

Project Data Summary Sheet¹⁴¹

Project Number	AIR 8000 Phase 2
Project Name	BATTLEFIELD AIRLIFT – CARIBOU REPLACEMENT
First Year Reported in the MPR	2013-14
Capability Type	Replacement
Acquisition Type	MOTS
Capability Manager	Chief of Air Force
Government 1st Pass Approval	Apr 12
Government 2nd Pass Approval	Apr 12
Total Approved Budget (Current)	\$1,406.7m
2016-17 Budget	\$60.7m
Project Stage	Integration and Test
Complexity	ACAT II



Section 1 – Project Summary

1.1 Project Description

This project was approved to replace the retired Caribou capability and provide the Australian Defence Force (ADF) with an enhanced intra-theatre and regional airlift capability through acquisition of a fleet of ten new Light Tactical Fixed Wing aircraft. The Government approved solution is acquisition through United States Air Force (USAF) Foreign Military Sales (FMS) of the Leonardo (previously known as Alenia Aermacchi, **Finmeccanica, Leonardo-Finmeccanica**) built C-27J aircraft modified by L-3 Product Integration Division (PID) to the United States (US) Department of Defense Joint Cargo Aircraft (JCA) C-27J configuration, known as Spartan. The JCA C-27J is a Military Off The Shelf (MOTS) acquisition offering enhanced self protection and interoperability that meets Australian requirements. The aircraft will be operated by 35 Squadron with its Interim Main Operating Base (MOB) at Royal Australian Air Force (RAAF) Base Richmond. Government agreed in May 2016 to both delay FOC and the relocation of the C-27J to RAAF Amberley until December 2019. Project acquisition includes the ten aircraft, training system, support system materiel elements and three years of initial FMS training and support services from aircraft In-Service Date (ISD), through Initial Operational Capability (IOC) to Final Operational Capability (FOC).

1.2 Current Status

Cost Performance

In-year

The year-end variance of (\$12.1m) reflects an underspend in contracting effort associated with the procurement of Commercial Spares, support equipment and Aircraft baseline modification contract activity including delays in deliveries against support contracts for the Project.

Project Financial Assurance Statement

As at 30 June 2017, project AIR 8000 Phase 2 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, whilst there is sufficient budget remaining for the project to complete against the agreed scope, yet to execute contracts carry cost risk.

Contingency Statement

The project has not applied contingency in the financial year.

Schedule Performance

The original schedule of **IMR and IOC were declared with caveats** in December 2016. **The IOC declaration encompassed the materiel caveats described by the project at IMR.** FOC at end of 2017, as originally planned, **was unachievable** as a result of: Leonardo aircraft production delays **associated to the transfer of the fuselage assembly line**; reduced training throughput due to aircraft availability; the delayed start to US based training in 2014; and delays associated with establishing facilities at the Main Operating Base at RAAF Base Amberley. The revised schedule **agreed by Government moved** FOC out **to be achieved** by Dec

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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.

2019 (24 months behind original schedule); noting, the capability will continue to mature beyond FOC. The most significant milestones achieved in financial year 2016-17 include achievement of IOC (with caveats) , delivery of Aircraft A34-005, A34-006 and A34-007 and transition from US based contractor provided training to Air Force delivered training in Australia.
Material Capability Delivery Performance
The C-27J aircraft is a relatively mature and well tested MOTS product. Notwithstanding, the project office is working through a number of capability baseline considerations identified post-establishment of the FMS Case. These baseline issues are associated with the configuration and certification status of the USAF JCA C-27J program, which were not finalised by the USAF at the time of divestiture. Seven aircraft have been accepted to date and a total of nine are expected to be delivered by December 2017 with the tenth and final aircraft delivered on schedule in January 2018.
Note
The capability assessments and forecasts by the Project are not subject to the ANAO's assurance review.

1.3 Project Context

Background
A requirement to replace Defence's battlefield airlift capability was first identified in the 1980s. Defence ensured the battlefield airlift capability was maintained via a sustainment commitment to the Caribou until their retirement in 2009 and lease of additional B300 King Air aircraft until suitable replacement platforms and appropriate Defence Capability Plan funding could be allocated.
Government authorised Defence to issue a Letter of Request seeking price and availability information from the USAF for the C-27J on 30 September 2011. Defence approached Airbus Military for price and availability data for the Airbus Military C295 aircraft. Raytheon data for C-27J was solicited via Direct Commercial Inquiry. On 10 May 2012 Government announced it had approved the purchase of ten C-27J battlefield airlift aircraft via FMS from the US Government to replace the Caribou aircraft, at a total program cost of up to A\$1.4 billion.
Leonardo manufactures the C-27J Military Industrial Baseline Aircraft configuration which is then flown to the US for modification. L-3 PID, acting as the prime contractor to the US Government, is responsible for post-production integration of US improved mission systems. The design and integration work by L-3 PID enhances the effectiveness of the baseline aircraft, ensuring that the US JCA variant, as offered through the FMS agreement, meets the battlefield airlift capability needed by Defence.
The USAF's potential to divest the C-27J was a known consideration that was factored into the business case presented to and approved by government at project combined First and Second Pass in April 2012. In early 2013 the USAF confirmed its intention to divest their C-27J fleet and accelerated its schedule for withdrawal. Subsequently, in mid 2013 USAF advised that it would not complete Military Type Certification (MTC) and that L-3 PID was, contrary to earlier advice, required by the Air National Guard to vacate the facilities occupied by the C-27J training school located at Robins Air Force Base, Georgia USA. This resulted in a late notice requirement for relocation of the L-3 training school to L-3 facilities in Arlington and Waco Texas, which resulted in a three month delay to ISD (achieved June 2015).
Military Type Certification (MTC) will leverage heavily on the Federal Aviation Authority civilian certification and USAF work completed at the time of its decision to cease its MTC. The USAF decision not to complete MTC has materially increased the effort and schedule risk associated with achieving MTC which will have a cost impact. The Commonwealth has secured significant Intellectual Property licensing rights to technical data from Leonardo and L-3 PID to aid in MTC and through-life support of the C-27J.
Uniqueness
The C-27J is a MOTS aircraft acquisition with a limited number of changes to meet Australian requirements, such as ; paint scheme; upgraded Radar Warning Receiver; updates to address obsolescence; and upgrade to the Mode 5 Identify Friend or Foe system.
The uniqueness of the project lies in the degree of Australian specific contracting effort that was conducted by the USAF C-27J FMS Program Office to establish initial FMS training and support services as a result of USAF C-27J divestiture (generally, FMS leverages off a contemporary US military procurement). USAF contracting of US based initial training from L-3 PID utilising the ADF Airworthiness Management System is also atypical. Historically, the USAF airworthiness management system has been utilised for such training arrangements; however, due to USAF C-27J divestiture, this option was no longer possible. Both the USAF and L-3 were unfamiliar with Australian airworthiness management system requirements.
Major Risks and Issues
The Government endorsed acquisition strategy accepted a number of risks stemming from, or exacerbated by, the likelihood of USAF C-27J divestiture. Notwithstanding these risks, the benefits of acquiring the USAF JCA configured C-27J via FMS were assessed to outweigh these risks, and their likelihood of occurring was taken into account when developing initial project strategies and plans. However, the accelerated pace of USAF C-27J divestiture resulted in greater impact to the program than originally anticipated.
Current major project residual risks and issues are as follows:
C27-J Capability Baseline. The project has reviewed the C-27J capability baseline and identified a number of known incomplete capability requirements, some of which will be matured beyond FOC. Following confirmation of divestment, USAF ceased MTC activity and rectification of those incomplete capability requirements. The project has undertaken a detailed analysis to quantify and characterise the structural life-of-type of the airframe and the proposed capability upgrades. These include Electronic Warfare Self Protection systems which impact project budget and schedule. They are not anticipated to be an impediment to achieving the overall capability defined in approved scope, but the capability is expected to mature beyond FOC.
Training. Delays in establishment of contracts between the US Government and L-3 impacted training schedule and student throughput. The courseware standard delivered required active involvement by the project office and Air Mobility Group to implement ongoing improvements and meet perceived gaps in US based training. The project has undertaken detailed planning to ensure the continuity of training is maintained when training activities transition from the US to Australia in mid 2017. The risk will reduce as the first maintainer training course successfully completes in Australia and the first aircrew course is scheduled

to commence in July 2017.

Sustainment. The availability of spares, and Support and Test Equipment under the FMS case has not met the requirements of the Commonwealth. The US Government and L-3 are working to deliver all spares on order under the FMS Case expeditiously. The project has reviewed the Logistics Support System including a detailed analysis of the future requirements for spare parts and Support and Test Equipment, the supply pipeline, delivery timeframes and stock levels to improve the operational availability. As a result, the project redirected a range of acquisitions away from the FMS case to the aircraft Original Equipment Manufacturer and other suppliers through direct commercial sales. In parallel, a Through Life Support (TLS) contract is in negotiation with the preferred tenderer, Northrop Grumman. The contract is expected to be in place in the second half of 2017, with a phase in period to support hand off to the enduring sustainment system managed by in-service organisations in 2018.

Facilities. Delays in approval for construction of the new 35 Squadron facilities at RAAF Amberley currently represent a low risk to FOC. 35 Squadron is currently planning to relocate to RAAF Amberley into the new facilities in 2019.

USAF Divestiture of C-27J. The C-27J capability delivery has been affected by US Government divestiture of their C-27J program leading to an impact on project schedule and cost. The USAF decision to divest of C-27J effectively decreases the global fleet by approximately 150 aircraft to an estimated 80 aircraft, reducing opportunities for sustainment and training cost sharing. The requirement to move the training facility from Robins AFB to L-3 facilities at Waco and Arlington has had an impact on acquisition cost and schedule. The impact to cost will be understood once contracts are finalised between the US Government and L-3, until final cost impact is known there remains additional risk to the overall project budget.

Contracting. The contracting processes to establish initial training and support arrangements took longer than planned, which has had an impact on project schedule and affordability.

Aircraft Production Delays. The risk of aircraft production delays was not anticipated to represent a significant risk to project IOC or FOC given the significant schedule contingency contained in the original production schedule. However, Leonardo's decision in May 2015, based on commercial considerations, to close its Naples C-27J fuselage production facility and consolidate all C-27J production at its Turin facility will delay delivery of Aircraft 5 through 10 by up to 20 months. The magnitude of production restructure made the December 2017 FOC date unachievable. Leonardo have applied additional resources in an effort to recover the schedule where possible and are now executing aircraft production to a revised approved schedule and exceeding performance targets.

IMR/IOC Caveats. Achievement of these milestones were declared with caveats relating to deficiencies in supply support and training courseware. Further details are provided in Section 5.2.

Other Current Sub-Projects

N/A.

Section 2 – Financial Performance

2.1 Project Budget (out-turned) and Expenditure History

Date	Description	\$m	Notes
	Project Budget		
Apr 12	Original Approved	1,156.5	
Jun 17	Exchange Variation	250.2	
Jun 17	Total Budget	1406.7	
	Project Expenditure		
Prior to Jul 16	Contract Expenditure – US Government	(633.1)	1
	Contract Expenditure – Leonardo	(34.5)	2
	Other Contract Payments/Internal Expenses	(24.0)	3
		(691.6)	
FY to Jun 17	Contract Expenditure – Leonardo-Finmeccanica	(15.6)	2
	Contract Expenditure – US Government	(15.0)	1
	Other Contract Payments/Internal Expenses	(18.1)	4
		(48.6)	
Jun 17	Total Expenditure	(740.2)	
Jun 17	Remaining Budget	666.4	
Notes			
1	The scope of this contract is explained further in Section 2.3 – Details of Project Major Contracts.		
2	Alenia Aermacchi, Finmeccanica and Leonardo-Finmeccanica are now shown as Leonardo due to a partial corporate de-merger.		
3	Other expenditure comprises: operating expenditure, minor contract expenditure and other capital expenditure not attributed to the listed contracts.		
4	Other expenditure comprises: Support and Test Equipment, spares and global freight costs (\$8.2m), operating expenditure related to initial sustainment costs (\$4.0m), contractor support costs for certification purposes (\$3.7m) and other minor project administrative costs also contribute to other expenditure (\$2.1m).		

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
147.6	72.8	60.7	PBS - PAES: The variation is primarily due to adjustments to commitment obligations held against the project's Foreign Military Sales case with the US Government. PAES - Final Plan: Variance primarily due to further reductions in Foreign Military Sales case spend driven by case ramp down and reprogramming of spend associated with Structural Substantiation Program to reflect the latest program schedule.
Variance \$m	(74.8)	(12.1)	Total Variance (\$m): (86.9)
Variance %	(50.7)	(16.6)	Total Variance (%):(58.9)

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
		(3.5)	Australian Industry	Year End Variance reflects an underspend due to delays in contracting for Commercial Spares, support equipment and associated deliveries and delays against Technical support contracts including Engine Maintenance Support, engineering support, Aircraft Certification services, Structural Substantiation Program and Aircraft baseline modification contracting activities reflecting delayed contract development and lower contract throughput.
		(8.6)	Foreign Industry	
			Early Processes	
			Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
60.7	48.6	(12.1)	Total Variance	
		(19.9)	% Variance	

2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 17 \$m			
US Government	May 12	882.4	717.8	Reimbursement	FMS	1,2,4
Leonardo	May 12	62.0	71.1	Firm Price	Modified ASDEFCON (Complex)	1,3

Notes

1	Contract value as at 30 June 2017 is based on actual expenditure to 30 June 2017 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).
2	The scope of this contract is explained further below.
3	Alenia Aermacchi is now known as Leonardo due to a partial corporate de-merger.
4	Amendment 4 to FMS case AT-D-SGU was approved in May 2017 reducing the case value to \$US655.5m. The Amendment reflects removal of training device acquisition funding and an overall release of management reserve funding no longer require under the case. The amendment also reflects the CoA's intention to close the case early.

Contractor	Quantities as at		Scope	Notes
	Signature	30 Jun 17		
US Government	10	10	10 C-27J Aircraft and associated training, training equipment, spares, ground support equipment and initial support	
Leonardo	N/A	N/A	C-27J Intellectual Property and Technical Data	
Major equipment received and quantities to 30 Jun 17				
Seven aircraft accepted plus a substantial amount of the IP rights and Technical data received.				
Notes				
1	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	Operational Flight Trainer	TBA	TBA	TBA	TBA	1,2
	Fuselage Trainer	TBA	TBA	TBA	TBA	1
Preliminary Design	Operational Flight Trainer	TBA	TBA	TBA	TBA	1,2
	Fuselage Trainer	TBA	TBA	TBA	TBA	1

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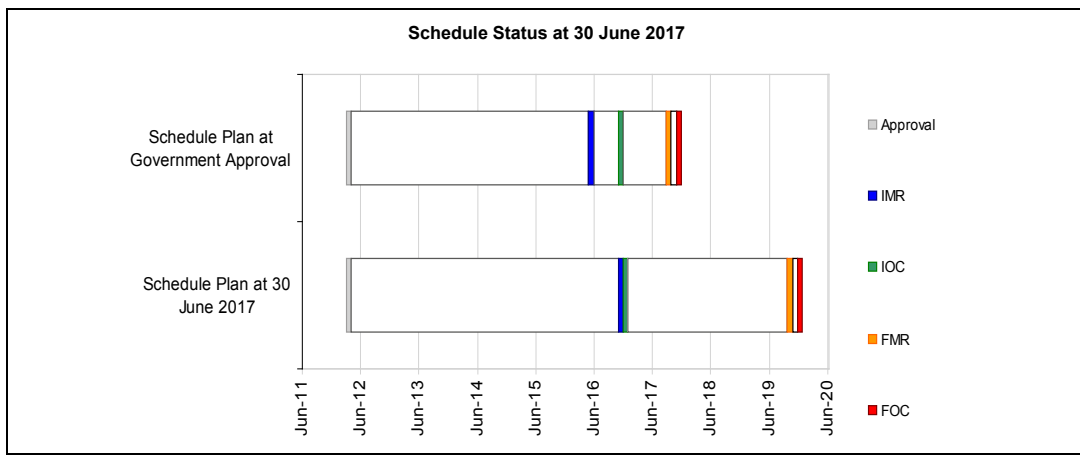
Critical Design	Operational Flight Trainer	TBA	TBA	TBA	TBA	1,2
	Fuselage Trainer	TBA	TBA	TBA	TBA	1
Notes						
1	Contracts for the acquisition of the training devices have yet to be established. Training devices are not included in the revised FOC definition approved by Government in May 2016.					
2	The Project expects to approach the market to procure a suitable flight simulator in 2018 following the completion of future aircraft baseline configuration planning .					

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	Operational Flight Trainer	TBA	TBA	TBA	TBA	1,2
	Fuselage Trainer	TBA	TBA	TBA	TBA	1
Acceptance	C-27J Aircraft 1 (A34-001)	Jul 14	N/A	Nov 14	4	3
	C-27J Aircraft 2 (A34-002)	Sep 14	N/A	Dec 14	3	3
	C-27J Aircraft 3 (A34-003)	Nov 14	N/A	Aug 15	9	3, 4
	C-27J Aircraft 4 (A34-004)	Feb 15	N/A	Mar 16	13	3, 5
	C-27J Aircraft 5 (A34-005)	Aug 15	N/A	Aug 16	12	3, 5, 6
	C-27J Aircraft 6 (A34-006)	Oct 15	N/A	Nov 16	13	3, 5, 6
	C-27J Aircraft 7 (A34-007)	Dec 15	N/A	Mar 17	15	3, 5, 6
	C-27J Aircraft 8 (A34-008)	Feb 16	N/A	Aug 17	18	5, 6
	C-27J Aircraft 9 (A34-009)	Apr 16	N/A	Nov 17	19	5, 6
	C-27J Aircraft 10 (A34-010)	May 16	N/A	Jan 18	20	5, 6
	Operational Flight Trainer	TBA	TBA	TBA	TBA	1, 2
Fuselage Trainer	TBA	TBA	TBA	TBA	1	
Notes						
1	Contracts for the acquisition of the training devices have yet to be established.					
2	The Project expects to approach the market to procure a suitable flight simulator in 2018 following the completion of future aircraft baseline configuration planning .					
3	Aircraft 1, 2, 3, 4, 5, 6 and 7 have been Accepted by the Commonwealth of Australia and have been placed on the Australian State Register.					
4	Delivery of Aircraft 3 was delayed due to the requirement for repair of the life raft door following damage sustained during the acceptance test flight, and the requirement for delivery of minor waiver data to support aircraft acceptance (later rectified through a contract change proposal).					
5	Delivery of Aircraft 4 was delayed due to availability of required spares from Leonardo to rectify a number of discrepancies and the prioritisation of aircraft components for use on another aircraft.					
6	Leonardo's decision to close its Naples fuselage production facility and consolidate all C-27J production at its Turin facility has resulted in a delay to delivery of Aircraft 5 through 10. However, Leonardo's production consolidation has been beneficial to the overall production of aircraft. From Aircraft 5, there have been considerable improvements in aircraft build quality and the project has been able to recover some lost production schedule. Continued improvements are expected as a result of Leonardo's consolidation decision and management of its supply chain to reduce delivery risks such as working with Dowty to deliver propellers after a Dowty production line fire (potentially effecting Aircraft 8, 9 and 10).					

3.3 Progress Toward Materiel Release and Operational Capability Milestones

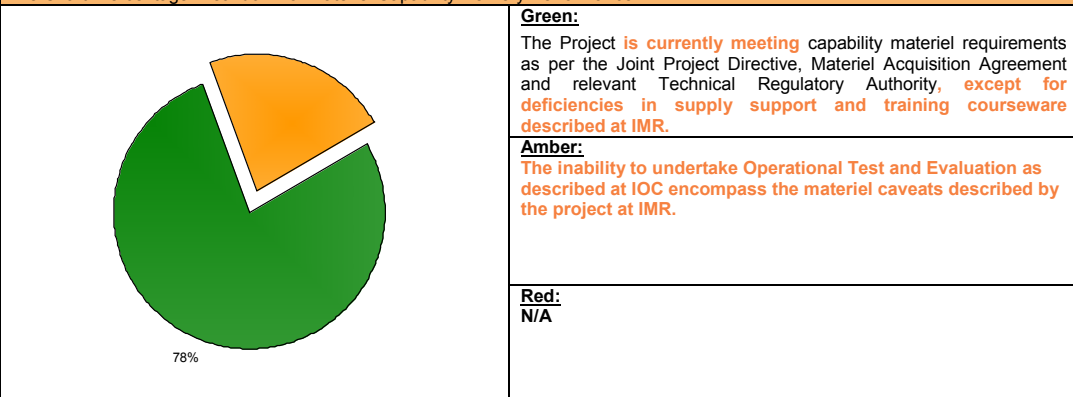
Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
In-Service Date (ISD)	Mar 15	Jun 15	3	1
Initial Materiel Release (IMR)	Jun 16	Dec 16	6	2
Initial Operational Capability (IOC)	Dec 16	Dec 16	0	3
Final Materiel Release (FMR)	Oct 17	Oct 19	24	4
Final Operational Capability (FOC)	Dec 17	Dec 19	24	4
Notes				
1	Variance due to delays in establishing FMS support and training arrangements in the US.			
2	Variance due to delay in delivery of Aircraft and adequate support. IMR was declared with caveats relating to deficiencies in supply support and training courseware.			
3	IOC was declared with caveats in December 2016 with four aircraft delivered to Australia. The IOC caveats encompassed the limitations described by the project described at IMR.			
4	Variance due to delays in aircraft production, acquisition of Mature Training System devices and construction of facilities at RAAF Amberley. A substantial delay to FMR/FOC is anticipated as a result of the decision by Leonardo to consolidate aircraft production at its Turin facility. Noting this delay, and in conjunction with other USAF C-27J divestiture considerations, the project office has undertaken a detailed planning review to enable an appropriate re-baseline of the project schedule. In May 2016 Government agreed to delay FOC to December 2019 and redefine FOC to exclude the flight simulator. These changes are being progressed through project management documentation.			



Section 4 – Materiel Capability Delivery Performance

4.1 Measures of Materiel Capability Delivery Performance

Pie Chart: Percentage Breakdown of Materiel Capability Delivery Performance



Note
This Pie Chart does not necessarily represent capability achieved. The capability assessments and forecasts by the Project are not subject to the ANAO's assurance review.

4.2 Constitution of Initial Materiel Release and Final Materiel Release

Item	Explanation	Achievement
Initial Materiel Release (IMR)	Delivery of three aircraft and sufficient logistics support (including trained personnel) to support initial operations. IMR was declared with caveats in December 2016 (refer to section 5.2).	Achieved with caveats
Final Materiel Release (FMR)	All 10 aircraft delivered and associated logistics support (including trained personnel) to support mature level of operations. Aeromedical Evacuation and Search and Rescue roles enabled, and logistics support available at the final MOB. FMR is forecast for October 2019.	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
<p>C-27J Capability Baseline. The project has reviewed the C-27J capability baseline and identified a number of known incomplete capability requirements, some of which will be matured beyond FOC. Following confirmation of divestment, USAF subsequently ceased MTC and rectification of a number of known incomplete capability requirements. The project has undertaken a detailed analysis to quantify and characterise the structural life-of-type of the airframe and proposed capability upgrades including Electronic Self Protection systems impacting project budget and schedule. Prior to divestiture, the USAF was operating the JCA C-27J under a Military Flight Release with broad capability scope and mitigators for the known incomplete capability requirements. They are not anticipated to be an impediment to achieving ISD or IOC; however, the overall capability is expected to mature beyond FOC.</p>	<p>A capability baseline confirmation process has been established to address the known deficiencies. The baseline confirmation process will culminate in a plan for addressing deficiencies. Each deficiency will be assessed based on its acceptability 'as is' or importance to capability in order to determine a priority for rectification. Once priorities and costs are determined, available project budget will be allocated on a priority basis.</p> <p>A structural Substantiation Program will test the life-of-type of the airframe. Post mitigation review of the structural life-of-type assesses the wing risk as medium and the fuselage risk as low.</p> <p>As approved by Government in the original 2012 project approval, an upgrade to Mode 5 IFF/ADS-B systems is progressing to contract signature with the Original Equipment Manufacturer of the aircraft.</p> <p>Management and mitigation activities for the whole of project affordability assess the risk to achieving capability requirements as low.</p>
<p>Training Delays in establishment of contracts between the US Government and L-3 has impacted the training schedule and student throughput. The courseware standard delivered required active involvement by the Commonwealth to implement ongoing improvements and meet perceived gaps in US based training. The project has undertaken detailed planning to ensure the continuity of training is maintained when training activities transition from the US to Australia in mid 2017. The first maintainer training course has successfully completed in Australia with the first aircrew course scheduled to commence in July 2017.</p>	<p>The project worked closely with the USAF FMS Program Office to minimise delays to the delivery of training and implement improvements to courseware.</p> <p>The project will transition training from the US to Australia in July 2017 and commence training at RAAF Richmond in Australia from Aug 2017. Continuity of training leading up to cessation in the US was actively managed, planned and tested to ensure continuity without impact to capability.</p> <p>The project continues to investigate options to deliver a Mature Training System at RAAF Amberley. During 2016-17 the Government agreed that alternative approaches to FMS are required. The project has engaged with Estate and Infrastructure Group to ensure a suitable training facility is available when the Mature Training System assets are acquired for installation via the alternative approach.</p>
<p>Sustainment The availability of spares, Support and Test Equipment has not met the requirements of the Commonwealth. The US Government and L-3 are working to deliver all spares on order under the FMS Case expeditiously. The project has undertaken a detailed analysis of future requirements for spare parts and Support and Test Equipment, including a review of the supply pipeline, delivery timeframes, stock levels to improve the operational availability. The project has redirected a range of acquisitions away from the FMS case to the aircraft Original Equipment Manufacturer and other suppliers through direct commercial sales as a result of the detailed analysis.</p>	<p>The project is continuing to work closely with the USAF FMS Program Office and L-3 to minimise delays to the delivery of spares, Support and Test Equipment. The project office is directly engaging with industry suppliers to acquire items not on order under the FMS case.</p> <p>The project is also working closely with the Air Force to improve the breadth and depth of spares available and enhance supply chain responsiveness to improve operational availability. In addition the project closely manages critical spares, Support and Test Equipment. The project moved new orders away from the US FMS case to direct commercial arrangements which have demonstrated shorter lead times, utilised airfreight to expedite delivery and worked with Air Mobility Group for emerging requirements. In parallel, a Through Life Support (TLS) contract is in negotiation with the preferred tenderer, Northrop Grumman. The contract is expected to be in place early in the second half of 2017, with a phase in period to support hand off to the enduring sustainment system managed by in-service organisations in 2018.</p>
<p>Facilities. Delays in approval for construction of the new 35 Squadron facilities at RAAF Amberley currently represent a low risk to FOC. 35 Squadron is currently planning to relocate to RAAF Amberley into the new facilities in 2019.</p>	<p>The Parliamentary Works Committee approved the facilities enabling detailed planning for establishment of mature training in Australia. The training facility design and construction has preceded selection of training devices but is designed to accommodate anticipated training devices. Government approved a decoupling of mature training to FOC and it will now be delivered post FOC. The post mitigation activities for the facilities assess the risk as low.</p>
Emergent Risks (risk not previously identified but has emerged during 2016–17)	
Description	Remedial Action
N/A	N/A

5.2 Major Project Issues –

Description	Remedial Action
<p>USAF Divestiture of C-27J. The risk that USAF C-27J divestiture would have a greater than anticipated impact on project budget and schedule has been realised. Accelerated USAF divestiture resulted in incomplete military type certification by the USAF and the unanticipated requirement for interim training to be relocated from Robins Air Force Base to L-3 facilities in Texas, with conduct of flying training to be contracted by the USAF utilising the ADF Airworthiness Management System (AMS) rather than the USAF AMS as originally planned.</p>	<p>In the absence of USAF Military Type Certification, completion of MTC has required additional Project resourcing to be applied. MTC will be achieved with nil impact to IOC/FOC schedule.</p> <p>Implementation of ADF AMS requirements in USAF contracts with L-3 took longer than anticipated.</p> <p>All stakeholders (CoA, USG and L-3) underestimated the time required to relocate and re-establish the training school at its Texas facilities resulting in approximately a six month delay to the planned start of training. The delayed start to training translated to a three month delay to achievement of the planned ISD at 35 Squadron.</p> <p>Finalisation and throughput management of the training system is ongoing between the Commonwealth of Australia, USAF and L-3.</p> <p>The final impact to cost will be understood once the mature training system contracts have been finalised, until final cost impact is known this remains an issue.</p>
<p>Contracting. The USAF's contracting processes to establish initial training and support arrangements took longer than planned, which has had an impact on project schedule and affordability.</p>	<p>The project continues to work closely with the USAF FMS Program Office to contain the cost and schedule impact.</p>
<p>Aircraft Production. The unlikely risk that significant aircraft production delays would occur and impact the project IOC/FOC schedule has been realised as a result of Leonardo commercial decision to close its Naples fuselage production facility and consolidate all C-27J production at its Turin facility and subsequent delays to aircraft modification in the USA. The decision by Leonardo in May 2015 will affect delivery of Aircraft 5 through 10 by up to 20 months. The magnitude of production restructure has made the December 2017 FOC date unachievable. Leonardo have applied additional resources in an effort to recover the schedule.</p>	<p>The Project is working with USAF and L-3 to implement a mitigation strategy that maximises available aircraft utilisation in support of training and 35 Squadron to support IOC. The Government was advised of Leonardo's production restructure in 2016 and agreed to an updated FOC of Dec 2019.</p> <p>The Project has engaged USAF, L-3 and Leonardo to convey the Commonwealth of Australia's requirement to improve the aircraft production schedule.</p> <p>Noting the substantial delay to FOC, the project office has undertaken a detailed planning review to enable an appropriate re-baseline of the project schedule. Leonardo continues to apply resources and effort to recover schedule and meet the currently agreed schedule.</p>
<p>Spares Availability. The availability of spares and Support and Test Equipment has not met the requirements of the Commonwealth. The US Government and L-3 are working to deliver all spares on order under the FMS Case expeditiously. The project is undertaking a detailed analysis of future requirements for spare parts and Support and Test Equipment, including a review of the supply pipeline, delivery timeframes, stock levels to improve the operational availability.</p>	<p>The project is continuing to work closely with the USAF FMS Program Office and L-3 to minimise delays to the delivery of spares and Support and Test Equipment. The project office is directly engaging with industry suppliers to acquire items not on order under the FMS case.</p> <p>The project is also working closely with the Air Force to improve the breadth and depth of spares available and enhance supply chain responsiveness to improve operational availability.</p> <p>The project is also acquiring spares via direct commercial arrangements to improve delivery schedules for critical items.</p>
<p>Aircrew and Maintenance Training systems (caveat). Deficiencies were identified in the US based training requiring additional training for aircrew and maintenance personnel in Australia.</p>	<p>The deficiencies in US based training are being managed in Australia by the project office in conjunction with Air Mobility Group under the aircrew 'Check to line' process and similar for 35 Squadron maintenance workforce certifications.</p> <p>In addition training will cease in the US in July 2017. Aircrew ground training will be conducted in Australia with the simulator element undertaken in Italy. All maintenance training will be undertaken in Australia</p>
<p>Logistics Support System (caveat). The Logistics Support System is established providing Authorised Engineering Organisation and Authorised Maintenance Organisations and Supply Support. The project has only partially met the support system requirements due to deficiencies in spares and Support and Test Equipment to support four aircraft operations at RAAF Richmond.</p>	<p>The supply chain has been exceedingly slow to deliver against orders. As a result Air Lift Systems Program Office (ALSPO) are managing a significant number of priority demands each month to support 35 Squadron (SQN). The aircraft Rate of Effort achieved by 35 SQN is being affected by spares Support and Test Equipment availability. The deficiencies identified are being managed by the project office and ALSPO and will continue to be managed to achievement of a suitable level of spares support.</p>

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	8	7	8	8	8	8	8	55																																		
Integration and Test	Project Status	7	6	8	8	9	6	8	52																																		
	Explanation	<ul style="list-style-type: none"> Schedule: Critical Path activities understood, however, delays to critical milestones have been realised against original schedule and since has been replanned in line with advice to Government. Cost: Progress of USAF contracting action has enabled FMS cost to be better understood. The costs are currently expected to be contained within the available contingency budget. Technical Difficulty: Necessary logistics data and arrangements for its employment in support of the capability are in place. Commercial: Contractor is in the early stages of delivery and starting to demonstrate some degree of risk management necessary. 																																									
<table border="1"> <caption>Project Maturity Score (MPR) Data</caption> <thead> <tr> <th>Project Milestone</th> <th>MPR Score</th> </tr> </thead> <tbody> <tr><td>Enter DCP</td><td>13</td></tr> <tr><td>Decide Variable Capability Options</td><td>14</td></tr> <tr><td>1st Pass Approval</td><td>21</td></tr> <tr><td>Industry Proposals / Offers</td><td>35</td></tr> <tr><td>2nd Pass Approval</td><td>37</td></tr> <tr><td>Contract Signature</td><td>44</td></tr> <tr><td>Preliminary Design Review(s)</td><td>45</td></tr> <tr><td>Detailed Design Review(s)</td><td>50</td></tr> <tr><td>Complete Sys. Integ. & Test</td><td>54</td></tr> <tr><td>Complete Acceptance Testing</td><td>57</td></tr> <tr><td>Initial Material Release (IMR)</td><td>60</td></tr> <tr><td>Final Material Release (FMR)</td><td>63</td></tr> <tr><td>Final Contract Acceptance</td><td>65</td></tr> <tr><td>AMA Closure</td><td>66</td></tr> <tr><td>Acceptance Into Service</td><td>67</td></tr> <tr><td>Project Completion</td><td>70</td></tr> </tbody> </table>										Project Milestone	MPR Score	Enter DCP	13	Decide Variable Capability Options	14	1st Pass Approval	21	Industry Proposals / Offers	35	2nd Pass Approval	37	Contract Signature	44	Preliminary Design Review(s)	45	Detailed Design Review(s)	50	Complete Sys. Integ. & Test	54	Complete Acceptance Testing	57	Initial Material Release (IMR)	60	Final Material Release (FMR)	63	Final Contract Acceptance	65	AMA Closure	66	Acceptance Into Service	67	Project Completion	70
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Section 7 – Lessons Learned

7.1 Key Lessons Learned –

Project Lesson	Categories of Systemic Lessons
<p>The level of risk and complexity contained in an FMS Letter of Offer and Acceptance is often understated and poorly understood. Whilst an FMS program for MOTS equipment and associated support affords a number of advantages, the transfer of a significant amount of project and technical management to the US Government implementing agency, and the weak bargaining position of the Commonwealth, increases the project's exposure to technical, schedule and cost risk. For an FMS program the level of Commonwealth contract and financial management involvement and oversight of industry is very low in comparison to that mandated for Direct Commercial Sale contracts, yet both procurement methods confront similar issues. This accords the FMS customer a 'Best Endeavours' approach to business. Adequate Commonwealth participation in key project management and technical oversight activities in the US, as provided for in the Government Combined First and Second Pass submission, is critical to providing the necessary level of project and contract management. In the case of C-27J, divestiture has further accentuated project risk and complexity, increasing the need for ongoing engagement of the USAF FMS program office and L-3 PID to ensure Commonwealth requirements and risks are adequately understood and managed. The planned downsizing and closing of the USAF project office further reduces the ability of the USG to achieve customer requirements normally delivered under the FMS system. This drives the Commonwealth's approach to deliver certain outputs via Direct Commercial Sales.</p>	Contract Management

<p>The practice of approving projects with staffing to be found from within existing Divisional resourcing can result in 'late to need' or understaffing at critical project planning and execution phases that is counter productive to achieving project outcomes. Further, the recruitment process lead times for candidates not already within the ADF or Australian Public Service can create significant extended vacancies within the Project workforce, with this being exacerbated by the relatively short notice that personnel are obliged to provide for internal transfers. This is exacerbated when the Department imposes a recruiting freeze on the workforce. Whilst outsourced services may be suitable in some instances to mitigate this risk, in such circumstances they are not always available, the most efficient, or affordable, and come with an additional administrative overhead. In particular, rapidly approved projects, such as AIR 8000 Phase 2, which gained combined Government Pass approval, should be priority staffed as outlined in the approved project workforce plan, on which the Materiel Acquisition Agreement schedule was developed.</p>	Resourcing
<p>Accelerated project approval, through a combined government 1st and 2nd Pass, carries additional project execution risk given the likelihood that data fidelity and planning maturity will be otherwise inherently lower. As such, all effort should be made to understand the associated risk premium versus the benefit an accelerated project approval offers. In the case of AIR 8000 Phase 2 the potential impact of USAF divestiture was not fully appreciated across the full breadth and depth of the project. Any assumption that because procurement is via FMS it is low risk must be fully tested.</p>	Off-The- Shelf Equipment

Section 8 – Project Line Management

8.1 Project Line Management in 2016-17

Position	Name
Division Head	AVM Catherine Roberts (Mar 16-current)
Branch Head	AIRCDRE Phil Tammen
Project Director	GPCAPT Gerry van Leeuwen (Dec 15-current)
Project Manager	WGCDR Jamie Scott (Jan 16-current)