Part 2. Defence Major Projects Report

Secretary's Foreword

I am pleased to provide the 2020-21 Major Projects Report, in conjunction with the Australian National Audit Office, on 21 Defence major capability acquisition projects, delivered by the Capability Acquisition and Sustainment Group.

The 14th annual Major Projects Report provides transparency on the progress of Defence's most complex acquisition projects. The Major Projects Report is a valuable tool to inform the Parliament and Australian public on Defence capability and related expenditure.

As at 30 June 2021, Defence was managing 161 major and 13 minor acquisition projects in support of the Australian Defence Force with a total acquisition value of $121.6 billion.

The 21 projects within the 2020-21 Major Projects Report have a combined total approved budget of $58 billion and total in year budget of $6.2 billion. Of note are the following project achievements during 2020-21 which support delivery of important capability for the Australian Defence Force and wider Indo-Pacific region:

- Pacific Patrol Boat Replacement program – in 2020-21, five vessels were delivered to our regional neighbours, Palau, Kiribati, Tonga, Papua New Guinea and Solomon Islands. Defence has now delivered 11 vessels.
- Joint Strike Fighter – Initial Operational Capability was declared in December 2020 and the Joint Strike Fighter can now be operationally deployed.
- Replacement Replenishment Ships – the first of two new Supply class replenishment ships, HMAS *Supply* was commissioned into the Royal Australian Navy and achieved Initial Operational Readiness in April 2021.

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
02 December 2021

Overview

As at 30 June 2021, Capability Acquisition and Sustainment Group (CASG) was managing 161 major and 13 minor acquisition projects at various phases in the Capability Life Cycle, worth a total acquisition cost of $121.6 billion. The 2020-21 acquisition budget of $9.3 billion was achieved, with acquisition spend up $1.3 billion from the prior year.

During this period 25 major and minor acquisition projects were closed. The 25 closed projects had a final spend over their life of $6.1 billion against a budget of $7.2 billion. About half the budget savings was in the Super Hornet acquisition project.

The Major Projects Report (MPR) outlines 21 projects, delivered by CASG, with a total acquisition cost of $58 billion. This accounts for 48 per cent of CASG projects by total budget.

Scope of the ANAO review

The purpose of the MPR is to provide transparency and accountability of Defence acquisitions for the benefit of Parliament and other stakeholders. The Australian National Audit Office conducts a priority assurance review of the information provided in the Project Data Summary Sheets (PDSS) at Part 3 of the report to provide confidence to the Parliament and other stakeholders that the information being provided by Defence is accurate and transparent.

The PDSS provided at Part 3 of this report disclose key project activity relating to cost, scope, schedule, risks and issues, and lessons learned up to 30 June 2021. Significant events that have occurred subsequent to 30 June 2021 are disclosed in the *Statement by the Secretary of Defence* and are detailed in Part 3 of the 2021-22 MPR.

Key Achievements and Annual Performance

Overall, the performance of the Department's major capital equipment program in the 2020-21 financial year has been strong.

The 2020-21 reporting period was again dominated by the COVID-19 pandemic that resulted in global disruptions to workforce, travel and supply chains. Defence and Defence Industry continued to display exceptional levels of resilience and adaptability and were able to maintain capability delivery at a high operating tempo. The achievements of CASG in safely continuing to deliver capability to the Australian Defence Force (ADF) demonstrates the high calibre of the professionals in the organisation and the robust processes and controls that enable them.

Defence and industry have largely maintained the scope and pace of the capability projects and programs. Key achievements this year include:

- The commissioning of a further five Guardian Class patrol boats, with 11 now delivered to Pacific nations.
- The F-35A Joint Strike Fighter project reached Initial Operating Capability (IOC) and can now be operationally deployed.
- Hawkei Protected Light Land Mobility System achieved IOC.
- HMAS *Supply* was commissioned into Navy's service.
- Prototyping for the Hunter class frigate commenced on schedule.
- Defence further embedded support for Australian industry to maximise opportunities for involvement in Defence projects, especially small and medium sized enterprises.

In respect of the acquisition projects managed by CASG in 2020-21:

- Achieved the acquisition budget of $9.3 billion

- 12 achieved IOC, five on time or ahead of schedule
- six achieved FOC, three on time or ahead of schedule delivery in accordance with second pass approval.

As at 30 June 2021 of the 161 Government approved major projects, two had issues with capability, schedule, or cost which were significant enough to be managed as Projects of Concern. A further 14 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 21 MPR projects over the 2020-21 period has been largely consistent with the overall performance of the 161 major equipment projects.

- one Project of Concern and nine Projects of Interest
- five projects report in year schedule slippage of between six and 24 months. Eight projects report on track to meet FOC by original forecast date.
- 10 projects reports a budget variation within 10 per cent of the actual in year budget. The remaining 11 projects reported variances of between 12 and 42 per cent.

Entry and exit from MPR

Of the 21 projects included in this report, 19 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 4000 Phase 3 – Air Warfare Destroyer Build
- AIR 7000 Phase 2B – Maritime Patrol and Response Aircraft System
- AIR 5349 Phase 3 – EA-18G Growler Airborne Electronic Attack Capability
- AIR 9000 Phase 8 - Future Naval Aviation Combat System Helicopter
- LAND 53 Phase 1BR – Night Fighting Equipment Replacement
- SEA 1439 Phase 3 – Collins Class Submarine Reliability and Sustainability

Two projects are new inclusions to the MPR:

- LAND 19 Phase 7B – Short Range Ground Based Air Defence
- AIR 2025 Phase 6 – Jindalee Operational Radar Network

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 2021.

The project additions and removals are in accordance with MPR Guidelines endorsed by the JCPAA in November 2020 and are published in Part 4 of this report.

Defence Strategic Environment

Significant Defence Events

In this reporting period there have been some significant events for Defence. These represent exciting opportunities for Defence and include:

The establishment of the AUKUS trilateral security partnership between Australia, the United Kingdom and the United States. On 16 September 2021, the Prime Ministers of Australia and the United Kingdom and the President of the United States of America, announced an enhanced trilateral security partnership between the three countries. AUKUS is a framework to enable deeper practical cooperation in developing leading-edge military capabilities and technologies. It will deepen cooperation between our three nations with a focus on improving joint capabilities and

interoperability initially focusing on cyber capabilities, artificial intelligence, quantum technologies, and additional undersea capabilities. AUKUS complements our network of international partnerships and will help ensure that Australia remains a responsible and highly capable security partner in the Indo-Pacific region for decades to come.

Nuclear-Powered Submarines. Australia in collaboration with AUKUS partners, will determine the optimal pathway for the delivery at least eight nuclear-powered submarines. These submarines will offer enhanced capability compared to conventional submarines. Nuclear-powered submarines have superior characteristics of stealth, speed, manoeuvrability, survivability and endurance when compared to conventional submarines. These abilities will allow for operation in contested areas with a lower risk of detection, and deter actions against Australia's interest. Following the announcement of this intent, Defence has established a multi-agency Nuclear-Powered Submarine Taskforce, which will intensively examine the full suite of requirements in partnership with the United Kingdom and the United States to deliver these submarines.

Cancellation of Attack-Class Submarine program. Following the decision to pursue a nuclear-powered submarine program, the Australian Government decided not to proceed with the Attack Class Submarine Program for the acquisition of 12 conventionally powered submarines. This decision was driven by the deterioration of Australia's strategic environment and is not related to the performance of the Attack Class Submarine Program. Defence acknowledges the impact of this decision and is committed to preserving the contribution the Attack Class project has made to strengthening Australia's defence and shipbuilding industry. This announcement was made outside of the MPR reporting period and is not reflected in the Project Data Summary Sheet for SEA1000 Phase 1B in Part 3 of this report.

The establishment of a Sovereign Guided Weapons Enterprise. On 31 March 2021, the Government announced the acceleration of the creation of a $1 billion Sovereign Guided Weapons Enterprise. Australia currently relies on key overseas strategic partners, including the United States, for access to a number of guided weapons. The domestic manufacture and supply of weapons will benefit and enhance ADF operational capacity and ensure the availability of stocks. This decision builds on existing capabilities, including the Nulka decoy missile and the Government Owned Contractor Operated explosive factories at Benalla in Victoria and Mulwala in New South Wales.

Support to Industry through COVID-19. As part of the Whole-of-Government response and initiatives, Ministerial leadership and close consultation, Defence has been directly supporting industry through COVID-19 with:

- The implementation of Government initiatives to support defence industry during the pandemic through the Accelerated Payment scheme. Since the start of the pandemic in March 2020 to 30 June 2021, the total value of invoices paid early (from contracted payments) was $31.7 billion. Defence also prioritised existing activities, bringing forward approximately $1 billion of economic stimulus investment initiatives.
- Active engagement with defence industry on steps to put in place recovery and COVID mitigation plans as well as support for movement of essential workers across State, Territory and international borders.
- Defence industry was able to rapidly shift from core business and respond with exceptional performance during the busy periods of the pandemic.
    - An Australian manufacturer who, with the help of ADF personnel helped increase production of surgical facemasks. Defence's support filled a short-term gap while the supplier recruited and trained supplementary staff.
    - A family-owned business who joined forces with the Department of Defence to rapidly produce face shields, designed by Defence Science and Technology Group, for frontline healthcare workers.

- A medical provider who developed the surge capacity to create mass treatment and infection control facilities. As a result world-leading, lifesaving wearable medical technology was able to be produced in Australia.

Acquisition environment - generational change and capability modernisation

Defence has embarked on a generational capability modernisation period, with significant investment made into the future frigate program, land vehicle modernisation, and bringing the fifth generation Joint Strike Fighter into service. For these projects to be successful, they need to be delivered in partnership with Australian Industry and maximise Australian industry capabilities wherever possible.

Earlier acquisition models, conceived in the wake of the Kinnaird Review, took a risk averse approach which encouraged the procurement of Off-the-Shelf capabilities, predominantly acquired under Foreign Military Sales. By its nature, this type of acquisition carries less risk and can be delivered faster through existing production lines.

However, the strategic environment changes recognised in the Defence Strategic Update and the associated Force Structure Plan, have heralded a shift from Off-the-Shelf equipment to the most complex developmental projects to meet the more demanding capability requirements. Through 2020-21, CASG (working with Defence Industry) achieved approximately $17 billion worth of activity, a growth rate of over 15% over 2019-20.

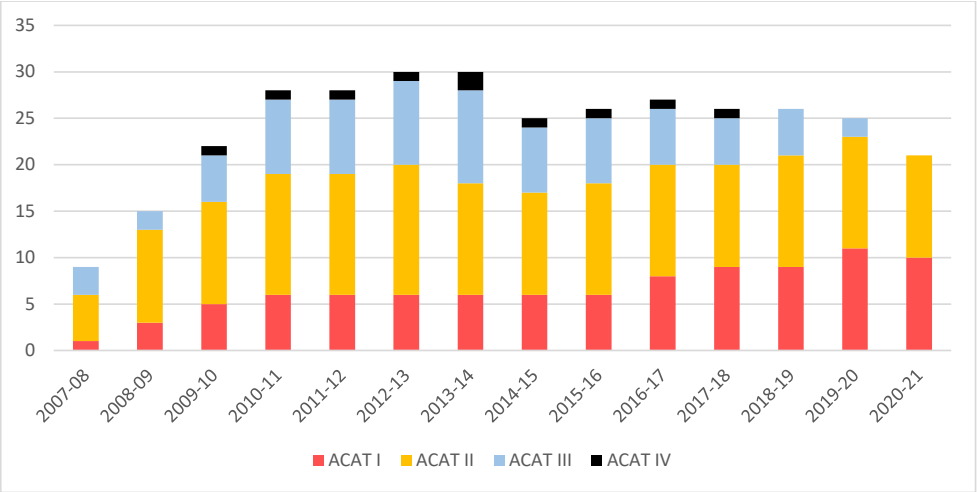
Defence also has a significant focus on consideration of Australian Industry Capability (AIC), to meet Government's commitment to build a sovereign, resilient and internationally competitive defence industrial base. Industry in this context has both an economic prosperity lens (through the desire to maximise AIC outcome), but also a critical ADF warfighting outcome lens (through the Strategic Industrial Capability Priorities), where the sovereign support and supply chain will be essential to the delivery of ADF capability.

Over the last decade the number of highest complexity (ACAT 1) projects has increased from 11 to 21. Some of these projects carry extreme risk associated with the level of structural and technical complexity and integration (Appendix 2 refers).

Of the 21 projects in the 2020-21 MPR, 10 are the highest complexity ACAT I and 11 are ACAT II. Whilst two are cooperative programs[137] with the United States Government, none are Foreign Military Sales (FMS) as the prime contract[138]. In comparison the 28 projects in the 2010-11 MPR comprised only six ACAT I and 13 ACAT II, with the remaining being ACAT III and ACAT IV projects. Five of these projects were Foreign Military Sales.

[137] See AIR6000 Phase 2A/2B and AIR7000 Phase 1B PDSSs for details of major contracts.
[138] SEA5000 Phase 1, AIR6000 2A/2B, SEA1439 Phase 5B2, AIR8000 Phase 2, LAND19 Phase 7B and SEA1442 Phase 4 list an FMS contract their respective PDSS, and although listed as one of the major contracts it is not the predominant contact and therefore not considered an FMS case.

Table 1 – ACAT complexity of MPR projects by year



The *Lead the Way: Defence Transformation Strategy* was released in November 2020. It provides the vision and an enduring framework for enterprise-wide transformation in support of Defence's delivery of its strategy and force structure priorities.

The Transformation Strategy is being implemented over two years (January 2021 to December 2022) and consists of 12 key initiatives.

A number of the initiatives will either directly or indirectly enhance Defence's capacity to manage, develop, deliver and sustain capability.

These initiatives include:

3.1. Drive improved capability delivery.

3.2. Strengthen Defence's approach to Australian industry capability, including innovation, export and harnessing opportunities from Australian science and technology.

3.3. Adopt a strategic approach to Defence enterprise resilience and supply chain assurance.

3.4. Improve Defence's Strategic Workforce Planning, Learning and Management.

3.5. Institute an improved Enterprise Performance Measurement and Reporting framework.

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 with the 2020-21 Defence Portfolio Budget Statements, Portfolio Additional Estimates Statements, and Annual Report, are presented on an accrual basis. Defence transitioned from cash reporting to accrual

reporting on 1 July 2020. Accrual recognition is considered a better financial measure of contract performance as measurement is linked to contract delivery rather than when payments are made. This transition is expected to support more accurate information on point-in-time budget positions; recording that is more aligned to the contracts and vendor arrangements and less focussed on year-end payments; and easier planning and forecasting for when work occurs rather than when invoices are paid.

The total in-year budget (2020-21) for all the projects listed in the 2020-21 MPR is $6.2 billion and total approved acquisition cost is $58 billion. Table 1 lists the 21 projects by total Government approval from highest to lowest total approved budget.

Table 2 2020-21 MPR projects by Total Approved Budget

Project Number	Project Name	Project Name Abbreviation	ACAT	2020-21 In-Year Budget $m	Total Approved Project Budget $m
AIR06000PH2A/B	New Air Combat Capability	Joint Strike Fighter	I	2,252.9	15,630.7
SEA05000PH1	Future Frigates	Future Frigates	I	498.4	6,046.9
SEA01000PH1B	Future Submarines Design Acquisition	Future Subs	I	768.3	5,818.2
LND00400PH2	Combat Reconnaissance Vehicles	Combat Recon. Vehicles	I	488.7	5,655.4
AIR09000PH2	Multi-Role Helicopter	MRH90 Helicopters	I	97.3	3,770.0
SEA01180PH1	Offshore Patrol Vessel	Offshore Patrol Vessel	II	252.1	3,669.6
LND00121PH3B	Medium Heavy Capability, Field Vehicles, Modules and Trailers	Overlander Medium/Heavy	I	216.4	3,397.8
AIR07000PH1B	MQ-4C Triton Remotely Piloted Aircraft System	MQ-4C Triton	II	191.8	1,953.4
LND00121PH4	Protected Mobility Vehicle – Light (PMV-L)	Hawkei	I	425.7	1,952.9
AIR08000PH2	Light Tactical Fixed Wing	Light Tactical Fixed Wing	II	40.7	1,426.1
LND00019PH7B	Short Range Ground Based Air Defence	SRGB Air Defence 1	II	167.5	1,201.0
AIR02025PH6	Jindalee Operational Radar Network	JORN Upgrade 1	II	48.7	1,128.5
SEA01654PH3	Maritime Operational Support Capability	Repl Replenishment Ships	II	208.1	1,082.6
AIR05431PH3	Civil Military Air Management System	CMATS	I	135.5	974.5
LND0200PH2-A	Battlefield Command System	Battlefield Command System	I	116.6	962.3
JNT02072PH2B	Battlespace Communications System Phase 2B	Battle Comm. Sys. (Land) 2B	I	88.3	942.2
SEA01439PH5B2	Collins Class Communications and Electronic Warfare Improvement Program	Collins Comms and EW	II	57.3	608.7
SEA03036PH1	Pacific Patrol Boat Replacement	Pacific Patrol Boat Repl	II	82.2	501.4
SEA01442PH4	Maritime Communications Modernisation	Maritime Comms	II	34.4	434.1
SEA01448PH4B	ANZAC Air Search Radar Replacement	ANZAC Air Search Radar Repl	II	39.9	429.1
JNT02008PH5A	Indian Ocean Region UHF SATCOM	UHF SATCOM	II	7.7	421.3
Total				**6,209.5**	**58,006.6**

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 includes activities such as:

- Follow-on Second Pass approvals for additional phases of capability
- 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 budget. There have been no RCIs in this reporting year.

In-Year cost

The 21 projects in the 2020-21 MPR had a combined in year budget of $6.2 billion. Overall budget variation was $98m or 1.6%.

The initial Portfolio Budget Statement forecast was $6.9 billion and mid-year Portfolio Additional Estimates Statement forecast was $6.4 billion. Table 5b in Appendix 5 lists the forecast expenditure against actual expenditure per project.

In 2020-21 most projects reported spending less than their annual budget allocation. Whilst this is largely consistent with last year's report, the percentage of projects that have reported budget variations greater than 10% of the Final Plan has grown from 32% in 2019-20 to 52% in 2020-21. There are a number of drivers of budget variation including shifting schedule delivery milestones and reprogramming of schedules, less than forecast costs to contracted workforce and other Project office costs, and lower than forecast Foreign Military Sales and United States Government and Cooperative Agreement costs. Additionally, during the pandemic a number of projects brought forward activities to support industry in the early stages of the COVID-19 pandemic.

Across year financial movements occur for a number of reasons including to support movement of delivery schedules, reprogramming of Foreign Military Sales, and foreign exchange variations. An in year variation, or across year financial movement occurs within the total approved project budget.

Causes of budget variation in 2020-21 include:

- LAND 200 Tranche 2 Battlefield Command System. In year expenditure of $67.5 million against a Final Plan expenditure forecast of $116.6 million primarily due to finalising contract change proposals and the delay in meeting a software release review milestone.
- SEA 1439 Phase 5B2 Collins Class Communications and Electronic Warfare Improvement Program. In year expenditure of $39m against a Final Plan expenditure forecast of $57.3

million due to milestone delays as a result of COVID-19 travel restrictions and lower than forecast Foreign Military Sales and ASC (major contractor) payments.

- SEA 1654 Phase 3 Maritime Operational Support Capability (Replacement Replenishment Ships). In year expenditure of $150.5 million against a Final Plan expenditure forecast of $205.1 million primarily due to the transfer of additional works from Spain to Australia and delays to a contract change proposal relating to final sparing deliveries.

Other common reasons for budget variations in 2020-21 include Foreign Exchange adjustment, reprogramming of Foreign Military Sales and restrictions relating to COVID-19 including travel and supply chain.

Appendix 5 further details total budget and in year budget status for each of the MPR projects.

Schedule

CASG projects have continued to deliver successful capability outcomes, noting schedule remains the primary improvement focus and is being driven through the Smart Buyer process and early phases of the Capability Life Cycle.

This year, eight projects report no variation to schedule. The majority of projects continue to report zero or minimal variation to Final Operational Capability (FOC) compared to the originally forecast FOC date. There are however four projects that are reporting more than 50% variation to achieve their originally forecast FOC date. Of the 19 projects carried over from the last report, five projects extended their FOC forecast date within 2020-21. The average FOC variance of the 17 projects[139] forecasting a FOC date at 30 June 2021 is 21 months. Table 5c at Appendix 5 provides the detailed breakdown for the 21 projects.

Defence and industry pursue an aggressive schedule to delivery capability with urgency. Where schedule slippage has occurred, project managers are working with Defence, Industry and the Capability Manager Representatives to manage the impacts without compromising capability.

Schedule variation occurs for a number of reasons including late delivery, increase in scope, a force majeure event[140] or a deliberate management decision. It also occurs because Defence set ambitious schedule targets to ensure it can provide the ADF with leading edge capability.

Causes of Schedule Variation 2020-21

Four projects recorded an in year schedule variation of between six and 24 months. There are a number of causes for these variations including the impacts of the COVID-19 pandemic affecting supply chains, domestic and international travel restrictions and shutdowns. Through COVID-19, Defence and Industry have innovated and found new ways to work. Many projects have been able to continue without detriment. Some schedules have been impacted by six to 12 months. Other factors include delays to interdependent projects, and technical, reliability and integration issues.

The four projects that reported schedule variation to forecast FOC declaration during the year:

- MRH90 Helicopters – ongoing capability delays have resulted in a revision of FOC. There has been significant work by both Industry and the Commonwealth to define and implement a

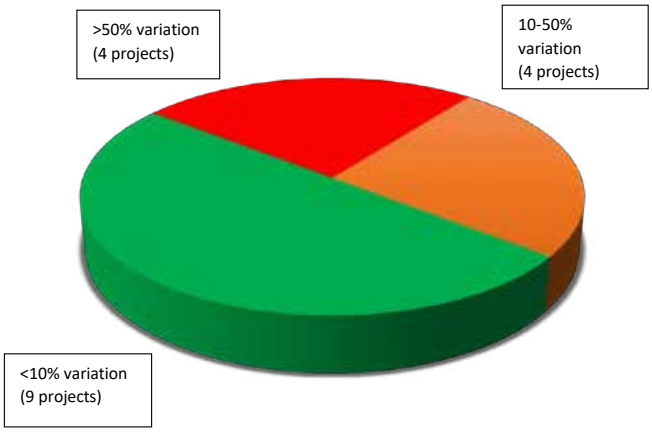
[139] SEA1000 Phase 1B Future Submarine Design Acquisition and SEA5000 Phase 1 Future Frigates are in design phase and do not have delivery milestones established. AIR5431 Phase 3 Civil Military Air Management System and AIR2025 Phase 6 Jindalee Operational Radar Network are undertaking schedule reviews that will identify a revised FOC date

[140] A force majeure is an event or circumstance which is beyond the control of either party and without fault or negligence, was unable to be prevented. Examples include the closure of the Ferrol shipyard in Spain due to country wide COVID-19 lockdowns.

series of capability block enhancements to bring the MRH90 to contracted standards. This included a retrofit program to progressively bring all aircraft up to the contracted standard.

- MQ-4C Triton – In 2020 the United States Navy announced a two year production funding pause for its Triton program (United States Fiscal years 2021 and 2022). Defence placed Triton project activity on hold whilst analysing the impacts to the Australian program and the broader Maritime Patrol and Response capability. Government considered these impacts within the Tranche 3 proposal in May 2020 and approved the acquisition of a third Triton aircraft. Government agreed revised milestone dates however schedule risk remains.
- Light Tactical Fixed Wing – The Capability Manager conducted a capability revalidation activity for the projects which redefined the expected project outcomes. Government approved the revised scope and subsequent schedule in December 2020.
- Battlespace Communication Systems – The FOC date was extended to accommodate a Contract Change Proposal relating to COVID-19 Delay.

Figure 1 – Schedule variation percentage



Schedule variations are reported based on the achievement of FOC. In most instances the programs are providing effective capability to the ADF prior to FOC.

Schedule variation in early milestones such as IOC and IMR do not necessarily result in a variation to the originally forecast FOC date. Five projects in the 2020-21 MPR with a forecast or actual variation to IMR and IOC are not forecasting a shift of FOC. This is because schedule development will often accommodate overlap in design and production, long production lead times and the ability to redeploy assets or surge a workforce as one phase is completed and another commences.

Materiel Scope and Capability

It is important to understand the difference between materiel scope and capability. 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 is the delivery of the materiel element of capability. Other fundamental inputs to capability such as workforce, facilities or supporting IT infrastructure are outside the materiel scope.

Calculating 'expected scope delivery' in a percentage term does not distinguish the relative impact some scope may have on overall capability, either up or down. Likewise, measuring the materiel

scope delivery of a project against the final intended capability effect, without considering other fundamental inputs to capability, does not present a true picture of the forecast capability. [141]

The 'traffic light' assessment of each element is indicative of[142]:

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

Of the 21 projects in this MPR:

- 13 projects had 100 per cent of the measure green
- four have measures which are at risk
- two are reporting an element that is unlikely to be fully met
- two projects currently in the design phase are not included[143].

Table 3 – 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%)	The project has options to deliver Maritime Strike capabilities in a timeframe closely following that of the United States Navy. The project will also continue to invest in F-35A development toward advanced Maritime Strike options for consideration under the Enhanced Maritime Strike for the Air Combat Capability project in the context of a Joint Maritime Strike strategy.
JNT 2072 Phase 2B - Battlespace Communications Systems	Amber (2.5%)	The project is managing schedule risks associated with the Terrestrial Range Extension System scope of work as expressed in the Materiel Acquisition Agreement and supporting suite of Capability Definition Documentation
LAND 121 Phase 3B - Overlander Vehicles	Amber (11%)	IOC was achieved with caveats due to delay in achievement of air certification. Achieving air certification by FOC remains a medium risk after mitigation. Schedule management remains a key focus and is being closely managed by CASG and the Capability Manager
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 capability.
LAND 200 Tranche 2 - Battlefield Command System	Red (9%)	The project does not expect to deliver the Weapons Integrated Battle Management System under the current contract for the M1A1 tank. Additionally the project does not expect to deliver the equipment for the Hawkei General Service Vehicle (Utility variant), however this will be offset by an increase in the quantities delivered for the Hawkei Command and Control Vehicle and the Manoeuvre Vehicle.

[141] Joint Committee of Public Accounts and Audit Reports 458 and 468 recommended Defence review the procedure for development of expected capability estimates for future MPRs. The term 'capability' can be considered as the capability effect available to the ADF and in reporting terms, the project scope being delivered when combined with the required fundamental inputs to capability.
[142] 2020-21 Major Projects Report Guidelines endorsed by the Joint Committee of Public Accounts and Audit November 2020 refers to capability rather than materiel scope which incorrectly attributes an MPR project outcome to the final capability.
[143] SEA1000 Phase 1B Future Submarine Design Acquisition and SEA5000 Future Frigates are in design phase and do not have materiel scope established.

AIR 8000 Phase 2 - Light Tactical Fixed Wing	Red (3%)	Following a technical and value for money evaluation it was decided to retain the existing Aircraft Self Protection capability rather than upgrade it. A simulator with less mission functionality will be procured. $35m is set aside for risk management of future platform obsolescence (avionics).

Acquisition Governance

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.

CASG is developing a report on acquisition and sustainment activities that will focus on the Top 30 Projects and Products within the Portfolio Budget Statements. The intention is to sequence this report with the other Defence public reports listed above, and including the MPR and ANAO Performance Audits.

Whilst these reform activities have been occurring, Defence continues to rely upon existing systems such as statutory reporting, annual budget processes, enterprise committee accountabilities, and Capability Life Cycle processes to ensure the timely and accurate reporting to decision makers and relevant Ministers.

Capturing Government approval

Agreements

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

As the Defence Transformation Strategy, Data Strategy and the Enterprise Resource Planning project is implemented, Defence will continue to contemporise the MAA templates as required. Future requirements and systems may evolve agreements (such as for electronic management) but Defence will continue to capture project detail for reporting.

The removal of the requirement for Project Directives occurred to strengthen the focus on the primary artefacts related to project approvals, being the Ministerial/Cabinet submission and associated approval. Defence staff have access to their Government approval of the project, as appropriate. Annual Materiel Acquisition Agreement reviews and Independent Assurance Reviews assure dates with Government approvals.

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.

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 further deterioration of delivery parameters.

Projects of Concern

Projects (or sustainment activities) identified as a Project of Concern have technical, commercial, cost or schedule challenges that benefit from additional senior executive and Ministerial support. 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.

The process allows Defence, Defence Industry and Ministers to work together to establish remediation actions with the primary objective being to return the project to the usual management framework.

As at 30 June 2021, MRH90 Helicopters is the only project in this year's Major Projects Report that is a Project of Concern.

Table 4 – Projects of Concern at 30 June 2021

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 within Defence and with Industry.

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 project assurance framework 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.

Smart Buyer and Independent Assurance Reviews

Defence's Smart Buyer program supports projects and products in their early planning phases through consideration of key strategy drivers, which in turn supports the development of robust project execution strategies. Within CASG, these strategies are subsequently tested in the Independent Assurance Reviews (IARs) that follow.

Whilst the primary role of Smart Buyer is to set-up projects for success, the methodology is flexible and has been adapted to address a variety of situations, including where support is required to establish programs, or where services or sustainment activities are contemplated. The Smart Buyer program is an example of the One Defence approach to capability acquisition with the program formally undertaking CASG, Chief Information Officer Group and complex Estate and Infrastructure workshops.

Independent Assurance Reviews consider the health and outlook of projects across the Capability Life Cycle. 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 makes recommendations or proposes 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 elevation to Project of Interest or Project of Concern status.

Both the Smart Buyer and Independent Assurance Review programs draw on a common pool of experienced external reviewers. Recent additions to the pool have expanded both numbers and skillsets available, enabling the programs to better meet rising demand across Defence.

While there was a temporary decline in the delivery of both the IAR and Smart Buyer programs immediately following the outbreak of the COVID-19 pandemic, demand for both programs now exceeds pre-pandemic levels.

In 2020-21, there have been 143 IARs conducted covering 181 project phases or sustainment activities. Review Board members have extremely varied professional backgrounds but typically have extensive senior management experience gained in either the Australian Public Service, ADF, Industry or Academia, and have a very sound understanding of Defence, CASG and Government processes.

Lessons

The *Lead the Way: The Defence Transformation Strategy*, released in November 2020, identified the need for new Enterprise Lessons Framework to ensure Defence is actively seeking every opportunity to learn and adapt as part of a continuous improvement culture. Defence's new approach will strengthen the relationship between lessons and decision making at the enterprise-level, investigate the adoption of modern tools and systems to support data collection and analysis and explore the introduction of a monitoring and evaluation framework to support lesson implementation. This initiative is due for delivery by late 2022 and will build on and strengthen the existing good practice lessons approaches operating within Defence.

CASG has implemented a lessons program supported by policy and a framework that ensures observations, insights and lessons can be captured within the Defence Lessons Repository. Systemic themes arising from CASG observations, insights and/or lessons are analysed and fed back into policy and or training as part of CASG's commitment to Defence's continuous improvement culture.

CASG supports the broader Defence Lessons Program and is represented at Defence Lessons Working Groups and Defence Lessons Steering Groups which aims to share information and continuously improve.

As Defence moves to deliver its Enterprise Lessons Framework by late 2022, the organisation is evolving and learning the language of lessons and the application of associated processes. This will lead to improved lessons capture and the quality of the information found at Appendix 4 (the lessons learnt) of which the majority currently better qualify as observations rather than lessons. Notwithstanding, CASG is working to ensure the content at Appendix 4 is capture in the Defence Lessons Repository and where possible undertake analysis to extract lessons to share, and where appropriate, shape policy and/or training to ensure lessons are learned.

Business Systems

Risk Reform

The CASG Risk Reform Program is nearing completion[144]. The program modernises risk management within the Group by delivering a Risk Management System that:

- standardises application of the ISO31000:2018 risk management process
- clearly defines the level and depth of risk planning for specific project applications
- introduces a common risk language
- standardises the format for risk planning

[144] Joint Committee of Public Accounts and Audit Report 473 recommended Defence plans and reports a methodology that shows how acquisition projects can transition from the use of spreadsheets risk registers.

- provides a selection of appropriate methods, techniques and approaches, and
- incorporates an information management system that enables enhanced risk-based decision making.

The system includes the definition of process requirements that enable appropriate visibility, traceability and auditability of risk records. The selection of an updated information management system (Predict!) for risk management is also framed by wider project management and governance information requirements in line with the Defence ICT strategy, as well as work undertaken by Defence's Enterprise Resource Planning (ERP) project.

Comprising the system is an array of standardised policy, tools and supporting resources, including:

- CASG Risk Management Strategy
- CASG Risk Management Framework
- CAS Risk Management Manual
- Project and Product Risk Management Practical Guide
- Standardised project, product and business risk matrices
- Risk Terminology Common Language
- Consistent risk management templates
- Training and ongoing support

Training for risk practitioners and decision makers includes familiarisation and Predict! user training, and from early November 2021 will include online "Risk Management in CASG" eLearning that expands upon the Commonwealth-wide Risk Management training provided by Comcover.

Risk-based discussions are supported by the Project Performance Review process, which informs senior managers of project performance. Current risk information is presented as part of this monthly review process based on data extracted from Predict!. This facilitates senior management risk based decision making, and where necessary, enables appropriate and proportionate intervention measures to be implemented to maintain approved project cost, schedule and scope outcomes.

Predict! was approved as the single risk management tool for CASG programs, projects, products and business risks in May 2020. Between October 2020 and October 2021, 90 projects and 47 products have transitioned from spreadsheets, other risk systems and earlier versions of the Predict! system to the latest version of Predict!. Some projects and products that are soon to close will not be transitioned, however the remaining projects and products will be transitioned by end of February 2022.

On completion of the Risk Reform Program in February 2022 CASG will transition to a continuous improvement model to maintain its risk system as a modern, standardised and well governed risk management system that supports risk based decision making.

Monthly Reporting Module

Defence introduced the Monthly Reporting Module in July 2020 and saw the retirement of the previous Monthly Reporting System. The Monthly Reporting Module replaced the functionality of Monthly Reporting System for performance metrics against scope, cost and schedule. Further, the Monthly Reporting Module developed a Materiel Acquisition Agreement module that allow central control over the Materiel Acquisition Agreement baseline in the Monthly Reporting Module to maintain consistent baselines.

For the 2020-21 MPR, issues were identified with the consistency and accuracy of data in the Monthly Reporting Module leading to the use of alternate data sources to generate the PDSS information for some projects.

CASG has worked to resolve the consistency and accuracy in Monthly Reporting Module issues. The change to accrual accounting problem was resolved in October 2020. Human error issues have been addressed via increased communications, education and guidance material, augmented by a central quality review team which has seen a significant drop in errors. Defence continues to work to align end of month budgeting tools and processes to ensure accurate financial data.

Reporting on project personnel numbers

Defence's acquisition budget does not include staffing costs. These are funded through the annual Departmental operating budgets. Defence's project expenditure accurately captures project spend, which includes supplier and contractor costs. Staff costs are reported as part of Defence's operating results. At present Defence does not have systems that allows it to capture time spent by staff on specific projects. Defence is currently assessing the viability of implementing such system(s). This assessment will include a cost versus benefit analysis to support an informed decision on implementing such a system in the future.

Capability Life Cycle improvements

Defence is delivering capability with urgency to meet the rapidly changing strategic environment, as detailed in the 2020 Force Structure Plan. Appendix 3 refers.

Caveats or deficiencies are used where a milestone (Initial Operational Capability, Final Operational Capability, Initial Materiel Release, Final Materiel Release) has been achieved in principle, with outstanding actions to be rectified or mitigated.

Declaring milestones with caveats is a useful method to assess the project's performance in terms of ability to meet capability requirements while transparently acknowledging there may be an element of scope or performance that is outstanding.

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 MMM-YY	FOC Achieved / Forecast MMM-YY	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	N/A	N/A	JCPAA Approval[1]
AIR 8000 Phase 3	C-17 Heavy Airlift	2008-09	2011-12	1,423.40	1,423.40	0	Dec-11	Dec-11	FOC achieved
AIR 5349 Phase 1/2	Bridging Air Combat Capability	2008-09	2012-13	3,661.40	3,045.90	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	1,882.50	1,663.80	218.7	Sept 12	Oct-14	FMR achieved
AIR 5418 Phase 1	Follow On Stand Off Weapon	2009-10	2013-14	319	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	Sept 13	Oct-14	FMR 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 MMM-YY	FOC Achieved / Forecast MMM-YY	Reason for Exit
SEA 1390 Phase 2.1	Guided Missile Frigate Upgrade Implementation	2007-08	2013-14	1,453.80	1,374.70	79	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	3,885.30	3,559.60	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	1,818.70	1,764.30	54.4	May-16	Jul-16	FOC achieved
AIR 87	Armed Reconnaissance Helicopter	2007-08	2016-17	1,867.80	1,867.80	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	1,250.60	1,036.10	214.5	Oct-17	Jan-17	FOC achieved
LAND 121 Ph3A	Overlander Vehicles (Light)	2009-10 (Ph 3) 2012-13 (Ph 3A)	2016-17	1,017.60	900.5	117.1	Oct-16	Oct-16	FOC achieved
LAND 75 Phase 4B	Battlefield Command System	2015-16	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

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 MMM-YY	FOC Achieved / Forecast MMM-YY	Reason for Exit
SEA 1439 Phase 4A	Collins Replacement Combat System	2007-08	2017-18	438.8	438.8	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	3,092.20	2,861.90	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	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
SEA 4000 Phase 3	Air Warfare Destroyer Build	2008-09	2019-20	9,094.3	8,146.8	947.4	Jun 20	Jun 21	JCPAA Approval
AIR 7000 Phase 2B	Maritime Patrol and response Aircraft System	2014-15	2019-20	5,633.5	4,199.6	1,433.8	Jun 22	Jun 22	JCPAA Approval
AIR 5349 Phase 3	EA-18G Growler Airborne Electronic Attack Capability	2013-14	2019-20	3,426.9	2,670.9	755.9	Aug 22	Aug 22	JCPAA Approval

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 MMM-YY	FOC Achieved / Forecast MMM-YY	Reason for Exit
AIR 9000 Phase 8	Future Naval Aviation Combat System Helicopter	2011-12	2019-20	3,147.6	2,445.1	702.5	Dec 23	Dec 23	JCPAA Approval
LAND 53 Phase 1BR	Night Fighting Equipment Replacement	2018-19	2019-20	556.4	387.9	168.5	Mar 23	Sep 23	JCPAA Approval
SEA 1439 Phase 3	Collins Class Submarine Reliability and Sustainability	2009-10	2019-20	443.7	401.9	41.8	Dec 22	Jun 23	JCPAA Approval

Notes:

1. Approval granted after project scope and budget were approved for transition to the in-service sustainment support system in 2010-11

2,3,4. 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: Acquisition complexity 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: 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 4: Lessons learned

The 2020-21 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".

Table A4. 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 2048 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 2048 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 2048 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

Resourcing	For appropriate management according to Defence best practice benchmarks, allocation of project management resources is required immediately on project approval, particularly for projects with primarily FMS acquisition strategies. These projects inherently experience significant lag between Second Pass approval and schedule and financial management maturity, due to the lag between FMS case establishment and initial prime acquisition contracts when compared to commercially based acquisitions. The delay in achieving maturity benchmarks are only exacerbated when resourcing is not applied early in the acquisition life cycle	AIR 5349 Phase 3 – EA-18G Growler Airborne Electronic Attack Capability
Resourcing	Workforce planning considerations need to capture project drawdown and closure resourcing requirements. If the project workforce is reduced too early, or if key roles are not maintained there is risk to project performance and good governance.	AIR 5349 Phase 3 – EA-18G Growler Airborne Electronic Attack Capability
Requirements Management	Ensure that all capability requirements are clearly defined, approved and appropriately funded before detailed acquisition planning commences.	SEA 1439 Phase 3 – Collins Class Submarine Reliability and Sustainability
Schedule Management	Ensure that maintenance period schedule dependencies are identified and appropriate risk management strategies developed.	SEA 1439 Phase 3 – Collins Class Submarine Reliability and Sustainability
Contract Management	Consider the impact associated with long term sole source cost plus contracts.	SEA 1439 Phase 3 – Collins Class Submarine Reliability and Sustainability
Schedule Management Contract Management	Understand the competing priorities within a program (ISS Performance Term Contract) and how they will impact on individual project performance.	SEA 1439 Phase 3 – Collins Class Submarine Reliability and Sustainability
Governance	Responsibilities need to be clearly defined between project stakeholders in regards to the development and endorsement of trial documents and that this is identified well in advance of scheduled trials.	SEA 1439 Phase 3 – Collins Class Submarine Reliability and Sustainability
Governance	The AWD Reform has been successful and the key reason is due to implementing an experienced Management Team into the Shipbuilding Program who have previously built and designed the ship. First of Class ship build programs should have this support when building the first ship, allowing the local Australian workforce to be better prepared and trained to build the remaining ships.	SEA 4000 Phase 3 – Air Warfare Destroyer

Contract Management	The Hobart Class Combat System operation and performance has been proven on *HMAS Hobart* and *NUSHIP Brisbane* through acceptance tests at sea. The first-time success of this complex integration is due to thorough design and architecture early in project, along with the extensive use of on-shore test facilities closely replicating the ship environment. Close cooperation and regular dialogue with United States Navy colleagues were also important to ensure integration with the AEGIS weapon system.	SEA 4000 Phase 3 – Air Warfare Destroyer
Contract Management	The interpretation of the requirements of fitness for purpose of drawings is different between contracting parties. A review of all product types prior to contract and interrogation of the delivery schedule to confirm sufficient time for reviews and incorporation of comments is necessary.	SEA 4000 Phase 3 – Air Warfare Destroyer
Resourcing First of Type Equipment	The shipbuilding capacity of shipyards involved in a project like AWD needs to be assessed in detail in terms of precise capacity to undertake production engineering as well as the workload constraints of facilities, production supervision and overall workforce numbers taking into consideration the total contracts conducted at the shipyard in parallel.	SEA 4000 Phase 3 – Air Warfare Destroyer
Schedule Management	The schedule that plans the transition from design to production needs detailed evaluation by the designer(s) and the production shipyard(s) to ensure the balance between commencing production and completing very detailed design is appropriately balanced and agreed.	SEA 4000 Phase 3 – Air Warfare Destroyer
Resourcing	The need to develop appropriate and sector wide tools and infrastructure, namely the Maritime Information Environment IT network, to facilitate Government policies in continuous naval shipbuilding.	SEA 4000 Phase 3 – Air Warfare Destroyer
Contract Management	Whilst an FMS program affords a number of advantages, the transfer of a significant amount of project management and engineering functions to the US Government implementing agency (NAVAIR PMA-299) and the weak bargaining position of the Commonwealth, increases the project's exposure to risk (technical, schedule and cost). The resultant level of risk and complexity is often understated and poorly understood. The level of Commonwealth contract and financial management involvement and oversight of industry is very low in comparison to that mandated for Direct Commercial Sale contracts, yet both procurement methods confront similar issues. Adequate Commonwealth participation in key project management and technical oversight activities in the US, as provided for in the Government Second Pass submission, is critical to provide the required level of contract management.	AIR 9000 Phase 8 – Future Naval Aviation Combat System
Resourcing	The recruitment process lead times for candidates not already within the ADF or APS can create significant extended vacancies within the Project workforce, and this is exacerbated by the relatively short notice that Defence personnel are obliged to provide for internal transfers.	AIR 9000 Phase 8 – Future Naval Aviation Combat System

Off-The-Shelf Equipment	By procuring MOTS equipment, adhering to the project's clearly defined scope as detailed by government at Second Pass, and effectively using the Program Management Steering Group to prevent potential scope creep, the project has been able to meet or exceed its financial and schedule obligations as detailed within the project's Materiel Acquisition Agreement.	AIR 9000 Phase 8 – Future Naval Aviation Combat System
Schedule Management	Linking ship integration to the project has assured continued support and oversight of that aspect from subject matter experts. As this projects final milestones are linked to future ship integration and the delivery of capability on that vessel it has been invaluable to have a Project Team member embedded within the parent Ship Project. By actively participating in the development of the ship's Aviation configuration our project has been able to minimise disruptions to the ship build cycle and Project schedule slippages.	AIR 9000 Phase 8 – Future Naval Aviation Combat System
Contract Management	The signed PSFD MoU does not provide explicit detail on those activities which will be undertaken in the interests of both nations by the CP (paid for by shared funding) and those which are Australian unique (paid for in addition to the shared financial contribution). Clearer definition of this division in the MoU would have avoided the post-signature negotiation required to resolve this ambiguity.	AIR 7000 Phase 2B – Maritime Patrol and Response Aircraft System
Requirements Management	The CP model has allowed Australia to work closely with the USN in the future requirements definition and planning for the P-8A. This has been to the significant mutual benefit of both the USN and Australia.	AIR 7000 Phase 2B – Maritime Patrol and Response Aircraft System
Contract Management	Precision of description about what is included under the PSFD MoU.	AIR 7000 Phase 2B – Maritime Patrol and Response Aircraft System
Requirements Management	Greater focus in regards to Australian Industry involvement within MoU.	AIR 7000 Phase 2B – Maritime Patrol and Response Aircraft System
Contract Management	Scope of the MoU, does not contemplate other USN organisations (NAVSUP, SPAWAR). Consider how support from other US agencies can be assured.	AIR 7000 Phase 2B – Maritime Patrol and Response Aircraft System
Contract Management	Use of a US Cooperative Program contract support model should be used with caution, if the activity will be subcontracted primarily back to Australian Industry to support. Consider direct contract arrangements within Australia, with reachback to US CONUS OEM as required if IP, export and data support can be assured.	AIR 7000 Phase 2B – Maritime Patrol and Response Aircraft System

Requirements Management	Airworthiness Certification of USN product may not meet Australian WHS requirements. Consider what SFARP approach needs to be taken when introducing into service.	AIR 7000 Phase 2B – Maritime Patrol and Response Aircraft System
Contract Management	Export controls need to be closely monitored to ensure the articles receive appropriate Congressional approval in time for shipment, particularly for classified items.	AIR 7000 Phase 2B – Maritime Patrol and Response Aircraft System
Requirements Management	When interfacing with US ICT organisations, it is very difficult to arrange access with the correct subject matter experts. Consider strong relationships under a cooperative program to ensure the right people are making decisions.	AIR 7000 Phase 2B – Maritime Patrol and Response Aircraft System
Contract Management	Procurements through different parts of the USN organisation have different schedules and may take significantly longer than others. Ensure the contracting processes and timelines for the organisation conducting the contract management are well understood, before beginning the Procurement Process.	AIR 7000 Phase 2B – Maritime Patrol and Response Aircraft System
Requirements Management	SATCOM connectivity and who pays for each segment is rarely clear. Ensure ownership of each data segment is well understood.	AIR 7000 Phase 2B – Maritime Patrol and Response Aircraft System
Requirements Management	SPAWAR manages a large number of components in the TOC across the USN, of which only a small number are needed for an aircraft platform. As a consequence, large numbers of "common" TOC components may be changed as part of a suite of TOC upgrades across the USN fleet, and rolled into what was a relatively minor air vehicle change. This may well hold up delivery of a new mission system software drop while awaiting the software regression testing to be complete on the overall configuration build change for the TOC.	AIR 7000 Phase 2B – Maritime Patrol and Response Aircraft System
Resourcing	Consider co-location or moving of Acquisition Project staff to the Sustainment organisation as part of standing up the Sustainment Management Unit (SMU). This will ensure a better flow of knowledge transfer and ownership of the history of a particular requirement. Co-location of the Project Office with the SMU in January 2019 has already yielded benefits in terms of information transfer and cooperation in capability delivery.	AIR 7000 Phase 2B – Maritime Patrol and Response Aircraft System
Requirements Management	Ensure the transition plan is approved well in advance of the first aircraft delivery (12 months or more).	AIR 7000 Phase 2B – Maritime Patrol and Response Aircraft System

Appendix 5: Data Tables

Table 5A Project Budget Status

Project Number	Government Approved Budget at Second Pass $m	Subsequent Government Approvals $m	Price Indexation $m	Foreign Exchange Variation $m	Real Cost / Scope Variation $m	Transfers $m	Budgetary Adjustments $m	Budget Cost Savings $m	Current Budget $m	Government Approved budget at Second Pass %	Subsequent Government Approvals %	Price / Exchange %	RCI %	Other %
AIR06000PH2A/B	2,751.60	10,515.40	351	2,023.90	-2.90	-8.40	0.00	0.00	15,630.60	17.60%	67.27%	15.19%	-0.02%	-0.05%
SEA05000PH1	6,184.00	0	0	-140.40	0.00	3.30	0.00	0.00	6,046.90	102.27%	0.00%	-2.32%	0.00%	0.05%
SEA01000PH1B	989.40	4,963.10	0	-117.80	0.00	-16.60	0.10	0.00	5,818.20	17.01%	85.30%	-2.02%	0.00%	-0.28%
LND00400PH2	5,762.70	0	0	-107.30	0.00	0.00	0.00	0.00	5,655.40	101.90%	0.00%	-1.90%	0.00%	0.00%
AIR09000PH2	957.2	2,565.60	679.8	-137.40	31.50	-239.30	-87.40	0.00	3,770.00	25.39%	68.05%	14.39%	0.84%	-8.67%
SEA01180PH1	3,639.10	0	0	30.50	0.00	0.00	0.00	0.00	3,669.60	99.17%	0.00%	0.83%	0.00%	0.00%
LND00121PH3B	2,549.20	735.5	0	143.10	0.00	-30.00	0.00	0.00	3,397.80	75.03%	21.65%	4.21%	0.00%	-0.88%
AIR07000PH1B	2,067.90	0	0.2	-114.70	0.00	0.00	0.00	0.00	1,953.40	105.86%	0.00%	-5.86%	0.00%	0.00%
LND00121PH4	1,945.00	0	0.4	7.60	0.00	0.00	0.00	0.00	1,953.00	99.59%	0.00%	0.41%	0.00%	0.00%
AIR08000PH2	1,156.50	0	0	270.50	0.00	-1.00	0.00	0.00	1,426.00	81.10%	0.00%	18.97%	0.00%	-0.07%
LND00019PH7B	1,274.30	0	0	-73.40	0.00	0.00	0.00	0.00	1,200.90	106.11%	0.00%	-6.11%	0.00%	0.00%
AIR02025PH6	1,117.90	0	0	0.00	8.20	2.40	0.00	0.00	1,128.50	99.06%	0.00%	0.00%	0.73%	0.21%
SEA01654PH3	1,004.60	0	0	-3.40	0.00	81.40	0.00	0.00	1,082.60	92.80%	0.00%	-0.31%	0.00%	7.52%
AIR05431PH3	731.4	0	0	2.40	247.50	0.00	-6.80	0.00	974.50	75.05%	0.00%	0.25%	25.40%	-0.70%
LND0200PH2-A	930	0	0	32.30	0.00	0.00	0.00	0.00	962.30	96.64%	0.00%	3.36%	0.00%	0.00%
JNT02072PH2B	915.7	0	0	26.50	0.00	0.00	0.00	0.00	942.20	97.19%	0.00%	2.81%	0.00%	0.00%
SEA01439PH5B2	599.1	0	0.4	6.70	0.00	0.00	2.50	0.00	608.70	98.42%	0.00%	1.17%	0.00%	0.41%
SEA03036PH1	504.5	0	0	-3.10	0.00	0.00	0.00	0.00	501.40	100.62%	0.00%	-0.62%	0.00%	0.00%
SEA01442PH4	385.6	0	0	48.40	0.00	0.00	0.00	0.00	434.00	88.85%	0.00%	11.15%	0.00%	0.00%
SEA01448PH4B	427.8	0		1.30	0.00	0.00	0.00	0.00	429.10	99.70%	0.00%	0.30%	0.00%	0.00%
JNT02008PH5A	461	0	18	-39.70	-18.00	0.00	0.00	0.00	421.30	109.42%	0.00%	-5.15%	-4.27%	0.00%
Total $m / Average %	**36,354.60**	**18,779.50**	**1,049.90**	**1,856.10**	**266.30**	**-208.10**	**-91.70**	**0.00**	**58,006.60**	**62.67%**	**32.37%**	**5.01%**	**0.46%**	**-0.52%**

Table 5B 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)	Variation % (Final Plan - Actual Spend)
AIR06000PH2A/B	New Air Combat Capability	2,430.6	2,354.4	2,252.9	2,565.9	135.3	313.03	13.9%
SEA01000PH1B	Future Submarines Design Acquisition	782.5	782.2	768.3	630.7	-151.8	-137.60	-17.9%
SEA05000PH1	Future Frigates	587.0	506.9	498.4	508.5	-78.5	10.12	2.0%
LND00400PH2	Combat Reconnaissance Vehicles	566.2	501.4	488.7	414.6	-151.5	-74.10	-15.2%
LND00121PH4	Protected Mobility Vehicle – Light (PMV-L)	440.1	434.0	425.7	411.6	-28.5	-14.08	-3.3%
SEA01180PH1	Offshore Patrol Vessel	285.1	254.5	252.1	204.6	-80.5	-47.56	-18.9%
LND00121PH3B	Medium Heavy Capability, Field Vehicles, Modules and Trailers	226.1	218.5	216.4	216.1	-10.0	-0.27	-0.1%
SEA01654PH3	Maritime Operational Support Capability	231.3	214.4	208.1	150.5	-80.9	-57.66	-27.7%
AIR07000PH1B	MQ-4C Triton Remotely Piloted Aircraft System	239.2	199.7	191.8	206.1	-33.2	14.27	7.4%
LND00019PH7B	Short Range Ground Based Air Defence	174.4	171.5	167.5	172.3	-2.2	4.74	2.8%
AIR05431PH3	Civil Military Air Management System	93.7	136.3	135.5	121.6	27.9	-13.91	-10.3%
LND0200PH2-A	Battlefield Command System	216.5	118.5	116.6	67.5	-149.0	-49.07	-42.1%
AIR09000PH2	Multi-Role Helicopter	122.5	98.5	97.3	103.9	-18.6	6.60	6.8%
JNT02072PH2B	Battlespace Communications System Phase 2B	95.9	90.2	88.3	77.0	-18.9	-11.31	-12.8%
SEA03036PH1	Pacific Patrol Boat Replacement	85.3	82.7	82.2	71.3	-14.1	-10.96	-13.3%
SEA01439PH5B2	Collins Class Communications and Electronic Warfare Improvement Program	64.5	58.1	57.3	39.0	-25.6	-18.34	-32.0%
AIR02025PH6	Jindalee Operational Radar Network	53.5	48.7	48.7	45.8	-7.6	-2.88	-5.9%
AIR08000PH2	Battlefield Airlift – Caribou Replacement	66.9	41.7	40.7	35.6	-31.3	-5.03	-12.4%
SEA01448PH4B	ANZAC Air Search Radar Replacement	43.0	40.1	39.9	36.5	-6.6	-3.49	-8.7%
SEA01442PH4	Maritime Communications Modernisation	39.8	35.3	34.4	34.9	-4.9	0.49	1.4%
JNT02008PH5A	Indian Ocean Region UHF SATCOM	9.0	8.1	7.8	6.4	-2.5	-1.32	-17.0%
Total		6,853.0	6,395.7	6,218.6	6,120.2	-732.8	-98.3	-1.6%

Table 5C Project Schedule Status

Project Number	Project	2nd Pass	Originally Estimated IOC	Forecast IOC at 30 Jun 20	Forecast IOC at 20 Jun 21	IOC variation (months)	Variation Percentage	Originally estimated FOC	Forecast FOC at 30 Jun 20	Forecast FOC at 30 Jun 21	FOC variation (months)	Variation Percentage
AIR06000PH2A/B	New Air Combat Capability	Apr-14	Dec-20	Dec-20	Dec-20	0	0.00%	Dec-23	Dec-23	Dec-23	0	0.00%
LND00400PH2	Combat Reconnaissance Vehicles	Mar-18	Jun-22	Jun-22	Jun-22	0	0.00%	Jun-27	Jun-27	Jun-27	0	0.00%
AIR09000PH2	Multi-Role Helicopter	Apr-06	Apr-11	Dec-14	Dec-14	45	73.38%	Jul-14	Dec-21	Jun-22	96	95.98%
SEA01180PH1	Offshore Patrol Vessel	Nov-17	Dec-22	Dec-22	Dec-22	0	0.00%	Jun-30	Jun-30	Jun-30	0	0.00%
LND00121PH3B	Medium Heavy Capability, Field Vehicles, Modules and Trailers	Jul-13	Dec-19	Dec-19	Dec-19	0	0.00%	Dec-23	Dec-23	Dec-23	0	0.00%
AIR07000PH1B	MQ-4C Triton Remotely Piloted Aircraft System	Nov-20	Jul-24	Jul-26	Apr-26	21	47.76%	Dec-25	Jun-29	Jul-31	66	109.81%
LND00121PH4	Protected Mobility Vehicle – Light (PMV-L)	Aug-15	Dec-19	Dec-20	May-21	17	32.66%	Jun-23	Jun-23	Jun-23	0	0.00%
AIR08000PH2	Battlefield Airlift – Caribou Replacement	Apr-12	Dec-16	Dec-16	Dec-16	0	0.00%	Dec-17	TBA	Jun-22	54	79.37%
LND00019PH7B	Short Range Ground Based Air Defence	Feb-19	Jun-23	-	Jun-23	0	0.00%	Jun-26	-	Jun-26	0	0.00%
AIR02025PH6	Jindalee Operational Radar Network	Dec-17	Apr-24	-	TBA	-		Jan-29	-	TBA	-	-
SEA01654PH3	Maritime Operational Support Capability	Apr-16	Mar-21	Jul-21	Aug-21	5	8.52%	Dec-22	Dec-22	Dec-22	0	0.00%
AIR05431PH3	Civil Military Air Management System	Dec-14	Jun-20	Jun-23	TBA	48	-	Jun-23	Apr-26	TBA	46	-
LND0200PH2-A	Battlefield Command System	Sep-17	Sep-21	Apr-23	Apr-23	19	39.49%	Jun-22	Sep-22	Oct-23	16	28.09%
JNT02072PH2B	Battlespace Communications System Phase 2B	Apr-15	Sep-17	Mar-18	Mar-18	6	20.48%	Sep-20	Sep-22	Sep-23	36	55.30%
SEA01439PH5B2	Collins Class Communications and Electronic Warfare Improvement Program	Mar-17	Jun-21	Aug-21	Dec-22	18	35.29%	Dec-24	Jun-27	Jun-27	30	32.20%
SEA03036PH1	Pacific Patrol Boat Replacement	Apr-16	Oct-18	Nov-18	Nov-18	1	3.40%	Sep-23	Jun-24	Nov-23	2	2.25%
SEA01448PH4B	ANZAC Air Search Radar Replacement	Jun-17	Jun-20	Jul-21	Jul-21	13	36.04%	Jun-24	Jun-24	Jun-24	0	0.00%
SEA01442PH4	Maritime Communications Modernisation	Jul-13	Dec-18	Dec-21	Dec-21	37	55.38%	Dec-23	Apr-25	Apr-25	16	12.80%
JNT02008PH5A	Indian Ocean Region UHF SATCOM	Mar-10	Jul-12	Jul-12	Jul-12	0	0.00%	Jul-18	Dec-21	Dec-21	42	41.03%
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									
Average Variations		-	-	-	-	13	20.73%				21	24.04%
Median						6	8.52%				9	2.25%
Standard Deviation						16	24%				29	37.11%

Appendix 6: Glossary

Glossary

Acquisition Categories	See Appendix 2.
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.
Final Operational Capability (FOC)	The capability state relating to the in-service realisation of the final subset of a capability system that can be employed operationally.
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.
Initial Materiel Release (IMR)	A milestone that marks the completion and initial release of Acquisition Project supplies required to support the achievement of Initial Operational Capability (IOC)
Initial Operational Capability (IOC)	The capability state relating to the in-service realisation of the first subset of a capability system that can be employed operationally
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.
Out Turned costs / out-turning	Defence establishes cost estimates using out-turned costs (i.e. inclusive of agreed or estimated contract price indexation) to ensure that estimates include allowances for future inflationary cost increases and foreign exchange
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.
Public Governance, Performance and Accountability Act 2013	*The Public Governance, Performance and Accountability Act 2013* came into effect on 1 July 2014 and superseded the *Financial Management and Accountability Act 1997*. 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.