Defence ICT Update
Military Communications and Information Systems (MiCIS) 2017

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ICT is a key enabler that allows Defence to perform its core business of defending Australia.

Defence has three primary drivers:

• 2016 Defence White Paper
• First Principles Review
• Defence ICT Strategic Direction 2016-2020
The Defence White Paper was released in February 2016 and defines a comprehensive, responsible, long-term plan for the defence of Australia.

**ICT was highlighted as a key enabler for Defence.**

The Defence White Paper sets the basis for strategic investment in ICT

IIP helps in planning for ICT investments aligned to strategic Defence capabilities
The First Principles Review recommends how Defence can deliver our mission in the most efficient and effective way.

ICT specific recommendations include:

- Information Management
- Business process standardisation and applications rationalisation
- Identity and Access Management
- Service delivery reform

“We recommend that the Associate Secretary be directed and resourced to implement enterprise information management that provides Defence with trusted information to inform decision-making and military interoperability....”

— First Principles Review
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<th>Challenge</th>
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| Significant capability modernisation                                    | • The largest most technically ambitious and complex portfolio we have ever delivered  
                              • Creates the imperative to improve the efficiency and effectiveness of capability decisions |
| Rapid technological change                                               | • Increases the cost and risks of delay in the capability portfolio  
                              • Creates opportunities to gain advantage or cost efficiencies by leveraging technology |
| Budgetary uncertainty                                                    | • Increases the need for transparency and sound financial stewardship  
                              • Means Defence must demonstrate value for money to the government and wider community |
| Economic growth in our region                                           | • Driving rapid regional military modernisation  
                              • Creates an uncertain strategic environment and increases the need for sound policy advice |
| Greater demand for military responses to various regional and expeditionary crises | • Requires a greater emphasis on joint capabilities  
                              • Increases the need to deliver high quality policy advice and work effectively across government |
A simplified business model based on the functions required in the One Defence approach.

- A stronger and more strategic centre able to provide clear direction, contestability of decision-making, as well as enhanced control of resources and monitoring of organisational performance
- An end-to-end approach for capability development with Capability Managers assigned clear authority and accountability
- Enablers that are integrated and customer-centric with greater use of cross-functional processes, particularly in regional locations
The Defence ICT Strategy 2016-2020 details a transformation from an infrastructure-centric to information-centric approach to ICT.

It aligns with the Defence ICT vision and mission.

Underpinned by five drivers:
- Defence strategic direction
- One Defence
- Sustainment requirements
- Investment profile
- Service orientation

Five strategic planks at the core:
- ‘One Defence’ reforms enabled
- Stable core
- Rationalised and secure services
- Enhanced Defence capabilities
- Optimised and agile environment
Various strategic drivers impact Defence ICT

- Service orientation
- Defence strategic direction
- One Defence
- Sustainment requirement
- Investment profile
Secure robust and reliable ICT for Defence
• Our major programs of work are transforming the current ICT landscape. We understand how we detect and manage threats needs to evolve, ensuring we stay one step ahead.

Flexible and trusted networks and systems
• Through the various programs we will standardise and rationalise the Defence Terrestrial Communications Network, deliver a single desktop for the fixed Defence Secret and Restricted Networks and consolidate Defence’s infrastructure, applications and networks.

The right information to the right person at the right time
• To continue to improve how we manage information we are focusing on improving Enterprise Information Management solutions.

Integration and interoperability across capabilities, systems and processes
• A clear outcome for all our transformation programs is to deliver capabilities, systems and processes that work together seamlessly.

Integrated enterprise planning solutions
• We are creating architecture that ensures that systems and networks are configurable and mappable to the wider Defence network.
Future state ICT will be implemented through five strategic planks.

1. Enabled
   'One Defence' reforms enabled

2. Stable
   Stable core

3. Secure
   Rationalised and secure services

4. Enhanced
   Enhanced Defence capabilities

5. Agile
   Optimised and agile environment
Defence is applying a strategic approach to implementation.

- A new governance structure to provide decision-making and coordination for whole-of-Defence ICT
- $20b investment in ICT over 10 years
- Creating a fit-for-purpose workforce
- Key roles for industry and the extended enterprise
- Risks must be recognised and treated
Information management is critical for decision making and maximising the advantage for the ADF.

- Invest in identifying required areas of change
- Defence is focusing on delivering capabilities and remaining agile to new demands and emerging technologies

“Information Management...is crucial to offset the relatively small size of the ADF and enable a competitive war fighting advantage.”

— First Principles Review
Enterprise Information Management (EIM)

EIM Platform

- Enterprise Search
- Enterprise Content Management
- Master Data Management
- Business Intelligence
- Data Warehousing
- Service Oriented Architecture - Integration
- Business Process Management

EIM COE

Vertical Capabilities

Standards
Governance
Policies
Technology
Cultural Change
Frameworks

ERP
Defence One
JP2096
JP2064
Land 1771
Defence’s vision for Enterprise Information Management is that trusted and accurate information and information services are delivered to the point of need, to enhance military and business operations.

- Provide common battlespace awareness and information superiority
- Link sensors and weapons platforms to enable a competitive war fighting advantage
- Deliver timely, credible, traceable and relevant information to inform management decisions
- Align information and data with standard business processes
- Enable measurable performance
- Provide a trusted single source of enterprise-wide data
- Deliver common and standardised applications and ICT infrastructure
Dedicated investment in ICT projects to facilitate standardisation of key Defence business processes.

- Business Process Management Engineering
- ICT Innovation
- Case Management
- eVetting Project
A Single Information Environment (SIE) is being implemented to deliver the modern, secure, sustainable and scalable information environment to enable military and business operations across fixed, deployed, and mobile environments.
The deployed and disconnected environments.

- Challenges of communications in the deployed environment
- Middle East ICT Refresh Program
- Project JACKSTAY – Maritime ICT
- Inclining the Optus C1 satellite
Deployed Communications: ICT in the disconnected state

Military use of business applications

- Office in the field
- Network monitoring
- Network management

Bandwidth / Bitrate constrained

- 1 Gb/s? No chance…
- Narrowband
- Redundancy / Diversity
- Fight for communications daily
  - Strategic Connection never guaranteed
  - Cloud is not always the option
Deployed Communications  ICT in the disconnected state

Contested communications

- The electromagnetic spectrum is a battlefield of its own
- We, and our adversary, will seek to dominate the EMS for our own use and deny its use by the other side
- Any transmission via radio (including SATCOM) will likely result in exploitation or a kinetic response
- Tailoring of solutions to meet the user need
Deployed Communications ICT in the disconnected state

Future Vision

- Demand for office – like services continues
- Reliance on strategic connection (back to Australia) needs reviewing
- Working with other nations and government departments
- Commanders needing mission assurance from the systems they employ
- Remaining undetected but maintaining both situational awareness and command and control
Middle East Region ICT Refresh

- All Wide Area Networks
- All Base Area Networks

- All SATCOM
  - Dual Large 6.3m hub
  - Multiple 4m dishes to replace the ageing existing fleet
- All LAN computer systems
  - EDLAN
  - 3000+ terminals in two domains
Supporting the deployed and disconnected

Project JACKSTAY

ICT for the maritime environment
• Windows 10 / Server 2012 R2
• New Hardware
• LAN only - bearers being addressed separately
• Focussing on Low Side
• Successfully deployed on two ships
• Interim solution pending delivery of SEA 2273 – FIE Modernisation
Optus C1 - Defence Payload System (DPS)

- Launch Date: 11 June 2003
- Location: 156oE
- Design Life: 15 years (*planned EOL mid 2018*)
  - Extended by Defence from 2018 to 2020
- Contracted to Incline:
  - Will incline from Jan 2019
  - Will now operate to Dec 2027

Benefits of Optus C1 in an inclined orbit:

1. Filings: Safeguard filings at 156oE possibly out to as far as 2030 preserving location and filings for future government consideration
2. Capability: Extended use of Defence Payload System (DPS) possibly out to as far as 2027. Can also provide assistance to WoG including Antarctic Division
3. Redundancy: Retain a wholly sovereign capability for AUS specific use and for surge support or downtime of primary resources
Industry engagement – how to get our attention

Tips for engaging with Defence on communications matters

- Understand our constraints
- Reliance on cloud technology may not be workable in the deployed environment
- Our networks and transmission systems need to have a high degree of integrity and survivability
- Automation / Seamlessness
- Be open to a partnership
Questions?