## DST LEADERSHIP TEAM



## DOING BUSINESS WITH DST

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### **For further information** visit www.dst.defence.gov.au or

download the free DST App







Australian Government Department of Defence

# Science and Technology Capabilities

Defence Science and Technology is a national leader in safeguarding Australia by delivering valued scientific advice and innovative technology solutions supporting Australia's defence and national security.











#### MAJOR SCIENCE AND TECHNOLOGY CAPABILITIES (MSTC)

Each MSTC comprises people, infrastructure, S&T know-how and partner relationships in a combination of a science and defence domain. The science component comprises the specialist knowledge, skills and experience of staff in the domain, as well as infrastructure and partnering. The defence component is the context in which our specialist knowledge, skills and experience have impact, including the particular physical aspect or operational context.

<b>Corporate Divisions</b> Responsible for corporate duties in order to shape strategic direction and enhance engagement with Defence and external partners.	Science Strategy and Program Division Develops science policy, formulates Defence S&T and strategic research programs, and oversees resource investment into S&T capabilities.	A Martine Contraction of the second s	Science Partnerships and Engagemen Coordinates and develops interactions industry, academia, overseas agencies Australian government agencies. Promu defence science in the education and w Australian communities.	t Division with and other otes vider	Research Services Division Delivers enabling services including science information management and technolog research infrastructure, scientific engineering and support, laboratory emergency management, safety and sec	gy. urity.
Maritime Division (MD) Provides support and solutions to enhance the operational performance and survivability of defence platforms in the maritime domain.	Sonar Technology and Systems Conducts leading research and development in undersea acoustic sensors and systems to grow the ADF's undersea warfare capability.	Acoustic Signature Management Delivers S&T solutions to manage the acoustic signature of defence platforms; and the hydrodynamic and manoeuvring performance of ships and submarines.	Non Acoustic Signature Management Undertake research in materials science and technology to enhance the survivability, operational capability, seakeeping and cost of ownership of ADF platforms.	Maritime Autonomy Leads research into autonomous and unmanned systems to enhance ADF capability in maritime surveillance, mine countermeasures and rapid environmental assessment.	Undersea Command and Control Provides the ADO with scientific and technical expertise to enhance the RAN's undersea warfare capability and decision making.	Maritime Platform Performance Undertakes research in platform performance of materials, structures and systems to enhance the capability, survivability and safety of RAN vessels.
Land Division (LD) Provides support and solutions for ADF personnel by applying expertise in human sciences, personnel protection, vehicle and systems sciences, and chemical, biological and radiological warfare.	Land Human Systems Develops, sustains and applies the broad cross-section of human science skills in support of ADF land operations.	Land Vehicles and Systems Conducts research in vehicle systems management, armour and protection, logistics and integrated support systems.		Chemical and Biological Defence Research and development of defence against chemical, biological and radiation (CBR) threats.		Land Personnel Protection Supports soldier combat system development, and analysis of threats affecting the soldier.
Aerospace Division (AD) Provides support and solutions to enhance the operational effectiveness, performance, survivability, availability and safety of ADF aerospace capabilities.	Aerospace Systems Effectiveness Supports Defence outcomes in capability, efficiency and safety by providing advice and solutions where humans and air platforms or systems interact.	Aircraft Performance and Survivability Conducts performance and survivability modelling and experimentation for flight, propulsion, signatures and stores carriage and clearances.	Aircraft Health and Sustainment Supports aircraft health management systems and technologies, engine and fuel integrity, and aerospace systems sustainment analysis.	Airframe Technology and Safety Works to ensure aircraft safety and availability, reduce fleet cost of ownership and advises on acquisition projects.	Aircraft Structures Provides safety-critical aircraft structural integrity and airworthiness advice and solutions to the ADO.	
Joint and Operations Analysis Division (JOAD) Analyses Defence operations and capability to provide independent, impartial and timely advice.	Three JOAD MSTCs develop and apply a to inform decisions impacting: 1. Aero: and 3. Maritime Capability. This encou command and control, underpinning te training, and their contribution to oper	nalytical methods, techniques and tools space Capability, 2. Land Capability mpasses specification, procurement, chnologies, force structure and ational effectiveness.	Joint Capability Analysis Supports joint capability issues, including through the DST operations support centre by immersion and experimentation with warfighters.		Decision Sciences Enhances military decision-making at individual, team and organisational levels in terms of intent, capabilities, awareness and control including human and machine perspectives, and their integration.	Strategic Capability Analysis Informs strategic policy and capability decisions by applying analysis, concept development, risk assessment and technology forecasting.
Cyber and Electronic Warfare Division (CEWD) Provides expert advice and technology solutions in the cyber domain and electronic warfare environment.	Electronic Warfare Operations Conceives, develops and validates EW technologies and techniques to support the ADF.	Cyber Warfare Operations Researches and develops new and novel concepts, technologies and techniques to enable autonomous, resilient and effective cyber capabilities.		<b>Contested Communications</b> Provides advice and solutions for robust communications in contested, complex and dynamic environments.	Electronic Surveillance and Coordination Provides expertise in radio frequency phenomenology and systems, subsystems and devices and the associated digital signal processing and computing technologie and architectures.	<b>Cyber Sensing and Shaping</b> Develops concepts, technologies and techniques for assessing, characterising and shaping s communication networks to enable cyber operations.
Weapons and Combat Systems Division (WCSD) Applies science and technology to the development and operation of highly effective weapon and combat systems for Defence.	Tactical Systems Integration Conducts research into tactical- information: architectures; integration and interoperability; automation; and processing, to achieve distributed tactical decision superiority for the ADF.		Tactical Systems Performance Assessment Conducts analysis of weapon system performance and end-to-end tactical system effectiveness.	Weapon Systems Technologies Applies S&T of sensors, processing and electromagnetic interactions to weapons and tactical systems to enhance the ADF's warfighting capability.	Energetic Systems and Effects Enhances Defence and national security capabilities, and the safety of ADF assets through research into energetic materials, explosive ordnance, propulsion technologies and high speed systems.	
Intelligence, Surveillance and Space (ISSD) Enhances the national capability for accurate, relevant and timely actionable intelligence for Defence and Government decision makers.	Intelligence Analytics Develops situational awareness capabilities for intelligence analysts and conducts domain-specific research into human, open-source and all-source analysis techniques.	Information Integration Supports the integration and application of intelligence, surveillance and reconnaissance systems.	Intelligence Systems Develops intelligence systems for geospatial intelligence and measurement and signature intelligence, and imagery-based capabilities.	Surveillance and Reconnaissance Systems Conducts research into surveillance and reconnaissance systems and assesses their application to defence and national security needs.	High Frequency Radar Enhances long-range over-the- horizon radar as part of the national intelligence, surveillance and reconnaissance system.	National Security Provides a whole-of-government coordination program for science and technology needs relating to national security.