



Australian Government

Department of Defence  
Defence Science and  
Technology Organisation

# Priorities for national security science and technology

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**DSTO**



Science and Technology for Safeguarding Australia

# Proposed Priorities

- Cyber Security
- Intelligence Exploitation
- Border Security & Identity Management
- Preparedness, Protection and Incident Response
- Investigative Support and Forensics



# Cyber security

<b>Challenge</b>	<ul style="list-style-type: none"><li>• Australia is now dependent on cyberspace for its national wellbeing &amp; security</li><li>• Cyberspace is an environment vulnerable to exploitation by malicious actors</li><li>• Cyber security requires application of S&amp;T to anticipate vulnerabilities, strengthen cyber systems and enhance national capacity to respond &amp; recover from cyber attack</li></ul>
<b>S&amp;T Scope</b>	<ul style="list-style-type: none"><li>• Cyber threat estimation &amp; forecasting</li><li>• Cyber influence &amp; data analytics</li><li>• Sensing to effects</li><li>• Autonomous systems</li><li>• System design for uncertainty</li></ul>



# Intelligence Exploitation

<b>Challenge</b>	<ul style="list-style-type: none"><li>• The deluge of available data from heterogenous sources is challenging the capabilities to extract actionable intelligence.</li><li>• Requires the support of automated data analysis and representation tools.</li></ul>
<b>S&amp;T Scope</b>	<ul style="list-style-type: none"><li>• Intelligence collection &amp; analysis within the NIC</li><li>• Intelligence collection &amp; analysis for criminal investigation</li></ul>



# Border Security and Identity Management

<b>Challenge</b>	<ul style="list-style-type: none"><li>• Preserving Australia's border integrity is a key challenge for Government</li><li>• The projected growth in people and cargo movement across Australian borders is challenging the ability to identify and assess risks and to conduct timely interventions</li></ul>
<b>S&amp;T Scope</b>	<ul style="list-style-type: none"><li>• Biometrics systems</li><li>• Surveillance and detection technologies (wide area, passenger and cargo screening)</li></ul>



# Preparedness, Protection and Incident Response

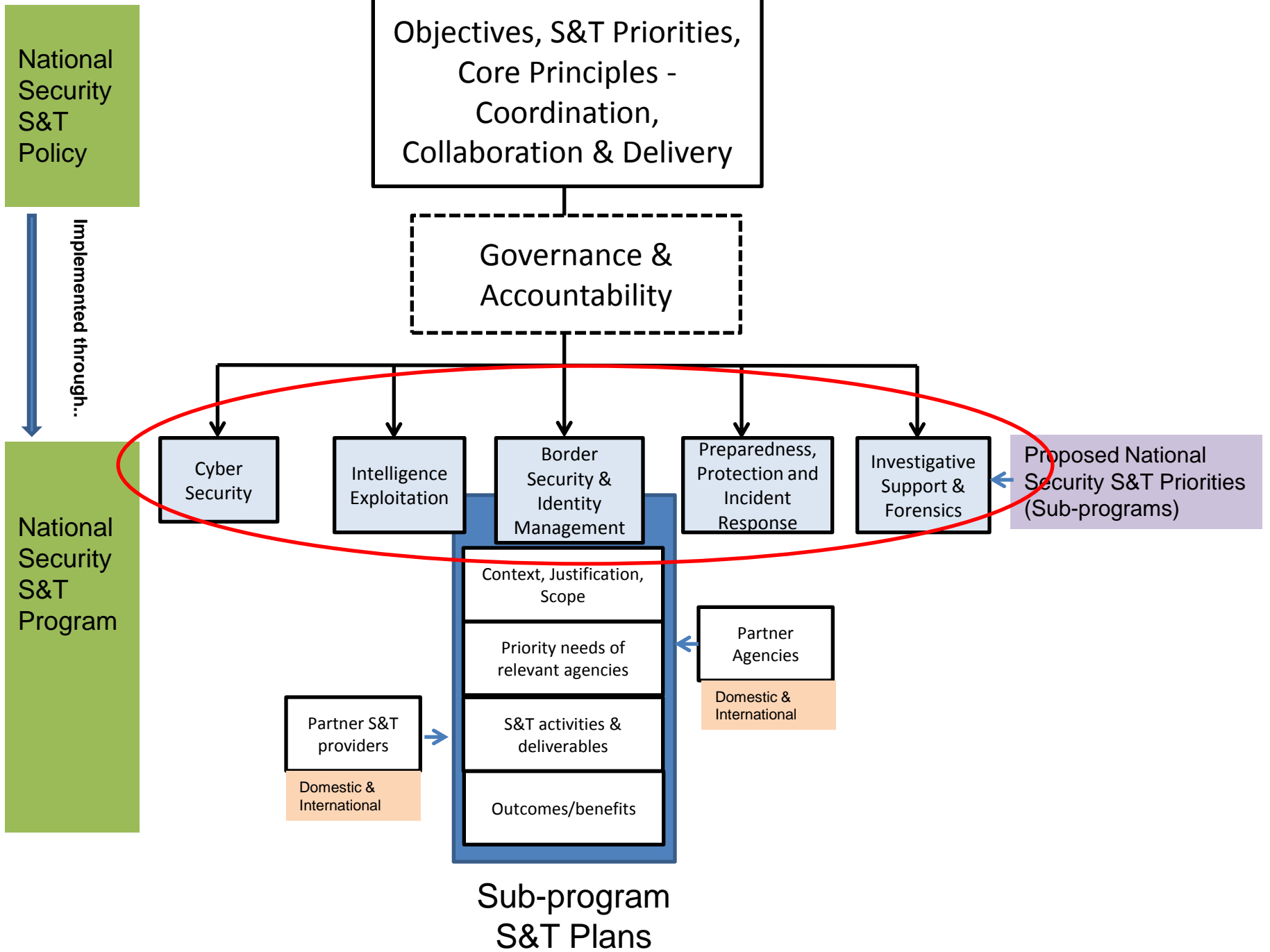
<b>Challenge</b>	<ul style="list-style-type: none"><li>• Ensuring Australian agencies are appropriately equipped and prepared to effectively and safely respond to events of national security significance (e.g terrorist attack on critical infrastructure or mass gatherings)</li></ul>
<b>S&amp;T Scope</b>	<ul style="list-style-type: none"><li>• First responder community infrastructure protection</li><li>• National security exercise support and training</li><li>• Social resilience and community engagement</li></ul>



# Investigative Support and Forensics

Challenge	<ul style="list-style-type: none"><li>• Novel, adapted and complex methods used by terrorists and perpetrators of nationally significant crimes creates an ongoing need for S&amp;T assisted solutions to detect, investigate and prosecute</li></ul>
S&T Scope	<ul style="list-style-type: none"><li>• Detection and surveillance technologies</li><li>• Intelligence, collection and analysis</li><li>• Forensic analysis</li></ul>







## Syndicate discussions

- Will these address the critical needs of national security users?
- What is the scope?
- Are there gaps? Are there overlaps?
- What are the specific user requirements and timeframes for delivering solutions?
- What S&T initiatives will be required to address these priorities?
- What and how – sourcing and delivering S&T, coordination, management, funding..

