SINGAPORE DEFENCE
TECHNOLOGY SUMMIT
22-24 March 2023

DSTA
Defence Science &
Technology Agency

24 March 2023

News Release

DSTA EXPANDS TECH PARTNERSHIPS WITH INDUSTRY AND ACADEMIA TO BOLSTER SINGAPORE'S DEFENCE CAPABILITY

Singapore's Defence Science and Technology Agency (DSTA) is expanding its network of partners and areas of collaboration to gain strategic technology advantage for Singapore's defence and security against future threats. DSTA signed more than nine partnerships with military partners, commercial companies and academia, at the sidelines of this year's Singapore Defence and Technology Summit 2023[1] which was held from 22 to 24 March 2023.

DSTA's Chief Executive, Mr Mervyn Tan said, "Evolving asymmetrical threats and the emergence of novel, disruptive technological innovations have placed renewed importance for DSTA to prepare ourselves for these new paradigms and be at the forefront of the latest technology trends. Recognising the importance of exchanging views and ideas with top government decision-makers, innovators and engineers from around the world, we brought together hundreds of leaders this week at the Singapore Defence Technology Summit. It is imperative that we adopt a very different collaboration strategy in light of the new threats and opportunities. With our partners in the defence sector, we are pushing beyond traditional areas such as platforms design to share data and harness smart and digital technologies – such as Artificial Intelligence (AI), Data Analytics and Machine Learning – to optimise efficiencies, improve systems performance and achieve sustainability. We will also be exploring ways to accelerate the adoption of suitable commercial dual-use innovations,

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[1] Hosted by DSTA, the Singapore Defence Technology Summit is a unique gathering of global tech leaders from government, industry, academia, and think tanks, to network, confer, and collaborate in the development of defence and security capabilities. Visit https://www.techsummit.sg for more details.

including collaborations with digital tech start-ups and small and medium-sized enterprises, to meet Singapore's defence needs. In addition, our partnerships with top notch academia will dive deeper into research on emerging technologies."

The new collaborations were established with more than nine partners (Annex A) across a broad range of areas. DSTA's collaboration with Lockheed Martin Corporation will expand to build data-driven analysis and diagnostics to drive DSTA's efforts in developing its Fleet Management System. DSTA will also partner Saab AB to jointly deliver an advanced, digitalised and data-driven Multi-Role Combat Vessel. This will not only deepen DSTA engineers' competencies in surface ships design but also in data analytics. DSTA's partnership with Thales will be elevated to the co-development of new radar waveforms and to groom a pipeline of local radar expertise to better support the Singapore Armed Forces (SAF).

DSTA has also forged collaborations with Booz Allen Hamilton, Krauss-Maffei Wegmann and Safran to harness digital technologies to bolster the spectrum of defence capabilities – from cybersecurity to technologies to enhance the availability of traditional weapon systems and platforms. In its efforts to drive sustainability, DSTA will also work with ExxonMobil to adopt Hydrotreated Vegetable Oil for a fleet of vessels operated by the Republic of Singapore Navy.

Beyond enhancing the technical capabilities of existing platforms, DSTA will also tap on its partners' deep pool of research knowledge and insights by working with Safran and Carnegie Mellon University to nurture its talent pool through internship opportunities, co-development of executive education programmes and courses, and sharing of academic publications and research information.

In addition, through initiatives such as the International Data Engineering Prize Challenge – a global challenge which called for a novel data ingestion and curation solution for counter-terrorism intelligence analysis, and jointly organised by DSTA and the U.S. Department of Defense's Irregular Warfare Technical Support Directorate – DSTA also actively solicits for innovative solutions from small and medium-sized enterprises, start-ups, and even individuals.

"These partnerships put DSTA in a much stronger position to constantly innovate and be ready to leverage the latest technologies to enhance Singapore's capabilities against future threats," Mr Tan said.

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Annex A

The following table summarises the Collaboration Agreements (CA) / Memorandum of Understanding (MOU) signed between DSTA and partners on the sidelines of the Singapore Defence Tech Summit 2023:

S/N	Name of Organisation (Country)	Scope
1.	Booz Allen Hamilton Inc. (U.S.)	MOU on partnership in cybersecurity, AI and related technologies.
2.	Carnegie Mellon University (U.S.)	MOU on collaboration in Artificial Intelligence research and development for areas of mutual interest such as cybersecurity and autonomous systems, executive education programmes, faculty exchanges and sharing of academic publications and scholarly information.
3.	ExxonMobil Asia Pacific Pte Ltd	MOU on exploring the adoption of Hydrotreated Vegetable Oil, a type of sustainable fuel, to reduce carbon emissions for the Republic of Singapore Navy's vessels.
4.	Krauss-Maffei Wegmann (Germany)	MOU on harnessing digital technologies for defence applications, focusing on the use of data analytics, machine learning and algorithms to enhance efficiency of maintenance and operations for the Singapore Armed Forces' combat vehicles.
5.	Lockheed Martin Corporation (U.S.)	CA to explore data analytics and workflow automation to optimise the maintenance, training effectiveness and availability of platforms operated by the Republic of Singapore Air Force.
6.	Rafael Advanced Defense Systems Ltd. (Israel)	Implementation Agreement on the use of synthetic data to train computer vision

		algorithms, as well as the application of visual odometry for soldier navigation.
7.	Saab AB (Sweden)	MOU on partnership for Multi-Role Combat Vessel, harnessing technologies such as artificial intelligence and data analytics to realise the MRCV's concept as a highly digital ship.
8.	Safran Electronics & Defense (France)	MOU on smart technologies for improved systems performance, availability and sustainability for defence applications, as well as talent development initiatives including internship opportunities and co-developed lectures and courses.
9.	Thales Group (France)	Collaboration on co-developing a Radar Digital Twin, to facilitate continuous upgrades to better address emerging and future needs. Thales will also ensure its engineering and services experts will be located in Singapore to provide optimum service quality, and help train local talent in the domain of radars.

About Defence Science and Technology Agency

The Defence Science and Technology Agency (DSTA) is a top-notch technology organisation that drives innovation and delivers state-of-the-art capabilities to make the Singapore Armed Forces a formidable fighting force. Harnessing and exploiting science and technology, our engineers and IT professionals leverage multidisciplinary expertise to equip our soldiers with advanced systems to defend Singapore. DSTA also contributes its technological expertise to support national-level developments. To achieve our mission, DSTA excels in systems engineering, digitalised platforms, cyber, software development and more.

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