

## Project Data Summary Sheet<sup>139</sup>

Project Number	<b>AIR 6000 Phase 2A/2B</b>
Project Name	<b>NEW AIR COMBAT CAPABILITY</b>
First Year Reported in the MPR	2010-11
Capability Type	Replacement
Acquisition Type	Developmental
Capability Manager	Chief of Air Force
Government 1st Pass Approval	Nov 06
Government 2nd Pass Approval	Nov 09 (Stage1) Apr 14 (Stage 2)
Budget at 2 <sup>nd</sup> Pass Approval	\$13,264.1m
Total Approved Budget (Current)	<b>\$16,522.6m</b>
2018-19 Budget	<b>\$1,977.6m</b>
Project Stage	Integration and Test
Complexity	ACAT I



### Section 1 – Project Summary

#### 1.1 Project Description

The AIR 6000 **Phase 2A/2B** project aims to introduce the F-35A Joint Strike Fighter (JSF) capability that will meet Australia's air combat needs out to 2030 and beyond. Phase 2A/2B of the project is approved to acquire seventy-two Conventional Take Off and Landing (CTOL) F-35A JSF aircraft to establish three operational squadrons, a training squadron and necessary supporting/enabling elements to replace the F/A-18A/B Hornet capability.

Lockheed Martin is contracted to the United States (US) Government for the development and production of the F-35A JSF. The aircraft and associated support systems are being procured through a government to government co-operative agreement with the US and JSF partner nations, comprised of the United Kingdom, Canada, Italy, Denmark, Norway, Netherlands and Turkey. **Outside the partnership**, Japan, Israel, the Republic of Korea **and Belgium are procuring the F-35 JSF via US Foreign Military Sales (FMS).**

#### 1.2 Current Status

##### Cost Performance

###### In-year

**30 June 2019 – The underspend is primarily due to delays in billing against Initial Spares, Training and the Reprogramming Laboratory. This was partially offset by an increase in billing against Aircraft.**

###### Project Financial Assurance Statement

In consideration of risks disclosed at Section 5.1, as at 30 June 2019, Project AIR 6000 Phase 2A/2B has reviewed the approved scope and budget for those elements required to be delivered by the project **In 2018 the project obtained Government approval to move enabling scope to redistribute key project elements between AIR6000 program phases. The approved changes have not increased funding for AIR 6000 PH2A/2B or other associated programs phases.** Defence considers, there is sufficient budget, including contingency, remaining for the project to deliver the revised scope. **The project will continue to address cost risks in the annual update to Government in late 2019.**

###### Contingency Statement

The project has not applied contingency in the financial year.

<sup>139</sup> 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.

<p><b>Schedule Performance</b></p> <ul style="list-style-type: none"> <li>Initial Operating Capability (IOC) remains on track as planned for 2020.</li> </ul> <p>The first two aircraft to be permanently based in Australia arrived in Williamtown on 10 December 2018, as planned in the schedule established at 2014 approval. In the 2018/19 financial year Australia accepted delivery of eight aircraft bringing the total fleet to fourteen. This completed the aircraft delivery approved by Government in the Stage 1 project approval of 2009. At 30 June 2019, ten of these aircraft were operating at the Luke Air Force Base Pilot Training Centre in support of pilot training and four were based at Williamtown to conduct the Australian Verification and Validation (V&amp;V) program.</p> <p>Thirteen Australian pilots have been trained to Instructor Qualification standard, via US based training, and a further eight are currently undergoing pilot training. US based academic training of Australian maintainers at Eglin Air Force Base ceased in 2018 because training commenced at the Integrated Training Centre at RAAF Base Williamtown in 2019. On the Job Training of RAAF maintainers is planned to occur at Luke Air Force Base through until December 2020. Transition of training to Australia has commenced. All maintenance training aids have been installed in the Australian Integrated Training Centre and four Full Mission Simulators installed for pilot training.</p> <p>The Australia Canada United Kingdom Reprogramming Lab (ACURL) building at Eglin Air Force Base was accepted on 16 July 2018 and the initial software tools accepted at Fort Worth, Texas in November 2018. This system is currently being installed into the ACURL building. In addition, a contract has been awarded to Lockheed Martin for the commencement of Initial Design Activity for the mature ACURL Phase 2 design solution.</p> <ul style="list-style-type: none"> <li>Facilities construction at RAAF Base Williamtown is largely complete. The land acquisition process has delayed the ability for the full length of the runway extension to be operational. Consequently, a Defence Area has been declared, encompassing the area to maintain project schedule to achieve full operation by October 2020. Regional Warehouse at Williamtown and Forward Operating Bases are in the design phase. Construction work at RAAF Base Tindal is well underway.</li> </ul> <p>Sustainment of the global F-35 fleet is provided through the Global Support Solution (GSS), which is still maturing as the global fleet grows. The 2014 US Government assignment of regional Airframe and Engine Maintenance, Repair, Overhaul and Upgrade responsibilities to Australia has assisted in the planning of Australian sustainment. In November 2016 the US Government assigned the regional maintenance and repair of 64 Tier 1 components to four Australian companies and in February 2019, 343 Tier 2 components to seven Australian companies. Sovereign sustainment requirements have been defined and JSF Division is working closely with the F-35 Joint Program Office and industry on the planning and execution of these requirements.</p>
<p><b>Materiel Capability Delivery Performance</b></p> <p>The project is confident that the F-35A JSF Air Vehicle will meet Initial Operating Capability (IOC) in 2020. Production is on schedule for the Royal Australian Air Force to accept thirty-three aircraft by December 2020. Williamtown facilities are largely complete and support capabilities required for IOC are maturing. The V&amp;V Program is underway and is established to mitigate remaining risks to IOC, and FOC.</p> <p>Most of the capability requirements of FOC are delivered by the extant integrated F-35 System and new developments are on track for incorporation in production Lots 13-15. AIR 6000 Phase 2A/B will continue to contribute to JSF Program developments to enable Australia to consider capability options and upgrades. AIR 6000 Phase 2A/B has options to deliver Maritime Strike capabilities in a timeframe closely following that of the United States Navy. AIR 6000 Phase 2A/B will also continue to invest in F-35A development where available to pressure advanced Maritime Strike options open for consideration under AIR 3023 in the context of a Joint Maritime Strike strategy.</p>
<p><b>Note</b></p> <p>Forecast dates and capability assessments are excluded from the scope of the review.</p>

1.3 Project Context

<p><b>Background</b></p> <p>Project AIR 6000 was established in 1999 to replace the air combat capabilities provided by the F/A-18A/B and F-111 fleets. In 2002 Government identified the Lockheed Martin F-35A JSF as the preferred option and joined the <b>System Development and Demonstration</b> (SDD) phase of the JSF Program as one of nine Partner Nations. At this time the project discontinued the competitive evaluation under AIR 6000. The subsequent decision by Government to acquire the F-35A JSF has been taken progressively, including:</p> <ul style="list-style-type: none"> <li>Providing First Pass Approval in November 2006, which included agreement to join the next phase of the JSF Program and funded project AIR 6000 Phase 1B to <b>conduct</b> detailed definition and analysis activities to support Government Second Pass Approval for AIR 6000 Phase 2A/2B.</li> <li>Signing the multilateral Production, Sustainment and Follow-on Development (PSFD) Memorandum of Understanding (MoU) in December 06 to allow entry into the next stage of the JSF Program.</li> <li>AIR 6000 Phase 2A/2B Stage 1 Approval in November 09 to acquire 14 CTOL F-35A JSF aircraft and associated support and enabling elements necessary to establish the initial training capability in the US, commencing in 2014, and to allow commencement of Operational Test in the US and Australia.</li> <li>AIR 6000 Phase 2A/2B Stage 2 was approved by Government in April 14 to acquire an additional 58 CTOL F-35A JSF aircraft and enabling elements. The combined acquisition of 72 aircraft will achieve Final Operating Capability (FOC) in 2023 comprising of three operational squadrons of fifth generation F-35A JSF to replace the F/A-18A/B Hornet aircraft.</li> <li>In 2017 Defence advised Government of emerging issues associated with AIR 6000 Phase 2A/2B affordability. In 2018 Government agreed to Defence proposals to defer key project scope to later AIR 6000 program phases, some of which are yet to be approved. In addition to significantly reducing AIR 6000 Phase 2A/2B known cost risks, this aligned Australian delivery schedules with the global JSF development program. The approved changes have not</li> </ul>
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**increased or reduced funding for Phase 2A/B or other associated program phases. As the changes have minimal impact on overall delivery schedule of the project, AIR 6000 Phase 2A/B plans for FOC in 2023 remain unchanged. Some level of known cost risk remains with a possibility that further scope transfers may be required.**

**Uniqueness**

The JSF Program was established by the US Government as the first international collaborative development program for a US military aircraft. The program includes initial design, production, follow-on development and through life support of the JSF global fleet.

The JSF Program is expected to deliver over 3,000 aircraft to the nine MoU Partners (with the US to acquire approximately 75 per cent of the total) with the potential for significant additional aircraft procurements by Foreign Military Sales (FMS) customers.

The JSF is characterised by a low observable (stealth) design, internal weapons and fuel carriage, advanced electro-optical and infrared sensors (long range), the ability to employ a wide range of air-to-surface and air-to-air weapons, advanced communications suite to enable network centric operations, state of the art prognostics and health management, a single interchangeable engine and reduced support requirements.

Due to strict US export restrictions imposed on the JSF Air System, direct commercial sale is not permitted. JSF aircraft and associated supporting systems will be acquired by Australia under the PSFD MoU arrangements. Key factors are:

- The US Government has contracted with Lockheed Martin and Pratt & Whitney on Australia’s behalf in accordance with US contracting laws, regulations and procedures.
- The F-35 Joint Program Office (JPO) acquisition strategy is to commence with eleven annual Low Rate Initial Production (LRIP) contracts transitioning from a Fixed Price Incentive Fee to a Firm-Fixed Price at the appropriate time.
- Each contract requires a separate Partner Procurement Request (PPR) from each partner nation defining their requirements for that buy. PPRs are submitted two years ahead of contract and four years ahead of delivery.
- F-35A JSF Aircraft to be delivered under **AIR 6000 Phase 2A/2B are acquired under annual contracts. Lots 12 to 14 production contracts procurements leverage off a Block Buy initiative, with Australia’s commitment remaining on an annual basis.** The Australian F-35A JSF capability will be supported via a F-35 Global Support Solution that is progressively being implemented and a range of Australian sovereign sustainment contracts, with all arrangements planned to be performance-based.

As well as providing capability and programmatic benefits, a key aim of Australia’s participation in the JSF Program is to embed Australian industry in the JSF global supply and support chain for the life of the JSF Program. The Commonwealth continues to work with the prime contractor Lockheed Martin, its JSF industry partners and their sub-contractors to achieve long term industry outcomes for Australia.

**The Cooperative Partnership will continue to progressively enhance the capability of the entire F-35A Air System over its life of type under the auspices of the Follow On Modernisation program.**

<p><b>Major Risks and Issues</b></p> <p>There are no significant issues facing the AIR 6000 Phase 2A/2B Project. The following are risks being managed by the Project.</p> <p>The F-35 Joint Program is large and complex with varying challenges. As a Partner Nation, Australia actively supports the program to overcome existing and emergent technical challenges; however, these are primarily the responsibility of the US Government to resolve with Lockheed Martin and the Partner Nations.</p> <p>Major risks being managed by the AIR 6000 Phase 2A/2B Project are:</p> <ul style="list-style-type: none"> <li>The F-35A capability may be impacted by failure to deliver air system elements to meet the capability requirements of Air Force as a result of a technical deficiency or a delay in delivery schedule. F-35A air system elements include aircraft/engine, weapons, Autonomous Logistics Information System (ALIS) system, reprogramming enterprise and the training system.</li> <li>The ongoing viability of the F-35A system to meet emerging Government direction and Air Force capability requirements may be impacted by the failure to adequately resource and manage the currently unapproved AIR6000 project phases including additional support elements and follow-on modernisation.</li> <li>The Australian F-35 capability relies on a cohesive Joint Strike Fighter Cooperative Program to develop and sustain the F-35 system. Significant changes to the program support organisation may impact Australia's and the F-35 Partners ability to influence the program.</li> <li>The Australian F-35A sustainment solution may be impacted by the Joint Program Offices (JPO) ongoing development and evolution to a mature and effective Global Support Solution (GSS), leading to an impact on Australia's GSS performance effectiveness.</li> <li>Australia's standing and reputation in the international F-35 Co-operative partnership maybe compromised due to inadequate security and cyber protection leading to potential disclosure of sensitive information to potential adversaries. Stakeholders include Department of Defence, Industry, Supply Chain, USA armed forces and the F-35 enterprise.</li> <li>Acquisition and operation of the F-35A capability may be affected by overall funding or programming issues arising from internal cost growth / forecasting accuracy and external budget constraints, leading to an impact on capability and schedule.</li> <li>The F-35 Program may not provide the required industry benefit and Australian industrial capability and capacity, targets and goals for resulting contracts will not be realised, or will be delayed. Australian industry may not be able to meet Global Support Solution (GSS) performance, cost or schedule requirements. Australian industry assignment MRO&amp;U activation may impact on the performance outcomes of F-35 GSS Enterprise.</li> <li>Failure to effectively employ and manage the maturation of Military, Government employee and supporting Defence Industry workforce may impact the effectiveness and efficiency of the Australian F-5A program.</li> <li>The capability requirements for an integrated 5th generation Air Force may be impacted due to delays in delivery or service release of training devices and equipment, workforce provisioning and contractual arrangements resulting in possible delays to capability outcome declarations.</li> </ul>
<p><b>Other Current Related Projects/Phases</b></p> <p><b>AIR JSF SDD – Participation in the JSF System Development and Demonstration (SDD) Program:</b> In November 2018, Australia closed the Materiel Acquisition Agreement for AIR JSF SDD – Participation in the JSF System Development and Demonstration (SDD) Program, as all AIR JSF SDD financial milestones were completed. The US expects to formally complete the F-35 program SDD phase, following Operational Test and Evaluation and a Department of Defense decision to go into full-rate aircraft production.</p> <p><b>AIR 6000 Phase 5 - Air Combat Capability Air-to-Air Weapons:</b> This project was approved by Government in March 2016 and will acquire reserve stocks of air-to-air Within-Visual-Range (WVR) and Beyond-Visual-Range (BVR) missiles for the Air Combat Capability including the F-35A Joint Strike Fighter.</p> <p><b>AIR 6000 Phase 3 - Air Combat Capability Air-to-Surface Weapons:</b> This project was approved by Government in May 2018 and will acquire the reserve stocks of air to ground weapons, new countermeasures and ammunition for the F-35 Joint Strike Fighter (JSF).</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>		
Nov 09	Original Approved	2,751.6	
May 12	Real Cost Decrease	(204.4)	1
Sep 12	Real Cost Increase	201.5	1
Jun 14	<b>Government Second Pass Approval – Stage 2</b>	<b>10,515.4</b>	2
	Total at Second Pass Approval	<b>13,264.1</b>	
Apr 18	Real Variation – Transfer	(8.4)	3

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Jul 10	Price Indexation		351.0	4
Jun 19	Exchange Variation		2915.9	
Jun 19	<b>Total Budget</b>		<b>16,522.6</b>	
<b>Project Expenditure</b>				
Prior to Jul18	Contract Expenditure – US Government – LRIP 10 Production	(777.3)		5
	Contract Expenditure – US Government – LRIP 6 Production	(258.1)		5
	Contract Expenditure – US Government – LRIP 11 – Production	(256.3)		5
	Contract Expenditure – US Government – PSFD MoU (FY14/15 – 22/23)	(193.2)		5
	Contract Expenditure – US Government PSFD MoU (FY 09/10 – 13/14)	(181.0)		5
	Contract Expenditure – US Government – LRIP 10 Propulsion	(131.3)		5
	Contract Expenditure – US Government – Reprogramming Laboratory Phase 1	(91.4)		5
	Contract Expenditure – US Government – LRIP 8 – Production and Non-Annualised Sustainment	(71.7)		5
	<b>Contract Expenditure - US Government (Block Buy Contract Production)</b>	(51.1)		5, 6
	Contract Expenditure – US Government – LRIP 6 Propulsion	(49.6)		5
	Contract Expenditure – US Government – FMS Case AT-D-YAF, AT-P-AMN (Weapons)	(36.8)		5
	Contract Expenditure – US Government - FY 17 Air Vehicle Initial Spare	(22.8)		5
	Contract Expenditure – US Government - LRIP 10 Non-Annualised Sustainment Contract	(20.4)		5
	Contract Expenditure – US Government - LRIP 11 – Propulsion	(16.5)		5
	<b>Contract Expenditure - US Government (Block Buy Contract Propulsion)</b>	(8.9)		5, 6
	Other Contract Payments / Internal Expenses	(503.2)		7
			(2,669.6)	
FY to Jun 19	<b>Contract Expenditure - US Government (Block Buy Contract Production)</b>	(685.4)		5,6
	Contract Expenditure – US Government – LRIP 11 – Production	(569.4)		5
	Contract Expenditure – US Government – LRIP 11 – Propulsion	(102.4)		5

	Contract Expenditure – US Government - LRIP 10 Production	(88.9)	5
	Contract Expenditure – US Government PSFD MoU (FY 14/15 – 22/23)	(86.5)	5
	<b>Contract Expenditure - US Government (Block Buy Contract Propulsion)</b>	(52.9)	5
	Contract Expenditure – US Government – LRIP 10 Non-Annualised Sustainment	(52.9)	5
			6
	Contract Expenditure – US Government - FY 17 Air Vehicle Initial Spare	(37.0)	5
	Contract Expenditure – US Government – FMS Cases AT-D-YAF, AT-P-AMN (Weapons)	(25.1)	5
	Contract Expenditure – US Government – LRIP 11 Non-Annualised Sustainment	(19.6)	5
	Contract Expenditure – US Government – Reprogramming Laboratory Phase 1	(19.5)	5
	Contract Expenditure – US Government – LRIP 8 – Production and Non-Annualised Sustainment	(14.9)	5
	Contract Expenditure – US Government - LRIP 10 Propulsion	(5.9)	5
			5
	Contract Expenditure – US Government – LRIP 6 Production	(3.3)	5
	Contract Expenditure – US Government – LRIP 6 Propulsion	(0.3)	5
	Other Contract Payments / Internal Expenses	(178.0)	8
		(1,942.0)	
Jun 19	<b>Total Expenditure</b>	(4,611.6)	
Jun 19	<b>Remaining Budget</b>	(11,911.0)	
<b>Notes</b>			
1	A May 12 budget adjustment (\$204.4m) was applied to AIR 6000 Phase 2A/2B based on an incorrect interpretation of the Government's decision to vary the New Air Combat Capability (NACC) Program. In September 12, a budget adjustment correction was applied (\$201.5m), using an updated exchange rate. As a result, the project's total approved budget has remained the same as intended by Government.		
2	Government approved AIR 6000 Phase 2A/2B Stage 2 in April 14 for an additional 58 CTOL F-35A JSF aircraft.		
3	Transfer to Estate and Infrastructure Group following request for funding scope changes for RAAF Base Tindal Joint Strike Fighter facilities.		
4	Up until July 10, indexation was applied to project budgets on a periodic basis. The cumulative impact of this approach was \$70.3m. In addition to this amount, the impact on the project budget as a result of out-turning was		

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	a further \$280.8m having been applied to the remaining life of the project.
5	The scope of this contract is explained further in Section 2.3 – Details of Project Major Contracts.
6	<b>Previously reported as a single Block buy Contract that combined the expenditure of the Production and Propulsion.</b>
7	Other expenditure for the period prior to <b>July 18</b> is associated with Support Systems (\$282.0m) which comprises of software capability for the reprogramming lab, facilities, support & test equipment, information communications technology and ALIS; mission systems (\$89.3m) comprising of FMS cases, weapons & aircraft; Project Office services (\$71.2m) comprising of Project Office services (travel, contract support services) & contract administration in relation to the Joint Project Office; NACC Operating Expenditure (\$59.5m) comprising of Project Office expenses, initial support & maintenance, US pilot training and NACC ISP Grants Program; and monitoring (\$1.2m) which includes Diminished Manufacturing Supply (DMS).
8	Other expenditure for the period <b>July 18 to June 19</b> is associated with Support Systems (\$97.6m) comprising of software capability for the reprogramming lab, facilities, support and test equipment, information communications technology, <b>training simulators, spares</b> and the ALIS; <b>Mission Systems (\$45.1m)</b> comprising of FMS cases, weapons and aircraft; Project Office services (\$20.8m) comprising of Project Office services (travel, contract support services) and contract administration in relation to the Joint Project Office NACC operating expenditure (\$13.1m) comprising of Project Office expenses, initial support and maintenance, US pilot training and the NACC ISP Grants Program; <b>and non-standard mission system (\$1.4m) for the Ferry activities.</b>

2.2A In-year Budget Estimate Variance

Estimate PBS \$m	Estimate PAES \$m	Estimate Final Plan \$m	Explanation of Material Movements
1,821.1	1,933.3	1,977.6	PBS – PAES: <b>This project is being delivered as planned, with the forecast variation primarily attributable to foreign exchange updates.</b>  PAES – Final Plan: The acquisition is as now forecast in PBS 2019-20. The variation is <b>largely due to an in-year budget change at BE's Round 2 and an additional re-profiling exercise from FY2019-20 into FY2018-19.</b>
Variance \$m	112.2	44.3	Total Variance (\$m): <b>156.5</b>
Variance %	6.2	2.3	Total Variance (%): <b>8.6</b>

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan \$m	Actual \$m	Variance \$m	Variance Factor	Explanation
1,977.6	1,942.0	(35.6)	Australian Industry	<b>30 June 2019 – The underspend is primarily due to delays in billing against Initial Spares, Training and the Reprogramming Laboratory. This was partially offset by an increase in billing against Aircraft.</b>
			Foreign Industry	
			Early Processes	
			Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	
			Effort in Support of Operations	
			Additional Government Approvals	
		(35.6)	<b>Total Variance</b>	
		(1.8)	<b>% Variance</b>	

2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature \$m	30 Jun 19 \$m			
US Government PSFD MoU (FY 09/10 – 13/14)	Dec 06	167.1	181.0	Various	MoU	1, 12, 13
US Government PSFD MoU (FY 14/15 – 22/23)	Dec 06	253.1	614.9	Various	MoU	2, 12, 13
US Government (LRIP 6 Production)	May 11	22.0	273.9	Fixed Price Incentive	USG Contract	3, 12, 13
US Government (LRIP 6 Propulsion)	Aug 11	5.8	51.0	Fixed Price Incentive	USG Contract	4,12, 13
US Government (LRIP 10 Production)	Dec 14	79.2	902.4	Fixed Price Incentive	USG Contract	5, 12, 13
US Government (LRIP 10 Propulsion)	Mar 15	13.4	146.0	Fixed Price Incentive	USG Contract	6, 12, 13
US Government	Mar 15	119.0	138.3	Fixed Price Incentive	USG	7, 12, 13



(Reprogramming Laboratory Phase 1)					Contract	
US Government (LRIP 8 Production and Non-Annualised Sustainment)	Jun 15	99.9	112.3	Fixed Price Incentive	USG Contract	8, 12, 13
US Government (LRIP 11 Production)	Dec 15	88.2	899.2	Fixed Price Incentive	USG Contract	9, 12, 13
US Government (AT-D-YAF)	Jun 16	111.9	110.4	Reimbursement	FMS	12, 13
US Government (LRIP 10 Non-Annualised Sustainment)	Jun 16	31.8	221.5	Various	USG Contract	12, 13, 16
US Government (AT-P-AMN)	Jul 16	132.3	141.4	Reimbursement	FMS	12, 13
US Government (LRIP 11 Propulsion)	Jul 16	14.2	167.0	Fixed Price Incentive	USG Contract	12, 13, 15
US Government (Block Buy Contract Production)	Feb 17	236.3	1,170.7	Various	USG Contract	10, 12, 13
US Government (FY17 Air Vehicle Spares & ACURL Spares)	Mar 17	114.4	109.5	Fixed Price Incentive	USG Contract	11, 12, 13
US Government (Block Buy Contract Propulsion)	Aug 17	39.6	298.2	Various	USG Contract	10,12, 13
US Government (LRIP 11 Non-Annualised Sustainment)	May 18	57.5	163.8	Various	USG Contract	12, 13, 16
<b>Notes</b>						
1	Contribution to PSFD MoU shared costs based on proportionality principle: i.e. number of aircraft purchased as a percentage of entire partner fleet. Commitment via MoU signature in December 06 with price re-baselined from 2002 to 2012 per US Government update. Covers period from 2009–10 to 2013–14 as approved by Government in November 09 and is now complete. The PSFD MoU 'contract' is a 'variable' priced 'contract' in that it is updated annually to reflect both estimated shared costs and escalation.					
2	Contribution to PSFD MoU shared costs based on proportionality principle: i.e. number of aircraft purchased as a percentage of entire partner fleet. Commitment via MoU signature in December 06 with price re-baselined from 2002 to 2012 per US Government update. Covers period from 2014–15 to 2022–23 as approved by Government in April 14. The PSFD MoU 'contract' is a 'variable' priced 'contract' in that it is updated annually to reflect both estimated shared costs and escalation. Contract Price increase since signature due to increased tooling replacement cost not previously included; inclusion of scope previously considered country unique; and updated estimates for shared sustainment, Follow-on Development and F-35 Joint Program Office administration.					
3	LRIP 6 Production contract for Australia's first two F-35A aircraft including initial Long Lead items, support equipment and other hardware and services. This contract is progressively modified with approved work scope and forms the basis of the Air System contract for the complete system – per Section 1.3 'Uniqueness'.					
4	LRIP 6 Propulsion contract for two engines for installation on Australia's first two F-35A aircraft. Also includes one spare engine and initial Long Lead items. This contract is progressively modified with approved work scope and forms the basis of the propulsion contract for the complete system – per Section 1.3 'Uniqueness'.					
5	LRIP 10 Production contract for Australia's next tranche of eight F-35A aircraft for initial Long Lead items. This contract is progressively modified with approved work scope and forms the basis of the Air System contract for the complete system – per Section 1.3 'Uniqueness'.					
6	LRIP 10 Propulsion contract for eight engines for installation on Australia's next tranche of eight F-35A aircraft. This contract is progressively modified with approved work scope and forms the basis of the propulsion contract for the complete system – per Section 1.3 'Uniqueness'. Subsequent to full funding being awarded for this contract further modifications (contract changes) have occurred. These include: (1) Long Lead funding for LOT 12 (15 aircraft), (2) initial sparring for operating units, maintenance depots and the Global Pool and (3) the migration of ALIS propulsion data.					
7	Contract for Phase 1 Reprogramming Laboratory hardware and software tools.					
8	LRIP 8 Production and Non Annualised Sustainment contract for the provision of training devices, support equipment, non-aircraft spares and an aircrew fitting service.					
9	LRIP 11 Production contract for Australia's next tranche of eight F-35A aircraft. This contract includes Long Lead items and is progressively modified, forming the basis of the Air System contract for the complete system – per Section 1.3 'Uniqueness'. This contract <b>has met</b> Full Funding award with the increase in contract value a result of the staged					

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	procurement and provision of funding for the F-35 production line to build the aircraft.			
10	<p><b>Lots 12-14 Production and Propulsion are procured under separate Block Buy Contracts, Air Vehicle Production via Lockheed Martin and Propulsion via Pratt &amp; Whitney. Both contracts encompass Long Lead items for the procurement of aircraft under Lots 12-14 and Economic Order Quantities for the production contract only. Both production and propulsion are also contracted under Undefined Contract Action for Lot 12.</b></p> <p><b>These contracts were previously combined and reported previously combined and reported as a single Block Buy Contract. Australia will commit to aircraft purchases on an annual basis via these two contracts, subject to annual approvals by Government.</b></p>			
11	FY17 Air Vehicle Initial Spares & ACURL Spares contract for Australia's Deployable Spares Pack (DSP), Australia's contribution to F-35 global spares pool and spares for the Reprogramming Lab.			
12	Contract value as at <b>30 June 2019</b> is based on actual expenditure to <b>30 June 2019</b> and remaining commitment at current exchange rates. This includes adjustments for indexation (where applicable).			
13	The scope of these contracts is explained further below.			
14	The project has reviewed the list of major contracts reported in the PDSS to ensure it reflects only the most significant contracts of the project. This has resulted in some contracts previously reported separately now being reported as part of other contract payments/internal expenses and being removed from the list of major contracts.			
15	LRIP 11 Propulsion contract for eight engines for installation on Australia's tranche of eight F-35A aircraft being procured through the LRIP 11 Production Lot. This contract is progressively modified with approved work scope and forms the basis of the propulsion contract for the complete system – per Section 1.3 'Uniqueness'.			
16	LRIP 10 and 11 Non-Annualised (NA) Sustainment contracts consist of one-time tasks and infrastructure stand up activities. The contracts undergo discrete modifications for each individual good and/or service being procured which in turn dictates the 'type' of contract. The majority of each discrete procurement is acquisition related, examples being initial non-aircraft spares, site activation, depot stand-up, hardware procurement and delivery, training systems, support equipment and ALIS.			
Contractor	Quantities as at		Scope	Notes
	Signature	30 Jun 19		
US Government (PSFD MoU)	N/A	N/A	Australia's contribution to shared costs from 2010 to 2023 based on the purchase of 100 aircraft. Includes contribution to production tooling, US overhead cost of running program, follow on development and shared sustainment activities.	1
US Government (LRIP 6 Production)	2	2	Procurement of the first two Australian F-35A aircraft including Advanced Acquisition items and services and progressive associated work scope.	
US Government (LRIP 6 Propulsion)	3	3	Provision of engines for installation on Australia's first two F-35A aircraft plus one spare engine.	
US Government (LRIP 10 Production)	8	8	Procurement of Advanced Acquisition items associated with the next eight F-35A aircraft procurement.	
US Government (LRIP 10 Propulsion)	8	8	Procurement of Advanced Acquisition items and spares associated with propulsion systems for the next eight F-35A aircraft procurement. This contract has also been modified to include Long Lead items to support Lot 12 aircraft.	
US Government (Reprogramming Laboratory Phase 1)	N/A	N/A	Reprogramming Laboratory Hardware and Software tools.	
US Government (LRIP 8 Production and Non-Annualised Sustainment)	N/A	N/A	Training devices, support equipment and non-aircraft spares.	
US Government (LRIP 11 Production)	8	8	Procurement of Advanced Acquisition items associated with the next eight F-35A aircraft procurement.	
US Government (AT-D-YAF)	N/A	N/A	Procurement of Small Diameter Bombs (SDB 1) and associated racks.	
US Government (AT-P-AMN)	N/A	N/A	Procurement of Radio Frequency Countermeasures.	

US Government (Block Buy Contract Production)	N/A	N/A	Procurement of Long Lead items and Economic Order Quantities for Lots 12-14 and Undefined Contracting Action for Lot 12. Leading to full funding contract award in Quarter 4 2019 for procurement of 45 F-35A aircraft, pending Government approval of Lot 14.	2
US Government FY17 Air Vehicle Initial Spares & ACURL Spares	N/A	N/A	F-35 global spares pool, Deployable Spares Pack and spares for the Reprogramming Lab.	
US Government (Block Buy Contract Propulsion)	N/A	N/A	Procurement of Long Lead items for Lots 12-14 and Undefined Contracting Action for Lot 12. Leading to full funding contract award in Quarter 4 2019 for procurement of 45 F135 propulsion systems, pending Government approval of Lot 14.	2
US Government (LRIP 11 Propulsion)	8	8	Procurement of propulsion systems required for the eight F-35A aircraft being procured through the LRIP 11 Production Lot.	
US Government (LRIP 10 Non-Annualised Sustainment Contract)	N/A	N/A	Procurement of initial non-aircraft spares, site activation, depot stand-up, hardware procurement and delivery, training systems, support equipment and ALIS.	
US Government (LRIP 11 Non-Annualised Sustainment)	N/A	N/A	Procurement of initial non-aircraft spares, site activation, depot stand-up, hardware procurement and delivery, training systems, support equipment and ALIS.	
Major equipment received and quantities to 30 June 19				
Fourteen F-35A aircraft have been received by Australia, of which ten remain in the USA to support training.				
Notes				
1	No equipment delivered as part of this contract.			
2	These contracts were previously reported as Lot 12 Long Lead and EOQ.			

### Section 3 – Schedule Performance

#### 3.1 Design Review Progress

Review	Major System/Platform Variant	Original Planned	Current Planned	Achieved /Forecast	Variance (Months)	Notes
Preliminary Design	JSF Air System (CTOL Variant)	Mar 03	N/A	Jul 03	4	1
Critical Design	JSF Air System (CTOL Variant)	Apr 04	Feb 06	Feb 06	22	2
Notes						
1	Aircraft weight was the major issue that delayed the closure of the Preliminary Design Review (PDR) by four months.					
2	Additional design effort was required to achieve the weight savings expected after PDR. The CTOL Critical Design Review (CDR) was delayed as a result from April 04 to February 06 until the re-design was complete and included the 'roll up' of many lower-tiered reviews.					

#### 3.2 Contractor Test and Evaluation Progress

Test and Evaluation	Major System/Platform Variant	Original Planned	Current Planned	Achieved/F orecast	Variance (Months)	Notes
System Integration	Block 2B Fleet Release (against IMS7 Baseline)	Jun 15	Jun 15	Jul 15	1	1
	Block 3i Initial Release to support LRIP 6 (against IMS7 Baseline)	Mar 14	Nov 14	Sep 14	6	2
	Block 3F Fleet Release (against IMS7 Baseline) – for F-35A (full envelope with weapons)	Aug 17	Oct 17	Aug 17	0	3, 4, 5

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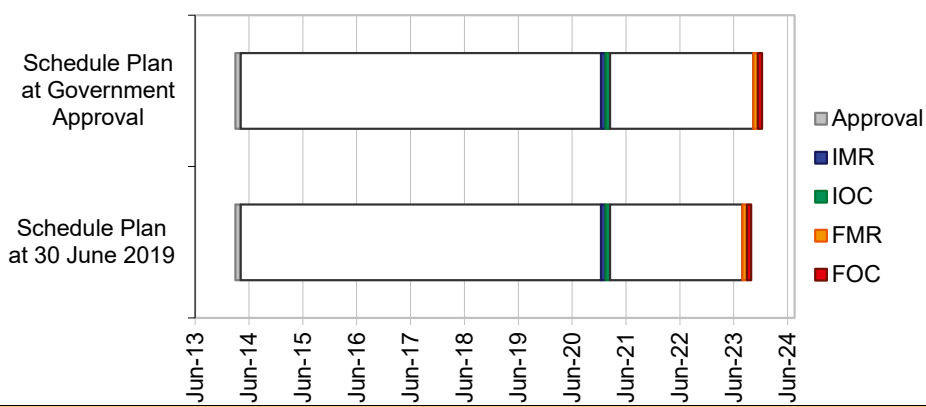
Acceptance	Accept and deliver two (LRIP 6) aircraft to US Pilot Training Centre	Mar 14	Nov 14	Nov 14	8	6
	Accept and deliver aircraft 3-14	Dec 16	Jun 19	Jun 19	30	7
	Accept and deliver aircraft 15-72	Dec 23	Sep 23	Aug 23	(4)	8
<b>Notes</b>						
1	Block 2B supported the United States Marine Corps IOC declaration which occurred on 31 July 15.					
2	Block 3i Initial Release software provides initial pilot training capability for the LRIP 6 aircraft configuration. The six month variance was due to delays in earlier software deliveries and compounded by integration into the updated computer architecture delivered in LRIP 6 aircraft.					
3	F-35 aircraft software is developed and released in capability blocks. Block 3F software is the final release under the System Development and Demonstration (SDD) phase of the program and is the requirement for Australian IOC declaration. It is noteworthy; all Block 3F software is developed to support full Australian weapons requirements, where Australia's weapons approval is dependent on US and Australian clearances.					
4	Block 3F software was fleet released August/October 17 onto late LRIP 9 US and Partner aircraft. Fleet release dates indicate software has finished development, while the release of partner nation specific loads follows with minor adjustments to meet sovereign requirements. The priority for the release of partner specific loads is driven by a nation's aircraft delivery schedules.					
5	Australia accepted its first three Block 3F aircraft March 18. Acceptance, initially planned February 18 as contracted Bed Down Plan, was delayed to remediate non-software related production issues. All new aircraft are to be accepted in Block 3F (or later) configuration.					
6	The March 14 original delivery date was based on Australian IOC in December 18. The November 14 delivery date reflects a deferral in production to align with the US re-baselining of JSF production, and verification of a new software load for LRIP 6 aircraft to assure an appropriate training capability.					
7	1) The final remaining 12 Stage 1 aircraft were originally scheduled for delivery by December 16 leading to Australian IOC in 2018. In March 10, the JSF Program experienced a Nunn-McCurdy breach of the critical cost growth statutory threshold. Based on subsequent delays to SDD completion and the US aircraft buy profile, the Australian Government initiated a two year deferral in production and IOC, with Aircraft (14) accepted in June 19. This will achieve a revised Australian IOC by December 20.					
8	2) Variance is due to the expected completion of Aircraft 72 production in July 23, resulting in Aircraft 72 early acceptance and ferry to Australia in August 23.					

3.3 Progress toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved/Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Oct - Dec 20	Dec 20	(0)	
Initial Operational Capability (IOC)	Dec 20	Dec 20	(0)	
Final Materiel Release (FMR)	Oct - Dec 23	Sep 23	(3)	1
Final Operational Capability (FOC)	Dec 23	Oct 23	(2)	2

<b>Notes</b>	
1	FMR date currently forecast as 3 months early. The driving activity for this date is the arrival of the last tranche of Australian aircraft from the US.
2	FOC date currently forecast for 2 months early. Extra month is administrative time allowance for Air Force to declare FOC post FMR.

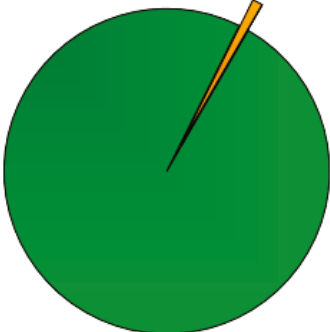
Schedule Status at 30 June 2019



**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 Delivery Capability Performance	
	<p><b>Green:</b></p> <p>The Project expects to meet the majority of capability requirements as expressed in the Materiel Acquisition Agreement and supporting suite of Capability Definition Documentation, with delivery in accordance with requirements of the relevant Technical Regulatory Authorities.</p>
	<p><b>Amber:</b></p> <p><b>AIR 6000 Phase 2A/B has options to deliver Maritime Strike capabilities in a timeframe closely following that of the United States Navy. Phase 2A/B will also continue to invest in F-35A development where available to pressure advanced Maritime Strike options open for consideration under AIR 3023 in the context of a Joint Maritime Strike strategy.</b></p>
	<p><b>Red:</b></p>
Note	
<p>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)	<p><b>Acceptance and</b> delivery of 33 aircraft to RAAF Base Williamtown between 2018 and 2020 to support Australian V&amp;V and stand-up of No.3 Squadron (SQN) and No.2 Operational Conversion Unit (<b>2OCU</b>); 3SQN facilities fully fitted, accredited, staffed and ready to support flying operations.</p> <p>Materiel delivery, V&amp;V, training, support and transition activities required for IOC completed.</p> <p>IMR is expected to be achieved October to December 20.</p>	Not yet achieved
Initial Operational Capability	<p><b>The JSF system shall, be capable of performing and sustaining one squadron capable of Defensive Counter Air (DCA), and Offensive Counter Air (OCA) roles (though not concurrently) for a 30 day period. The JSF system shall be deployable to Forward Operating Bases within Australia and Overseas. Aircraft are available to support the start of pilot training in Australia.</b></p> <p><b>Initial Operational Capability is expected to be achieved in December 2020.</b></p>	Not yet achieved
Final Materiel Release (FMR)	<p>Delivery of final aircraft between 2021 and 2023, resulting in all 72 F-35A aircraft in Australia.</p> <p><b>All aircraft will be upgraded in accordance with the Continuous Capability Development and delivery (C2D2) plan (noting that this is an ongoing program of capability enhancement.</b></p> <p>Delivery and acceptance, commissioning or contracting in Australia of the aircraft, spares, support systems, and personnel, training, weapons, equipment, contracts and facilities necessary for ongoing operations of three Operational Squadrons and one training Squadron at FOC.</p> <p>Materiel delivery, V&amp;V, training, support and transition activities required for FOC completion.</p> <p>FMR is expected to be achieved September 2023.</p>	Not yet achieved

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<b>Final Operational Capability</b>	<b>The JSF system shall, be capable of performing and sustaining three operational squadrons and one training squadron; as per strategic and capability guidance. FOC is expected to be achieved in December 2023.</b>	<b>Not yet achieved</b>
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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
There is a chance that the sustainable and airworthy system will be affected by elements of Fundamental Input to Capability (FIC) not in place, leading to an impact on the integration of F-35A enterprise systems and existing Australian Defence Force (ADF) systems.	JSF Division is to lead the proactive coordination between all organisations responsible for certifying, operating with, integrating and sustaining the F-35A Air System to exploit the full 5th generation capabilities across the ADF FIC. <b>This risk is now being managed within the Air System Delivery emergent risk.</b>
3) There is a chance that because the <b>Autonomous Logistics Information System (ALIS)</b> is so fundamental to F-35A capability it is by nature a critical vulnerability that will require ongoing development and cyber protection.	Ongoing engagement is required between JSF Information Systems staff, the <b>Joint Program Office (JPO)</b> and key stakeholders to ensure <b>Information Communication Technology (ICT)</b> systems development and integration are synchronised with the broader JSF program, including facilities. This engagement needs to include design influence and sharing of system data to support the protection of Australian networks and to meet the National systems and accreditation requirements. <b>This risk is now being managed within the Air System Delivery emergent risk.</b>
There is a chance that F-35A capabilities originally anticipated to be available will be late to Australian need resulting in a delay to, or redefinition of, capability milestones and that elements of <b>the Fundamental Inputs to Capability (FIC)</b> will not be in place to create a battleworthy system due to a failure to integrate F-35A enterprise systems and existing <b>Australian Defence Force (ADF)</b> systems.	Joint Strike Fighter Division; in consultation with the Capability Manager is to lead ADF stakeholders engagement to identify the minimum essential F-35A capabilities and their need date, ensuring their incorporation into the <b>Joint Program Office (JPO)</b> led Continuous Capability Development and Delivery (C2D2) development roadmap. Capability gaps resulting from late delivery of essential F-35A capabilities, thereby impacting battleworthiness, are to be addressed through coordinated efforts across extant ADF capabilities and systems. <b>Furthermore AIR 6000 Phase 2A/B has options to deliver Maritime Strike capabilities in a timeframe closely following that of the United States Navy, and will also continue to invest in F-35A development where available to pressure advanced Maritime Strike options open for consideration under AIR 3023 in the context of a Joint Maritime Strike strategy. This risk is now being managed within the Air System Delivery emergent risk.</b>
<b>The Australian F-35A sustainment solution may be impacted by the Joint Program Offices' (JPO) ongoing development and evolution to a mature and effective Global Support Solution (GSS), leading to an impact on Australia's GSS performance effectiveness.</b>	JSF Division will continue to engage the JPO and participate in GSS forums to ensure knowledge on programmatic issues is captured and understood. Advice to JSF DIV Senior Executives will continue to be provided, allowing them to effectively influence F-35 Enterprise decisions, where required. Australia will continue to source updates and attend forums that provide an avenue to provide consolidated national comments and feed these into future plans. JSF Division will continue to support the Joint Executive Steering Board and Autonomic Logistics Advisory Council oversight of the maturing of the GSS and will maintain close liaison with Air Combat Transition Office and Air Combat Support Program Office to monitor lower performance rates that may result in spares shortages and develop mitigation strategies as needed.

<p>There is a chance that the F-35 reprogramming enterprise will be affected by the timeliness and scope leading to an impact on capability delivery.</p>	<p>Improve understanding of technical and programmatic issues via Australian participation in initial development of the Joint Reprogramming Laboratory solution with the UK. Australia is co-chair of a steering group to manage reprogramming development; mitigation plans are being developed with steering group oversight. This participation has improved our understanding of technical and programmatic issues. While <b>Reprogramming</b> Phase 1 is an interim and limited capability, <b>Reprogramming</b> Phase 2 requirements are being developed to meet full capability needs at <b>Final Operating Capability</b>, including the need to support multiple aircraft configurations (Follow On Modernisation.) <b>This risk is now being managed within the Air System Delivery emergent risk.</b></p>
<p>4) <b>Acquisition and operation of the F-35A capability may be affected by overall funding or programming issues arising from internal cost growth / forecasting accuracy and external budget constraints, leading to an impact on capability and schedule.</b></p>	<p>JSF Division will conduct on-going engagement with the F-35 Joint Program Office and major project suppliers to facilitate improved cost data to allow the F-35 project to meet budgeting and programming expectations along with proactive management of cost risk identification and engagement with the Capability Manager to prioritise requirements to deliver project capability within the approved project budget. Acquisition and cost models will be refined with benchmarking against United States and Australian costs. Options maybe developed for Capability Manager consideration to achieve project affordability by aligning project expenditure with the Defence Integrated Investment Program capacity in any specific year.</p>
<p>The F-35 Program may not provide the required Australian industry benefit and industrial capability and capacity and targets for resulting contracts maybe delayed or not realised.</p>	<p>JSF Division will conduct coordinated activities with Defence Industry Division and maintain the close working relationship with Centre for Defence Industry Capability Defence Industry Innovation Centre, utilisation of the New Air Combat Capability program that provides financial support for industry capacity and capability growth, and JSF Division advocacy on behalf of Australian Industry with Joint Program Office, United States Prime Contractors and Original Equipment Manufacturers.</p>
<p>Failure to effectively employ and manage the maturation of Military, Government employee and supporting Defence Industry workforce may impact the effectiveness and efficiency of the Australian F-35A program.</p>	<p>The Australian F-35A program is evolving with dynamic personnel resource requirements; requiring various skills and experiences. The integrated workforce requirements are monitored and adjusted to meet the evolving project needs. The Workforce Reviews engage Defence, the Australian Public Service Workforce Planning Agencies and Industry; thereby assuring appropriate workforce coverage to meet the evolving program needs.</p>
<p>The capability requirements for an integrated 5th generation Air Force may be impacted due to delays in delivery or service release of training devices and equipment, workforce provisioning and contractual arrangements resulting in possible delays to capability outcome declarations.</p>	<p>The JSF Training System is evolving and work continues with the key stakeholders on understanding the capabilities and aligning expectations. Additional personnel have been engaged to deliver the Australian Training System and the associated support contracts. Influential representation by Defence at critical and essential Joint Program Office meetings and Periodic Technical Interchange Meetings with Lockheed Martin will burn-down the risk through persistent and consistent education.</p>
<p><b>Emergent Risks (risk not previously identified but has emerged during 2018-2019)</b></p>	
<p><b>Description</b></p>	<p><b>Remedial Action</b></p>
<p>The ongoing viability of the F-35A system to meet emerging Government direction and Air Force capability requirements may be impacted by the failure to adequately resource and manage the currently unapproved AIR6000 project phases including additional support elements and follow-on modernisation.</p>	<p>JSF Division has established the Future Phases Directorate using internal resources. The Future Phases Directorate will work with the Capability Manager's representative to prepare documentation seeking Government approval. The Futures Phases Directorate will conduct detailed engagement with Air Force Headquarters and other Air Force entities to define Scope by Phase and then provide Capability Development Documentation efforts to support Government decision of each phase.</p>

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<p>The Australian F-35 capability relies on a cohesive Joint Strike Fighter Cooperative Program to develop and sustain the F-35 system. Significant changes to the program support organisation may impact Australia's and the F-35 Partners ability to influence the program.</p>	<p>Defence will maintain cohesive working relationships with enterprise stakeholders, maintain Government to Government engagement in the program, and continue to engage in multilateral and bilateral discussions with F-35 partners, continue representation in at strategic fora and where appropriate take the lead on influencing the F-35 Partners with the Joint Program Office and a future F-35 sustainment organisation.</p>
<p>The F-35A capability may be impacted by failure to deliver air system elements to meet the capability requirements of Air Force as a result of a technical deficiency or a delay in delivery schedule. F-35A air system elements include aircraft/engine, weapons, the Autonomous Logistics Information System, the Reprogramming Enterprise and the training system.</p>	<p>JSF Division has established a risk management framework to ensure that any risks to establishing a credible air combat capability are identified and resources can be allocated to mitigate these risks to ensure these do not impact the System which is being delivered. The air system elements are monitored and controlled within the integrated master schedule and the Project Performance Review process. The inclusion of Cooperative Partner Personnel positions within the Joint Program Office will give Australia early insight into emergent potential issues. The Capability Manager is a key informed stakeholder in this process which will ensure the systems being delivered will meet Air Forces evolving capability needs.</p>
<p>Australia's standing and reputation in the international F-35 Co-operative partnership maybe compromised due to inadequate security and cyber protection leading to potential disclosure of sensitive information to potential adversaries. Stakeholders include Department of Defence, Industry, Supply Chain, USA armed forces and the F-35 enterprise.</p>	<p>JSF Division will continue to train, practice and promote efficient application of security policy, practices and procedures across the physical, information and personnel security domains and ensure that effective and appropriate mitigations are deployed to address any identified issues. Robust security compliance assurance control activities are continually conducted within Defence and our broader industry partners. In addition to the promotion and enforcement of the Defence Industry Security Program, engagement continues with Defence and Government cyber security agencies to develop an Information and Communications Technology Protection Program which would assist our industry partners.</p>

5.2 Major Project Issues

Description	Remedial Action
<p>The Maintenance Weapon Loading Small Group Try Outs were delayed as a result of schedule slip of the Weapons Load Trainer installation.</p>	<p>This issue was retired as the overall impact was limited due to Joint Program Office provision of Memorandum for Record alternate training procedure resulting in maintenance training being successfully commenced. Small Group Try Outs were executed with minimal schedule slippage.</p>
<p>The design of the F-35A ejection system has been identified as having a greater risk exposure compared to legacy ejection systems.</p>	<p>The risk reduction modification for incorporation has now been released and modifications are occurring throughout the fleet. Full fleet modification has now been achieved on Australian aircraft. There is some residual risk as Australian pilots continue to train in partner aircraft that are scheduled to be modified. This risk is now managed as part of the 'F35-A System Capability' risk in Section 5.1.</p>
<p>The proposed Continuous Capability Development &amp; Delivery (C2D2) framework increases Australia's contribution to total development costs, including infrastructure costs). Revised embodiment (forward fit / retrofit) cost estimates have not been disclosed as yet. This has produced an additional cost pressure on the AIR 6000 Ph2A/2B budget.</p>	<p>This issue has been mitigated through identification of options to deliver required capability, with lower cost pressures on project budget. The issue is being cost-planned and managed within the new Future Phases directorate as part of the 'F-35A Future Evolution' risk in Section 5.1.</p>
<p>Verification &amp; Validation events and Initial Operating Capability have been affected by the delay to software upgrades to the Full Mission Simulator.</p>	<p>Extensive engagement with the Joint Program Office, Lockheed Martin and their stakeholders was conducted; combined with consistent communication with Air Force to manage expectations, obtain guidance and assess impacts. This issue was retired and is continued to be managed as part of 'Aircrew Training Devices' risk Section 5.1.</p>
<p>The timeframe for the Follow On Modernisation upgrades have not delivered an F-35A capability that satisfies Air Force's Final Operating Capability requirements or timeframe.</p>	<p>JSF Division is working with Air Force to determine a variety of alternative options to deliver the Final Operating Capability requirements. The issue is being cost-planned and managed as in the new Future Phases directorate as part of the 'F-35A Future Evolution' risk in Section 5.1.</p>



<p>The delivery schedule for the <b>Beyond Line of Sight (BLOS)</b> communications capability does not satisfy Air Force's <b>Final Operating Capability</b> requirements or timeframe.</p>	<p>JSF Division is working with Air Force to determine an alternative option to deliver the required Final Operating Capability. <b>The BLOS capability has been deferred to a future phase of the project where it will be delivered as a common capability candidate.</b></p>
<p>Delivery of the F-35A Enterprise Architecture Management has been affected by the level of support available by for the primary software application.</p>	<p>JSF Division prioritised engagement and resolution of this issue with Directorate Technical Regulatory Architecture Group and Commonwealth Information Officer Group. <b>F-35A Enterprise Architecture workflow was adjusted to limit any significant impact to schedule or delivery of capability milestones and the issue was retired with these controls in place.</b></p>
<p>Delayed provision of Interim Contractor Support Training Workforce has affected capability milestone delivery.</p>	<p><b>JSF Division continues to work with Lockheed Martin and the Joint Program Office to establish training system support services. Interim support is being established through existing contracts and Air Combat Office Support Office are arranging follow-on contracts to meet full capability needs limiting the impact to capability delivery. This issue is being managed as part of the 'F-35A Training System' risk in Section 5.1.</b></p>
<p><b>The F-35 future sustainment affordability has been affected by an increase in through-life sustainment cost estimates.</b></p>	<p><b>The Sustainment Affordability sub project Stage 1 and Stage 2 to alleviate ambiguity and provide controls. Stage 1 delivers a Single Cost Model for future sustainment cost estimates, validated against current planned functional outcomes. The sustainment affordability activity aims to reduce the consequences of this issue by resourcing the activity with sufficient staff to ensure a new and accurate baseline is established with a model that can provide timely advice to the executive using analysed and defensible source information. Stage 2 will address efficiency considerations such as the Joint Program Office (JPO) Joint Affordability Model (JAM) as well as confidence assessments through broad scope heuristics. This issue is being closely managed within Affordability and Budget Reprogramming risk in Section 5.1.</b></p>

<p>Note</p>
<p>Major risks and issues in Section 5 are excluded from the scope of the review.</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 Testing	Project Status	8	7	7	7	8	8	7	52
	Explanation	<ul style="list-style-type: none"> <li><b>Requirement:</b> The final SDD Block 3 capability was delivered in early 2018, however elements of the support system remain to be fully proven and the additional capabilities <b>continue to be developed</b>.</li> <li><b>Technical Understanding:</b> The JSF Air System is an extremely complex weapon system that will drive significant change in how Australia supports and conducts air combat operations. The initial air vehicle design is mature with Critical Design Review completed in 2006 and the final SDD Block 3 capability delivered in early 2018. However elements of the support system remain to be fully proven and the additional capabilities are in development. The risks and issues experienced to date are not unexpected in a development program of this complexity.</li> <li><b>Operations and Support:</b> The Global Support Solution <b>continues to be developed by the Joint Strike Fighter Program Office</b>, with significant oversight from the JSF Executive Steering Board. Australia is progressively developing its own sovereign plans for operating and supporting the F-35A capability. This includes ongoing cost modelling <b>and analysis</b> to better understand operating and support <b>costs through the life of type of the Australian F35A</b>.</li> </ul>							

Milestone	MPR Score
Enter DCP	13
Decide Viable Capability Options	16
1st Pass Approval	21
Industry Proposals / Offers	30
2nd Pass Approval	35
Contract Signature	42
Preliminary Design Review(s)	45
Detailed Design Review(s)	50
Complete Sys. Integ. & Test	58
Complete Acceptance Testing	57
Initial Material Release (IMR)	60
Final Material Release (FMR)	63
Final Contract Acceptance	65
MAA Closure	66
Acceptance Into Service	67
Project Completion	70

2017-18 MPR Status - - - - -	2018-19 MPR Status - - - - -
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## Section 7 – Lessons Learned

### 7.1 Key Lessons Learned

Description	Categories of Systemic Lessons
JSF is a complex program that requires a robust Program Management framework to be established early in the life of the program lifecycle.	Governance
JSF is a collaborative program that requires active engagement to ensure national requirements are met.	Requirements Management
JSF Production, Sustainment and Follow-on Development Memorandum of Understanding is run by the Joint Program Office and it is difficult to predict cost, schedule and associated budgeting impact on ADF processes and procurement.	Governance
Integration of JSF into ADF systems of systems has been underestimated.	Requirements Management
The collaborative environment of the JSF program introduces additional stakeholder complexity due to the engagement of the nine partner nations.	Governance
Allowing industry to come up with innovative solutions, without the Commonwealth being too prescriptive in requirements definition, can provide improved outcomes. Through the Turbine Engine Maintenance Facility negotiations TAE came up with a proposal to renovate a disused Masters hardware facility rather than building a new facility on a green field site. This resulted in significant schedule reduction.	Requirements Management
The disadvantages of conducting staged facility handover / takeover (HOTO) activities outweigh the advantages. Traditional HOTO activities should be conducted.	Requirements Management
Having a dedicated ICT SME team (CIOG) embedded within the Project Office was a significant contributor to reducing ICT risks.	Requirements Management
The ongoing sustainment costs of ICT intensive projects is expensive - hardware refresh, software licensing, upgrades, personnel (administrators) - and cannot be underestimated.	Requirements Management

## Section 8 – Project Line Management

### 8.1 Project Line Management as at 30 June 2019

Position	Name
Division Head	AVM Leigh Gordon
Branch Head	AIRCDRE Damien Keddie
Project Director	GPCAPT Guy Adams
Project Director	WGCDR Steve Unwin (Acting)
Project Director	GPCAPT Rodney Srinivasan

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