



Australian Government

Department of Defence

Defence Science and Technology Group

Defence Science & Technology (DST) Group Value Proposition

DST Group provides value to Australia's Defence and national security through its capacity to reduce and mitigate strategic and operational risks and to create and maintain a capability edge.

Strategic

DST Group reduces risk in Defence's core business – Defence operations, intelligence, capability development and integration. It does this by providing specialist advice and innovative technology solutions that are grounded in research and are independent of commercial or non-government research interests.

DST Group strengthens strategic capability by building unique, collaborative international partnerships that enable access to classified government and compartmented technologies not otherwise available.

By building partnerships with academia, industry and other government departments, DST Group explores the impact of emerging technologies that can potentially create and prevent strategic surprise. DST Group is uniquely placed to take a longer term perspective to mature and de-risk ground-breaking technologies prior to industry transition.

Operational

DST Group strengthens operational capability through the provision of scientific advice and technology solutions that enhance and adapt Defence capability to our unique circumstances. This includes providing benefits in terms of military efficiency, effectiveness, readiness, sustainability and reducing losses.

DST Group enhances operational capability through the research, development, testing, evaluation, and modification of new and existing warfighting systems for the Australian Defence Force.

DST Group reduces the cost of ownership and increases the availability of Defence capability through technical advice based on modelling, risk analysis, experimental testing and life extension work.

Source of Value

DST Group's capacity to deliver value is built on its:

- unique world-class sovereign capabilities, with research staff and infrastructure covering the spectrum of Defence science;
- deep knowledge of and responsiveness to the Australian Defence environment and military capabilities;
- proven record of linking research and innovation with applications, and researchers and innovators with end users;
- active collaboration with Defence and national security communities of interest nationally and internationally;
- ability to integrate diverse and privileged information from multiple sources into coherent expert advice relevant to Defence, national security and government decision making, policy formulation and strategic planning;
- ability to maintain commercially unviable technology capabilities that are critical to Defence; and
- ability to work with academia and industry to foster a national science and technology base and transfer knowledge to support Defence capability development, acquisition and sustainment. This activity also generates economic value for the nation.

Examples of Defence Science & Technology

Value and Impact for Defence

	DST Role	Value and Impact for Defence	Examples
CORE ROLES	Operations	<ul style="list-style-type: none"> • Force protection • Effectiveness and efficiency • Fast tracking new capabilities • Lessons learnt 	<ul style="list-style-type: none"> • Counter IED technology • Survivability: Bushmaster, ASLAV vehicles • Staff in Special Ops, deployed in theatre • Cryptology, Intelligence and Logistics
	Sustainment	<ul style="list-style-type: none"> • Improved Defence capability • Preparedness • Cost savings 	<ul style="list-style-type: none"> • Physical Employment Standards • Armidale Class Patrol Boats serviceability • Collins submarine remediation • F/A-18 structural refurbishment • Recovery of PC-9 airworthiness
	Acquisition	<ul style="list-style-type: none"> • New advanced capability • Manage technical risk • Drive interoperability • Cost savings 	<ul style="list-style-type: none"> • Risk assessment and mitigation for major projects (e.g. LAND 121 Phase 4, F-35) • Co-development programs, such as AEW&C, AIR 7000, Growler, P8 • Diggerworks
	Future Proofing	<ul style="list-style-type: none"> • Shape strategic capabilities • Access global innovation • Adopt critical technologies • Reduce technical risk 	<ul style="list-style-type: none"> • Cyber technology • Intelligence analytics • Heavyweight torpedo • Future submarine design options
EXTENDED CORE	Advice to Government	<ul style="list-style-type: none"> • Technical advice that is expert and independent to inform decision makers • Inform strategic planning • Science diplomacy 	<ul style="list-style-type: none"> • Air accident investigations - CH-47, MH-370 and MH-17 investigations • Defence White Paper • Convention on Prohibition of Chemical Weapons • Defence Export Controls
	National Security	<ul style="list-style-type: none"> • Leveraging dual-use technologies • Coordinating whole-of- government requirements and investment 	<ul style="list-style-type: none"> • Chemical and biological hazards for first responders • Biometric identification and analytics for intelligence agencies and Immigration & Border Protection Force
	Strategic Research	<ul style="list-style-type: none"> • Create 'game changing' capability • New knowledge and understanding 	<ul style="list-style-type: none"> • Over-the-horizon radar • Hypersonic technologies • Unmanned systems • Under Sea Warfare • Exploitation of space-based capabilities
SUPPORTING	Emerging Futures	<ul style="list-style-type: none"> • Anticipate change • Create and prevent strategic surprise 	<ul style="list-style-type: none"> • <i>Forward 2035</i> foresighting study • Support quantum technologies, smart materials, replace GPS • Small satellite systems
	Partnerships	<ul style="list-style-type: none"> • Leverage alliances • Access to critical technology • Shape university capabilities • Transition to capability with commercial revenue 	<ul style="list-style-type: none"> • The 5-eyes Technical Cooperation Program • University and industry collaboration • Defence Materials Technology Centre • Capability and Technology Demonstrator Program • Nulka, JDAM-ER, JORN
	Outreach	<ul style="list-style-type: none"> • Enhance reputation of Australian Defence • Fostering/recruiting future workforce 	<ul style="list-style-type: none"> • National Science Week, Catalyst program • Support Science, Technology, Engineering and Mathematics education