

## Part 2. Defence Major Projects Report



## Secretary's Foreword

I am pleased to provide the 2019-20 Major Project Report, which reports on 25 Defence major capability acquisition projects, delivered by the Capability Acquisition and Sustainment Group.

The 13th annual Major Projects Report provides transparency on the progress of Defence's most expensive and complex acquisition projects. The Major Projects Report is a valuable tool to inform the Parliament and Australian public on Defence capability and related expenditure.

The 2019-20 reporting year has been a challenging year for much of Australia. Defence is proud of the way in which the Australian Defence Force, Australian Public Servants and our Industry partners have responded in the face of unprecedented natural disasters and the COVID-19 pandemic. Collectively, Defence and Defence Industry have shown strong resilience and adaptability to maintain capability delivery at a high operational tempo, and remain postured to manage the risks associated with further COVID-19 impacts on supply chains.

On 1 July 2020, Defence released the *2020 Defence Strategic Update* and the *2020 Force Structure Plan*. The *2020 Defence Strategic Update* sets out the challenges in Australia's strategic environment and their implications for Defence planning. The *2020 Force Structure* includes adjustments to Defence capability investments and provides Government with more flexibility to deliver the new strategic objectives.

Defence is committed to acquiring major capabilities such as the Attack Class submarines, Hunter Class frigates and the Joint Strike Fighter. As of 30 June 2020, Defence was managing 192 major acquisition projects with a total acquisition value of \$130.5 billion. This significant investment in defence capabilities will flow to Australian industry, creating jobs and building skills. Defence is investing in an Australian Industry Capability (AIC) program to create a more durable supply chain and strengthened sovereign defence industrial base.

The 25 projects within the 2019-20 Major Projects Report have a combined total approved budget of \$78.6 billion and a total in-year budget of \$6.1 billion. The following 2019-20 project achievements support the delivery of important capability for the Australian Defence Force:

- Joint Strike Fighter – As at 30 June 2020, Australia's total Joint Strike Fighter fleet included 26 aircraft – 21 of which were in Australia, with the remaining five located in the Pilot Training Centre in the US. In the 2019-20 financial year, Australia accepted 12 aircraft. A further four aircraft have been accepted since 30 June 2020, bringing the total Australian fleet to 30.
- Pacific Patrol Boat Replacement program – in 2019-20, three vessels have been delivered to Samoa, Solomon Islands and Fiji. Since 30 June 2020 the program has delivered a vessel to Palau and a vessel to Tonga, bringing the total number of vessels so far gifted to Pacific Island partners to eight.
- In April 2020, HMAS *Sydney* was commissioned at sea and all three Hobart Class destroyers have now been delivered to Navy.

I would like to take the opportunity to thank the Auditor-General, Mr Grant Hehir, and his staff for their contribution to the report.



Greg Moriarty

Secretary

Department of Defence

20 November 2020

## Overview

As at 30 June 2020, Capability Acquisition and Sustainment Group (CASG) was managing 192 major and 14 minor acquisition projects at various phases in the Capability Life Cycle, worth a total acquisition cost of \$130.5 billion and a 2019-20 budget of \$8.7 billion. During this period eight major and minor acquisition projects were closed.

The Major Projects Report (MPR) outlines 25 projects, delivered by the Capability Acquisition and Sustainment Group (CASG), with a total acquisition cost of \$78.7 billion. This accounts for 60 per cent of CASG projects by total budget.

## Key Achievements

Despite a challenging second half of the 2019-20 period, major projects and their contractors have worked together to progress the delivery of important capability to the Australian Defence Force (ADF). There have been a number of key achievements for MPR projects including:

- The delivery of 12 F-35A Joint Strike Fighter aircraft.
- The announcement that Government had approved the acquisition of a third Triton air vehicle.
- A comprehensive response to Operation Bushfire Assist 2019-2020 that included six prime Australian Industry partners and numerous subcontractors to support the use of 14 ADF Aerospace platforms to support the activities in five Australian states and territories. Of note the MRH-90, P-8A Poseidon and C-27J Spartan aircraft were integral to the Defence Joint Task Forces conducting bushfire operations.
- The operational availability of the Collins Class submarines has been sustained at levels exceeding international benchmarks.
- Initial Operational Capability (IOC) has been declared for the Medium and Heavy fleet of next-generation logistics vehicles, modules and trailers.

Defence has demonstrated strong commitment to support Australian Industry affected by COVID-19 through the following:

- Establishing a dedicated Defence industry support cell to assist Industry manage COVID-19 related matters.
- Rapid invoice and accelerated payments to suppliers to help mitigate economic impacts of COVID-19 on defence industry, that in turn were flowed down through the supply chain, focussed on Australian businesses.
- Providing appropriate relief to contractors in circumstances of demonstrated adverse effects as a result of the COVID-19 crisis on the supply of labour, equipment, materials or services required to meet current contractual obligations.
- Migrating Australian Industry engagement for future programs and projects to online sessions.
- The engagement of 37 former Qantas and Virgin Australia staff by Northrop Grumman Australia in support of the C-27J Spartan capability.
- The first 18 shipbuilding apprentices will join the Hunter Class frigate program in South Australia's Osborne Naval Shipyard in Jul 20. These apprentices are the first of the estimated 1000 apprentices and graduates to be employed by ASC Shipbuilding over the life of the program.

## Governance, Audit and Continuous Improvement

Major capability acquisition and sustainment activities and their performance metrics are agreed upon between Capability Managers and CASG, and are subsequently documented in Materiel Acquisition Agreements and Materiel Sustainment Agreement Product Schedules. The effectiveness of the reporting relies on timely execution of these agreements and an annual review to ensure key performance measures remain fit for purpose.

Two Key Acquisition Projects, in the early stage of the Capability Life Cycle, have been included for the first time in the MPR at the request of the Joint Committee of Public Accounts and Audit (JCPAA). The Hunter Class Frigates (SEA 5000 Phase 1) and Attack Class Submarines (SEA 1000 Phase 1B) are both in the design stages with capability requirements being refined and as such no materiel scope delivery has been approved.

### Key Findings from Audits

Audit recommendations are proposed when a behaviour, process or system is found to not be working as intended or where an improvement to a behaviour, process or system has been identified. Achieving organisational goals is dependent on its capacity to manage risks, maintain compliance with regulations, and be open to continuous improvement and innovation.

In 2019-20, the Auditor-General published eight performance audit reports and one priority assurance review (2018-19 MPR). A number of themes have developed from recent ANAO audits that are relevant to Defence including:

- Reviewing lessons learned, specifically timeliness, objectivity, completeness and implementing necessary changes.
- The importance of having multiple bidders during the negotiation stage of an open tender process to encourage competition and drive Value for Money.
- Manage risks associated with conducting sole-sourced tenders and engaging with single tenderers, including ensuring contracts represent Value for Money.
- Whether performance measures are relevant, reliable and complete, and support accurate assessment of progress.
- Evaluation is a critical element of establishing accountability for project, program or activity performance against objectives, and providing insight to ensure ongoing improvement in program impact.
- Establish the evaluation approach and framework during the design phase.
- Planning and negotiating complex procurements and contracts.

### Entry to and exit from the 2019-20 Major Projects Report

Of the 25 projects included in this report, 20 projects have carried over from last year's report. Six projects have been removed because they achieved Final Operational Capability (FOC) or were considered low risk in achieving final deliverables:

- SEA 1448 Phase 2B – ANZAC Anti-Ship Missile Defence
- JP 2072 Phase 2A – Battlespace Communications System (Land)
- JP 2048 Phase 4A/4B – Amphibious Ships (LHD) (LHD Ships)
- JP 2048 Phase 3 – Amphibious Watercraft Replacement (LHD Landing Craft)
- AIR 7403 Phase 3 – Additional KC-30A Multi-role Tanker Transport
- JP 9000 Phase 7 – Helicopter Aircrew Training System

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Five projects are new inclusions to the MPR:

- SEA 1000 Phase 1B – Future Submarine Design Acquisition
- SEA 5000 Phase 1 – Future Frigates
- AIR 7000 Phase 1B – MQ-4C Triton Remotely Piloted Aircraft System (Triton)
- LAND 400 Phase 2 – Mounted Combat Reconnaissance Capability
- Land 200 Tranche 2 – Battlefield Command System

The Australian Government is embarking on the largest ever peace time upgrade to our defence capabilities. A continuous ship building program will deliver 54 new vessels, including nine Future Frigates and 12 Attack class submarines. SEA 5000 Phase 1 and SEA 1000 Phase 1B are the largest naval ship building projects ever undertaken in Australia. Whilst following the principles of Defence's Capability Life Cycle, the complexity, longevity and staged nature of the projects require a unique approach to project management. These are extremely large and complex projects that are and will continue to generate interest.

Appendix 1 lists the projects that have been removed from the report since its inception including the reason for their removal, and expenditure to date as at 30 June 2020.

The project additions and removals are based on the MPR Guidelines that were endorsed by the JCPAA in September 2019 and are published in Part 4 of this report.

## Overall Annual Performance

Overall, performance of the Department's major capital equipment program in the 2019-20 financial year is commendable, particularly under such extraordinary circumstances.

Aside from the individual project performance, collectively Defence and Defence Industry have proven an exceptional level of resilience and adaptability to maintain capability delivery at a high operational tempo. The strong level of support given to Operation Bushfire Assist 2019-2020 and the ongoing mitigation of emerging risks and issues throughout the pandemic demonstrates the high calibre of the project management professionals in the organisation and the robust processes and controls that enable them.

In respect of the 192 major acquisition projects managed by CASG in 2019-20:

- achieved the budget of \$8.7 billion.
- Seven projects achieved IOC, six of these were on time or ahead of the delivery schedule.
- Twelve projects achieved FOC, four achieved on time delivery in accordance with second pass approval.

Where schedule slippage has occurred, CASG is working with the Capability Managers to manage any impacts.

Overall, performance of the Department's major capital equipment program in the 2019-20 financial year is strong. As at 30 June 2020, two of the 192 Government approved major equipment projects had issues with capability, schedule or cost which were significant enough to be managed as Projects of Concern. A further 15 projects were identified as Projects of Interest, with risk associated with capability, schedule or cost that warrant further attention from internal Defence line management and senior executives.

The performance of the 25 MPR projects over the 2019-20 period has been largely consistent with the overall performance of the 192 major equipment projects:

- One Project of Concern and seven Projects of Interest.
- Four projects report in year schedule slippage of between two and six months. Nine projects report on track to meet FOC by original forecast date.
- Most projects have largely met in year budget, with 14 projects reporting an over/underspend within 10% of the actual in year budget. The remaining 11 MPR projects reported variances of between 11 and 48 per cent.

### COVID-19 Impacts on MPR projects

The full COVID-19 impacts on Defence's contracts are still being assessed under the evolving COVID-19 circumstances overseas. For those projects impacted, current delay is in the order of three to six months. Defence has continued to respond to COVID-19 impact on industry through its implementation of Recovery Deeds to enable focus on delivery. For each contract affected by COVID-19, the Contractor will generate a Recovery Plan which will set out how they propose to address the COVID-19 impacts on the contract. These Recovery Plans will, in conjunction with any necessary evidence, be used to inform Defence about any contract changes that will need to be effected.

## Defence Strategic Environment

### 2020 Defence Strategic Update and 2020 Force Structure Plan

The *2020 Force Structure Plan* sets out adjustments to Defence capability plans. It builds on investments made in the *2016 Defence White Paper* in response to rapid changes in the global strategic environment. The Force Structure Plan is the product of a more regular review of Defence policy settings.

Concurrent with the development of the Force Structure Plan, the Department developed the 2020 Defence Strategic Update. The Strategic Update sets out the Government's new defence strategy, with three key objectives at its core: to **shape** Australia's strategic environment; to **deter** actions against Australia's interests; and to **respond** with credible military force, when required.

The 2020 Force Structure Plan sets out current and future Defence capability investments to ensure Australia can continue to deliver a potent, capable and agile Australian Defence Force. The capabilities outlined in the 2020 Force Structure Plan are designed to deliver on the strategic priorities, with a focus on responding to grey-zone challenges, the possibility of high-intensity conflict, and domestic crises. The Government will deliver this by maintaining alignment of strategy, capability and resources, underpinned by an ongoing reform program. As such, Defence is on its way to regenerating and expanding Australia's maritime platforms, delivering a fifth-generation air force, and enhancing the mobility and security of our deployed land forces.

The Government has sustained its commitment to long-term funding certainty by continuing the policy of providing a 10-year funding model for Defence, including a \$270 billion investment in Defence capability.



## Defence Assistance to the Civil Community: 2019-20 Bushfire Crisis & COVID-19 Pandemic

Defence provided both emergency and non-emergency support in accordance with Defence Assistance to the Civil Community arrangements as part of a whole-of-government response where state or territory capacity or resources did not exist or were not available quickly enough. Defence emergency assistance to civil agencies increased overall in 2019-20 due to major bushfires and the COVID-19 pandemic.

The Australian Defence Force provided significant support to Emergency Management Australia in firefighting and recovery efforts around the country. Defence assistance commenced on 6 September 2019, and with a deterioration in conditions Operation Bushfire Assist 2019-2020 was stood up on 31 December 2019 and continued until 26 March 2020. Operation Bushfire Assist established Joint Task Forces and the mobilisation of Reserves. Defence Industry provided outstanding support to Defence for this mobilisation.

All domains managed the rapid mobilisation of a number of capabilities including:

- C-17A Globemaster III, C-130J Hercules, C-27J Spartan and P-8A Poseidon aircraft conducting bushfire-related tasking under the three established Joint Task Forces.
- The Aviation response to Operation Bushfire Assist was a whole-of-capability effort which included support from CH-47F Chinook, MRH90 Romeo, EC135 (Helicopter Aircrew Training System) and Unmanned Aerial Systems (UAS). The assets were deployed across New South Wales, Victoria, and South Australia. The response also included the conduct of coalition operations with our international partners from the New Zealand and Singaporean Air Forces.
- Provision of additional satellite and communications equipment.
- Rapid mobilisation of fuel and water storage, supply vehicles, and logistics support.
- Deployment of HMA Ships *Choules* and *Adelaide* to provide support, particularly the provision of additional medical support to isolated towns and evacuation of stranded residents and holiday makers.

Significant industry contribution was integral to the success of Operation Bushfire Assist with industry partners being responsive in helping to deliver immediate supply options and surge capacity. Notably Airbus Australia Pacific, Boeing Defence Australia, and Sikorsky Aircraft Corporation (USA) recalled staff to assist with aircraft and equipment preparations. Shadboldt completed required repair work on the gas turbine engine uptakes on *Adelaide* in extended rolling shifts; working beside General Electric, as the Manufacturer of the Landing Helicopter Dock gas turbines who completed the required work and testing/trials of the gas turbine engine on the ship at sea earlier than expected. Both partners also combined with Lloyds Register to enable *Adelaide* to sail earlier whilst continuing to satisfy her seaworthiness obligations in order to respond to Operation Bushfire Assist.

Defence responded swiftly to the COVID-19 pandemic, establishing the COVID-19 Taskforce in March 2020 to coordinate Defence's contribution to the whole-of-government response. Operation COVID-19 Assist was subsequently established in April 2020 and provided assistance in reconnaissance, planning and contact tracing teams; medical assistance in north-west Tasmania; supporting mandatory quarantine arrangements; and supporting state and territory police border controls.

## Defence Review of Project Performance

### Cost

The Defence Chief Finance Officer provides overall financial assurance, on the actual cost and budget data of individual projects included in this report. Project budgets approved by Government take into account the estimated impact of inflation over the life of a project which is known as ‘out-turning’.

All financial data related to Defence’s capital projects and capital programs provided within the 2019-20 Defence Portfolio Budget Statements, Portfolio Additional Estimates Statements, and Annual Report, are presented on a cash basis. For consistency, Defence also reports its 2019-20 capital projects on a cash basis in the Major Projects Report. Defence will be managing and reporting expenses on an accruals basis from 2020-21

The total in-year budget (2019-20) for all the projects listed in the 19-20 MPR is \$6.1 billion and the total approved acquisition cost is \$78.6 billion. Table 1 lists the 25 projects by total Government approval from highest to lowest.

### Understanding Budget Variation

Real budget variations occur as a result of Government endorsed changes to scope, real cost changes, and scope transfers between projects.

Foreign exchange rate variations do not represent real cost variations as they are managed through funding adjustments on a “no-win/ no loss” basis to offset realised foreign exchange losses or gains. Similarly, in-year variations between Budget, Additional Estimates and Final do not necessarily in themselves represent real cost variations. Defence considers that the Final Budget Forecasts represent the baseline against which in-year Project financial performance should be measured.

Subsequent Government approvals leading to real project “budget variation” (outlined in Table 2A Column B) includes activities such as:

- Follow-on Second Pass approvals
- Tranched or rolling approval processes that have been agreed by Government
- Where projects have merged or transferred cost or scope to realise more efficient project management practices.

In some instances, Real Cost Increases (RCI) require a Government approved budget variation due to unplanned cost and/or scope variation. Historically, there has been minimal requirement to apply RCIs to the project budgets. These instances are outlined in Column E. There have been no RCI’s in this reporting year 2019-20, the listed RCI’s were approved in earlier years.

Table 2A gives a summary of life-to-date budget approvals from Second Pass Approval to current budget including variables such as price indexation, foreign exchange and scope change impacts. Percentages of the variances are also provided.

Table 2B and Table 2C provide a further detailed breakdown of the budget variance. This is to provide a more detailed breakdown of the Department’s performance in cost and scope management, and highlight the projects with unplanned cost and/or scope variation in the interests of transparency.

**Table 1 – 2019/20 MPR Projects by Total Approved Budget**

Project Number	Project Name	Project Name Abbreviation	2019-20 In-Year Budget \$m	Total Approved Project Budget \$m
AIR 5349 Phase 3	EA-18G Growler Airborne Electronic Attack Capability	Growler	173.6	3,505.9
AIR 5431 Phase 3	Civil Military Air Management System	CMATS	86.4	975.6
AIR 6000 Phase 2A/2B	New Air Combat Capability	Joint Strike Fighter	1,884.6	16,631.3
AIR 7000 Phase 1B	Multi-mission Unmanned Aircraft System	Triton Drones	104.3	1,311.4
AIR 7000 Phase 2B	Maritime Patrol and Response Aircraft System	P-8A Poseidon	299.8	5,362.4
AIR 8000 Phase 2	Battlefield Airlift – Caribou Replacement	Battlefield Airlifter	91.7	1,439.2
AIR 9000 Phase 2/4/6	Multi-Role Helicopter	MRH90 Helicopters	119.9	3,773.9
AIR 9000 Phase 8	Future Naval Aviation Combat System Helicopter	MH-60R Seahawk	128.7	3,219.3
JP 2008 Phase 5A	Indian Ocean Region UHF SATCOM	UHF SATCOM	10.8	422.1
JP 2072 Phase 2B	Battlespace Communications System Phase 2B	Battle Comm. Sys. (Land) 2B	188.9	947.1
LAND 121 Phase 3B	Medium Heavy Capability, Field Vehicles, Modules and Trailers	Overlander Medium/Heavy	259.9	3,398.6
LAND 121 Phase 4	Protected Mobility Vehicle – Light (PMV-L)	Hawkei	239.9	1,987.5
LAND 200 Tranche 2	Battlefield Command System	Battlefield Command System	247.0	969.7
LAND 400 Phase 2	Combat Reconnaissance Vehicles	Combat Recon. Vehicles	173.6	5,761.7
LAND 53 Phase 1BR	Night Fighting Equipment Replacement	Night Fighting Equip Repl	78.9	446.7
SEA 1000 Phase 1B	Future Submarines Design Acquisition	Future Subs	579.5	5,925.8
SEA 1180 Phase 3	Offshore Patrol Vessel	Offshore Patrol Vessel	248.9	3,701.4
SEA 1439 Phase 3	Collins Class Submarine Reliability and Sustainability	Collins R&S	15.9	445.8
SEA 1439 Phase 5B2	Collins Class Communications and Electronic Warfare Improvement Program	Collins Comms and EW	93.3	610.7
SEA 1442 Phase 4	Maritime Communications Modernisation	Maritime Comms	46.4	444.0
SEA 1448 Phase 4B	ANZAC Air Search Radar Replacement	ANZAC Air Search Radar Repl	74.5	429.4
SEA 1654 Phase 3	Maritime Operational Support Capability	Repl Replenishment Ships	195.3	1,084.7
SEA 3036 Phase 1	Pacific Patrol Boat Replacement	Pacific Patrol Boat Repl	78.1	504.3
SEA 4000 Phase 3	Air Warfare Destroyer Build	AWD Ships	315.1	9,108.9
SEA 5000 Phase 1	Future Frigates	Future Frigates	375.2	6,291.8
<b>Total</b>			<b>6,110.2</b>	<b>78,698.7</b>

Table 2A – Project Budget Status

Project Number and name	(a) Government Approved Budget at Second Pass \$m	(b) Subsequent Government Approvals \$m	(c) Price Indexation \$m	(d) Foreign Exchange Variation \$m	(e) Real Cost/Scope Variations \$m	(f) Transfers \$m	(g) Budgetary Adjustments \$m	(h) Budget Cost Savings \$m	(i) (a+b+c+d+e+f+g+h) Current Budget \$m	(a)/(i) Government Approved Budget at Second Pass %	(b)/(i) Subsequent Government Approvals %	(c+d)/(i) Price / Exchange %	(e)/(i) RCI %	(f+g+h)/(i) Other %
AIR 6000 Ph 2A/B - Joint Strike Fighter	2,751.6	10,515.4	351	3,024	0	-8.4	-2.9	0	16,630.7	16.5	63.2	20.3	0	-0.1
SEA 4000 Ph 3 - AWD Ships	7,207.4	0	1,173.2	-363.3	1,198.5	-109.9	0	0	9,108.9	79.1	0	8.9	13.2	-1.2
SEA 5000 Ph 1 - Future Frigates	6,183.9	0	0	104.6	0	3.3	0	0	6,291.8	98.3	0	1.7	0	0.1
SEA 1000 Ph 1B - Future subs	989.4	5,021.7	0	-24.3	0	-34.0	-27.0	0	5,925.8	16.7	84.8	-0.4	0	-1.0
LAND 400 Ph 2 - Combat Reconnaissance	5,762.7	0	0	-1	0	0	0	0	5,761.7	100	0	0	0	0
AIR 7000 Ph 2B - P8A Poseidon	3,577.7	1,295.4	20.5	488.1	-20.3	1	0	0	5,362.4	66.7	24.2	9.5	-0.4	0
AIR 9000 Ph 2/4/6 - MRH90 Helicopters	957.2	2,565.6	679.8	-133.6	31.5	-239.2	-87.4	0	3,773.9	25.4	68.0	14.5	0.8	-8.7
SEA 1180 Ph 1 - Offshore Patrol Vessel	3,639.1	0	0	62.3	0	0	0	0	3,701.4	98.3	0	1.7	0	0
AIR 5349 Ph 3 - Growler	1,155.3	1,789.0	0	956.1	0	0	-394.9	0	3,505.9	33.0	51.0	27.3	0	-11.2
LAND 121 Ph 3B - Overlander Medium/Heavy	2,549.2	735.5	0	143.9	0	-30.0	0	0	3,398.6	75.0	21.6	4.2	0	-0.9
AIR 9000 Ph 8 - MH 60R Seahawk	3,029.6	0	0.1	228.8	0	-39.2	0	0	3,219.3	94.1	0	7.1	0	-1.2
LAND 121 Ph 4 - Hawkei	1,945.0	0	0.4	42.2	0	0	0	0	1,987.6	97.9	0	2.1	0	0
AIR 8000 Ph 2 - Battlefield Airlifter	1,156.5	0	0	283.7	0	-1.0	0	0	1,439.2	80.4	0	19.7	0	-0.1
AIR 7000 Ph 1B - Triton	1,246.1	0	0.2	67.3	-2.2	0	0	0	1,311.4	95.0	0	5.1	-0.2	0
SEA 1654 Ph 3 - MDS	1,004.6	0	0	-1.3	0	81.4	0	0	1,084.7	92.6	0	-0.1	0	7.5
AIR 5431 Ph 3 - CMATS	731.4	0	0	3.5	247.5	-6.8	0	0	975.6	75.0	0	0.4	25.4	-0.7
LAND 200 T2 - Battlefield command	930.0	0	0	39.7	0	0	0	0	969.7	95.9	0	4.1	0	0
JP 2072 Ph 2B - Battle Comm. Sys. (Land) 2B	915.7	0	0	31.4	0	0	0	0	947.1	96.7	0	3.3	0	0
SEA 1439 Ph 5B2 - Collins Comms and EW	599.1	0	0.4	11.2	0	0	0	0	610.7	98.1	0	1.9	0	0
LAND 53 Ph 1BR - Night Fighting Equip Repl	460.3	0	0	-13.6	0	0	0	0	446.70	103.0	0	-3.0	0	0
SEA 3036 Ph 1 - PPB-R	504.5	0	0	-0.2	0	0	0	0	504.3	100	0	0	0	0
SEA 1439 Ph 3 - Collins R&S	72.0	344.0	74.4	-5.5	0	-38.3	-0.8	0	445.8	16.2	77.2	15.5	0	-8.8
SEA 1442 Ph 4 - Maritime Comms	385.6	0	0	58.4	0	0	0	0	444.0	86.9	0	13.2	0	0
SEA 1448 Ph 4B - ANZAC Air Search Radar Repl	427.8	0	0	1.6	0	0	0	0	429.4	99.6	0	0.4	0	0
JP 2008 Ph 5A - UHF SATCOM	460.9	0	18	-38.8	0	0	0	-18.0	422.1	109.2	0	-4.9	0	-4.3
<b>Total \$m / Average %</b>	<b>48,642.6</b>	<b>22,266.6</b>	<b>2,318.0</b>	<b>4,967.2</b>	<b>1,456.0</b>	<b>-421.1</b>	<b>-513.0</b>	<b>-18.0</b>	<b>78,698.7</b>	<b>78.0</b>	<b>15.6</b>	<b>6.1</b>	<b>1.6</b>	<b>-1.2</b>

**Table 2B – Breakdown of Subsequent Government Approvals**

Project Number	Project	Subsequent Government Approvals \$m	Explanation
AIR 6000 Phase 2A/2B	Joint Strike Fighter	10,515.4	Second Pass approval for Stage 2, acquiring an additional 58 aircraft. This figure also includes some budget corrections to keep the budget aligned with the Government approval.
AIR 7000 Phase 2B	P-8A Poseidon	1,295.4	Government Second Pass Approval to fund the acquisition of an additional four P-8A aircraft and associated support systems. Funding was provided under AIR7000 Phase 2D, but merged with AIR7000 Phase 2B for efficiencies.
AIR 9000 Phase 2/4/6	MRH90 Helicopters	2,565.6	Second Pass approval of Phase 4 (Black Hawk Upgrade Replacement) and Phase 6 (Maritime Support Helicopter).
LAND 121 Phase 3B	Overlander Medium/Heavy	735.5	A range of programmatic decisions have been made in relation to this project. This is aligned to the revised second pass approval.
AIR 5349 Phase 3	Growler	1,789.4	Government approval to change acquisition strategy to a new-build aircraft, rather than modification of existing aircraft. This also includes the Growler Enabling capabilities and the integration of CEA systems into the Mobile Threat Training Emitter System.
SEA 1439 Phase 3	Collins R&S	344.0	A range of programmatic funding decisions have been made with Collins-related projects to achieve optimum capability within the funding provided. For full details, please see the PDSS.
SEA 1000 Phase 1B	Future Subs	5,021.7	Approval by Government for activity under the Submarine Design to be conducted by Naval Group, design of the Combat System by Lockheed Martin Australia, activity to develop the concept design for the Future Submarine Construction Yard and Infrastructure business case, and program office costs.
<b>Total</b>		<b>22,267.0</b>	

**Table 2C – Breakdown of Real Cost / Scope Variation**

Project Number	Project	(e) Real Cost / Scope Variation \$m	Explanation
SEA 4000 Phase 3	AWD Ships	1,199.5	This was a real cost increase (RCI) approved by Government in 2015. Following a number of independent reports, it was evident that the existing budget would be insufficient to complete the full project scope.
AIR 9000 Phase 2/4/6	MRH90 Helicopters	31.5	A RCI was approved by Government in 2008 to fund the Full Flight Mission Simulator, not included in the original scope.
AIR 5431 Phase 3	CMATS	247.5	A RCI was approved by Government in February 2018 to cover additional costs related to the acquisition.
<b>Total</b>		<b>1,474.5</b>	

### **In-Year Cost**

A summary of in-year project budget expenditure against the Portfolio Budget Statements and the Portfolio Additional Estimate Statements is shown in Table 3.

The financial variation explanations for each project can be found within Section 2.2A – In-year Budget Estimate Variance of the Project Data Summary Sheets (found in Part 3 of this Report).

### **Project Progress**

The percentage of budget spent is dependent on the characteristics of the project and the levels of early investment required, so the relationship between budget and progress does not necessarily match. In addition, programs with multiple tranches and/or follow-on Final Operational Capability milestones may distort the per cent of budget expended data in the future.

**Table 3 - Project In Year Status**

Project Number	Project	Portfolio Budget Statements \$m	Portfolio Additional Estimate Statements \$m	Final Plan \$m	Actual Spend \$m	Variation \$m (PBS-Actual Spend)	Variation \$m (Final Plan-Actual Spend)
AIR 6000 Phase 2A/2B	Joint Strike Fighter	2,388.6	1,897.6	1,884.6	1,938.4	450.2	-53.8
SEA 4000 Phase 3	AWD Ships	355.9	315.4	315.1	295.3	60.6	19.8
SEA 5000 Phase 1	Future Frigates	492.3	372.9	375.2	263.6	228.7	111.6
SEA 1000 Phase 1B	Future Subs	289.3	580.9	579.5	553.1	-263.8	26.4
LAND 4000 Phase 2	Mounted Combat Recon Cap	200.3	173.7	173.6	173.2	27.1	0.4
AIR 7000 Phase 2B	P-8A Poseidon	360.3	301.6	299.8	223.5	136.8	76.3
AIR 9000 Phase 2/4/6	MRH90 Helicopters	56.0	120.1	119.9	106.0	-50.0	13.9
SEA 1180 Phase 1	Offshore Patrol Vessel	349.2	249.2	248.9	227.2	122.0	21.7
AIR 5349 Phase 3	Growler	128.6	174.3	173.6	160.9	-32.3	12.7
LAND 121 Phase 3B	Overlander Medium/Heavy	238.1	260.1	259.9	269.4	-31.3	-9.5
AIR 9000 Phase 8	MH-60R Seahawk	112.7	129.3	128.7	75.3	37.4	53.4
LAND 121 Phase 4	Hawkei	292.3	240.3	239.9	220.3	72.0	19.6
AIR 8000 Phase 2	Battlefield Airlifter	93.5	92.1	91.7	72.6	20.9	19.1
AIR 7000 Phase 1B	Triton	101.3	105.0	104.3	95.6	5.7	8.7
SEA 1654 Phase 3	MOSC	191.8	196.0	195.3	107.1	84.7	88.2
AIR 5431 Phase 3	CMATS	92.7	86.5	86.4	87.5	5.2	-1.1
LAND 200 Tranche 2	Battlefield Command System	263.0	247.9	247.0	250.5	12.5	-3.5
JP 2072 Phase 2B	Battle Comms Sys Ph2B	207.5	189.8	188.9	187.4	20.1	1.5
SEA 1439 Phase 5B2	Collins EW	95.8	93.7	93.3	69.7	26.1	23.6
LAND 53 Phase 1BR	Night Fighting Equip Repl	90.8	79.5	78.9	80.7	10.1	-1.8
SEA 3036 Phase 1	PPB-R	78.0	78.2	78.1	66.5	11.5	11.6
SEA 1439 Phase 3	Collins R&S	5.8	15.9	15.9	13.1	-7.3	2.8
SEA 1442 Phase 4	Maritime Comms	57.2	45.7	46.4	36.7	20.5	9.7
SEA 1448 Phase 4B	Anzac Air Search Rad Repl.	71.2	74.5	74.5	72.7	1.5	1.8
JP 2008 Phase 5A	Indian Ocean UHF SATCOM	9.4	10.8	10.8	5.6	3.8	5.2
<b>Total</b>		<b>6,621.6</b>	<b>6,131.0</b>	<b>6,110.2</b>	<b>5,651.9</b>	<b>969.7</b>	<b>458.3</b>

## Schedule

CASG projects have continued to deliver successful capability outcomes, noting schedule remains the primary improvement focus and is being drive through the SmartBuyer process and early phases the Capability Life Cycle. Where schedule slippage has occurred, project managers are working with Defence, Industry and the Capability Manager Representatives to manage the impacts without compromising capability.

Of the 20 projects carried over from the last report, there are five projects that reassessed their Final Operational Capability forecast date within 2019-20. Four extended their Final Operational Capability date by between two to six months and the fifth brought forward the milestones by six months.

The average Final Operational Capability variance of the 22<sup>144</sup> projects forecasting a Final Operational Capability date at 30 June 2020 is 19.8 per cent, which is significantly less than the 27.8 per cent average in 2018-19. The project schedule status of the 25 projects in this year's report is shown in Table 4 from Second Pass through to Interim Operational Capability and Final Operational Capability.

The schedule performance narrative in each Project Data Summary Sheet details specific activity for each of the projects included in this MPR.

### Schedule Variation in Context

When analysing schedule performance there can be a tendency to focus on the numbers of months slipped rather than the drivers of that slippage. Adding up the months of slippage for a group of distinct projects that are unique in nature and highlighting the total number does little to inform the reader about schedule performance. Such statements incorrectly assume that CASG manages projects sequentially not concurrently.

Schedule variation occurs for a number of reasons including late delivery, increase in scope, a force majeure event or a deliberate management decision. It also occurs because Defence set ambitious schedule targets to ensure it can provide the warfighter with leading edge capability. The projects listed in the MPR are generally the larger, more complex acquisition projects that contain inherent risk, and as such, are more likely to encounter schedule delay, compared to other projects.

Twelve projects recorded a schedule variation of between one and 108 months. The causes of these variations are shown in Figure 1 and summarised below:

- P-8A Poseidon received Government approval for the purchase of four additional aircraft resulting in a revision of FOC dates.
- Three projects were affected by other Defence programs or decisions such as the ANZAC Midlife Capability Assurance Program, changes to the docking maintenance schedule, and delays to other interdependent projects.
- Three projects were impacted by events outside the control of Defence or Government including US Government decision affecting project progress, availability of appropriate industry partners to subcontract, and remediation of an incident involving an in-service EA-18G aircraft in the US.
- Five projects have experienced unplanned real schedule variation due to factors such as technical, reliability and integration issues with essential components and increases in original scope of project.

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<sup>144</sup> SEA 1000 Ph 1B and SEA 5000 Ph 1 are both currently in design phase and as a result do not yet have a FOC date. AIR 8000 Ph 2 is undergoing a capability reset which will identify a FOC date.



**Figure 1 – Causes of Schedule Variation 2019-20**

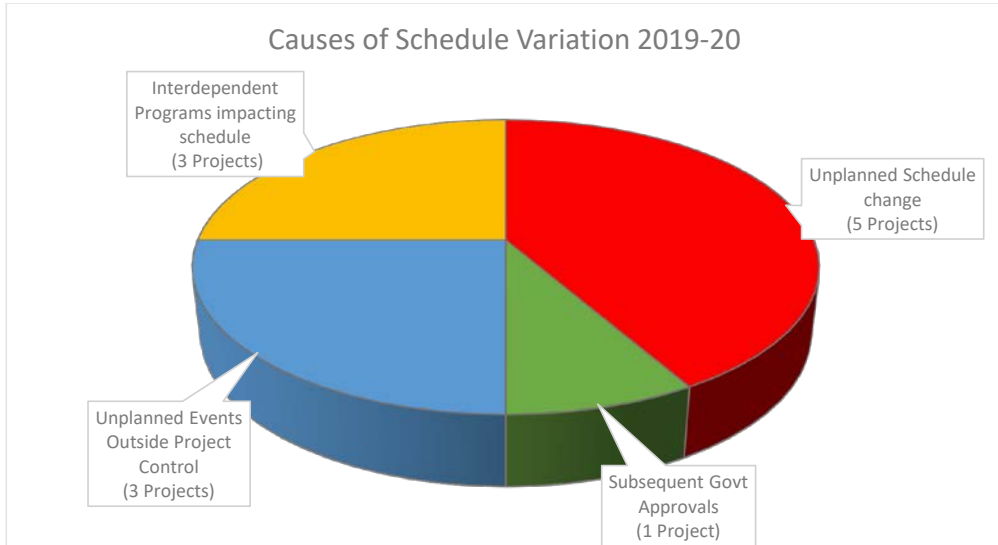
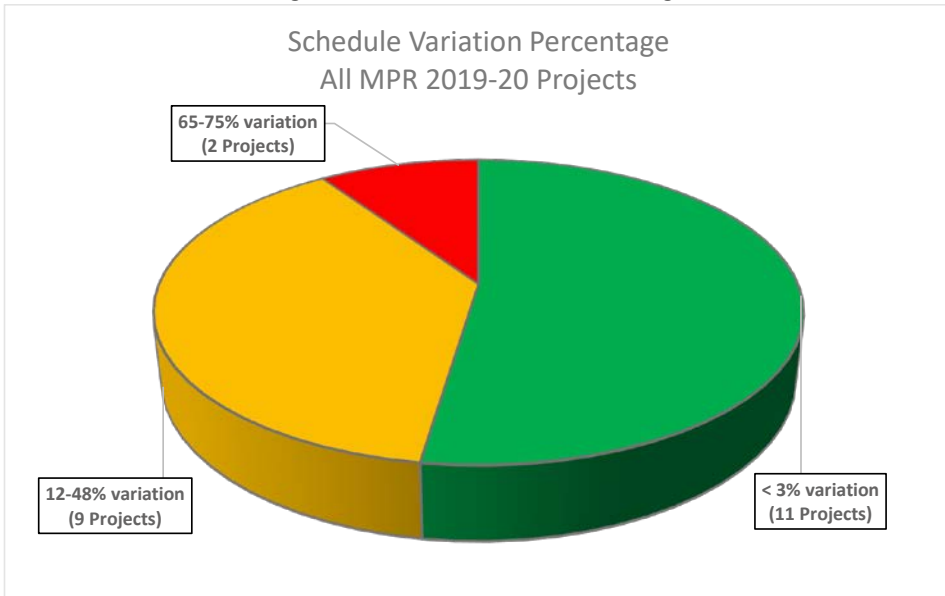


Figure 2 shows the percentage of schedule variation for all projects within this report. The chart shows that 52 per cent of the projects included in this report have a schedule variation of less than three per cent. Of these, nine projects have no variation to schedule at all<sup>145</sup>. This is further detailed in Table 4.

**Figure 2 – Schedule Variation Percentage**

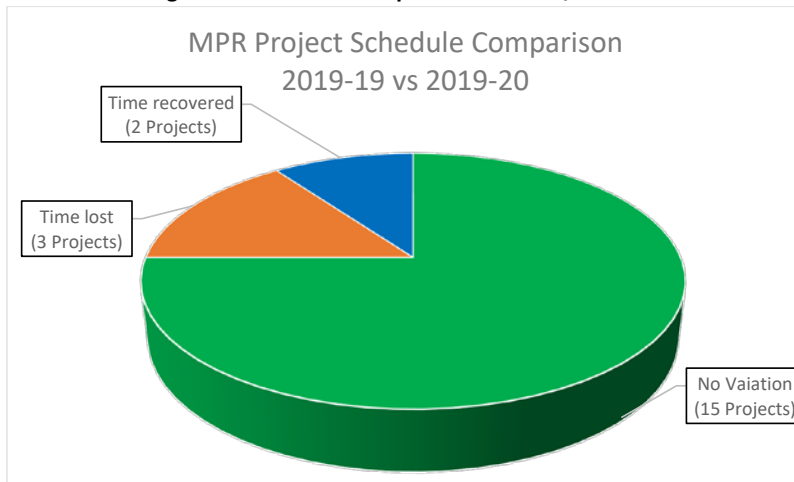


<sup>145</sup> SEA 1000 Ph 1B and SEA 5000 Ph 1 are both currently in design phase and as a result do not yet have a FOC date. AIR 8000 Ph 2 is undergoing a capability reset which will identify a FOC date. These projects have not been included in the calculation.

Whilst many projects have already identified travel restrictions, supply chain disruptions and workplace capacity issues as a result of COVID-19, the full impact on project schedule due to COVID-19 is yet to be fully understood.

Figure 3 shows that between 2018-19 and 2019-20 the majority of MPR projects did not experience any schedule variation to forecast FOC declaration during the year. Two projects were able to recover time – SEA 1439 Phase 5B2 (Collins EW) recovered six months and SEA 1442 Phase 4 (Maritime Comms) recovered three months to their forecast FOC declaration. Whilst three projects experienced a slip in schedule of between two to six months, two of these projects, AIR 6000 Phase 2A/2B (Joint Strike Fighter, 2 months) and LAND 121 Phase 3B (Overlander Medium/Heavy, 6 months) are still within the Government approved FOC window. The average variation for those projects that lost time equals 4.6 months whilst the average variation across all MPR projects is less than one month<sup>146</sup>.

**Figure 3 – Schedule Comparison 2018-19 / 2019-20**



Schedule slippages are reported based on the achievement of FOC. In most instances the programs are providing highly effective capability to the ADF prior to FOC. For example, the MRH-90 is reporting 89 months delay to FOC, however it is operational and providing extensive support locally for natural disaster relief as well as support to Pacific Island nations. The P-8A Poseidon maritime patrol aircraft, which is reporting a 29 month delay to FOC has been deployed on multiple operational deployments and conducted reconnaissance flights over fire-affected areas in New South Wales, Victoria and South Australia as part of Operation Bushfire Assist.

<sup>146</sup> Five projects new to the MPR in 2019-20 have not been included in this comparison. AIR 8000 Phase 2 is currently undergoing a capability reset and does not have a FOC date – a comparison has not been done for this project.

**Table 4 – Project Schedule Status**

Project Number	Project	(a) 2nd Pass	(b) Originally Estimated IOC	Forecast IOC at 30 Jun 19	(c) Forecast IOC at 20 Jun 20	(c-b) IOC variation (months)	(c-a)/(b-a) Variation Percentage	(d) Originally estimated FOC	Forecast FOC at 30 Jun 19	(e) Forecast FOC at 30 Jun 20	(e-d) FOC variation (months)	(e-a)/(d-a) Variation Percentage
AIR 5439 Phase 3	Growler	Apr-13	Jul-18	Feb-19	Feb-19	7	11.22%	Jul-22	Aug-22	Aug-22	1	0.92%
AIR 5431 Phase 3	CMATS	Dec-14	Jun-20	Nov-22	Jun-23	36	54.50%	Jun-23	Oct-25	Apr-26	34	33.34%
AIR 6000 Phase 2A/2B	Joint Strike Fighter	Nov-09	Dec-20	Dec-20	Dec-20	0	0.00%	Dec-23	Oct-23	Dec-23	0	0.00%
AIR 7000 Phase 1B	Triton	Jun-18	Jul-24	/	Jul-26	24	32.85%	Dec-25	-	Jul-29	43	47.74%
AIR 7000 Phase 2B	P-8A Poseidon	Feb-14	Feb-18	Jan-18	Jan-18	-1	-2.12%	Jan-20	Jun-22	Jun-22	29	40.83%
AIR 8000 Phase 2	Battlefield Airlifter	Apr-12	Dec-16	Dec-16	Dec-16	0	0.00%	Dec-17	Dec-19	TBA	0	0.00%
AIR 9000 Phases 2/4/6	MRI-90 Helicopters	Aug-04	Apr-11	Dec-14	Dec-14	44	55.05%	Jul-14	Dec-21	Dec-21	89	74.84%
AIR 9000 Phase 8	MH-60R Seahawk	Jun-11	Aug-15	Sep-15	Sep-15	1	2.04%	Dec-23	Dec-23	Dec-23	0	0.00%
JP 2008 Phase 5A	UHF SATCOM	Mar-09	Jul-12	Jul-12	Jul-12	0	0.00%	Jun-18	Dec-21	Dec-21	42	37.85%
JP 2072 Phase 2B	Battle Comms Sys Ph2B	Apr-15	Sep-17	Mar-18	Mar-18	6	20.48%	Sep-20	Sep-22	Sep-22	24	36.87%
LAND 121 Phase 3B	Overlander Medium/Heavy	Jul-13	Dec-19	Dec-19	Dec-19	0	0.00%	Dec-23	Jun-23	Dec-23	0	0.00%
LAND 121 Phase 4	Hawkei	Aug-15	Dec-19	Dec-20	Dec-20	12	23.12%	Jun-23	Jun-23	Jun-23	0	0.00%
LAND 200 Tranche 2	Battlefield Command System	Sep-17	Sep-21	-	Apr-23	19	39.49%	Jun-22	-	Oct-23	16	28.09%
LAND 400 Phase 2	Mounted Combat Reconnaissance Capability (MCR)	Mar-18	Dec-26	-	Dec-26	0	0.00%	Jun-27	-	Jun-27	0	0.00%
LAND 53 Phase 1BR	Night Fighting Equip Repl	Aug-16	Nov-18	Dec-18	Dec-18	1	3.65%	Sep-20	Sep-23	Sep-23	0	0.00%
SEA 1180 Phase 1	Offshore Patrol Vessel	Nov-17	Dec-22	Dec-22	Dec-22	0	0.00%	Jun-30	Jun-30	Jun-30	0	0.00%
SEA 1439 Phase 3	Collins R&S	Sep-00	Oct-13	Jul-20	Jul-21	92	59.23%	Jun-14	Jun-23	Jun-23	108	65.47%
SEA 1439 Phase 5B2	Collins EW	Jun-15	Jun-21	Jun-21	Aug-21	2	2.78%	Dec-24	Dec-27	Jun-27	30	26.27%
SEA 1442 Phase 4	Maritime Comms	Jul-13	Dec-18	Jul-20	Jan-21	25	38.50%	Dec-23	Jan-25	Apr-25	16	12.80%
SEA 1448 Phase 4B	ANAC Air Search Radar Repl	Jun-17	Jun-20	Jun-20	Mar-21	9	24.91%	Jun-24	Jun-24	Jun-24	0	0.00%
SEA 1654 Phase 3	MOSC	Apr-16	Mar-21	Mar-21	Jul-21	4	6.80%	Dec-22	Dec-22	Dec-22	0	0.00%
SEA 3036 Phase 1	PPB-R	Apr-16	Oct-18	Nov-18	Nov-18	1	3.40%	Sep-23	Nov-23	Nov-23	2	2.25%
SEA 4000 Phase 3	AWD Ships	Jun-07	Dec-15	Dec-18	Dec-18	36	35.30%	May-18	Jun-21	Jun-21	37	28.27%
SEA 1000 Phase 1B	Future Submarine Program	Feb-19	IOC & FOC Dates have not yet agreed									
SEA 5000 Phase 1	Future Frigate - Design and Construction	Jun-18	IOC & FOC Dates have not yet agreed									
<b>Average Variations</b>						<b>18</b>	<b>21.30%</b>				<b>21</b>	<b>19.80%</b>
<b>Median</b>						<b>3</b>	<b>2.80%</b>				<b>9</b>	<b>7.50%</b>
<b>Standard Deviation</b>						<b>26</b>	<b>35%</b>				<b>29</b>	<b>23%</b>

## Materiel Scope and Capability

It is important to understand the difference between materiel scope and capability. Materiel scope is the delivery of the materiel element of capability and does not include other fundamental inputs such as workforce. Defence notes that programs are generally providing highly effective capability to the ADF prior to declaration of FOC. A capability in Defence terms is the power to achieve a desired operational effect in a nominated environment within a specified time and to sustain that effect for a designated period.

Materiel scope performance measures indicate a forecast of the materiel element of capability against the FMR milestones, identified in the MAA at 30 June 2020. It should be noted that this measure does not include the fundamental inputs to capability (such as workforce) and are not necessarily indicative of each project's ultimate ability to deliver the final intended capability effect.

The subjective 'traffic light' assessment of each element is indicative of:

- Green – a high level of confidence that the capability outcome will be met.
- Amber – the capability outcome being under threat but still considered manageable and able to be met.
- Red – at this stage the capability outcome is unlikely to be fully met.

Of 25 projects in this year's report:

- 17 projects had 100 per cent of the measure green.
- Five have measures which are under threat.
- One is reporting an element that is unlikely to be fully met.
- Two projects currently in the design phase are not included.

Details of amber and red portions included are outlined in Table 5 below. As outlined above this is not indicative of Defence's expected capability delivery. Further information on individual project performance can be found in Section 4 of the PDSS.

Detail of the capital equipment assets to be delivered for projects (the materiel scope), is defined in the MAA, the Operational Concept Document and the Function and Performance Specification.

**Table 5 – Details of Projects Reporting Amber or Red Measures**

Project	Pie Chart Traffic Light	Narrative for Amber / Red Rating
AIR 6000 Phase 2A/2B - New Air Combat Capability	Amber (1%)	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 toward advanced Maritime Strike options for consideration under AIR 3023 in the context of a Joint Maritime Strike strategy.
AIR 8000 Phase 2 - Battlefield Airlift - Caribou Replacement	Amber (6%)	AIR8000PH2 remains committed to the timely delivery of capabilities to support operational intent of the C-27J. AIR 8000 Phase 2 was unable to complete FMR in October 2019, however, achievement of the military type certification was achieved in June 2020 with minor limitations that are being progressed to be removed. Final spares delivery (less than 1% remaining) has been transitioned to sustainment for acceptance, and is not currently being reported as a significant shortfall to capability. Further work is required to achieve the Identification Friend or Foe (IFF) modification incorporation into the fleet; this will be achieved under supervision of the sustainment organisation and capability managers. The MAA identifies a requirement for Air Force to deliver a response on retention, replacement or

		upgrade of the Missile Approach Warning System (MAWS). Options have been considered by the project and Defence in 2019 and a remediation decision forms part of the overall project capability consideration by Defence and Government in 2020 for the execution strategy for all residual acquisition activity.
AIR 9000 Phase 2/4/6 - Multi-Role Helicopter	Amber (25%)	MRH Project Office continues to work with industry to contract, redesign and deliver outstanding role equipment including the Taipan Gun Mount, Common Mission Management System, Aero-Medical Evacuation – Mature (AME-M) capability.
LAND 121 Phase 4 - Protected Mobility Vehicle – Light (PMV-L)	Amber (5%)	IMR was declared with caveats due to an incomplete support system (some technical publications being in draft and a delay in the delivery of spares required for IMR) and a delay in the completion of Air, Sea and Rail Verification and Validation activities.
LAND 200 Tranche 2 - Battlefield Command System	Amber (3%)	Restriction on the access to interface data for the M1A1 Tank may limit the capability provided by the WINBMS on that platform.
SEA 4000 Phase 3 - Air Warfare Destroyer Build	Red (1%)	This project will not deliver a Radar - Electronic Attack capability. Funding will be used to help develop an indigenous Electronic Attack system for use in the Hobart Class and other Navy vessels.

## Acceptance into Service

Defence has updated the Integrated Project Management Plan template to ensure it states that deficiencies in the Fundamental Inputs to capabilities (FIC) are to be identified ahead of transition into service. This will be informed by a FIC Tracker in order to assist the Capability Manager in making a determination as they consider declaration of IOC, other Operational Releases, or FOC. This allows full flexibility for the Capability Manager to work with the Delivery Group on the preferred course of action when dealing with a FIC deficiency and then how they communicate it irrespective if it is technical, environmental, materiel, services, safety and or legislative related.

## Acquisition Governance

### CASG Independent Assurance Reviews

An initiative of the First Principles Review, Independent Assurance Reviews are conducted to identify the current status, risks and recommended management on the health and outlook of programs, acquisition projects and sustainment products across the capability life cycle. Review teams are selected for their independence from line management and their experience and expertise in a variety of disciplines relevant to the matter under consideration.

Reviews will typically include interviews with stakeholders such as the Project Manager, Program Sponsor and Capability Manager. Depending on the risks or issues identified during the course of the review, which in all cases will consider the key aspects of certainty of scope, credibility of schedule and adequacy of funding, a formal Board meeting may be held to better understand the positions of the various parties. The Board Chairperson may make recommendations or propose actions for senior management consideration regarding the ongoing conduct of the project or product under review, including whether it should be considered a candidate for Project of Interest or Project of Concern status by senior executives.

During FY 2019-20 there were 122 Independent Assurance Reviews covering 148 project phases or products. In addition to reviews of Capability Acquisition and Sustainment Group matters, the Independent Assurance Review process continues to be applied to Chief Information Officer Group

projects at the invitation of the CIO, and a range of projects delivered by the Australian Signals Directorate and the Australian Geospatial Organisation.

Independent Assurance Reviews are broken down by project phase in the Capability Life Cycle in Table 6 below.

**Table 6 – Independent Assurance Reviews**

Independent Assurance Reviews by project phase	No. held
Gate Zero	17
Gate One	13
Gate Two	18
Performance (during delivery)	76
Sustainment	24

Of these, 16 of the 25 projects listed in the Major Projects Report had an Independent Assurance Review conducted in 2019-20.

Historically approximately 12 IARs are conducted each month, however as a result of COVID-19, the throughput of the 2020 IAR program was reduced as follows:

- April 2020 – 2 IARs completed
- May 2020 – 3 IARs completed
- June 2020 – 8 IARs completed

Through the use of desktop reviews, virtual meetings, and prioritising pre-Government Second Pass Approval matters the overall IAR schedule has been recovered.

### Smart Buyer

The Smart Buyer program has further matured over the last financial year. Surveys on the effectiveness have seen strong positive results with over 98 per cent of surveyed stakeholders confirming the process adds value and offers unique insights to Defence Projects and Programs.

Whilst the prime role of Smart Buyer is to set projects up for success, pre Government second pass, the methodology has been adapted to address a variety of issues that may arise in the execution of a project.

Smart Buyer supports key stakeholders to enable Defence and Industry clarity on capability, risks and drivers, and use that analysis to develop appropriate strategies – relating to projects or to other complex undertakings. Smart Buyer will continue to focus on Australian Industry Capability (AIC).

In 2019-20 the Capability Acquisition and Sustainment Group held a record 128 Smart Buyer workshops supporting projects and products. This is despite the challenges imposed by COVID-19 restricting face to face workshops and requiring new technology options to be explored, tested and implemented. The Capability Acquisition and Sustainment Group Smart Buyer workshop numbers are detailed by stage in the Capability Life Cycle in the Table 7 below. Of note, the Smart Buyer program has transitioned to a true One Defence program formally taking on the CIOG and more complex E&IG workshops while also supporting:

- Sustainment products such as AGSVA Psychological Services contract and the Defence Fuel Transformation Program to maximise the opportunities a sustainment re-tender offers Defence and Industry; and

- Other large capability procurements, such as the Navy Guided Weapons and the Space Situational Awareness Programs.

**Table 7 - Smart Buyer Workshops Conducted 2019-20**

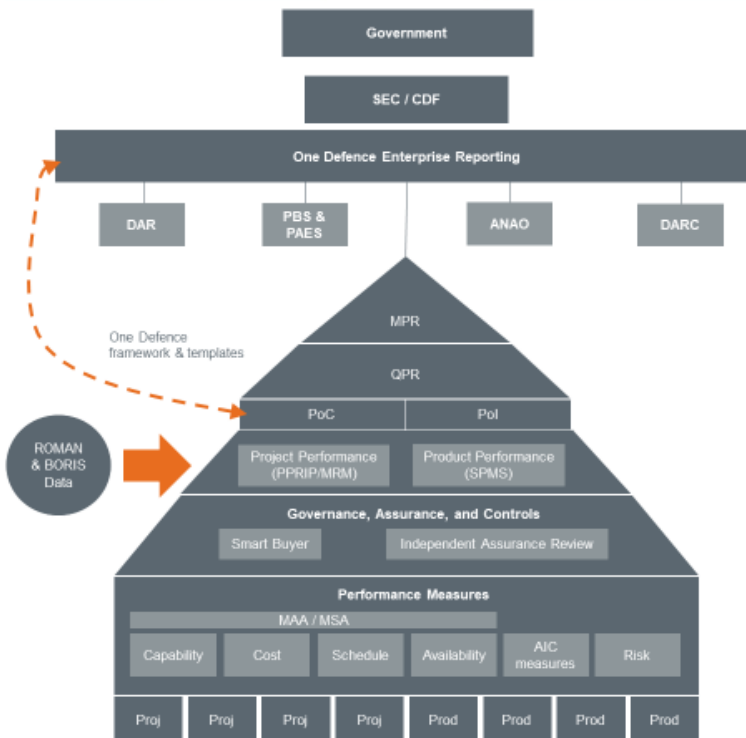
Smart Buyer Assessments	No. held
Gate Zero	30
Gate One	26
Gate Two	15
Other activities	47
CIOG	8
E&IG	2
<b>Total</b>	<b>128</b>

## Enterprise Project Performance Framework

### Enterprise Project Performance Reporting

Capital acquisition performance reporting developed and evolved over the last 15 years. Since First Principles Review, CASG is fully incorporated within the Enterprise level reporting framework consisting of the Portfolio Budget Statements, Portfolio Additional Estimates Statements and the Defence Annual Report, depicted at Table x below.

**Table 8 – Enterprise Project Performance Reporting framework**



## Agreements

Within CASG, Materiel Acquisition Agreements (MAAs) are the current project delivery agreements for monitoring and reporting on the current Government-approved scope, schedule and cost. While previous policy documents refer to Project Directives, the MAA is the foundational governance artefact in the Defence Enterprise Project Reporting Framework.

In recent years, Defence has undertaken a review of the MAA templates and updated them to improve the capture of information. In line with “One Defence” principles, the Agreements framework will continue to evolve as Defence project management reforms progress to provide a more holistic view of capability delivery while integrating with the latest corporate project reporting systems. Future versions of the Capability Life Cycle Manual may change the names of the governance artefacts, but Defence will still continue to capture project information through MAA-type constructions that provide project detail that can then enable more programmatic reporting.

## Quarterly Performance Report

The Capability Acquisition and Sustainment Quarterly Performance Report “QPR” provides the Department and the Ministers with insight into the performance of Defence’s major capital equipment acquisition and sustainment program. The QPR also fulfils Deputy Secretary Capability Acquisition and Sustainment’s obligation in accordance with the First Principles Review.

The QPR is a quarterly snapshot on performance of the key acquisition projects and sustainment products and contains sensitive information intended for internal departmental reporting. The QPR is comprised of the Top 30 projects and sustainment products listed in the Defence Portfolio Budget Statements and the projects featured in the Major Projects Report, Projects of Concern, and Projects and Products of Interest.

Through the QPR, the Defence Ministers and senior Defence stakeholders are provided with insight into the delivery of capability to the Australian Defence Force. The governance and reporting framework that underpins the QPR is core to the regular management of acquisition and sustainment activities.

The QPR contains some sensitive information provided by industry and Defence to enable the best cooperative approach to the delivery of highly complex Defence Projects. Respecting this sensitivity will retain the improved culture and Defence and Industry relationships.

A continuous improvement approach has benefitted both the monthly performance reporting and the QPR. These have included system enhancements to capture information more efficiently and increase consultation. Feedback on the content and format is regularly sought from all stakeholders including members of the Defence Investment Committee and the Defence Audit and Risk Committee.

## Projects of Interest

Projects (and products) showing heightened risks in the areas of cost, scope, schedule, capability, commercial strategy and/or other issues are monitored through a variety of sources. Consultation with senior stakeholders occurs before determining a Project of Interest. Once listed, reporting requirements are increased with a more detailed summary of issues, along with proposed remediation strategies to get the project/product back on track.

## Defence Major Projects Report

Auditor-General Report No.19 2020–21  
2019–20 Major Projects Report



The Projects of Interest ‘list’ is used for internal departmental and Ministerial reporting and management purposes. The broad goal is to provide senior management oversight, returning projects to satisfactory performance, and preventing projects from becoming Projects of Concern.

### Projects of Concern

Projects (or sustainment activities) identified as a Project of Concern have technical, cost or schedule challenges that benefit from additional support from senior executives and Ministers. Projects are removed from the list through project remediation or project contract cancellation with the approval of the Ministers. Projects of Concern receive a higher level of oversight and management and undertake more detailed reporting to Government.

As at 30 June 2020, MRH90 Helicopters (AIR 9000 Phase 2, 4 & 6) is the only project in this year’s Major Projects Report that is being managed under the Projects of Concern regime.

Since 2008, 25 projects, with a total value of \$32.4 billion, have been managed this way. As at 30 June 2020, the two active Projects of Concern had a total value of \$3.9 billion.

**Table 9 – Projects of Concern at 30 June 2020**

Project Number	Project Name	Date Added
AIR 9000 Phases 2, 4 & 6	MRH90 Helicopters	Nov 2011
AIR 5431 Phase 1	Deployable Defence Air Traffic Management and Control System	Aug 2017

### Defence’s consideration of Projects of Concern

Projects of Concern is an enduring framework that remains a valuable tool to escalate projects for more senior management of complex issues in collaboration with our Industry partners.

Defence’s senior committees have considered the effectiveness of the commercial mechanisms and the opportunity brought to achieve a successful outcome on elevation to a Project of Concern.

Defence has a well-regarded project assurance framework in place underpinned by Independent Assurance Reviews. The review Board Members are chosen for their experience and knowledge and ability to share lessons learned from past projects.

In July 2020 Defence closed out the two recommendations from the ANAO performance audit on Defence’s Management of its Projects of Concern list.

With the increasing complexity of the Integrated Investment Program potentially there is a higher probability of Projects of Concern or management ‘as if a Project of Concern’ for discrete elements of highly integrated and developmental activities.

### Enterprise Reform Program

A key component of Defence’s ongoing reform agenda is the improvement of our enterprise measurement and performance reporting practices. This will include improvements to how we establish performance measures, manage our reporting systems, and establish strong performance-based behaviours around clear accountabilities. Defence’s objective is to demonstrate in a clear and transparent fashion that the considerable investment made by the Australian Government in Defence is delivering value for money for taxpayers, is in alignment with Public Governance

Performance and Accountability Act 2013 requirements, and that we are achieving our delivery and operational outcomes.

### Cost of Producing the MPR

In support of the 2018-19 MPR Defence costed the effort involved in producing the MPR. The methodology used by the Defence Cost Estimation services involved:

- Estimates from nine projects in relation to their effort required to support the MPR process.
- The projects were selected based on their risk profile, as defined by the ANAO (three high risk, three medium risk, and three low risk projects).
- The results were averaged and extrapolated across the 26 projects from the 2018-19 MPR based on their ANAO risk assessment.
- Estimates were also assessed across the Department, based on the time taken to meet the Defence roles and responsibilities outlined in the MPR Guidelines.

This resulted in an estimated cost to Defence of \$2.4m to produce the 2018-19 MPR. Noting the similarities in 18-19 and 19-20 and due to the labour intensive effort to undertake the manual costing Defence did not undertake the activity for the 2019-20 MPR. It is anticipated the amount of effort will have increased as the projects that have come off the report for this year would have required less effort than the complex new projects that are participating in the MPR for the first time.

## Improvement Initiatives

### Risk Reform

The Capability Acquisition and Sustainment Group (CASG) is continuing to reform its management of risk to align enterprise-level and specialist risk management practice within the One Defence Enterprise Risk Management Framework. A cultural and behavioural change to the way risk is managed in CASG will ensure the success of the Risk Management Framework.

CASG is committed to continuously improving its approach to risk management. The CASG Risk Management Framework recognises the need, at all levels, to align, integrate, interface and continuously improve a risk-based approach to managing shared risk with Government, Capability Managers, and Defence Industry.

The CASG Risk Management Framework, a component of the Capability Acquisition & Sustainment Risk Management System (CAS-RM System), was released in June 2020. The CAS-RM System standardises application of the ISO31000:2018 risk management process and defines the level and depth of risk planning for specific project applications, including a common risk language, risk analysis tools, standardised format for risk planning, selection of appropriate methods, techniques and approaches and an information system to enable enhanced risk-based decision making. Rollout of the CAS-RM System is in four tranches: Policy, Practice, Tools and Cultural Change. Rollout of the risk management tool Predict! has already commenced and is anticipated to be complete by February 2022.

It is expected that the CAS-RM System will take a number of annual cycles to reach maturity.

## Monthly Reporting Module & Project Performance Review

Defence continues to improve its business systems and data collection with the aim of consolidating processes and systems in order to provide a more manageable system environment..

During 2019–20 the Monthly Reporting System (MRS), which previously provided a majority of the data for the PDSSs, was transitioned to Monthly Reporting Module (MRM). Starting July 20 MRM will maintain the same reporting function as MRS along with the format of the Acquisition Performance Report (APR), to continue to facilitate the accurate, efficient and timely reporting of projects. MRM will eventually also provide traceable and transparent commentary features and will be an accurate source of CASG project reporting information for users in the chain of command. MRM has been integrated into the Project Performance Review Information Platform (PPRIP) addressing the requirement for a unified system.

PPRIP is a web-based tool to support discussions between Project Managers, Directors and Branch Heads in elevating risks and supporting informed decision making to improve project performance. It does this by sourcing data from Defence Enterprise systems to give Project Managers real time information to assist them to focus on key performance indicators and easily identify risks and concerns.

## Project Maturity Scores

Project Maturity Scores were initially established in 2010 as an assessment methodology used for quantifying, in a practical and communicable manner, the maturity of projects as they progress through the capability definition and acquisition cycle. The Project Maturity Score comprised a matrix of seven common project attributes that are assigned a score between one and 10. At specified project life cycle gates in the capability definition and acquisition life cycle, an assessment is made of the score for each of the seven project attributes, the total of which is the maturity score at that stage of the project. The policy was updated in 2018 to align with the First Principles Review recommendations, CASG Business Framework and the interim Capability Life Cycle Manual.

In 2019 a Project Performance Score policy was generated to provide a scoring matrix that addressed ANAO concerns with the Project Maturity Score process to incorporate both Capability Life Cycle changes and references to Smart Buyer. Testing of the Project Performance Score was unsuccessful and, like Project Maturity Scores, was found to be very difficult, if not impossible, to apply to mega projects. Results of the testing also highlighted that Project Performance Scores are not suitable for application in programs as they roll out. Project Maturity Scores and Project Performance Scores are not a reliable indicator of project maturity or performance as scores often remain static for a several years as the project progresses through key milestone events such as Critical Design Review, production (low rate and full rate), delivery, and testing programs.

The implementation of PPRIP, supported by the MRM enables rich conversations on a monthly basis between Project Managers and Branch Heads to take place based on contemporary project performance data. This empowers Branch Heads to make informed decisions and to implement corrective actions if projects begin to trend away from or exceed agreed tolerances across a range of metrics.

The ANAO have been engaged and provided a demonstration of PPRIP and MRM, and whilst this platform is unable to produce a maturity or performance score, it does provide a comprehensive monthly review of projects covering cost, risk, schedule and FIC, leading to managers having a good understanding of project performance. The ANAO have acknowledged Defence's position that

Project Maturity Scores and Project Performance Scores are not a reliable indicator of project maturity or performances and as such they have been removed from the Guidelines for the 2020-21 MPR.

### System Program Office Reform

Systems Program Offices (SPO) Reform is a mechanism for the CASG to implement the agreed outcomes following from the First Principles Review (FPR).

SPO reform enables CASG to deliver capability in a more efficient manner to Capability Managers. The core business of SPOs will change from a primarily transactional role to focus on contracting, assurance, planning and governance. Industry will play a key role in project execution, working in genuine partnership with CASG. For the SPOs this involves understanding and clearly articulating the requirements and allowing the suppliers to maximise efficiency and finding innovative solutions to deliver the required capability outcomes. The increased focus on governance will allow the SPO to rapidly identify problems in the business and work with industry to solve these problems in a responsive and agile manner.

This is achieved by designing each SPO to ensure that they have the right size workforce, with the right skills and the most appropriate commercial model to deliver improved capability, on time and within budget, within a complex environments. Currently, 92% of SPOs are aligned with the First Principles Review model, and the total number of SPOs has reduced from 78 to 61 through a consolidation process.

Restructures are complex because the process may depend on extant contracts. The full revision to a new commercial model will be realised when legacy contract arrangements have ceased. In addition, the timing of reform may be impacted by Industry's capacity to support the new approach, and the associated upskilling and professionalisation of staff. Where necessary a formal organisational change management process, including union consultation, is conducted in company with the reform activities.

Despite the impacts of the COVID-19 pandemic (including restrictions on industry and workplaces), the SPO reform program is on track to be finalised December 2023.

### Improved Contract Management

Defence is currently reviewing and further strengthening its Contract Management Framework (the Framework). The Framework provides the principles, processes, tools, templates, guidance and training to support Defence contract managers in achieving effective contracting outcomes. It also includes the contract governance and assurance requirements and processes for major projects. The Framework links into Defence's project and program management frameworks to integrate contract management with project and program management, scaled to the complexity, cost and risk of the project. It recognises that contract management directly contributes to Defence capability program outcomes, as well as supporting Defence to meet its legislative obligations in achieving value for money and managing risk to meet government expectations. The focus of the Framework review is to develop and provide Defence contract managers with strengthened practical guidance, tools and training to support them in their roles. This includes a review of the Defence Contract Management Handbook and the Defence Contract Management Toolkit.

### Australian Industry Capability

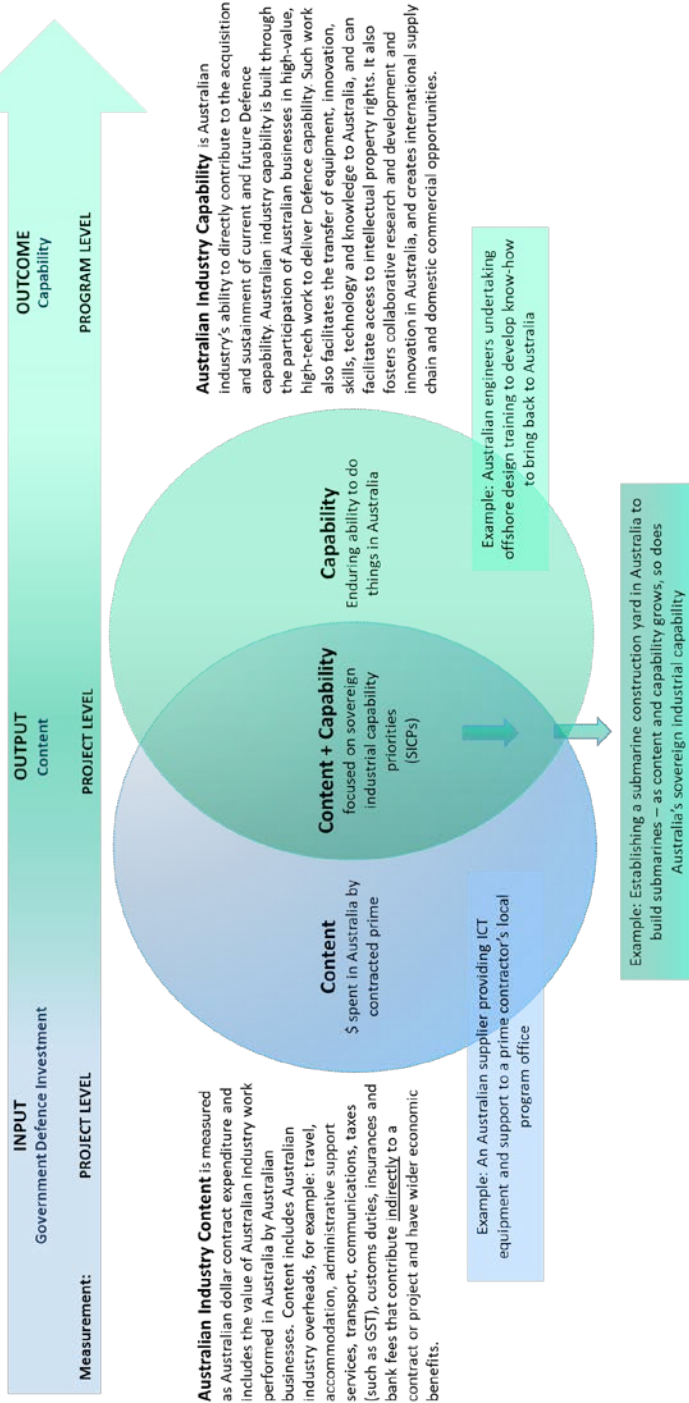
Defence industry is vital to Defence capability. The Australian Industry Capability (AIC) Program ensures Australian companies have greater opportunities to win work with Defence procurement and projects. This program plays a critical role in developing the agile and robust defence industrial base needed to deliver on the 2020 Defence Strategic Update and Force Structure plan.

Over the past twelve months, Defence has made progress in strengthening the AIC Program. Since the beginning of the COVID-19 outbreak in Australia, the Australian Government acted swiftly to increase engagement and strengthen the Defence and Industry partnership in order to safely sustain the ADF and continue with projects. Australia's defence industrial base quickly demonstrated its resiliency and agility, by responding with practical solutions in support of Defence's needs and the Whole-of-Government Response.

In March 2020, the Defence established the COVID-19 Taskforce Industry Support Cell as a central point of contact to engage with industry. Defence's support has meant that many defence industry businesses were able to continue to work through the pandemic and expand to offer more Australians job opportunities.

## Australian Industry Content and Australian Industry Capability

In equipping and sustaining the ADF we will broaden and deepen the defence industrial base, growing the level of Australian industry development and technology transfer over the life of major capital equipment projects to support sovereign industrial capability priorities and maximising opportunities for Australian industry to meet Australia's defence capability needs.



Ensuring alignment between ‘Australian Industry Content’ and ‘Australian Industry Capability’ requires a sustained collaborative effort between Government and Industry. Over the past twelve months, Defence has strengthened the implementation and enforceability of Australian Industry Capability Program with a suite of policy and contractual reforms. The Government is committed to developing an Australian Industry Capability assurance framework to improve the accountability and enforceability of contracted Australian Industry Capability Plans in procurement projects. Government has agreed to the development of enhancements to the Australian Industry Capability Program, through contractual and non-contractual mechanisms. These enhancements will give Australia’s small and medium businesses even more opportunities to win work with Defence.

For example, in August 2020, Government amended the guidance to the Commonwealth Procurement Rules so the value for money proposition can now include the broader benefit that procuring from Australian businesses can have on the economy. Value for money considerations will remain the main driver for Government procurement decisions, and integrating Defence’s Sovereign Industrial Capability Priorities as part of this process means Defence’s tender evaluations must now consider the benefit that Defence procurement can bring to Australian small businesses and jobs.

### Defence Finance Reform

In 2018, the then Chief Finance Officer Group was externally reviewed, with recommendations made to bring the group into line with the contemporary practices enacted across the Commonwealth. This was to ensure that we can keep up with the changes to our operating environment, increased stakeholder expectations and new technologies.

The resulting Defence Finance Reform is focused on Finance Reform for Defence as well as reforming Defence Finance Group in terms of its people, services and systems.

Some of the key changes are Defence’s transition from cash to accrual accounting on 1 July 2020, to get a more accurate picture of our budgetary position moving forward and standardising financial reporting across Defence to make it easier to understand across groups.

**Appendix 1 – List of Projects Removed from the Major Projects Report Since Inception**

Project Number	Project	First Reported in MPR	Last Reported in MPR	Government Approved Budget \$m	Expenditure to date \$m	Remaining Budget \$m	FMR Achieved/Forecast	FOC Achieved/Forecast	Reason for Exit
AIR 5376 Phase 3.2	F/A 18 Hornet Upgrade Structural Refurbishment (Hornet Refurb)	2008-09	2010-11	319.1	319.1	0.0	N/A	N/A	JCPAA Approval[1]
AIR 8000 Phase 3	C-17 Heavy Airlift	2008-09	2011-12	1,423.4	1,423.4	0.0	Dec-11	Dec-11	FOC achieved
AIR 5349 Phase 1/2	Bridging Air Combat Capability	2008-09	2012-13	3,661.4	3,045.9	615.5	Dec-12	Dec-12	FOC achieved
SEA 1444 Phase 1	Armidale Class Patrol Boat	2007-08	2012-13	537.2	530.3	6.9	Nov-07	Oct-12	FOC achieved
LAND 19 Phase 7A	Counter-Rocket Artillery and Mortar	2011-12	2012-13	265.7	186.1	79.6	Jan-13	Jan-13	FOC achieved
AIR 5376 Phase 2	F/A 18 Hornet Upgrade	2007-08	2013-14	1,882.5	1,663.8	218.7	Sept 12	Oct-14	FMR achieved
AIR 5418 Phase 1	Follow On Stand Off Weapon	2009-10	2013-14	319.0	287.1	31.9	Sept 13	Jan-14	FOC achieved
JP 2008 Phase 4	Next Generation SATCOM Capability	2009-10	2013-14	869.5	569.1	300.4	Jun-14	Jul-15	FMR achieved
JP 2043 Phase 3A	High Frequency Modernisation	2007-08	2013-14	580.2	498.1	82.1	Nov-17	Nov-17	JCPAA Approval[2]
LAND 17 Phase 1A	Artillery Replacement	2010-11	2013-14	158.5	158.5	0.0	Sept 13	Oct-14	FMR achieved
SEA 1390 Phase 2.1	Guided Missile Frigate Upgrade Implementation	2007-08	2013-14	1,453.8	1,374.7	79.0	Mar 16	Mar-16	JCPAA Approval[3]
SEA 1390 Phase 4B	SM-1 Missile Replacement	2010-11	2013-14	416.1	356.5	59.7	Feb 15	Jun-15	JCPAA Approval[4]
AIR 5077 Phase 3	Wedgetail	2007-08	2014-15	3,885.3	3,559.6	285.7	Feb 15	May-15	FOC achieved
LAND 75 Phase 3.4	Battlefield Command Support System	2010-11	2014-15	315.7	271.9	43.8	Mar-15	Apr-15	JCPAA Approval
AIR5402	Air to Air Refuel	2008-09	2015-16	1,818.7	1,764.3	54.4	May-16	Jul-16	FOC achieved
AIR 87	Armed Reconnaissance Helicopter	2007-08	2016-17	1,867.8	1,867.8	0.0	Mar-14	Apr-16	FOC achieved with Carveats
AIR 9000 PH5C	Additional Medium Lift Helicopter	2010-11	2016-17	637.8	448.2	189.6	Jul-17	Jul-17	FOC achieved
LAND 116	Bushmaster Protected Mobility Vehicle	2007-08	2016-17	1,250.6	1,036.1	214.5	Oct-17	Jan-17	FOC achieved



Project Number	Project	First Reported in MPR	Last Reported in MPR	Government Approved Budget \$m	Expenditure to date \$m	Remaining Budget \$m	FMR Achieved/Forecast	FOC Achieved/Forecast	Reason for Exit
LAND 121 Ph3A	Overlander Vehicles (Light)	2009-10 (Ph 3)	2016-17	1,017.6	900.5	117.1	Oct-16	Oct-16	FOC achieved
LAND 75 Phase 4B	Battlefield Command System	2012-13 (Ph 3A)	2017-18	316.4	280.8	35.6	Dec-17	Dec-17	FOC achieved
SEA 1429 Phase 2	Replacement Heavyweight Torpedo	2009-10	2017-18	428.7	337.5	91.2	Oct-18	Dec-18	JCPAA Approval
SEA 1439 Phase 4A	Collins Replacement Combat System	2007-08	2017-18	438.8	438.8	0.0	Oct-18	Dec-18	JCPAA Approval
SEA 1448 Phase 2A	ANZAC Anti-Ship Missile Defence (2A)	2009-10	2017-18	386.7	379.6	7.1	Jul-18	Aug-18	JCPAA Approval
AIR 7403 Phase 3	Additional KC-30A Multi-Role Tanker Transport	2015-16	2018-19	889.4	657.7	231.7	Oct-19	Dec-19	JCPAA Approval
JP 2048 Phase 3	Amphibious Watercraft Replacement	2013-14	2018-19	236.8	183.3	53.5	Dec-16	Nov-19	JCPAA Approval
JP 2048 Phase 4A/4B	Amphibious Ships (LHD)	2008-09	2018-19	3,092.2	2,861.9	230.3	Oct-19	Nov-19	JCPAA Approval
JP 2072 Phase 2A	Battlespace Communications Systems Phase 2A	2012-13	2018-19	438.2	376.2	62.0	Jan-19	Dec-19	JCPAA Approval
JP 9000 Phase 7	Helicopter Aircrew Training System	2015-16	2018-19	481.6	385.8	95.8	Apr-19	Dec-20	JCPAA Approval
SEA 1448 Phase 2B	ANZAC Anti-Ship Missile Defence (2B)	2009-10	2018-19	678.6	645.5	33.1	Nov-18	Jun-19	FOC achieved

**Notes:**

- Approval granted after project scope and budget were approved for transition to the in-service sustainment support system in 2010-11
- 3.4. Approval granted in 2014 based on a risk assessment performed by the then DMO and endorsed by the Capability Manager, which concluded the overall risk rating for remaining work was low
- 5.6.7. Approval granted in 2018 based on a risk assessment performed by CASG and endorsed by the Capability Manager, which concluded the overall risk rating for remaining work was low.

## Appendix 2: Acquisitions categories

Defence categorises its acquisition projects to enable it to differentiate between the complexities of business undertakings, focus management attention, provide a basis for professionalising its workforce and facilitate strategic workforce planning. Projects are graded into one of four acquisition categories (ACATs):

- ACAT I – These are major capital equipment acquisitions that are normally the ADF’s most strategically significant. They are characterised by extensive project and schedule management complexity and very high levels of technical difficulty, operating, support and commercial arrangements.
- ACAT II – These are major capital equipment acquisitions that are strategically significant. They are characterised by significant project and schedule management and high levels of technical difficulty, operating, support arrangements and commercial arrangements.
- ACAT III – These are major or minor capital equipment acquisitions that have a moderate strategic significance to the ADF. They are characterised by the application of traditional project and schedule management techniques and moderate levels of technical difficulty, operating, support arrangements and commercial arrangements.
- ACAT IV – These are major or minor capital equipment acquisitions that have a lower level of strategic significance to the ADF. They are characterised by traditional project and schedule management requirements and lower levels of technical difficulty, operating, support and commercial arrangements.

As the complexity of a project will vary over its life cycle, Defence reviews project acquisition categories at defined milestones between entry into the Integrated Investment Program and project completion.

The ACAT framework provides a recognised, consistent and repeatable methodology for categorising projects and aligning project managers’ certified experience and competencies to the complexity and scale of projects under management.

The ACAT level of a project is assessed against six project attributes:

- Acquisition cost - the approved budget for the project.
- Project management complexity - the complexity of project management necessary for its execution.
- Schedule complexity - the inherent complexity brought about by delivery pressures on the project.
- Technical difficulty - the complexities associated with technical undertakings such as design and development, assembly, integration, test and acceptance.
- Operation and support - the complexity associated with preparing the organisation and environment in which the system will be operated, supported and sustained.
- Commercial experience - the readiness and capability of industry to develop, produce and support the required capability, and the complexity of the commercial arrangements being managed.

## Appendix 3: Project Maturity

CASG's project maturity score quantifies the maturity of a project by way of a score based on the project managers' judgement at defined milestones in its capability development and acquisition phases. This score is then compared against an ideal or benchmark score for that milestone. A project's maturity is assessed on 16 milestones across its lifecycle and for each of these milestones the ideal or benchmark condition is represented by a benchmark score as shown in Figure A1.

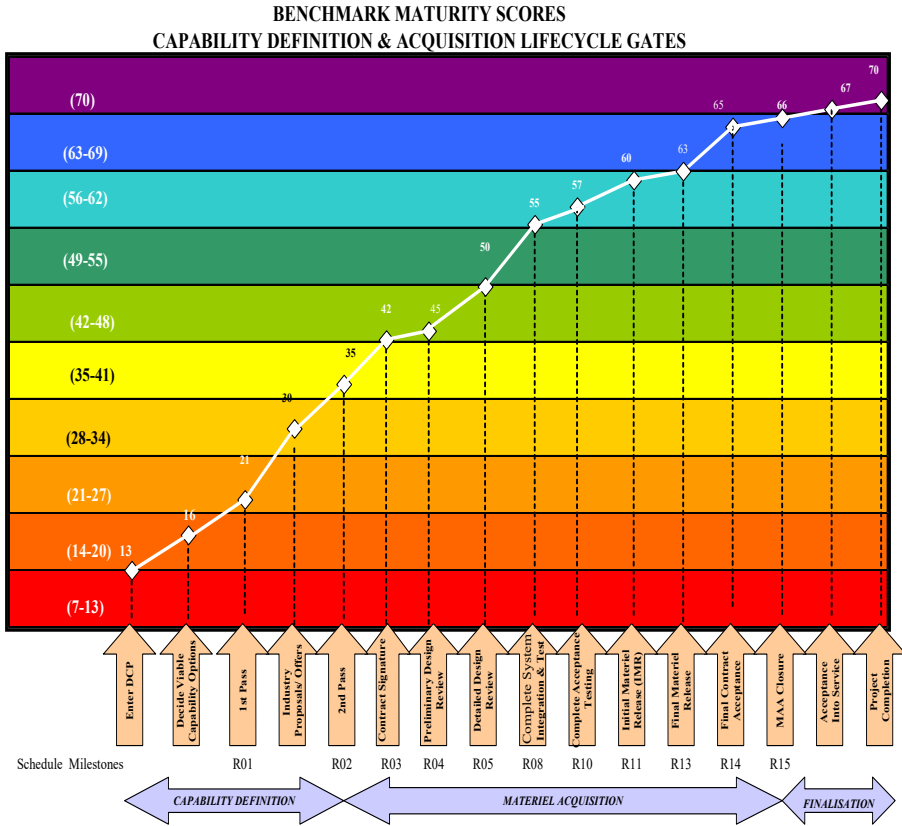
The project maturity score comprises a matrix of seven attributes:

- Schedule
- Cost
- Requirement
- Technical understanding
- Technical difficulty
- Commercial
- Operations and support

The project manager assesses the level of maturity that a project reaches at a particular milestone for each of these attributes on a scale of 1 to 10. Score assessment is made by selecting the most appropriate description that fits the question under the attributes columns.

Project maturity scores provide a means of communicating in a simple fashion an indicative 'as is' versus a 'should be' condition to inform decision making for each project. The scores are not precise and are not intended to enable exact comparisons across projects. Following is a description of the project maturity score attributes.

Figure A1 – Benchmark Maturity Scores



Project maturity score matrix							
Attributes	Schedule	Cost	Requirements	Technical understanding	Technical difficulty	Commercial	Operation and support
<b>Delivery performance</b>							
<b>Maturity Score</b>	How are the IMR & FMR milestones tracking against project approval?	How well is the cost tracking against project approval?	How well are the requirements defined in the MAA being realised?	Defence's understanding of the technical solution and arrangements to operate and support the capability.	How well are the design and its validation coming along?	How well is industry performing?	How well prepared is the project to transition from Acquisition to Sustainability?
10	Achieved	Proven	Demonstrated	Fully understood	Proven	All delivered	Operational
9	Confident	Contingency remains	Tested	Transferred	Tested	Delivered	Transitioning
8	Acceptable	Confident	Designed	Arranged	Integrated	Delivering	Integrated
7	In tolerance	Within contingency	Acceptable	Needs understood	Designed	Manages risk	Being procured
6	Manageable	Negotiated	Contracted	Provided for	Planned	As Contracted	Defined
<b>Process maturity</b>							
<b>Maturity score</b>	How realistic is the schedule?	What is the quality of the project estimate?	How well are the requirements defined and understood?	How well are the solutions understood?	How difficult is to integrate the component parts?	Can industry deliver the solution?	Is the impact on the existing operating and support environment understood?
5	Confirmed	Pre- endorsed capability	Endorsed	Understood	Manageable	Offered	Planned
4	Understood	Industry tested	Documented	Feasible	Feasible	Industry proposals	Known
3	Feasible	Reasonable	Solution classes	Coalescing	Building blocks	Strategy developed	Issues understood
2	Drivers known	Plausible	Scenarios identified	Minimal	Conceptual	Possible	Conceivable
1	Speculative	Speculative	Deficiency	Not at all	Not defined	Not yet	Not identified

<i>Project life cycle gates<sup>147</sup></i>	<i>Represents</i>	<b>Benchmark maturity score</b>
Enter Defence Integrated Investment Program	The stage at which a project is recommended to Government for inclusion in the Defence Integrated Investment Program	13
Decide viable capability options	The stage in the capability definition/ development process when 1 <sup>st</sup> Pass options that will be put to Government are decided by Chief CDG	16
1 <sup>st</sup> pass approval	The stage at which 1 <sup>st</sup> Pass options to be put to Cabinet are endorsed by the Defence Integrated Investment Program Committee	21
Industry proposals/ offers	The stage at which formal responses from industry to a request for price or request for tender have been received and evaluated	30
2 <sup>nd</sup> pass approval	The stage in the capability definition/development process when 2 <sup>nd</sup> pass approval is sought from Cabinet	35
Contract signature	On completion of contract negotiations and on concluding contract signature of a contract that has maximum influence on the project	42
Preliminary design review(s)	On completion of system requirements reviews and when preliminary design reviews are completed	45
Detailed design review(s)	On completion of detailed design reviews	50
Complete system integration and test	On completion of verification and validation activities at the system and subsystem levels	55
Complete acceptance testing	On completion of all contractual acceptance testing and associated testing activities nominated in the Test and Evaluation Master Plan	57
Initial materiel release	Occurs when the materiel components that represents the CASG contribution to initial operational release are ready for transition to the capability manager	60
Final materiel release	Occurs when all the products and services within the MAA have been transitioned to the capability manager.	63
Final contract acceptance	On final acceptance as defined in the contract.	65
MAA closure	Occurs when all of the actions necessary to finalise the MAA have been completed, including completion of all financial transactions and records, completion of contracts and transfer of remaining fund.	66
Acceptance into service	The point at which the capability manager accepts the materiel system, supplies and services for employment in operational service <sup>148</sup>	67
Project completion	Project closure is achieved when the project is financially closed, support arrangements have been transitioned and all MAA requirements have been demonstrated and transitioned.	70

<sup>147</sup> Defence is in the process of replacing this as the Capability Life Cycle implementation progresses. This will still be relevant for the historical data presented in the 2016-17 Major Projects Report.

<sup>148</sup> Where multiple elements of a mission system are involved (e.g. three surface combatants) this date represents Initial Operational Capability (IOC) of the initial Subset, including its associated operational support, i.e. when the IOC is achieved.

## Appendix 4: Capability Life Cycle

The Capability Life Cycle commenced in April 2016 to address First Principles Review Recommendation 2, which called for Defence to ‘Establish a single end-to-end capability development function within the Department to maximise the efficient, effective and professional delivery of military capability’. The Capability Life Cycle is Defence’s response to this recommendation.

The Capability Life Cycle is an end-to-end delivery model, but has four key stages, as outlined in the Figure below. The projects in this year’s MPR are in the Acquisition stage, but refer to decisions made in the Risk and Requirement Setting stage. Details about the Gates and Passes are listed below.

**Figure A2: Capability Life Cycle Model**



- **Gate Zero:** is the decision point at which the Investment Committee considers an investment proposal developed by a Capability Manager. It may agree to a proposal to develop a range of options with agreed timeframes, requirements and financial commitments to proceed to a Gate 1 decision, or, agree a single option for accelerated proceed directly to Gate 2.
- **Gate One:** (if required) is the decision point where the Investment Committee considers the progress made since Gate 0. The Investment Committee either clears the proposal for Government consideration, or provides direction to remediate projects.
- **First Pass:** (if required) is the Government decision to select a specific option(s) and proceed with agreed timeframes, technical requirements and financial commitments to Gate 2
- **Gate Two:** is the stage where the Integrated Project Manager initiates formal engagement with industry, in accordance with the agreed delivery strategy. The Investment Committee considers the updated proposal and either clears the proposal for Government consideration, or provides direction to remediate projects.
- **Second Pass:** is the Government decision to acquire a fully defined and costed capability.
- **Initial Operational Capability:** is the capability state relating to the in-service realisation of the first subset of a capability system that can be employed operationally. Declaration of initial operating capability is made by the Capability Manager, supported by the results of operational test and evaluation and declaration by the Delivery Group(s) that the fundamental inputs to capability have been delivered.
- **Final Operational Capability:** is the capability state relating to the in-service realisation of the final subset of a capability system that can be employed operationally. Declaration of final operating capability is made by the Capability Manager, supported by the results of operational test and evaluation and declaration by the Delivery Group(s) that the fundamental inputs to capability have been delivered.

## Appendix 5: Glossary

Acquisition Categories	See Appendix 1.
Additional Estimates	Where amounts appropriated at Budget time are required to change, the Parliament may make adjustments to portfolios through the Additional estimates process.
Australianised Military-off-the-shelf	An adapted military-off-the-shelf product where modifications are made to meet particular ADF operational requirements.
Capability	The power to achieve a desired operational effect in a nominated environment within a specified time and to sustain that effect for a designated period. Capability is generated by the Fundamental Inputs to Capability.
Capability manager	A capability manager (CM) has the responsibility to raise, train and sustain capabilities. In relation to the delivery of new capability or enhancements to extant capabilities through the Defence Integrated Investment Plan, CMs are responsible for delivering the agreed capability to Government, through the coordination of the fundamental inputs to capability. Principal CMs are Chief of Navy, Chief of Army, Chief of Air Force, and Chief of Joint Capabilities.
Capital equipment	Substantial end items of equipment such as ships, aircraft, armoured vehicles, weapons, communications systems, electronics systems or other armaments that are additional to, or replacements for, items in the Defence inventory.
Contract change proposal	This is a formal written proposal by the Commonwealth or the contractor, prepared in accordance with the terms and conditions of the contract, to change the contract after the effective date. After agreement by the parties, the contract is amended in accordance with the processes established in the contract
Corporate governance	The process by which agencies are directed and controlled, and encompasses; authority, accountability, stewardship, leadership, direction and control.
Developmental	A product that is not available off-the-shelf and has to be developed specifically to meet the ADF's particular operational requirements.
Fixed price contract	A fixed price contract is unalterable in all respects for the duration of the contract, except where the parties agree to a contract amendment which alters that contract price.



Foreign Military Sales	The US Department of Defense’s Foreign Military Sales program facilitates sales of US arms, Defense services, and military training to foreign governments.
Forward Estimates	The level of proposed expenditure for future years (based on relevant demographic, economic and other future forecasting assumptions). The Government requires forward estimates for the following three financial years to be published in each annual Federal Budget paper.
Function and performance specification	A specification that expresses an operational requirement in function and performance terms. This document forms part of the capability documentation.
Materiel Acquisition Agreement	An agreement between Defence and CASG which states in concise terms what services and products will be delivered, for how much and when.
Memorandum of understanding (MOU)	A memorandum of understanding is a document setting out an agreement, usually between two government agencies.
Minor Capital Acquisition Project	A Defence project in which the proposed equipment falls within the definition of capital equipment but does not meet the criteria in the definition of a major project.
Off-the-shelf	A system or equipment that is available for purchase, which is already established in-service with another military or government body or commercial enterprise and requires only minor, if any, modification to deliver interoperability with existing ADF assets.
Operational concept document	The primary reference for determining fitness-for-purpose of the desired capability to be developed. This document forms part of the Capability Definition Document.
Operational test and evaluation (OT&E)	Test and evaluation conducted under realistic operational conditions with representative users of the system, in the expected operational context, for the purpose of determining its operational effectiveness and suitability to carry out the role and fulfil the requirement that it was intended to satisfy.
Platforms	Refers to air, land, or surface or sub-surface assets that are discrete and taskable elements within the ADF.
Portfolio Budget Statement	A document presented by the Minister to the Parliament to inform Senators and Members of the basis for Defence budget appropriations in support of the provisions in Appropriation Bills 1 and 2. The statements summarise the Defence budget and provides detail of outcome performance forecasts and resources in order to justify agency expenditure.
Prime system integrator	The entity that has prime responsibility for delivering the mission and support systems.

<i>Public Governance, Performance and Accountability Act 2013</i>	<i>The Public Governance, Performance and Accountability Act 2013</i> came into effect on 1 July 2014 and superseded the <i>Financial Management and Accountability Act 1997</i> . It is a Commonwealth Act about the governance, performance and accountability of, and the use and management of public resources by, the Commonwealth, Commonwealth entities and Commonwealth companies, and for related purposes.
Test concept document	The basis for the development of the Test and Evaluation Master Plan for a project, and is the highest level document that considers test and evaluation requirements within the capability systems' life-cycle. This document forms part of the Capability Definition Document.
Variable price contracts	Variable price contracts provide for the contractor to be paid a fixed fee for performance of the contract, subject to certain variations detailed in the contract. Variable price contracts may allow for variations in exchange rates, labour and/or material costs.

## Appendix 6: Lessons learned

The 2019-20 Guidelines state that “for each project which has been removed, the lessons learned at both the project level and the whole-of-organisation level should be included as a separate section in the *following* Defence MPR”.<sup>149</sup>

**Table A6. Lessons learned**

Categories of systemic lessons	Project lesson	Project learned from
Contract management	Independent Assurance Reviews and Project Stakeholder Group meetings enable adjustment of project strategies and stakeholder input to balance schedule decisions against impacts to cost, schedule, performance, quality and stakeholder expectations. For example, cost, performance and supportability may be impacted by early acceptance of the supplies to meet schedule demands.	JP 20148 Phase 4A/4B - Amphibious Ships (LHD)
Contract Management	Prior to committing to the acquisition contract, use best endeavours to obtain high fidelity sustainment data and assess it against suitability (fitness for purpose). Senior engineering and logistic reviews are required prior to the delivery of the sustainment products to minimise sustainment risks	JP 20148 Phase 4A/4B - Amphibious Ships (LHD)
First of Type Equipment	When introducing new major capabilities into service, both operational tasks and maintenance tasks should be modelled and analysed in detail, before the training obligations under the acquisition contract are agreed.	JP 20148 Phase 4A/4B - Amphibious Ships (LHD)
First of Type Equipment	Ensure that technically complex developmental projects that have high levels of risk as part of the new system or integration of the new system into existing systems, demands that a prototype (lead platform) be agreed up-front and used for proving the capability before agreeing to additional platforms.	SEA 1448 Phase 2B – ANZAC Anti-Ship Missile Defence
Governance	Adequate communication between, and engagement of, critical stakeholders to ensure that a common understanding of Project status is maintained.	SEA 1448 Phase 2B – ANZAC Anti-Ship Missile Defence
Governance	Project budgets must be managed to avoid adverse impacts of program level changes to budget management practices.	SEA 1448 Phase 2B – ANZAC Anti-Ship Missile Defence
Governance	Seaworthiness policy changed the role of Regulators in the reviewing of the TI-338. Need to engage early with Policy and Procedure Owner to establish what ‘assurance’ is required and authorised	SEA 1448 Phase 2B – ANZAC Anti-Ship Missile Defence
Resourcing	JP 2072 is required to provide extensive support and advice to other projects procuring or integrating communications equipment via JP 2072 contracts. New project approvals need to include adequate resources for integration and support of communications systems within their own platforms. The sustainment organisation will need to be prepared to provide program, engineering and logistics support beyond the completion of JP 2072 phases.	JP 2072 Phase 2A – Battlespace Communications System

<sup>149</sup> 2018-19 Major Projects Report Guidelines, paragraph 1.13, emphasis applied.

Categories of systemic lessons	Project lesson	Project learned from
Requirements Management	Phase 2A delivery of More of the Same equipment required Design Acceptance under Phase 1, which was not achieved. Provisional Design Acceptance was put in place however some minor ancillary equipment defined in the capability baseline was withheld due to fitness for purpose issues. New project approvals should consider the necessary design inputs to ensure they are in place before projects proceed and engineering scope then resourced appropriately.	JP 2072 Phase 2A – Battlespace Communications System
Requirements Management	There was very limited detail on the levels of support agreed or articulated in the Capability Definition Documentation. Adequate support system was therefore not established in time for delivery of materiel. Future phases require the support system better defined prior to approval, and implemented earlier in the project lifecycle.	JP 2072 Phase 2A – Battlespace Communications System
Off-The-Shelf Equipment	The contracted Field Service Representative (FSR) teams have provided high quality service that has been well received by users and the Capability Manager. For example, in most cases it is more cost effective to locate/move FSR around to units than to send high volumes of equipment back to the Original Equipment Manufacturer facilities (domestic and international) for repairs or bulk upgrades. FSR have developed from an Introduction Into Service function into an increasing, ongoing support requirement for the foreseeable future.	JP 2072 Phase 2A – Battlespace Communications System
Governance	An observation from the Independent Assurance Review was the clarity of the Primary Systems Integrator role within Phase 2A and that it was a program level responsibility. Note that after earlier gaining Capability Manager and CIOG approval, ongoing development of the BCS(L) architecture continues via a standard systems engineering process with stakeholder representative input sought for major reviews; the Prime Systems Integration team is involved in other JP2072 phase reviews to ensure overarching alignment with the BCS(L).	JP 2072 Phase 2A – Battlespace Communications System
Requirements Management	Where a project has a long gestation period, for whatever reason, the Sponsor and Capability Manager must be closely engaged to ensure the requirements set maintains relevance over time.	JP 9000 Phase 7 – Helicopter Aircrew Training System
Off-the-Shelf Equipment	Tenderer/Contractor 'off-the-shelf' claims need to be tested as thoroughly as possible, as soon as possible in the project lifecycle. This requires the availability of, or access to, appropriate and engaged subject matter experts early.	JP 9000 Phase 7 – Helicopter Aircrew Training System
Schedule Management	Conduct of SCRAM activities during contract negotiation and again prior to IBR were first trialled in this Project, yet the schedule risks were realised very early in the Project. Early use of the SCRAM activity is valuable (risks identified early) and the process should be matured to support selection/negotiation and to baseline activities.	JP 9000 Phase 7 – Helicopter Aircrew Training System
Resourcing	This Project is one of the first to implement the Integrated Support Contractor (ISC) model to execute traditional Project Office roles. The ISC Contract structure was closely aligned to and reliant on the Prime Contractor's Contract Master Schedule (CMS). Initial CMS deliverables had quality issues manifesting significant second order effects on the ISC contract. Evolution of the ISC construct should recognise risks in lock-stepping the ISC delivery so closely to the Prime Contractor CMS.	JP 9000 Phase 7 – Helicopter Aircrew Training System

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Categories of systemic lessons	Project lesson	Project learned from
Contract Management	The ASDEFCON suite of contract templates are a good initiative for capturing lessons learned from years of project delivery. In endeavouring to capture all lessons the templates have become voluminous with significant inter-relationships. This can make contract execution, and in particular contract changes, very difficult as even a small change in one area may unravel other relationships within the contract suite.	JP 9000 Phase 7 – Helicopter Aircrew Training System
Schedule Management Resourcing	A dedicated Chief Information Officer Group/Information Communication Technology (ICT) subject matter expert assigned to the project through all stages of the acquisition would improve ICT delivery efficiency.	JP 9000 Phase 7 – Helicopter Aircrew Training System

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