

## Project Data Summary Sheet<sup>138</sup>

Project Number	JP 9000 Phase 7 <sup>139</sup>
Project Name	Helicopter Aircrew Training System
First Year Reported in the MPR	2015-16
Capability Type	Replacement
Acquisition Type	Australianised COTS
Capability Manager	Chief of Navy
Government 1st Pass Approval	February 2007
Government 2nd Pass Approval	August 2014
Budget at 2 <sup>nd</sup> Pass Approval	\$483.8m
Total Approved Budget (Current)	\$481.5m
2017-18 Budget	\$93.4m
Project Stage	Initial Materiel Release
Complexity	ACAT II



### Section 1 – Project Summary

#### 1.1 Project Description

JP (AIR<sup>2</sup>) 9000 Phase 7 will provide a new Helicopter Aircrew Training System (HATS) to prepare Navy and Army aircrew for conversion to operational aircraft. JP 9000 Phase 7 will replace the current systems based on Squirrel and Kiowa helicopters.

The project will deliver a total aircrew training solution based around 15 Airbus EC135T2+ helicopters, three Thales Flight Simulators and numerous other synthetic training devices, together with system support and joint delivery for an initial award term of approximately eight years, with further optional award terms of three years recurring.

#### 1.2 Current Status

##### Cost Performance

###### In-year

As at 30 June 2018 the Project had an underspend of \$0.4m mainly driven by lower than forecast price variation and exchange rate fluctuation, reduced requirements for Contractor Support and Legal Expenditure.

###### Project Financial Assurance Statement

As at 30 June 2018, JP 9000 Phase 7 has reviewed the project's approved scope and budget for those elements required to be delivered by Defence. Having reviewed the current financial and contractual obligations for this 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 during the financial year.

##### Schedule Performance

The revised schedule, delivered in April 2016 to address program delays, has continued to challenge all parties throughout the year. Notwithstanding these challenges, the Pilot and Aircrewman Trial Courses commenced on schedule in January 2018, and the Aviation Warfare Officer Trial Course commenced on schedule in February 2018.

Two of the three Flight Simulators were accepted, and the third has completed testing and is due to be accepted in July 2018.

All other 17 synthetic training devices were accepted during the period.

Initial Materiel Release was achieved in May 2018.

##### Materiel Capability Delivery Performance

During the reporting period delivery and acceptance of all training mission systems, with the exception of Flight Simulator 3, was completed. Training courseware development and Contractor testing was also completed and the Pilot, Aircrewman and Air Warfare Officer Trial Courses, facilitating Commonwealth testing, commenced. The Sensor Operator Trial Course cannot commence until completion of the Aircrewman course.

###### Note

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

#### 138 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.

<sup>139</sup> HATS was originally approved as an AIR project but since second pass it has been managed and reported as a Joint project. For finance reporting purposes the title 'AIR' must be retained. The remainder of this report will refer to JP 9000 Phase 7.

### 1.3 Project Context

<p><b>Background</b></p> <p>JP 9000 Phase 7 is intended to provide a rotary wing training capability for Navy and Army, to meet the future rotary training needs of the Australian Defence Force (ADF). The Project will deliver a system that encompasses live, synthetic and classroom aviation instruction to overcome the broadening gap between current rotary training systems and the advanced operational helicopters in the current and planned future ADF inventories.</p> <p>The Project achieved Government First Pass approval in February 2007 and Second Pass approval in August 2014. Both Acquisition and Support Contracts were signed on 14 November 2014.</p> <p>The Acquisition contract will deliver a total aircrew training solution based around 15 Airbus EC135T2+ helicopters, three Thales Flight Simulators and numerous other synthetic training devices. BDA is responsible for the development and set to work of a training delivery and management system which includes Training Management Plans based on Defence identified competencies and competency levels. Training development is being conducted in accordance with the Defence Training Model.</p> <p>The Support Contract provides for system support and joint delivery for an initial award term of approximately eight years, with further optional award terms of three years recurring. The Support Contract is performance based with Key Performance Indicators relating to aircraft, simulator and instructor availability and includes a Continuous Improvement and Efficiency Program.</p>
<p><b>Uniqueness</b></p> <p>As a direct capital acquisition utilising ASDFCON developed performance based contracts there are no truly unique aspects to the project.</p>
<p><b>Major Risks and Issues</b></p> <p>During pre-contract testing Flight Simulator auto-rotational performance modelling was identified as a risk, as rectification may <b>have required</b> unplanned modification of Simulator software resulting in schedule delay. <b>The first two Flight Simulators received Level B qualification for initial rotary wing training and Installation Operating Permits were issued in October 2017. The third Flight Simulator received Level B qualification in May 2018. Qualification of the Simulators for initial rotary wing training retired the risk identified in pre-contract testing.</b></p> <p>The project <b>continued to manage, and subsequently closed the</b> one significant issue, schedule compression, <b>achieving</b> commencement of the trial course (Pilot) in January 2018, through collegially and pragmatically working with BDA to identify and leverage efficiencies in program delivery.</p>
<p><b>Other Current Sub-Projects</b></p> <p>The HATS project influences the following aircraft platforms by providing aircrew training to feed into their operational flying conversions:</p> <p>AIR 9000 Phase 8 Future Naval Aviation Combat System Helicopter (<b>Seahawk Romeo</b>).</p> <p>AIR 9000 Phase 2/4/6 Multi-Role Helicopter (<b>MRH90</b>).</p> <p>Additional Medium Lift Helicopters (<b>Chinook</b>).</p> <p>Armed Reconnaissance Helicopter (<b>ARH Tiger</b>).</p> <p>The following projects directly influence HATS:</p> <p>AIR 5428 Pilot Training System which provides students to HATS for rotary wing conversion.</p> <p>Multi role Aviation Training Vessel (MATV), MV SYCAMORE. <b>MV SYCAMORE was delivered to Navy in 2017 and EC135 day and night operations were approved in Jun 2018.</b></p> <p>J 0028 HATS Facilities Project providing training, accommodation and maintenance facilities. <b>Handover of all J0028 facilities was achieved by April 2017.</b></p>
<p><b>Note</b></p> <p>Major risks and issues are excluded from the scope of the review.</p>

## Section 2 – Financial Performance

### 2.1 Project Budget (out-turned) and Expenditure History

Date	Description	\$m	Notes
	<b>Project Budget</b>		
Feb 07	Original Approval	13.6	1
Nov 13	Real Variation – Transfer	(3.2)	2
Jun 14	Real Variation – Transfer	(1.6)	2
Sep 14	Government Second Pass Approval	475.0	
	<b>Total at Second Pass Approval</b>	<b>483.8</b>	
Jul 10	Price Indexation	2.4	3
Jun 18	Exchange Variation	(4.7)	
Jun 18	<b>Total Budget</b>	<b>481.5</b>	
	<b>Project Expenditure</b>		
Prior to Jul 17	Contract Expenditure – Boeing Defence Australia (BDA) – Acquisition Contract	(170.2)	
	Contract Expenditure – BDA – Support Contract Phase In	(12.6)	
	Contract Expenditure – Jacobs Australia	(5.1)	
	Other Contract Payments/Internal Expenses	(12.4)	4
		<b>(200.3)</b>	
FY to Jun 18	Contract Expenditure – BDA – Acquisition Contract	(64.2)	
	Contract Expenditure – BDA – Support Contract Phase In	(25.4)	
	Contract Expenditure – Jacobs Australia	(2.0)	
	Other Contract Payments/Internal Expenses	(1.4)	5
		<b>(93.0)</b>	

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Jun 18	<b>Total Expenditure</b>	(293.3)
Jun 18	<b>Remaining Budget</b>	188.2
<b>Notes</b>		
1	The project's original budget amount prior to achieving Second Pass Government approval.	
2	Transfer of budget to Estate and Infrastructure Group for Facilities Activities.	
3	Up until July 2010, indexation was applied to project budgets on a periodic basis. The cumulative impact of this approach was \$2.4m, applied only to the portion of the budget approved at First Pass. From July 2010 all project budgets were approved by Government in out-turned dollars.	
4	Other Expenses mainly comprised of: Contractor Support (\$6.4m), Salaries (\$2.9m), Legal (\$1.5m), Travel and Training (\$1.4m).	
5	Other expenditure comprises: Contractor Support (\$1.3m), Travel and Training (\$0.1m).	

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Defence's Explanation of Material Movements
89.8	93.2	93.4	PBS – PAES: Variation is due to reprogramming of Boeing Milestone and Price Adjustment payments offset by reduced requirement for Contractors. PAES – Final Plan: Variation is due to Global Foreign Exchange Update.
Variance \$m	3.4	0.2	Total Variance (\$m): 3.6
Variance %	3.8	0.2	Total Variance (%): 4.0

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
			Australian Industry	As at 30 June 2018 the Project had an underspend of \$0.5m mainly driven by lower than forecast price variation and exchange rate fluctuation, reduced requirements for Contractor Support and Legal Expenditure.
			Foreign Industry	
			Early Processes	
		(0.5)	Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
93.4	93.0	(0.5)	Total Variance	
		(0.5)	% 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			
BDA – Acquisition	Nov 14	311.6	272.2	Firm	ASDEFCON	1
BDA – Support Phase In	Nov 14	68.6	61.3	Firm	ASDEFCON	1
Jacobs Australia ISC	Dec 14	10.2	8.7	Firm	ASDEFCON	2
<b>Notes</b>						
1	Contract value as at 30 Jun 18 is based on actual expenditure to 30 Jun 18 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).					
2	On 01 Dec 17, exercised Contract extension options, extending the Contract until 22 Dec 19.					
Contractor	Quantities as at		Scope	Notes		
	Signature	30 Jun 18				
BDA – Acquisition	Various	Various	15 EC 135 Helicopters 3 Full Flight Simulators 17 associated synthetic training devices 4 Training Management Plans Training Management System			
BDA Support Phase In	N/A	N/A	System support and joint delivery for an initial award term of approximately 8 years.			
Jacobs Australia ISC	N/A	N/A	Provide specialist engineering support, integrated logistics and training design.			
<b>Major equipment received and quantities to 30 Jun 18</b>						
15 EC 135 Helicopters. 2 Full Flight Simulators. 17 Synthetic Training Devices, comprising: <ul style="list-style-type: none"> <li>2 Tactical Part Task Trainers.</li> <li>10 Desktop Trainers.</li> <li>2 Virtual Reality Trainers.</li> <li>1 Marshalling Virtual Reality Trainer.</li> </ul>						

<ul style="list-style-type: none"> <li>• 1 Aircraft Replica Trainer.</li> <li>• 1 EC-135 Helicopter Underwater Escape Trainer Module.</li> </ul>
Notes
N/A

### 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	System Requirements Review	Sep 15	N/A	Jan 16	4	1
	System Definition Review	Feb 16	N/A	Dec 16	10	2
Critical Design	Aircraft Replica Trainer	Jan 16	Nov 16	Feb 17	13	3
	Support System Detailed Design Review	Jun 16	N/A	Jun 17	12	4
Notes						
1	Variance due to slow ramp up of Contractor workforce and scheduling/resource issues identified through the Integrated Baseline Review and complimentary Schedule Compliance Risk Assessment Methodology (SCRAM) review.					
2	Additional delay to System Definition Review resulted from BDA remediation and re-planning efforts, including emergent issues identified through remediation activities.					
3	Hardware design activity is only applicable to the ART, as all other aspects are predominantly COTS devices/technology. Design review for ART is a combined preliminary and critical process. A Contract Change Proposal was signed in November 2015 to move the ART Design Review so that it logically occurred after the System Definition Review.					
4	Additional delay to Support System Detailed Design Review resulted from emergent issues identified during development of aspects of the support system.					

#### 3.2 Contractor Test and Evaluation Progress

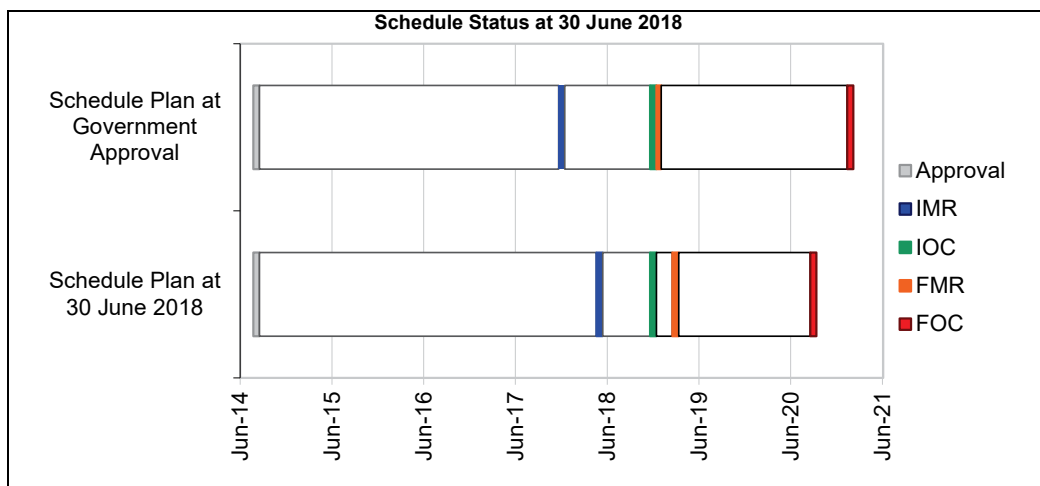
Test and Evaluation	Major System/Platform Variant	Original Planned	Current Planned	Achieved/Forecast	Variance (Months)	Notes
System Integration	Piloting Course Readiness – Pilot	Dec 17	N/A	Dec 17	0	1
Acceptance	First EC135T2+ helicopter	Mar 16	N/A	May 16	2	
	Final EC135T2+ helicopter	Feb 17	N/A	Dec 17	10	2
	Final Acceptance	Mar 19	N/A	Mar 19	0	
Notes						
1	This milestone is closely associated with the System Acceptance Audit which will constitute acceptance of the mission systems, support system and training system elements to achieve Initial Materiel Release (see section 4.2), and will be achieved at the same time.					
2	Delay was due to retention of aircraft N52-007, by Airbus Helicopters, in Germany as prototype for development of an air-conditioning retrofit Engineering Change. Remaining helicopters are being modified in Australia by BDA at no additional cost to the Commonwealth.					

#### 3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Dec 17	May 18	5	1
Initial Operational Capability (IOC)	Dec 18	Dec 18	(1)	
Final Materiel Release (FMR)	Dec 18	Mar 19	3	2
Final Operational Capability (FOC)	Dec 20	Sep 20	(3)	
Notes				
1	IMR predicated on acceptance of the Aircraft Replica Trainer, managed through the recovery schedule on a just in time for training basis. Sufficient systems were available to commence trial course in January 2018.			
2	FMR delay due to reframing milestone to accommodate Navy acceptance of the Sensor Operator Training Management Package instead of trial course completion and to align with Final Acceptance Milestone.			

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**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	
	<p><b>Green:</b> The project expects to meet capability requirements as expressed in the MAA and supporting suite of Capability Definition Documentation and in accordance with the requirements of the relevant Technical Regulatory Authorities.</p>
	<p><b>Amber:</b> N/A</p>
	<p><b>Red:</b> N/A</p>
<p><b>Note</b> This Pie Chart represents Defence’s expected capability delivery. Capability assessments and forecast dates are excluded from the scope of the review.</p>	

**4.2 Constitution of Initial Materiel Release and Final Materiel Release**

Item	Explanation	Achievement
Initial Materiel Release (IMR)	<ul style="list-style-type: none"> <li>15 helicopters, 2 Full Flight Simulators, 2 Tactical Part Task Trainers, 2 Virtual Reality Trainers (VRT), 1 Marshalling VRT, 1 Helicopter Underwater Egress Training conversion module, 1 Aircraft Replica Trainer and 10 Desktop Trainers ready to be employed for HATS Piloting courses.</li> <li>Associated Mission, Support and Training Systems.</li> <li>IMR was achieved in May 2018.</li> </ul>	Achieved

Final Materiel Release (FMR)	<ul style="list-style-type: none"> <li>IMR deliverables, plus one additional full flight simulator and transition of all HATS acquisition products (Mission and Support Systems) and materials to their in-service support agency.</li> <li>Forecast to be achieved in <b>March 2019</b>.</li> </ul>	Not yet achieved
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### Section 5 – Major Risks and Issues

#### 5.1 Major Project Risks

Identified Risks (risk identified by standard project risk management processes)	
Description	Remedial Action
Flight Simulator Auto-rotation modelling deficiency may require unplanned modification of Simulator software resulting in schedule delay.	Optimisation of modelling by the Original Equipment Manufacturer. Review and optimisation of device handling responses during post installation and qualification testing. <b>This risk has been retired with achievement of Level B qualification for ab initio training in October 2017.</b>
Emergent Risks (risk not previously identified but has emerged during 2017-18)	
Description	Remedial Action
N/A	N/A

#### 5.2 Major Project Issues

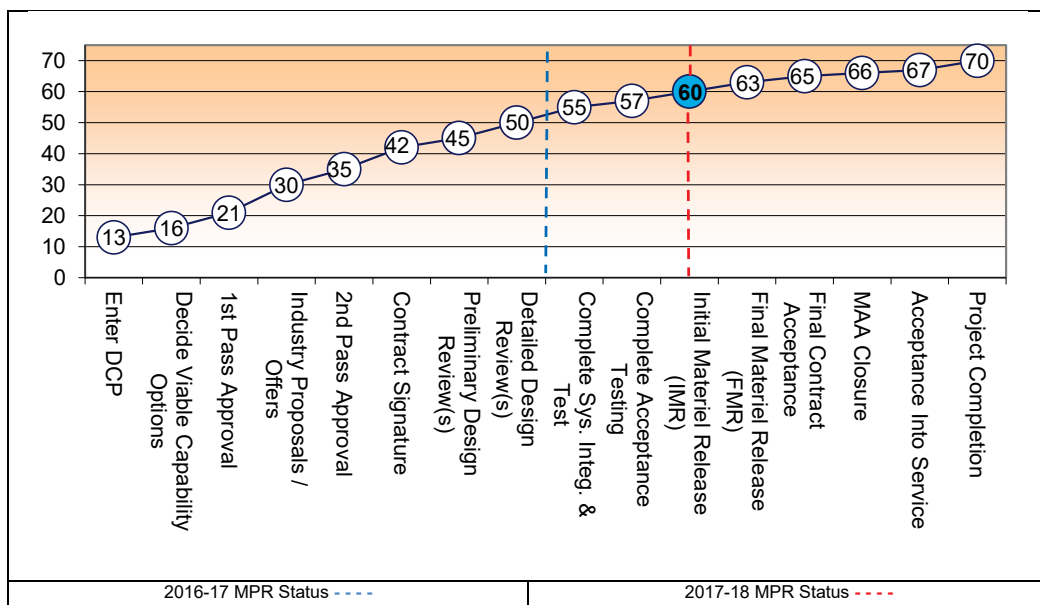
Description	Remedial Action
The body of work required prior to commencement of the Trial Course (Pilot) in January 2018 is placing significant pressure on the available Commonwealth and BDA resource base.	<b>The Pilot, Aircrewman and Aviation Warfare Officer Trial Courses commenced in January 2018 as scheduled. This issue has now been retired.</b>

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	8	8	8	9	8	9	60
<b>Initial Materiel Release</b>	Project Status	9	9	8	9	8	8	9	60
	Explanation	<ul style="list-style-type: none"> <li><b>Schedule:</b> The schedule continues to be actively managed. FMR/FA is expected to be achieved in March 2019.</li> <li><b>Cost:</b> Cost risk has been retired to a stage where unused contingency can be written back.</li> <li><b>Technical Understanding:</b> Knowledge necessary to operate and support the solution is well understood.</li> <li><b>Technical Difficulty:</b> To meet the Benchmark of 9, system integration and necessary final contract acceptance testing should be completed. Mission system testing has been completed and training delivery testing is progressing well to completion at FA (as designed).</li> </ul>							



**Section 7 – Lessons Learned**

7.1 Key Lessons Learned

Project Lesson	Categories of Systemic Lessons
Where a project has a long gestation period, for whatever reason, the Sponsor and Capability Manager must be closely engaged to ensure the requirements set maintains relevance over time.	Requirements Management
Tenderer/Contractor 'off-the-shelf' claims need to be tested as thoroughly as possible, as soon as possible in the project lifecycle. This requires the availability of, or access to, appropriate and engaged subject matter experts early.	Off-the-Shelf Equipment
Conduct of SCRAM activities during contract negotiation and again prior to IBR were first trialled in this Project, yet the schedule risks were realised very early in the Project. Early use of the SCRAM activity is valuable (risks identified early) and the process should be matured to support selection/negotiation and to baseline activities.	Schedule Management
This Project is one of the first to implement the Integrated Support Contractor (ISC) model to execute traditional Project Office roles. The ISC Contract structure was closely aligned to and reliant on the Prime Contractor's Contract Master Schedule (CMS). Initial CMS deliverables had quality issues manifesting significant second order effects on the ISC contract. Evolution of the ISC construct should recognise risks in lock-stepping the ISC delivery so closely to the Prime Contractor CMS.	Resourcing
The ASDEFCON suite of contract templates are a good initiative for capturing lessons learned from years of project delivery. In endeavouring to capture all lessons the templates have become voluminous with significant inter-relationships. This can make contract execution, and in particular contract changes, very difficult as even a small change in one area may unravel other relationships within the contract suite.	Contract Management
<b>A dedicated Chief Information Officer Group/Information Communication Technology (ICT) subject matter expert assigned to the project through all stages of the acquisition would improve ICT delivery efficiency.</b>	<b>Schedule Management Resourcing</b>

**Section 8 – Project Line Management**

8.1 Project Line Management in 2017-18

Position	Name
Division Head	MAJGEN Andrew Mathewson (to Nov 17) <b>Mr Shane Fairweather (Nov 17–current)</b>
Branch Head	CDRE Scott Lockey
Project Director	Mr Stuart Harwood
Project Manager	CMDR Darren Murphy (to Jul 17) <b>Mr Christopher Langmaid (Jul 17–current)</b>

