Project Data Summary Sheet[144]

Project Number	JP 2008 Phase 5A
Project Name	**INDIAN OCEAN REGION UHF SATCOM**
First Year Reported in the MPR	2010-11
Capability Type	Upgrade
Acquisition Type	MOTS
Capability Manager	**Deputy Chief Information Warfare**
Government 1st Pass Approval	Mar 09
Government 2nd Pass Approval	Mar 09 and Mar 10
Budget at 2nd Pass Approval	**$460.9m**
Total Approved Budget (Current)	**$419.9m**
2017–18 Budget	**$17.4m**
Project Stage	Detailed Design Review
Complexity	ACAT II

Section 1 – Project Summary

1.1 Project Description

This Project will provide the Australian Defence Force (ADF) with twenty 25kHz UHF SATCOM channels on a hosted payload on a commercial Intelsat Satellite (IS-22), to provide coverage of the Indian Ocean Region, and associated ground infrastructure to provide network control.

1.2 Current Status

Cost Performance

In-year

As at **the end of June 2018, the project is recording an underspend of $9.2m against a planned FY 2017/2018 Budget of $17.4m. This was due to delays in achieving Contract Milestones for Software Deployment Readiness Review (SDRR) and Test Readiness Review (TRR) and subsequently Stop Payment under the provisions of the Viasat contract have been imposed.** This **has also resulted in Contract Milestones being rescheduled; resulting from delay in delivery of Government Furnished Materiel and prolonged development of Mission System software.**

Project Financial Assurance Statement

As at **30 June 2018**, project JP 2008 Phase 5A has reviewed the approved scope and budget for those elements required to be delivered by the project. Having reviewed the current financial and contractual obligations of the project, current known risks and estimated future expenditure, Defence considers, as at the reporting date, there is sufficient budget **including contingency** remaining for the project to complete against the agreed scope.

Contingency Statement

The project has applied contingency in the financial year primarily for the treatment of project risks that relate to independent software review and actions that support the system security accreditation.

Schedule Performance

The IS-22 satellite was successfully launched on 25 March 2012. Materiel Release (MR) for the Indian Ocean Region was achieved on 21 December 2012. In May 2012, additional Network Control System (NCS) design review and test and evaluation milestones were added to the project. In December 2013 a Contract Change Proposal (CCP) was signed causing Final Materiel Release (FMR) for the NCS to move to September 2014. CCP2 was signed in December 2015 after Viasat experienced delays in software development which resulted in a further slip to FMR (NCS), forecast to be achieved in April 2018 (49 months behind schedule). To minimise the capability impacts caused by the schedule delays, CCP2 introduced two new milestones; the NCS Manager Software Readiness Review (NSWRR) and Software Deployment Readiness Review (SDRR).

CCP3 was signed in March 2017 to introduce architectural enhancements to the NCS supporting security requirements.

---

144 Notice to reader

In August 2017, delay in the provision of Government Furnished Material triggered the need to raise CCP4. After a number of technical workshops and capability delivery discussions, the Contractor provided a revised schedule in April 2018, which indicated that the Contractor will be a further ten months late with their software development. Since April 2018, the parties have engaged in evaluation and negotiation of a revised delivery baseline (addressing both contracted schedule and scope), taking into account both the delays in provision of GFM and the Contractor's software development.

Materiel Capability Delivery Performance

The IS-22 satellite is currently meeting all performance measures, including:

- the hosted payload; and
- the Communications System Monitor (CSM).

The NCS contract was executed on 16 May 2012, factoring United States (US) requirements of Defense Information Systems Agency and Space and Naval Warfare System Command. The implementation strategy was reported to Government. The Integrated Waveform (IW) NCS is the largest remaining scope to be delivered. An issue with the modification of Commercial Off The Shelf (COTS) software caused delay. While the COTS software that is being modified is currently used in other defence departments around the world, it is now considered developmental for this project. To partially mitigate the impact of the delay, part of the final deliverable, IW will be introduced under an interim capability state.

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

1.3 Project Context

Background

The JP 2008 Phase 5 project was created to provide capability originally planned for under the JP 2008 Phase 4 Next Generation SATCOM Capability project (a result of Phase 4 of the project being re-scoped to provide access to the Wideband Global Satellite (WGS) capability).

UHF SATCOM provides critical tactical radio coverage over the Middle East Area of Operations. Coverage was provided by leases on two commercial satellites and channels loaned by the US Government on an availability basis, which proved to be significantly less than the capability needed by the ADF. This project was also formed on the basis that LEASAT 5 would reach end of life in 2011.

A market survey was conducted in September 2008 to inform cost and capability options for JP 2008 Phase 5A. It revealed an opportunity for Defence to host a payload on an Intelsat commercial satellite over the region in mid 2012. A Restricted Request For Tender was subsequently let to ten companies for the capability in November 2008 and Intelsat was selected as the preferred tenderer.

Combined first and second pass Government Approval was given in March 2009 and a contract was signed with Intelsat for eight 25 kHz channels and 15 years support in April 2009.

First pass Government approval was given for the project to pursue a Memorandum Of Understanding with the US to provide global UHF SATCOM coverage using US satellites in return for access to ten 25 kHz channels on IS-22.

A subsequent second pass approval was given in March 2010 which allowed the project to procure the full payload on IS-22.

With the signature of the NCS contract with Viasat Inc in May 2012, additional design review and test and evaluation milestones were added to the project. Additional software readiness reviews NSWRR and SDRR were introduced as well as an Interim Capability state that will introduce IW. These milestones relate to the development and procurement of the UHF Channel Control System.

Uniqueness

The contract with Intelsat is based on the standard ASDEFCON template; however, it required significant tailoring based on input from specialist space lawyers. There are also a number of unique aspects to a contract for a satellite, including the unusual risk profile of the Launch and the corresponding high degree of schedule uncertainty which is typical of a satellite program where product quality requires a high priority.

A UHF Channel Control system was designed and developed to meet the requirements of Australian and US forces.

Major Risks and Issues

The timeframe for building works at HMAS Stirling that would impact the project's installation timeframes has been established. The timeframe is assessed as not impacting the project's installation timeframes; however, the risk will remain under ongoing watch.

There is an emergent risk that the Project Office may exhaust contingency before the final delivery of the program. In the past twelve months the Project has undergone schedule slippage and therefore will not achieve delivery of capability under the approved timeframes of the remaining two Operational Capability releases.

Other Current Sub-Projects

JP 2008 Phase 3E Advanced SATCOM Terrestrial Infrastructure System: This project provides the supporting ground infrastructure for Satellite Communications including UHF, X and Ka band communication services.

JP 2008 Phase 3F ADF SATCOM Terrestrial Enhancements: This project will provide the mature Australian anchoring capability for the WGS constellation.

JP 2008 Phase 4 Next Generation SATCOM Capability: This project provides WGS capability.

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

Section 2 – Financial Performance

2.1 Project Budget (out-turned) and Expenditure History

Date	Description	$m	Notes
	Project Budget		
Feb 09	Original Approved	4.0	
Apr 09	**Government Initial Second Pass Approval**	269.1	
Apr 10	**Government Subsequent Second Pass Approval**	187.8	1
	Total at Second Pass Approval	**460.9**	
Jun 14	Real Variation – Real Cost Decrease	(18.0)	2
Jul 10	Price Indexation	18.0	3
Jun 18	Exchange Variation	**(41.0)**	
Jun 18	**Total Budget**	**419.9**	
	Project Expenditure		
Prior to Jul 17	Contract Expenditure – Intelsat	(294.4)	
	Contract Expenditure – Viasat	**(28.9)**	4
	Other Contract Payments / Internal Expenses	**(30.7)**	
	Adjustment due to movement from Accrual to Cash	**0.9**	
		(353.1)	
FY to Jun 18	Other Contract Payments / Internal Expenses	**(8.2)**	5
		(8.2)	
Jun 18	**Total Expenditure**	**(361.3)**	
Jun 18	**Remaining Budget**	**58.6**	

Notes	
1	The Initial Second Pass Approval was for eight channels and the Subsequent Second Pass Approval was for the remaining channels of the hosted payload.
2	Real Cost Decrease was a result of Project Office negotiating insurance for payload launch into the contract. Separate launch insurance is no longer needed.
3	Up until July 2010, indexation was applied to project budgets on a periodic basis. The cumulative impact of this approach was $16.5m. In addition to this amount, the impact on the project budget as a result of out-turning was a further ($19.6m) having been applied to the remaining life of the project. For this project, that process was incorrectly executed but corrected in January 2012 by returning $30.9m to the budget; $21.1m and $9.9m for impacts of price and exchange variations respectively.
4	This contract was in Stop Payment from July 2014 to December 2015 **and from December 2017 with this ongoing**.
5	**The main contributor to this spend is SME Purchases ($8.2m)**

2.2A In-year Budget Estimate Variance

Estimate PBS $m	Estimate PAES $m	Estimate Final Plan $m	Explanation of Material Movements
22.3	**19.1**	**17.4**	**PBS to PAES: Underspend due to delay in completing contract milestones.** **PAES to Final Plan: There has been a requirement for Contract Milestones to be rescheduled due to the delay in delivery of Government Furnished Materiel and prolonged development of Mission System software.**
Variance $m	**(3.2)**	**(1.7)**	Total Variance ($m): **(4.9)**
Variance %	**(14.3)**	**(8.9)**	Total Variance (%): **(22.0)**

2.2B In-year Budget/Expenditure Variance

Estimate Final Plan $m	Actual $m	Variance $m	Variance Factor	Explanation
			Australian Industry	
			Foreign Industry	
			Early Processes	
		(9.2)	Defence Processes	
			Foreign Government Negotiations/Payments	
			Cost Saving	

			Effort in Support of Operations	**Figures are as per the end of June 18. Current underspend is due to delay in achieving the Contract milestones, Software Deployment Readiness Review (SDRR) and Test Readiness Review (TRR); remaining milestones have slipped to FY18/19 and FY19/20.**
			Additional Government Approvals	
17.4	8.2	(9.2)	**Total Variance**	
		(52.8)	**% Variance**	

2.3 Details of Project Major Contracts

Contractor	Signature Date	Price at		Type (Price Basis)	Form of Contract	Notes
		Signature $m	30 Jun 18 $m			
Intelsat	Mar 09	202.5	294.4	Firm	ASDEFCON (COMPLEX)	1, 3
Viasat	May 12	36.5	46.3	Firm	ASDEFCON (COMPLEX)	2, 3

Notes	
1	The increase in contract price is due to a Contract Change Proposal in 2010 which included 12 additional hosted UHF payload channels and a Communications System Monitor. The contract was transferred to Sustainment for support of the CMS in April 2014.
2	CCP2, approved in December 2015, was a nil cost CCP, related to the redevelopment of the NCS design. CCP3, approved in March 2017, increased the Viasat Contract Price.
3	Contract value as at 30 June 2018 is based on actual expenditure to 30 June 2018 and remaining commitment at current exchange rates, and includes adjustments for indexation (where applicable).

Contractor	Quantities as at		Scope	Notes
	Signature	30 Jun 18		
Intelsat	8	20	25kHz UHF SATCOM channels on IS-22 Hosted Payload	
Viasat	N/A	N/A	NCS comprising three channel control sites, and a Test and Training System for support.	

Major equipment received and quantities to 30 Jun 18
All 20 channels were delivered successfully on 25 May 2012 and are now operational.

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	IS-22 Hosted Payload	Jun 09	N/A	Jun 09	0	
	NCS	Aug 12	N/A	Aug 12	0	
Preliminary Design	IS-22 Hosted Payload	Nov 09	N/A	Oct 09	(1)	
	CSM	Oct 10	N/A	Nov 10	1	1
Critical Design	IS-22 Hosted Payload	Sep 10	N/A	Sep 10	0	
	CSM	Mar 11	N/A	Mar 11	0	
	NCS	Mar 13	N/A	Mar 13	0	
NCSM Software Readiness	NCS	Jul 16	N/A	**Oct 18**	**27**	2, 3
Software Deployment Readiness	NCS	May 17	N/A	**Jan 19**	**20**	2, 3

Notes	
1	The review was conducted in October 2010 but approval by the Project Office did not occur until November 2010 due to a number of issues with requirements traceability that required rectification.
2	Additional milestones introduced following the signing of CCP2 in December 2015.
3	Review re-scheduled under CCP3 signed in March 2017. **Delay to NCSM Software Readiness and Software Deployment Readiness milestones result from delay in delivery of Government Furnished Materiel at August 2017 and ongoing software development Review dates to be re-scheduled as an outcome of CCP4 negotiations.**

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	IS-22 Hosted Payload	Nov 10	N/A	Feb 11	3	1
	CSM	Sep 11	N/A	Oct 11	1	2

	NCS	Nov 13	Sep 14	**Sep 19**	**70**	3,**5**
Acceptance	IS-22 Hosted Payload	Jun 12	N/A	May 12	(1)	
	CSM	Jul 12	N/A	Jun 12	(1)	
	NCS	Mar 14	Sep 14	**Oct 19**	**67**	3,4,**5**

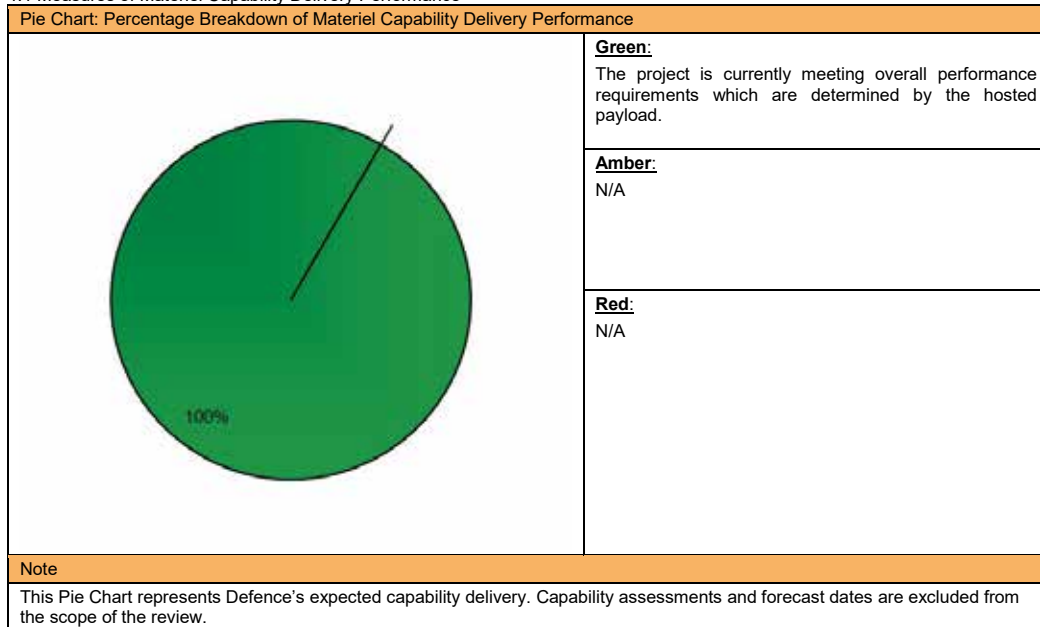| Notes	
1	Delay to commencement of integration was driven by a number of delays in sub system deliveries forming part of the hosted payload including C and Ku antennas (not forming part of this capability) and the UHF antenna.
2	While installation commenced in September 2011, testing to confirm that the installation met requirements was completed in October 2011.
3	In February 2014 Viasat advised the Commonwealth of software design delays affecting the NCS schedule. In February 2015 Viasat advised the Commonwealth of their decision to take on elements of work previously contracted to their sub-contractor and continue the software development in house. Variance is a result of software design delays captured in CCP2 signed in December 2015.
4	In March 2017 the Commonwealth signed CCP3 with Viasat for improvements to the network architecture the inclusion of GFM into the NCS.
5	**Delay to NCS System Integration and Acceptance milestones result from delay in delivery of Government Furnished Materiel and software development at August 2017.**

3.3 Progress Toward Materiel Release and Operational Capability Milestones

Item	Original Planned	Achieved /Forecast	Variance (Months)	Notes
Initial Materiel Release (IMR)	Jul 12	Jul 12	0	
Initial Operational Capability (IOC)	Jul 12	Jul 12	0	
Materiel Release (MR) # 1 (Indian Ocean)	Sep 12	Dec 12	3	1
Operational Capability (Indian Ocean)	Sep 12	**Sep** 18	**72**	**5**
Final Materiel Release (FMR) # 2 (Network Control System)	Mar 14	**Dec 19**	**69**	2
Final Operational Capability (FOC) (Pacific Ocean)	Jun 18	**Mar 20**	**21**	3, 4

Notes	
1	MR was claimed on 28 September 2012. Chief Information Officer Group (CIOG) requested additional information which was supplied and MR was achieved on 21 December 2012.
2	Software delays noted in Section 3.2 Note 3 impacted FOC; however, the magnitude of the delay is yet to be determined.
3	CIOG will be in a position to acquire agreed UHF capacity from the US as their capacity builds up in the region. A review of project submission documents to Government highlighted the omission of some key milestone dates in the PDSS.
4	FOC (Pacific Ocean) is scheduled to be delayed due to FMR#2 being re-scheduled to **December** 2019.
5	**FMR IOR was claimed on 28 September 2012; the ADF has been fully utilising the capability defined under the Operational Capability Indian Ocean (OC IOR) milestone since this time. Absence of an appropriate Technical Regulatory Framework (TRF) has limited the project to fully meet the Material Acquisition Agreement requirements. The project has amalgamated outstanding OC IOR actions with an interim capability state defined by CIOG to be claimed in September 2018.**

Schedule Status at 30 June 2018

Schedule Plan at Government Approval	
IMR/FMR Introduced in FY 2010-11	
Schedule Plan at 30 June 2018	

Legend:
- Approval
- ▪ MR
- ▪ OC
- ▪ FMR
- ▪ FOC

Note
Forecast dates in Section 3 are excluded from the scope of the review.
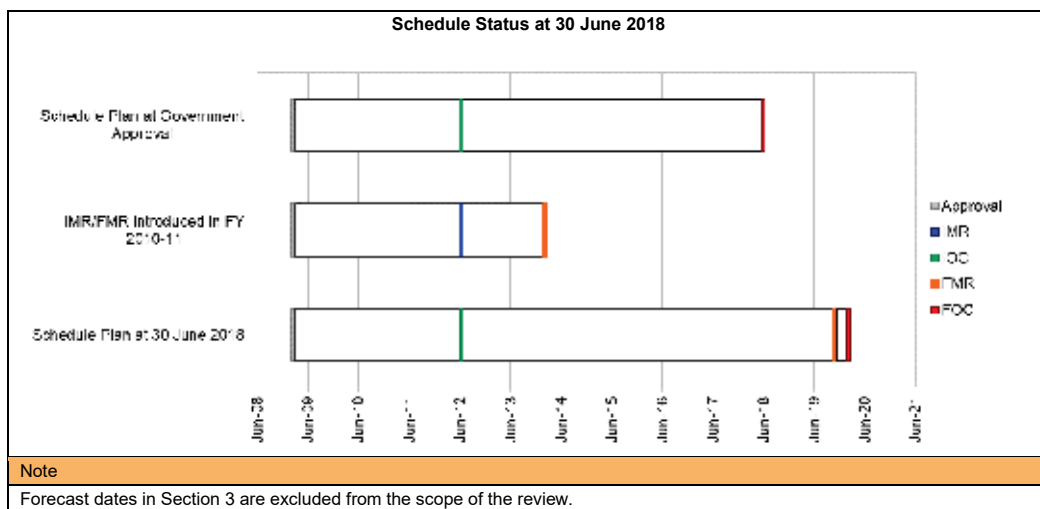
Section 4 – Materiel Capability Delivery Performance

4.1 Measures of Materiel Capability Delivery Performance

Pie Chart: Percentage Breakdown of Materiel Capability Delivery Performance	
100%	**Green**: The project is currently meeting overall performance requirements which are determined by the hosted payload.
	Amber: N/A
	Red: N/A

Note
This Pie Chart represents Defence's expected capability delivery. Capability assessments and forecast dates are excluded from the scope of the review.

4.2 Constitution of Initial Materiel Release and Final Materiel Release

Item	Explanation	Achievement
Initial Materiel Release (IMR)	1. In Orbit Test of hosted payload 2. IMR was achieved in July 2012	Achieved
Final Materiel Release (FMR #1)	1. 20 channels on a UHF Hosted Payload, including Operational Support Services for life-of-type in place, telemetry feed operational and initial training for telemetry feed 2. Upgrade of legacy NCS 3. CSM and initial training for CSM 4. FMR#1 was achieved in December 2012	Achieved
Final Materiel Release (FMR #2)	1. NCS comprising three channel control sites, and NCS/NCS Manager (IW) training package 2. FMR#2 is forecast to be achieved in **December** 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**
There is a risk that the Final Capability installations will be delayed at Defence Communication Station – Perth as it has been identified the building's roof is damaged and requires replacement. This may result in delay in delivering the UHF NCS.	**The program to undertake works has not been established; although it has been identified it will not occur during the project's installation periods.**
There is a risk that current facilitates are not fit for purpose or do not comply with Building Safety Regulations.	The Project Office established a project safety case report that identified a series of risks for remediation. **Activities are progressing to remediate current risks through existing maintenance support Contracts available within Defence.**
Emergent Risks (risk not previously identified but has emerged during 2017-18)	
Description	**Remedial Action**
There is an emergent risk that the Project Office may exhaust contingency before final delivery of the program. This has been identified as there is delay in delivery of supplies under the Viasat Contract whilst the project has been required to maintain a contracted workforce.	**The Project Office is re-baselining the Viasat contract that will underpin future costing requirements, enabling the program to develop strategies to work within current budgetary constraints.**

5.2 Major Project Issues

Description	Remedial Action
The project has undergone schedule slippage, causing delay in achieving the program's remaining operational milestones.	**A Project Control Board (PCB) was established to review the outstanding capability requirements of the program against schedule and remaining budget. Outcomes of the PCB are being used as the basis to negotiate a contract change proposal with Viasat Inc. Outcomes of the negotiation will be used in a proposal to for Government approval to extend the Operational Release milestone the Final Operational Capability (FOC) (Pacific Ocean).**
Note	
Major risks and issues in Section 5 are excluded from the scope of the review.	

Section 6 – Project Maturity

6.1 Project Maturity Score and Benchmark

Maturity Score		Attributes							
		Schedule	Cost	Requirement	Technical Understanding	Technical Difficulty	Commercial	Operations and Support	Total
Project Stage	Benchmark	7	7	7	8	7	7	7	50
Detailed Design Review	Project Status	6	8	8	7	6	6	7	48
	Explanation	**Schedule:** The schedule for the NCS has slipped **70** months. **Cost:** IS-22 and the NCS are on firm fixed price contracts. Overall costs have increased due to additional work required by the Project Office following signing of CCP2 and CCP3. **Requirement:** IS-22 has been launched and the NCS is expected to fulfil requirement. **Technical Understanding:** Interim operation and support of the capability has been established with a long term Through Life Support contract to be established. **Technical Difficulty:** Core software product previously under development with sub-contractor has ceased. Software development has restarted with Prime Contractor using alternative base product. **Commercial:** Services are being delivered as contracted.								

| 2016-17 MPR Status - - - - | 2017-18 MPR Status - - - - |
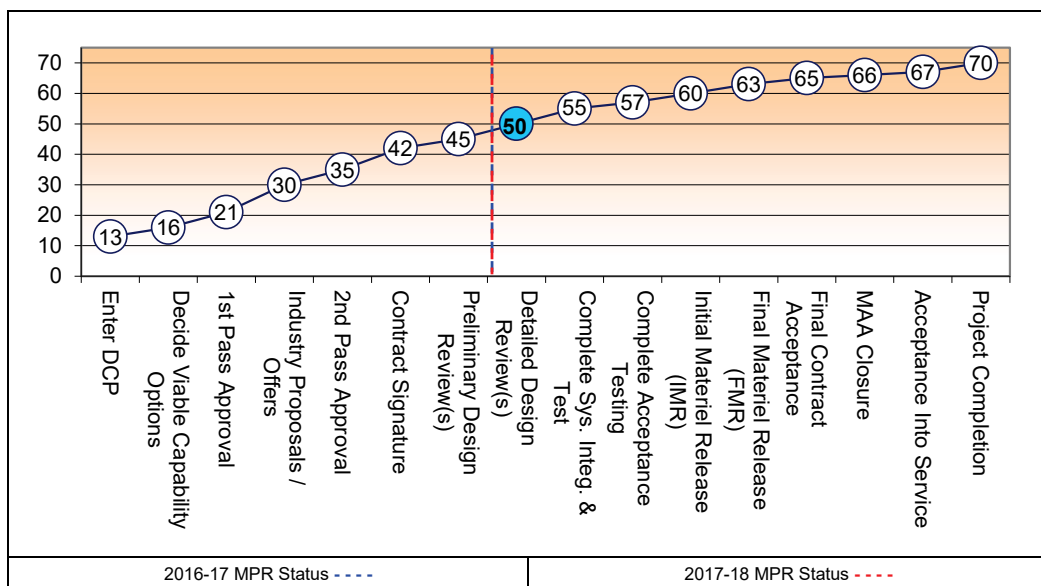
Section 7 – Lessons Learned

7.1 Key Lessons Learned

Project Lesson	Categories of Systemic Lessons
N/A	N/A

Section 8 – Project Line Management

8.1 Project Line Management in 2017-18

Position	Name
Division Head	RADM Anthony Dalton (to Aug 17) Mr Ivan Zlabur (Sep 17 – Current)
Branch Head	Ms Myra Sefton
Project Director	Ms Michelle Liu-Aves
Project Manager	Mr David Dixon