engineering and tech expertise amassed here. It was launched as the DSTA Academy in 2012 with an expanded scope to focus on delivering quality, practice-based training in systems engineering and the management of complex projects.

Besides structured training, staff can also learn from experts via lectures and lunchtime tech talks, compete in creative hackathons, or learn at their own pace through recommended Massive Open Online Courses!



Capture-the-Flag competitions pit one's cybersecurity skills against others!



Guest speaker IBM Fellow Dr John Maxwell Cohn shared about bringing innovation, fun and passion to the workplace at a DSTA Lecture.

CURIOUS



GREEN MARK

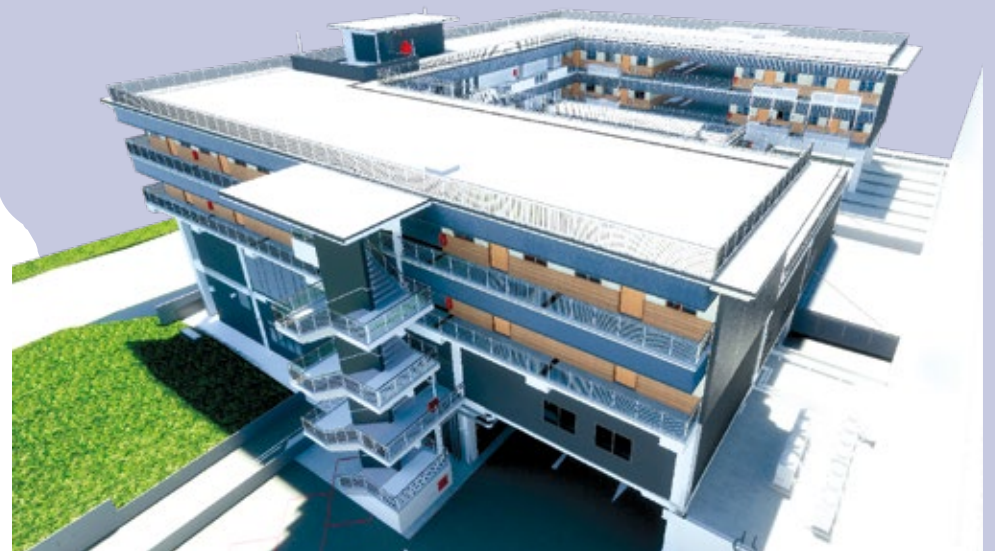
CERTIFIED PROJECTS

DSTA joins the ranks of Green Mark Champions, an award which recognises a commitment towards sustainable buildings.

We developed the SAF's first 'zero energy' building using a material that has a lighter carbon footprint than steel or concrete!

The 12-storey DSTA Integrated Complex Annex building has achieved energy savings of 35% and potable water savings of 70% through innovations in cooling, lighting, energy and water systems.

Also look out for the environmentally sustainable solutions we are bringing to the upcoming NS Hub!



GREEN

TYPE 2

18^{SG} DESIGNED TO BE INVINCIBLE

Singapore's newest Invincible-class submarine packs greater firepower, endurance and advanced sense-making systems. We are customising it for the Navy to stay ahead of changing currents.

DSTA is also responsible for the acquisition, management, and systems integration of many defence systems including the Littoral Mission Vessel, F-15SG fighter aircraft, and Hunter Armoured Fighting Vehicle.



PUSHING BOUNDARIES IN 20



June 2019 marked the groundbreaking ceremony for SAFTI City, which will transform the way the Army trains by providing a realistic urban environment for soldiers to train for a wide range of operations.

High-tech simulation systems, smart targetry capabilities and advanced training modules are just some of the exciting aspects our engineers will be working on!

Not more than three clicks are needed for soldiers to operate the Singapore Army's first fully digitalised vehicle - the Hunter Armoured Fighting Vehicle!

Commissioned in June 2019, the Hunter is engineered to be intuitive to use, train on and maintain. It's even designed to be capable of integrating with unmanned systems!



AGILE

EVOLVING

20

/20

HINDSIGHT FOR GREATER FORESIGHT

We envision ways to make tech work for people, using design thinking and agile development to harness new advances swiftly.

With our focus on people development and a wide array of learning programmes on cutting-edge domains, we are committed to empowering our people with skills to thrive in an innovation-driven world.



Staff will be trained in design thinking to see opportunities where others see challenges.



Showcasing innovative concepts and prototypes at our in-house workshop.

What's Next

These 20 facts are just a sneak peek of what makes us DSTA.

From imagination to innovation, there's more, and the possibilities are endless in a future that is ours to create!

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