Project Data Summary Sheet[141]

Project Number	**JP 2072 Phase 2A**
Project Name	**BATTLESPACE COMMUNICATIONS SYSTEM**
First Year Reported in the MPR	2012-13
Capability Type	Replacement
Acquisition Type	MOTS
Capability Manager	Chief of Army
Government 1st Pass Approval	N/A
Government 2nd Pass Approval	Nov 11
Budget at 2nd Pass Approval	**$436.4m**
Total Approved Budget (Current)	**$438.0m**
2017-18 Budget	**$9.0m**
Project Stage	Acceptance Into Service
Complexity	ACAT III

Section 1 – Project Summary

1.1 Project Description

Joint Project 2072 Battlespace Communications System (Land) (BCS(L)) Phase 2A **has delivered** approximately 11,000 Combat Radios and ancillary equipment to replace the Wagtail, Pintail and Raven fleets for the majority of the Land Force. Phase 2A **has also established** the mature support system for the new generation Combat and Tactical Data Radios.

1.2 Current Status

Cost Performance

In-year

The project **has** spent $**6.2**m against a budget of $**9.0**m **(YTD)** with the **underspend due to reduction in requirements for Mission System Equipment for Communications Nodes and delays in developing architecture for the Battlefield Communications System (Land).**

Project Financial Assurance Statement

As at 30 June 2018, Project JP 2072 Phase 2A has reviewed the approved scope and budget for those elements required to be delivered by the project. Having reviewed the current financial and contractual obligations of the project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget remaining for the project to complete against the agreed scope.

Contingency Statement

The project has not applied contingency in the financial year.

Schedule Performance

- Contract Signature (Acquisition) was achieved in March 2012. The first delivery of Phase 2A Combat Radios and ancillaries into service was achieved in November 2012. Contract Signature (Support) was achieved May 2015 (Harris Mature Support Contract) for Combat Radio, and forecast for October 2015 for Tactical Data Radio (Raytheon Mature Support Contract signed December 2015). Initial Materiel Release (IMR) and Initial Operational Capability (IOC) were achieved on 30 April 2014. While the IMR and IOC signatures were delayed by seven months due to the acceptance process, the rollout of the capability to units was unaffected.
- Preliminary Design Review was achieved in March 2015 establishing a functional baseline from the Functional Performance Specification document. Full Design Acceptance of the six dismounted communications nodes was achieved in December 2016. The major focus for schedule performance is to achieve FMR by **November 2018** and then commence project closure activities.

Materiel Capability Delivery Performance

The radio equipment and components that form this capability were already introduced into service under JP 2072 Phase 1 as bearers for the Battle Management System (BMS); Phase 2A extends the utility of the radio equipment for dismounted voice communications. The rollout to end users is effectively complete according to the approved Basis of Issue (the schedule which identifies equipment entitlements by unit); with some specialised ancillaries still being finalised and/or pending technical certification prior to release.

[141] Notice to reader

Forecast dates and Sections: 1.2 (Materiel Capability Delivery Performance), 1.3 (Major Risks and Issues), 4.1 (Measures of Materiel Capability Delivery Performance), and 5 (Major Risks and Issues) are excluded from the scope of the ANAO's review of this Project Data Summary Sheet. Information on the scope of the review is provided in the *Independent Assurance Report* by the Auditor-General in **Part 3** of this report.

Note
Forecast dates and capability assessments are excluded from the scope of the review.

1.3 Project Context

Background

Program Overview

- The overall JP 2072 program, BCS(L), will provide an integrated communications system to support forces deployed in the land environment through a combination of new equipment to replace ageing radio fleets and enhancements/upgrades to current communications systems. Phase 1 provided communication systems for integration into the Battle Group and Below Command, Control and Communications capability being delivered in conjunction with LAND 75 and LAND 125 (the three projects commonly known as LAND 200).

Phase 2A

- Phase 2A is continuing the rollout of products selected during Phase 1 to primarily provide voice services to dismounted users. Phase 2A will also establish a mature support system for ongoing sustainment of the Phases 1 and 2A materiel systems and contribute to ongoing Prime System Integration activities to evolve the BCS(L) design. Investigation and/or market survey activities will be conducted to specify and identify products for potential procurement in future phases.

Acquisition

- The primary objective of Phase 2A is to replace and enhance the existing dismounted voice communications capability currently provided by Wagtail, Pintail and Raven High Frequency (HF) and Ultra High Frequency/Very High Frequency (UHF/VHF) radios for Army, Air Force and Navy units. Phase 2A is also providing equipment for mounted (vehicle) installation and base station (RAAF) however the integration of mounted equipment into vehicles is outside the scope of JP 2072.
- To achieve this objective, Phase 2A maximises commonality and minimises ongoing support costs through delivery of 'more of the same' of the Phase 1 capability including: radios, ancillaries, cryptographic management equipment, load carriage equipment, training and interim support services.

In-Service Support Contract

- Under Phase 1, a three year interim support contract for the support of acquired materiel was executed early 2011. The interim support contract contained provisions for maintenance, training and capability introduction services from both Harris Corporation and Raytheon Australia as the Original Equipment Manufacturers. The mechanism for interim support consisted of Field Service Representatives, plus support staff and three facilities in Southern Queensland at Newstead, Pinkenba (Harris) and Amberley (Raytheon). The mature support acquisition strategy aligns with this interim support model due to United States (US) International Trade in Arms Regulations (ITAR) constraints.
- Phase 2A enhanced the contract with Harris Corporation to include management and storage of the increased equipment order. Phase 2A has established mature support contracts for the ongoing sustainment of the Phases 1 and 2A equipment with Harris Communications (Australia) and Raytheon Australia. Phase 2A will also transition management of the mature support contracts to sustainment by Battlespace Communications Operations Group.

Uniqueness

The radios delivered in Phase 2A are subject to US ITAR restrictions and other handling and management requirements. This has limited the options for sourcing of equipment suppliers; required change to the methodologies for supporting and maintaining equipment; affected the transfer of equipment into country and introduced different end user skills, training and working requirements.

Phase 2A procured 'more of the same' radios as originally delivered in Phase 1 and originally defined for interoperability with the BMS. However, the configurations of Phase 2A 'Nodes' or how the equipment is employed needed to be defined prior to achievement of IOC for the BMS, therefore changes to the configurations or operation of BMS and communications equipment may have follow on effects to the systems being rolled out under JP 2072. The establishment of mature support therefore incorporates provision for mass upgrades of equipment in minimal timeframes.

Unlike Phase 1, the equipment delivered under Phase 2A is mainly for use in a standalone voice communications role, which requires different ancillaries such as load carriage pouches, headsets and battery chargers. Many of these items required amendment/inclusion into existing design acceptance without affecting fundamental design or introducing new risks.

Major Risks and Issues

While the equipment components are already introduced into service, the specific configurations or 'Nodes' for dismounted voice communications roles are subject to user requirements validation with Army and RAAF. This user validation of the baselined Nodes has resulted in the need for some reconfiguration (limited within approved scope) to address fitness for purpose and weight considerations.

The project has very high exposure to risk of key personnel loss and with limited resources is increasingly reliant on contractor support to achieve approved scope.

Other Current Sub-Projects

JP 2072 Phase 1, BCS(L): The initial phase of the JP 2072 program, this project **has delivered** communications bearers to the BMS, and enhancing communications for Australian Defence Force Land elements through the development of an holistic battlespace communications architecture for the Land environment.

LAND 2072 Phase 2B, BCS(L): Phase 2B will provide the BCS(L) deployed, wide-band backbone by replacing and enhancing the existing Battlefield Telecommunications Network (BTN) capability within Army and Air Force. The end-state is a BTN which provides greater capacity, effective switching, wireless and wired network infrastructure supporting secure voice, data and video services. Phase 2B will also integrate the Second Generation Deployable Local Area Networks, including servers and user terminals, as well as deliver a Terrestrial Range Extension System to extend the range of Phase 1 networks.

LAND 2072 Phase 3, BCS(L): This project will introduce into service a digital communication backbone for land based elements of the Australian Defence Force (ADF) and their enabling elements. The capability is aligned with LAND 75 Phase 4 as part of a second tranche of LAND 200 with the capability being a vital function of the BMS. This phase will enhance the digital communications backbone delivered under previous phases, expand the provisioning to additional land forces and ADF elements, and provide a new capability to support the distribution and data management of the land Battlespace.

Note

Major risks and issues are excluded from the scope of the review.

Section 2 – Financial Performance

2.1 Project Budget (out-turned) and Expenditure History

Date	Description	$m		Notes
	Project Budget			
Nov 11	Original Approved (Second Pass Approval)		436.4	
Oct 17	Real Variation – Real Cost Decrease		(25.6)	1
Jun 18	Exchange Variation		27.2	
Jun 18	Total Budget		438.0	
	Project Expenditure			
Prior to Jul 17	Contract Expenditure – Harris Corp – Acquisition	(240.1)		
	Contract Expenditure – Harris Corp – Support	(23.7)		
	Contract Expenditure – Harris Corp – Follow on	(19.2)		
	Contract Expenditure – Harris Corp – Mature Support	(7.0)		
	Other Contract Payments / Internal Expenses	(76.5)		2
			(366.5)	
FY to Jun 18				
	Other Contract Payments / Internal Expenses	(6.2)		3
			(6.2)	
Jun 18	**Total Expenditure**		(372.7)	
Jun 18	**Remaining Budget**		65.3	

Notes	
1	Funds transferred to LAND 200 Tranche 2 to offset in-year shortfalls against the project's capital provision.
2	Other expenditure included: Attrition Spares, travel, introduction into service training expenses, contractor support and JP 2072 Prime Systems Integrator capability studies. Within the engineering scope of Phase 2A, the Risk Reduction Activity took place to better inform JP2072 Phase 3 and LAND 200 activities (24.9), Enhanced Position Location Reporting System (EPLRS) radio spares (9.9), ancillaries & minor equipment purchase (8.4), Key Loader Cryptographic devices (5.1), test sets (4.2), training racks (2.7), contractor support (2.2), engineering studies (1.7), freight and minor procurements and travel (0.2), Harris Corp standing offer (0.1).
3	Other expenditure comprises: Minor material acquisitions (5.3), contractor support (1.7), material support activities (0.1), travel and freight (0.1).

2.2A In-year Budget Estimate Variance

Estimate PBS $m	Estimate PAES $m	Estimate Final Plan $m	Explanation of Material Movements
5.2	12.5	9.0	PBS – PAES: Variation relates to additional equipment required to complete communication nodes, additional contractor support to conduct studies and provide engineering support for the development of the Battlespace Communications System (Land) architecture and test and integration facility.

			PAES – Final Plan: Variation relates to finalisation of communication nodes and delays to contractor support to conduct studies and provide engineering support for the development of the Battlespace Communications System (Land) architecture and test and integration facility.
Variance $m	7.3	(3.5)	Total Variance ($m): 3.8
Variance %	140.4	(28.0)	Total Variance (%): 73.1

2.2 B In-year Budget/Expenditure Variance

Estimate Final Plan $m	Actual $m	Variance $m	Variance Factor	Explanation
			Australian Industry	Underspend due to reduction in requirements for Mission System Equipment for Communications Nodes and delays in developing architecture for the Battlefield Communications System (Land)
			Foreign Industry	
			Early Processes	
		(2.8)	Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
9.0	6.2	(2.8)	**Total Variance**	
		(31.1)	**% Variance**	

2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature $m	30 Jun 18 $m			
Harris Corporation (Acquisition)	Jan 12	226.3	240.1	Firm	ASDEFCON	1, 2
Harris Corporation (Support)	Mar 12	14.6	23.7	Firm	ASDEFCON	1, 2
Harris Corporation (Follow on)	Oct 12	12.2	19.3	Firm	ASDEFCON	1, 2
Harris Corporation (Mature Support)	May 15	6.6	7.0	Firm	ASDEFCON	1, 2, 3

Notes	
1	The contract with Harris Corporation already established under Phase 1 was utilised to order the Phase 2A supplies. Two key orders were placed under the standing offer provisions of this contract to acquire the Phase 2A equipment and extend the Phase 1 interim support to Phase 2A equipment, including: 1. Order for acquisition of Phase 2A equipment; 2. Order for extension of interim support to cover Phase 2A equipment. Harris Corporation utilise US expatriate personnel and an Australian Subsidiary combined to meet requirements; and 3. Follow-on orders placed against the same contract with Harris, including Waveform upgrade and ancillaries including radio pouches/backpacks and waterproof variants.
2	Contract value as at 30 June 2018 is based on actual expenditure as the contract is complete.
3	The total value of this mature support contract is $69.8m, with $7.0m initial costs funded by the project and the remaining expenditure to be funded out of the ongoing sustainment budget.

Contractor	Quantities as at		Scope	Notes
	Signature	30 Jun 18		
Harris Corporation	11,638	11,638	Combat Net Radios, ancillaries and interim support.	1

Major equipment received and quantities to 30 Jun 18
11,638 radios (100 per cent of total Phase 2A radios) comprising: - 9,157 AN/PRC 152 VHF/UHF radios; and - 2,481 AN/PRC 150 HF radios.

Notes	
1	Figures include number of radios and exclude number of ancillary items (e.g. antennas, headsets, batteries etc).

Section 3 – Schedule Performance

3.1 Design Review Progress

Review	Major System /Platform Variant	Original Planned	Current Planned	Achieved /Forecast	Variance (Months)	Notes
System Requirements	N/A	N/A	N/A	N/A	N/A	1
Preliminary Design	N/A	N/A	N/A	N/A	N/A	1
Critical Design	N/A	N/A	N/A	N/A	N/A	1
Support System Detailed Design	N/A	N/A	N/A	N/A	N/A	1

Notes	
1	As Phase 2A is procuring 'more of the same' radios as originally delivered in Phase 1 there is no manufacturing design review.

3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System / Platform Variant	Original Planned	Current Planned	Achieved /Forecast	Variance (Months)	Notes
System Integration	N/A	N/A	N/A	N/A	N/A	1
Acceptance	N/A	N/A	N/A	N/A	N/A	1

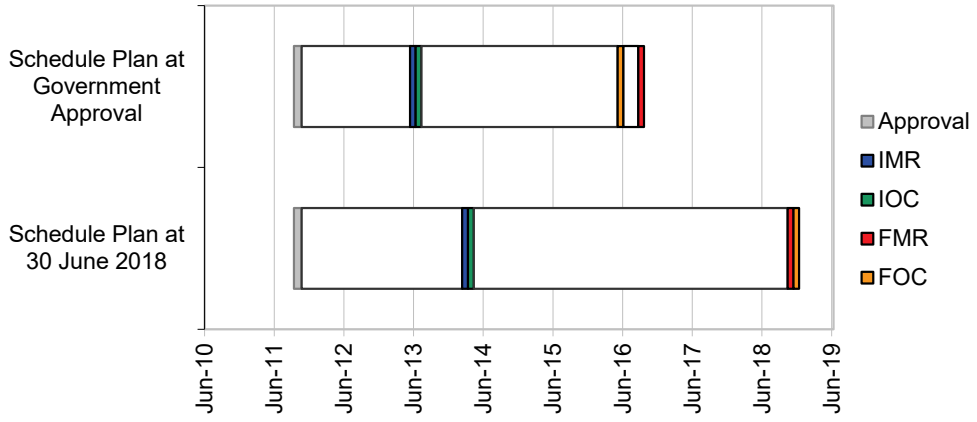
Notes	
1	As Phase 2A is procuring 'more of the same' radios as originally delivered in Phase 1. Both Harris and Raytheon equipment come complete with full test and evaluation data based upon extensive testing within the Department of Defense (US) and has been given Technical Certification via Capability, Acquisition and Sustainment Group Engineers. Hence there is no contractor test and evaluation. Phase 2A will complete Design Acceptance where several combinations of equipment and components already given Technical Certification are approved as fit for purpose.

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved /Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Jul – Sep 13	Apr 14	7	1
Initial Operational Capability (IOC)	Jul – Sep 13	Apr 14	7	1
Final Materiel Release (FMR)	Jul – Sep 16	**Nov 18**	**26**	2
Final Operational Capability (FOC)	Apr – Jun 16	**Dec18**	**30**	2

Notes	
1	Equipment was delivered on schedule to IMR units in March 2013, however Capability Manager declaration of IMR and IOC was delayed by extended user acceptance of supporting documentation.
2	The forecast dates **have been** reviewed following consultation with the Capability Manager. The delay is attributed to rescheduling the Project Management Stakeholder Group meeting to **January 2018, achievement of Technical Certification in April 2018 and availability of key personnel**. **This is an administrative process and does not adversely affect capability.**

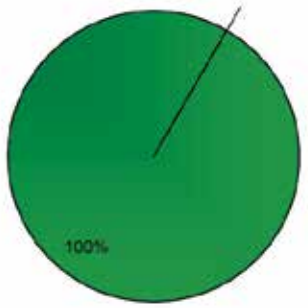
Schedule Status at 30 June 2018



Note
Forecast dates in Section 3 are excluded from the scope of the review.

Section 4 – Materiel Capability Delivery Performance

4.1 Measures of Materiel Capability Delivery Performance

Pie Chart: Percentage Breakdown of Materiel Capability Delivery Performance	
	**Green:** The project is currently meeting capability requirements as expressed in the Materiel Acquisition Agreement (MAA) and supporting suite of Capability Definition Documentation and in accordance with the requirements of the relevant Technical Regulatory Authorities. **Amber:** N/A **Red:** N/A
Note	
This Pie Chart represents Defence's expected capability delivery. Capability assessments and forecast dates are excluded from the scope of the review.	

4.2 Constitution of Initial Materiel Release and Final Materiel Release

Item	Explanation	Achievement
Initial Materiel Release (IMR)	IMR comprises the delivery of 1,332 radios and ancillaries to 7 Brigade and selected Training Establishments in accordance with Basis of Provisioning (BoP) to support Capability Manager IOC activities.	Achieved
Final Materiel Release (FMR)	Final delivery of 11,638 radios and ancillaries, development and provision of initial training in accordance with full JP 2072 Phase 2A BoP to support Capability Manager FOC activities. Further, the transition of the mature support contract to the support agencies. FMR is forecast to be achieved in **November 2018.**	Not yet achieved

Section 5 – Major Risks and Issues

5.1 Major Project Risks

Identified Risks (risk identified by standard project risk management processes)	
Description	Remedial Action
There is a chance that loss/exit of key personnel within JP 2072 program will impact on Phase 2A core responsibilities due to limited project staffing.	Introduction Into Service was delayed as far as allowable within defined IMR and FMR timeframes to alleviate pressure on staff. Contractor personnel were engaged and liaising with other projects for potential access to Integrated Support Contracts. **Management of the Support Contracts and Specialist Military Equipment has transitioned to sustainment.** Responsibilities **are** shared **within Battlespace Communication Systems Program Office** to promote cross skilling and reduce reliance on key persons.
Emergent Risks (risk not previously identified but has emerged during 2017-18)	
Description	Remedial Action
N/A	N/A

5.2 Major Project Issues

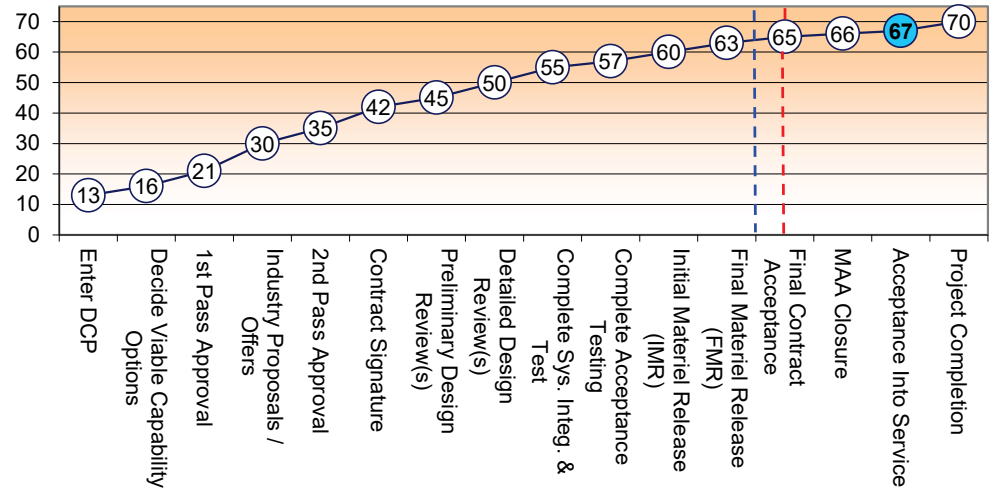
Description	Remedial Action
Some nodes need reconfiguration to address fitness for purpose and safety considerations as part of validation and verification processes.	The project **has** consult**ed** with the Capability Manager to consider the necessary node reconfigurations concerned with weight and manpower distributions resulting from the system integration assessment report by Diggerworks **and the dismounted RTX amplifier**. **The project has raised an Application for Deviation as part of the Technical Certification process.** Any necessary changes will be endorsed by the Capability Manager.

Note
Major risks and issues in Section 5 are excluded from the scope of the review.

Section 6 – Project Maturity

6.1 Project Maturity Score and Benchmark

Maturity Score		Attributes							Total
		Schedule	Cost	Requirement	Technical Understanding	Technical Difficulty	Commercial	Operations and Support	
Project Stage	Benchmark	10	9	10	10	10	9	9	67
Acceptance Into Service	Project Status	8	9	10	10	**10**	9	9	**65**
	Explanation	Schedule: FMR and FOC dates have **been reviewed. The maturity score will be adjusted on achievement of FMR, and declaration of FOC**.							



2016-17 MPR Status - - - - 2017-18 MPR Status - - - -

Section 7 – Lessons Learned

7.1 Key Lessons Learned

Project Lesson	Categories of Systemic Lessons
JP 2072 is required to provide extensive support and advice to other projects procuring or integrating communications equipment via JP 2072 contracts. New project approvals need to include adequate resources for integration and support of communications systems within their own platforms. The sustainment organisation will need to be prepared to provide program, engineering and logistics support beyond the completion of JP 2072 phases.	Resourcing
Phase 2A delivery of More of the Same equipment required Design Acceptance under Phase 1, which was not achieved. Provisional Design Acceptance was put in place however some minor ancillary equipment defined in the capability baseline was withheld due to fitness for purpose issues. New project approvals should consider the necessary design inputs to ensure they are in place before projects proceed and engineering scope then resourced appropriately.	Requirements Management
There was very limited detail on the levels of support agreed or articulated in the Capability Definition Documentation. Adequate support system was therefore not established in time for delivery of materiel. Future phases require the support system better defined prior to approval, and implemented earlier in the project lifecycle.	Requirements Management

The contracted Field Service Representative (FSR) teams have provided high quality service that has been well received by users and the Capability Manager. For example, in most cases it is more cost effective to locate/move FSR around to units than to send high volumes of equipment back to the Original Equipment Manufacturer facilities (domestic and international) for repairs or bulk upgrades. FSR have developed from an Introduction Into Service function into an increasing, ongoing support requirement for the foreseeable future.	Off-The-Shelf Equipment
An observation from the Independent Assurance Review was the clarity of the Primary Systems Integrator role within Phase 2A and that it was a program level responsibility. Note that after earlier gaining Capability Manager and CIOG approval, ongoing development of the BCS(L) architecture continues via a standard systems engineering process with stakeholder representative input sought for major reviews; the Prime Systems Integration team is involved in other JP2072 phase reviews to ensure overarching alignment with the BCS(L).	Governance

Section 8 – Project Line Management

8.1 Project Line Management in 2017-18

Position	Name
Division Head	RADM Anthony Dalton (**to Aug 17**) **Mr Ivan Zlabur (Sep 17 - current)**
Branch Head	Ms Myra Sefton
Program Director	**Mr Darren Lysenko (Acting Jul 17 current)**
Project Manager	Mr Jason Cooke **(to Feb 18)** **Mr Greg Reardon (Acting Feb 18 – current)**