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Performance Audit

Capability Development Reform

Department of Defence

Australian National Audit Office

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Canberra ACT
30 October 2013

Dear Mr President
Dear Madam Speaker

The Australian National Audit Office has undertaken an independent performance audit in the Department of Defence in accordance with the authority contained in the *Auditor-General Act 1997*. Pursuant to Senate Standing Order 166 relating to the presentation of documents when the Senate is not sitting, I present the report of this audit to the Parliament. The report is titled *Capability Development Reform*.

Following its presentation and receipt, the report will be placed on the Australian National Audit Office's website—http://www.anao.gov.au.

Yours sincerely

Ian McPhee
Auditor-General

The Honourable the President of the Senate
The Honourable the Speaker of the House of Representatives
Parliament House
Canberra ACT

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Abbreviations

ADF	Australian Defence Force
ARMS	(Defence's) Audit Recommendation Management System
ASPI	Australian Strategic Policy Institute
BPR	Business Process Review
CCDG	Chief, Capability Development Group
CDB	(Former) Capability Development Board
CDF	Chief of the Defence Force
CDG	Capability Development Group
CDIP	Capability Development Improvement Program
CDMRC	Capability Development and Materiel Reform Committee
CEO DMO	Chief Executive Officer, Defence Materiel Organisation
CGRB	Capability Gate Review Board
COTS	Commercial-off-the-shelf (equipment)
CSLC	Capability Systems Lifecycle
CSLCMM	Capability Systems Lifecycle Management Manual
CTMC	Capability and Technology Management College
DARC	Defence Audit and Risk Committee
DCC	Defence Capability Committee
DCDH	Defence Capability Development Handbook
DCDM	Defence Capability Development Manual
DCG	Defence Capability Guide
DCIC	Defence Capability and Investment Committee
DCP	Defence Capability Plan
DMO	Defence Materiel Organisation
DSTO	Defence Science and Technology Organisation
FIC	Fundamental Inputs to Capability
GMS	General Manager Systems (former senior position in DMO)

IPT	Integrated Project Team
JCPAA	Joint Committee of Public Accounts and Audit
JPD	Joint Project Directive
LCC	Lifecycle Costs
MAA	Materiel Acquisition Agreement
MARC	(DMO's) Materiel Audit and Risk Committee
MOTS	Military-off-the-shelf (equipment)
MPR	(DMO) Major Projects Report
MRCT	Mortimer Review Coordination Team
MRIGC	Mortimer Review Implementation Governance Committee
NPOC	Net Personnel and Operating Costs
NSC	National Security Committee (of Cabinet)
ORC	(Former) Options Review Committee
OTS	Off-the-shelf (equipment)
P3M3®	Portfolio, Program and Project Management Maturity Model
PIRB	Project Initiation and Review Board
SCAC	Secretary and CDF Advisory Committee
SRP	(Defence's) Strategic Reform Program
TRA	Technical Risk Assessment
TRL	Technology Readiness Level
VCDF	Vice Chief of the Defence Force

Summary and Recommendations

Summary

Introduction

1. To protect and advance Australia's strategic interests, Defence prepares for and conducts naval, military and air operations and other tasks as directed by the government of the day.[1] Developing and maintaining the capability to carry out these operations and tasks is a central and ongoing responsibility for Defence. The implications for Defence of the Government's strategic requirements, articulated in a Defence White Paper, are analysed and, among other things, lead to a series of projects to be programmed through the capability development process.[2] Capability development generally results in the acquisition of new or upgraded capital equipment, and Defence must ensure that the equipment and all the other prerequisites to a functional capability are available to the Services for operational use when needed.[3]

2. Capability systems are generally expensive and require upgrade or replacement over time to allow the Australian Defence Force (ADF) to maintain and improve its capability while keeping pace with changes in the

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1 The Defence portfolio comprises component organisations that together are responsible for the defence of Australia and its national interests. In practice, these are broadly regarded as one organisation known as 'Defence' (or the 'Australian Defence Organisation'). The three most significant bodies are:

- the Department of Defence, headed by the Secretary;
- the Australian Defence Force (ADF), comprising the three Services, Navy, Army and Air Force, commanded by the Chief of the Defence Force (CDF); and
- the Defence Materiel Organisation (DMO), a prescribed agency within the Department of Defence, headed by the Chief Executive Officer, DMO (CEO DMO).

(Australian Government, Portfolio Budget Statements 2013–14, Defence Portfolio, p. 2.)

2 Defence uses the term 'capability development' to mean the definition of requirements for future capability, principally during the requirements phase of its Capability Systems Life Cycle (CSLC) for major capital equipment. The CSLC comprises: the needs phase; the requirements phase; the acquisition phase; the in-service phase; and the disposal phase. Generally, Strategy Group has the lead responsibility for the needs phase; Capability Development Group for the requirements phase; DMO for the acquisition phase; Capability Managers for the in-service phase; and DMO for the disposal phase.

3 In addition to the acquisition and support of new or upgraded platforms or systems under Major Capital Equipment Projects for which DMO is primarily responsible, delivering new or upgraded capability to the ADF requires a number of other fundamental inputs to capability (FIC), namely: *personnel* (Capability Manager responsibility); *organisation* (Capability Manager responsibility); *collective training* (shared responsibility between the Capability Manager and the Chief of Joint Operations Command); *facilities and training areas* (Defence Support and Reform Group responsible for facilities and DMO for equipment and systems); and c*ommand and management*. (Capability Managers are responsible for regulations and service-specific command and management, while DMO is responsible for the system acquisition and logistics management aspects of the *command and management* FIC).

threat environment. Defence defines its capability needs in the light of the strategic thinking set out in the latest Defence White Paper. The Australian Government released the *Defence White Paper 2013* on 3 May 2013.[4] An earlier announcement had indicated that the Government expects to upgrade or replace up to 85 per cent of the ADF's equipment over the next 15 years at a cost to the Commonwealth of up to $150 billion over the next decade alone.[5] The Defence Portfolio Budget Statements 2013–14 outline planned Defence Capability Plan (DCP) expenditure of $8310 million for that year and over the Forward Estimates.

3. Generally, there are long lead times involved in delivering Defence capability, and many years may elapse from the point where a capability gap is identified to the delivery of a new or upgraded system into regular service. When projects are delayed, run into difficulties or, as sometimes happens, fail altogether, the consequences are serious: these include the likelihood of a gap in ADF capability developing or persisting, and a poor return on a generally substantial public investment.

4. Concerns over Defence's ability to deliver capabilities on time and on budget to specified technical requirements has caused successive governments and ministers to initiate reviews of the organisation's management of capability development. One of the most substantial reforms arising from these reviews has been two-pass government approval for major capability development projects, originally introduced as a result of the Defence Governance, Acquisition and Support Review in 2000. Two-pass approval was intended to give government greater control over capability development.

5. The Defence Procurement Review, chaired by Mr Malcolm Kinnaird AO (the 'Kinnaird Review'), followed in 2003. This review recommended strengthening the two-pass process and led to the creation of the Capability Development Group (CDG) in Defence to give focus to and improve capability definition and assessment. Also as a result of the Kinnaird Review, the Defence Materiel Organisation (DMO) was given greater independence within the department to manage acquisition projects. Later reviews, such as the Defence Procurement and Sustainment Review, chaired by Mr David Mortimer AO (the 'Mortimer Review') and completed in 2008, extended the thinking of Kinnaird

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4 See http://www.defence.gov.au/whitepaper2013/, accessed 26 July 2013.

5 Minister for Defence Materiel, the Hon. Jason Clare MP, *Defence Skills Plan to Meet the Challenges Ahead*, Media Release, 5 December 2011.

and sought to strengthen the framework established after 2003. This framework—the two-pass system—remains in place and forms the backbone of capability development and materiel acquisition within Defence.

Parliamentary and ANAO coverage

6. Capability development is central to Defence's ongoing capacity to achieve the outcomes required of it by government—that is, to protect and advance Australia's strategic interests by providing military forces and supporting those forces in the defence of Australia and its strategic interests.[6] Accordingly, it is unsurprising that there has been considerable attention to these issues by parliamentary committees.[7] The ANAO's program of work in the Defence portfolio over the past decade has also provided substantial coverage in this area. A particular focus has been Defence's processes for the identification, acquisition and introduction into service of the often high-value materiel required to generate capability. In this context, Audit Report No.48, 2008–09, *Planning and Approval of Defence Major Capital Equipment Projects*, tabled in June 2009, examined Defence's execution of the two-pass system in the years following the then Government's acceptance of the majority of the Kinnaird Review's recommendations. The ANAO's coverage, including more recent work, has included:

- ANAO's annual review of the DMO Major Projects Report, which, for 2011–12, reviewed 29 of the most significant major projects currently being managed by the DMO[8];

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6 Department of Defence, *Annual Report 2011–12*, p. 23.

7 In particular, the Joint Committee of Public Accounts and Audit (JCPAA) and the Senate Foreign Affairs, Defence and Trade References Committee have each undertaken significant inquiries in this field. See JCPAA Report 411, *Inquiry into financial reporting and equipment acquisition at the Department of Defence and the Defence Materiel Organisation* (August 2008) and the preliminary (December 2011) and final (August 2012) reports of the Senate Foreign Affairs, Defence and Trade References Committee's inquiry, *Procurement procedures for Defence capital projects*.

8 The objective of the Major Projects Report is to provide:

- comprehensive information on the status of selected Major Projects, as reflected in the Project Data Summary Sheets (PDSSs) prepared by the DMO, and the Statement by the Chief Executive Officer (CEO) of the DMO (in Part 3 of the report);
- the Auditor-General's formal conclusion on the ANAO's review of the preparation of the PDSSs by the DMO in accordance with guidelines endorsed by the JCPAA (also in Part 3 of the report);
- ANAO analysis of the three key elements of the PDSSs—cost, schedule and capability, in particular, longitudinal analysis across these elements of projects over time (in Part 1 of the report); and
- further insights and context by the DMO on issues highlighted during the year (contained in Part 2 of the report—although not included within the scope of the review by the ANAO).

- Audit Report No.52, 2011–12, *Gate Reviews for Defence Capital Acquisition Projects*, tabled in June 2012, which examined DMO's Gate Review process conducted at key points in a project's life, including before submission to government for first and second-pass approval[9]; and
- various performance audits of individual capability development projects and broader topics, such as Audit Report No.57, 2010–11, *Acceptance into Service of Naval Capability*, which considered the experience of 20 major projects in delivering capability into service with the Royal Australian Navy (Navy) and the impediments to this.[10]

7. This audit has been a further contribution to fulfilling the undertaking to the JCPAA in 2006 that the ANAO examine post-Kinnaird activities in Defence and DMO to examine reform progress. There was also an intention in the government response to Mortimer that the ANAO be invited to audit the progress of reform. With the two-pass system having been in place for more than a decade, and substantial time having elapsed since the Kinnaird and Mortimer Reviews reported, this is a broadly-based audit of Defence's progress in achieving capability development reform.

Common themes in Defence reviews

8. Many of the major reviews conducted in Defence over the last decade, including both the Kinnaird and Mortimer Reviews, recommended reforms to the two-pass system or related capability development issues. Accordingly, to inform this audit, the ANAO undertook the preliminary step of analysing the findings of major reviews since 2000. This analysis identified five reviews since the introduction of the two-pass system which were most relevant to capability development reform, and showed that these reviews included common, and often consistent, themes.[11] These reviews and themes are in Table S.1.[12]

9 Gate Reviews are an internal DMO assurance process involving a periodic, critical assessment of a project by a DMO-appointed Gate Review Assurance Board, comprising senior DMO management and up to two external members.

10 In Audit Report No.57, 2010–11, the ANAO made eight recommendations designed to improve Defence's management of the acquisition and transition into service of Navy capability, including reducing delays in achieving operational release of such capability.

11 During the audit, it became apparent that the reforms recommended by fresh reviews often emphasise, refine or give more impetus to existing initiatives recommended by earlier reviews. Implementation of a reform may remain incomplete when a further recommendation is made.

Table S.1: Recurring themes in reviews of capability development in Defence

Ticks indicate whether an issue was raised in a review. This table also appears in Chapter 2 (Table 2.1) including additional notes and references to the chapters of this report which consider each of these themes.

Theme	Review				
	April 2000 Defence Governance, Acquisition and Support	Aug. 2003 Kinnaird Review	Sept. 2008 Mortimer Review	April 2009 Pappas Review	Jan. 2011 Black Review
Turnover of capability development staff	High turnover of capability development staff prevents the development of skills and experience necessary in such a complex and specialist area.				
	✓	✓	✓	✓	✓
Chronic and critical shortage of skills essential to develop robust major capability proposals.	Cost estimation is a technical discipline and requires specialist skills. High levels of skill are critical to delivering capability and making accurate cost estimates that enable informed capability/cost decisions. CDG personnel (both cost estimators and Desk Officers—now known as 'project managers') have low average cost-estimating experience. Cost estimates must reflect whole-of-life costs.				
	✓	✓	✓	✓	✓
Initial entry of a project into the DCP warrants close attention. The DCP should be realistic, affordable, prioritised and consistent with government expectations.	Underestimation of the cost of new equipment specified in the DCP and of the associated operating costs, and lack of prioritisation of DCP projects. Over-programming and over-planning, which include both including more projects in the DCP than Defence can afford and starting more projects than required, to accommodate potential schedule slippage in projects.				
	✗	✓	✓	✓	✓
Lack of independent scrutiny of proposals undermines quality.	Absence of scrutiny of capital investment proposals to assess affordability, schedule risk and commercial aspects of acquisition by staff who are organisationally independent of the proposal sponsor.				
	✓	✓	✓	✓	✓

12 The result of the ANAO's examination of the findings of these reviews is in Chapter 2. The reviews referred to are: (i) Department of Defence, *Report on Defence Governance, Acquisition and Support* (prepared by KPMG), April 2000; (ii) *Defence Procurement Review* (Malcolm Kinnaird AO, chairman), August 2003—'the Kinnaird Review'; (iii) Department of Defence, *Going to the Next Level: the Report of the Defence Procurement and Sustainment Review* (David Mortimer AO, chairman), September 2008—'the Mortimer Review'; (iv) Department of Defence, *2008 Audit of the Defence Budget* (George Pappas, consultant), April 2009—'the Pappas Review'; and (v) Department of Defence, *Review of the Defence Accountability Framework* (Associate Professor Rufus Black), January 2011—'the Black Review.'

Theme	Review				
	April 2000 Defence Governance, Acquisition and Support	Aug. 2003 Kinnaird Review	Sept. 2008 Mortimer Review	April 2009 Pappas Review	Jan. 2011 Black Review
Technical risk is critical and should be clearly and consistently assessed and commun-icated to government.	Technical risk is a major factor in the acquisition of new defence capabilities. It is the major cause of both post-approval project slippage and cost escalation.				
	✗	✓	✓	✓	✓
Acquisition decisions should be based on a comprehensive **whole-of-life cost estimate**.	Understanding whole-of-life costs is essential to effective decision-making on capability options. Inadequate attention given to managing and costing defence capabilities on a whole-of-life basis results in funding shortfalls for ongoing operating, maintenance and support costs.				
	✓	✓	✓	✓	✓
Effective **information systems that provide cost information** for major capabilities.	Defence systems cannot readily provide consistent, reliable or complete infor-mation of the operating cost of current capabilities. Incomplete cost information about current capabilities prevents Defence from making reliable fact-based estimates of future operating costs, and means estimates of those costs are based on general assumptions rather than reliable historical data on cost drivers.				
	✓	✓	✓	✓	✓
Rigorous analysis of costs and risks associated with requirements set beyond those of **off-the-shelf** equipment	Requirements beyond off-the-shelf equipment generate what Mortimer described as 'disproportionately large increases to the cost, schedule and risk of projects' and therefore should be based on 'a rigorous cost-benefit analysis of additional capability sought against the cost and risk of doing so'. This analysis must be clearly communicated to government. Each and every decision to pursue a unique Australian solution needs to be made with a full understanding of not just the benefits but also the extra cost and risk of doing so.				
	✓	✓	✓	✓	✓
Committees and accountability.	Too many committees with too many members; representational in nature rather than limited to those essential to provide informed advice to accountable decision-makers; features of committees result in dissipated accountability and responsibility; improved committee processes required.				
	✓	✓	✓	✓	✓

Source: ANAO analysis

9. Most of the reviews acknowledged that Defence can demonstrate incremental improvements in some areas of capability development but finds it harder to demonstrate lasting change.[13] Defence, similarly, has acknowledged that capability development reform remains an ongoing challenge. In May 2011, the then Secretary of the department observed that:

> We have struggled to match our capability aspirations with our capacity to deliver. There are numerous reasons for this, but broadly they fall into three categories. First, we need to identify problems in the development and acquisition of major capabilities earlier ... Second, Defence has expressed difficulty in attracting and retaining an appropriate number of skilled staff to progress our projects ... Third, major Defence projects are technically complex, and some have taken more time than was originally anticipated in order to mitigate technical risks ahead of government consideration.[14]

10. High-level concern over capability development has continued to the present. In mid-August 2013 the outgoing Minister for Defence formally advised the then Prime Minister, through correspondence, of two significant capability projects which he considered to be case studies 'for any additional reforms necessary to address systematic deficiencies in procurement and capability projects.'

Audit objectives and scope

11. The objective of the audit was to examine the effectiveness of Defence's implementation of reforms to capability development since the introduction of the two-pass process for government approval of capability projects[15] and government's acceptance of the reforms recommended by the Mortimer Review.[16] The scope of this audit included the requirements phase and, to a limited extent, the acquisition phase of major capability development projects, focusing upon changes flowing from the major reforms.[17]

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13 See, for example, the discussion of the Black Review at paragraph 2.40 of this audit.

14 Hansard, Senate Foreign Affairs, Defence and Trade Legislation Committee, Estimates, 30 May 2011, pp. 12–13.

15 This occurred in 2000.

16 In 2008. While not intended as a comprehensive audit of Defence's implementation of the Mortimer Review, this audit does address Defence's progress in implementing the major recommendations of that Review agreed by government and which relate to capability development, as well as additional undertakings made in the 20-point plan announced in the government response.

17 During the audit, its scope was formally broadened, primarily to make it clear that the focus was on the implementation of the reforms associated with the two-pass process for capability development, rather than having a narrower, compliance focus on the documentation produced during the two-pass process. Defence was advised of the change in audit scope in November 2012.

12. The audit assessed Defence's progress in four critical areas that encompass the recurring reform themes in Table S.1, and associated review recommendations, namely:

- reforming capability development—organisation and process;
- improving advice to government when seeking approval;
- improving accountability and advice during project implementation; and
- reporting on progress with reform.

13. The audit has not attempted to evaluate the anticipated or actual outcomes, including project outcomes, resulting from implementation of those recommendations made by the various reviews and agreed by successive Australian Governments.

14. Defence was provided with an opportunity to review and comment on a draft audit report in June 2013 and the proposed audit report in August 2013. Defence also provided comments on ANAO issues papers circulated in November 2012. These consultative processes gave Defence ongoing opportunities to provide the ANAO with up-to-date evidence of improvement made by recent initiatives such as its Capability Development Improvement Program, which commenced during the audit.

Overall conclusion

15. Over more than a decade, successive governments have invested substantial effort in reviewing capability development in Defence, with a view to improving the organisation's effectiveness and efficiency in realising capability for the ADF. For its part, Defence has also put substantial effort into supporting these reviews and organising to give effect to the reform proposals accepted by government. While individual reviews have been initiated by particular circumstances, there has been a common underlying desire to see Defence projects soundly specified, and delivered within scope, on time and within the approved budget, despite their inherent complexity. As the 2011 Black Review observed, capability development is a process which 'has a profound effect on Defence as a whole, and is where much policy and organisational risk concentrates.' [18] Further, the need to manage Defence

18 *Review of the Defence Accountability Framework* (the 'Black Review'), January 2011, p. 92.

capability development effectively and efficiently is accentuated in a period of fiscal constraint.

16. Given that such projects are generally technically advanced, frequently incorporate new technology and are interdependent with other projects, it should not be surprising if contingencies sometimes arise that place at risk the achievement of the original expectations. It is generally during the acquisition phase of a capability development project that these issues manifest, including the effect of any shortcomings in Defence's execution of the requirements phase.

17. The ANAO's work with the DMO on the annual Major Projects Report focuses on capability projects that have received second-pass approval by government and moved into the acquisition phase managed by DMO. A consistent theme in the ANAO's findings from this work is that maintaining Major Projects on schedule is the most significant challenge for DMO and its industry contractors. Accumulated schedule delay can result in additional cost and the risk of a gap in ADF capability.

18. The ANAO's analysis in the Major Project Reports over the last five years, along with the findings of a range of ANAO performance audits of individual major projects and related topics, indicate that the underlying causes of schedule delay in the acquisition phase can very often relate to weaknesses or deficiencies in the requirements phase of the capability development lifecycle, such as where:

- the capability solution approved by government has not been adequately investigated in terms of its technical maturity (including the threshold issue of whether an option is truly off-the-shelf or developmental in some respect)[19];
- the capability requirements are inadequately specified, and the procedures to verify and validate compliance with them are not adequately defined and agreed[20]; or

19 See, for example, Audit Report No.26, 2012–13, *Remediation of the Lightweight Torpedo Replacement Project* and Audit Report No.37, 2009–10, *Lightweight Torpedo Replacement Project*; Appendix 4 to Audit Report No.52, 2011–12, *Gate Reviews for Defence Capital Acquisition Projects* (Case Study 2—LAND 112 Phase 4 – ASLAV enhancement; and Case Study 3—AIR 9000 Phase 2, 4, 6 – MRH-90 helicopter).

20 See, for example, Audit Report No.57, 2010–11, *Acceptance into Service of Navy Capability*, p. 21, which found that 'significant deficiencies which adversely affect the projects subject to this audit included: ... the process of gaining agreement on requirements and on the procedures for verifying and validating that equipment fully meets contractual requirements was not adopted as standard practice by DMO and Navy.'

- significant risks have not been adequately identified and appropriate mitigation treatments developed and implemented.[21]

19. Accordingly, during this audit, which generally focuses on the requirements phase managed by Defence's Capability Development Group (CDG), the ANAO sought to identify the progress made by Defence in implementing recommendations for reform agreed by government over the past decade to improve Defence's capability development performance.

20. The following discussion of the audit findings is structured around the four critical areas of capability development reform identified in paragraph 12: reforming capability development—organisation and process; improving advice to government when seeking approval; improving accountability and advice during project implementation; and reporting on progress with reform. The ANAO's overall summary conclusion then follows.

Reforming capability development—organisation and process

21. As noted in paragraph five, two-pass approval forms the backbone of the current capability development and materiel acquisition process within Defence. An important element in implementing the two-pass approval process has been the establishment of CDG, whose work largely supports that process. The audit considered both organisational and process elements of CDG's operation.

Further organisational reform required

22. The establishment of CDG in 2004, following the Kinnaird Review, created an opportunity for the critical work of capability definition and development to be focused in a single area of Defence. One of Kinnaird's objectives was met in the creation of the position of Chief of Capability Development Group (CCDG) in a timely manner, within some months of the original recommendation.[22] However, terms of appointment and the duration of occupancy of the CCDG position have both fallen short of the minimum tenure of five years envisaged by the Kinnaird Review and agreed to by the then

21 See, for example, Audit Report No.41, 2009–10, *The Super Seasprite*, Audit Report No.26, 2012–13, *Remediation of the Lightweight Torpedo Replacement Project,* and Audit Report No.37, 2009–10, *Lightweight Torpedo Replacement Project*.

22 Recommendation 2 of the Kinnaird Review (completed in August 2003) was that: a three-star officer, military or civilian, should be responsible and accountable for managing capability definition and assessment; and this appointment should be on a full-time basis, with a defined tenure (minimum five years) to ensure a coherent, cohesive, holistic and disciplined approach. The Government agreed to this recommendation in September 2003. Defence created the position of CCDG in December 2003.

Government.[23] Accordingly, the stable long-term leadership, through CCDG, that Kinnaird considered essential to achieving better capability development outcomes, has not eventuated.

23. While, inevitably, there will be circumstances which mean that a five-year term cannot always be maintained, the message from the Kinnaird Review, accepted by government, was that this goal was a key factor in driving improvements in Defence capability development. In relation to CCDG appointments, in July 2013, Defence advised the ANAO that its approach had been 'to place the officer on a three-year contract, consistent with other three-star officers and provide the option to extend the officer.' Defence further advised the ANAO, in September 2013, that it was 'comfortable that CCDG's tenure is consistent with the Government's specific announcement in 2003 and its ongoing expectations on this matter', referring to the media release by the then Minister for Defence announcing the appointment of the first CCDG for an initial three years.[24]

24. While Defence has interpreted the Minister's media release as endorsing its decision to appoint the CCDG for three years, this is not consistent with the then Government's earlier agreement to the minimum five-year tenure as recommended by Kinnaird. That minimum had a clear purpose of providing a 'single point of accountability ... to provide better integration of the capability definition and assessment process' in an environment where projects may take many years to progress.[25]

25. In the same vein, capability development project manager positions, predominantly filled by ADF members, have been subject to continuing high turnover. Both operational demands for many of the same staff, and career management considerations for the individual ADF members, have resulted in the high turnover and, hence, short average duration in these positions within CDG. Although this has been pointed out regularly as a serious issue by

23 The mean completed tenure of the first three occupants was about two years and seven months. One occupant resigned after 13 months.

24 In announcing CDG's formation, Senator Hill, as Minister for Defence, stated on 22 December 2003 that: 'The new group will be headed by the current Land Commander Australia, Major General David Hurley, who will be promoted to Lieutenant General. His appointment is for an initial three years.'

25 Kinnaird Review, p. iv.

reviews over the decade, the ANAO's survey of CDG staff, discussed below, indicates that the problem remains.[26]

26. There have been efforts to extend the duration of capability project manager postings in CDG, but this remains work-in-progress. The high turnover detracts from the development of the experience and skills needed in the capability project manager positions. Earnest attempts have been made to provide necessary training to these staff but, as the 2009 Pappas Review pointed out, this can, at best, only partially address the risks flowing from lack of opportunity to develop expertise.[27]

27. The ANAO's April 2012 survey of CDG staff, which represents the most recent available information on these matters, identified that there is both a marked variation in the degree of preparatory training undertaken by prospective capability project managers across the various Services[28] and in the take-up by individuals of available courses once they are employed in CDG.[29] There is also tension between improving staff skills and achieving longer tenure in CDG, on the one hand, and the military posting system and related career interests on the other; with the latter generally prevailing.

28. Sustained senior management attention will be required to develop and effectively implement approaches to improve the CDG workforce's capacity to successfully carry out its role in the longer term. Defence has advised[30] that its Capability Development Improvement Program (CDIP), which commenced shortly before the ANAO survey, is informing the development of reform initiatives 'to deal with the same issues raised in the

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26 As part of audit, the ANAO conducted an anonymous survey of CDG staff. The survey was directed at Capability Systems Division (CSD), a major component of CDG, where the relevant staff are located organisationally. All CSD staff were included. The response rate was 80 per cent. Responses indicated that average durations were short both in terms of an individual's time in each posting to CDG and in terms of their aggregate experience in CDG. The full survey results are in Appendix 2.

27 Pappas Review, p. 52. An example of an attempt to provide the necessary training is CDG seeking help from commercial organisations to transfer key skills to CDG staff (see paragraph 3.77).

28 The majority (71 per cent) of Army capability project managers reported having attended the 12-month capability and technology management program (delivered by Defence's Capability and Technology Management College) before joining CDG, whereas only a small proportion of Navy (14.3 per cent) and fewer still of Air Force (7.1 per cent) reported having done so.

29 At the time of the ANAO's survey of CDG staff, most project managers reported having attended three core courses: *Introduction to Capability Development, CDG Induction Training* and *Cost Estimation.* Those courses aside, only the course *Operational Concept Document* had been attended by more than half (53 per cent) and the remaining 13 CDG courses had been attended by only a minority of CDG project managers. A key reason advanced in survey responses for lack of attendance at courses was workload. See the section commencing at paragraph 3.40 and, in particular, Figure 3.5.

30 In its detailed response to this audit report.

survey'. This could involve considering whether alternative strategies might better achieve the goal of an improved definition and assessment function as envisaged by Kinnaird. Alternative approaches that could be assessed include the potential to use a professional group of specialists, who are not serving members of the military (and therefore not subject to regular reassignment), to fill more enduring project manager roles within CDG; and/or the creation, supported by senior management advocacy, of a capability development career stream that would highlight the importance of capability development work and increase its attractions as a career option for both ADF and civilian staff. Any adjustments to the current model would need to ensure that military expertise appropriately informs the capability definition and development process.

Continuing requirement for improved effectiveness of the capability development process

29. Capability development is inherently complex, and the process has been incrementally amended many times over the past decade to improve outcomes. The process is set down in the *Defence Capability Development Handbook* (DCDH), which Defence sees as an essential foundation for a consistent, rational process of capability development and, consequently, devotes considerable effort to maintaining.[31]

30. Effective recordkeeping is a necessary element of sound public administration.[32] Audit Report No.48, 2008–09, *Planning and Approval of Defence Major Capital Equipment Projects* found that, notwithstanding the requirements of Defence's own guidance, CDG could not provide essential capability development documentation for projects examined in the audit.[33] There has been a noteworthy improvement in this aspect of CDG's performance, with this audit identifying that Defence now generally produces and retains for each project the full capability development documentation suite required. While improving its compliance with the extant guidance on the capability development process and improving this aspect of its recordkeeping, Defence has identified duplication in the document suite and opportunities for

31 The DCDH has taken various forms since the inception of the two-pass system in 2000. It has been, over this period, a guide, a handbook and a manual. Its development since 2000 is set out in Table 4.1.

32 See ANAO Better Practice Guide, *Implementation of Programme and Policy Initiatives*, 2006, p. 58.

33 It was unclear whether this was due to the material not having been prepared or an inability to retrieve it.

simplification. CDG is now progressing this matter under its program of continuous improvement, the Capability Development Improvement Program (CDIP), begun in early 2012.[34]

31. Successive reviews have emphasised the importance of Defence ensuring that committees operate effectively, and that accountability in capability development is made clear.[35] In this context, and following the release of the Black Review in January 2011, Defence had been considering a proposal to undertake a business process review of CDG to identify improvement opportunities. Originally, the review was to have been led by the Strategic Reform and Governance Executive (SRGE)[36], but it has now been folded into CDG's internally-led CDIP process. To derive the expected benefits from this business process review, it will be important that its conduct is accorded appropriate priority, and that the perspectives of stakeholders external to CDG are taken into account by the review.

32. Notwithstanding the ongoing efforts to refine the capability development process, it is also clear that further opportunities for improved effectiveness remain, as the committees, procedures and processes involved in capability development have continued to attract criticism, including from those whose work flows through the system. This has been identified in past reviews and in responses to the ANAO's April 2012 survey of CDG staff conducted as part of this audit. CDG is giving attention to these issues under its CDIP program. Sustained effort, including senior management attention, will be required to embed improvements to the capability development process—such as improved committee arrangements and performance, and streamlined processes and documentation.

Slow progress in strengthening the DCP entry process for projects

33. One of the primary purposes of the two-pass system was to give government better and earlier control over Defence capability development

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34 During the audit, CDG also addressed some shortcomings the ANAO had identified in relation to obtaining, and maintaining records of, the endorsement and clearance by senior committees of the essential documents produced in the capability development process.

35 The December 2011 DCP Review identified that key committee meetings were often information-sharing activities rather than decision-making forums. In 2011, a P3M3 assessment of CDG made a more detailed assessment of the capability development committees. That assessment found strengths in the governance structure but also catalogued many weaknesses, almost wholly associated with the committees. See the section in Chapter 4 commencing at paragraph 4.25.

36 That is, by a part of the Defence organisation external to CDG, which would have provided the proposed review process with some measure of independence.

and the major projects that emerge from that process. Because of the way in which two-pass approval has been implemented, a third preliminary approval step has been introduced. This step, which was set out in the revised Cabinet rules proposed to and agreed by the then Government in response to the 2003 Kinnaird Review, required government approval of a capability need (and inclusion of a project in the DCP) to occur as a pre-condition to entering the two-pass process.[37]

34. Major reviews from the Kinnaird Review forward have consistently emphasised the need for more robust analysis taking place before projects are entered into the DCP, not least because a project attracts authority and momentum when it appears in the DCP, as it has been publicly identified as a Defence capability development priority.[38] Entry into the DCP of a project for which limited analysis has been undertaken is attended by risk, which may be increasingly difficult to avoid as a project progresses. Two Mortimer recommendations intended to address this risk were agreed by government. They were a recommendation to strengthen the DCP entry process, and a recommendation for the preparation, before a project's entry into the DCP, of a capability submission addressing the capability required, along with initial data relating to cost, schedule and risk.[39,40] Reported progress in achieving these reforms has been slow, with Defence advising that its Capability Development and Materiel Reform Committee had closed the two Mortimer recommendations by outcome in August 2013, during the audit.

37 Separate from the inclusion of a project in the DCP, Defence can propose—or government can direct—that a new policy proposal (NPP) be raised. An NPP can also result in a project being considered by government for a first or second-pass approval.

38 See, for example, the foreword to the Defence 2012 Public DCP, in which (p. i) the Minister for Defence describes the purpose of the DCP as 'to provide industry with guidance regarding Defence's capability development priorities'. Further, the Minister explained that the DCP contains 'those priority projects planned for either first or second pass approval over the four year Forward Estimates period.'

39 Defence's Mortimer Review Implementation Governance Committee (MRIGC) identified the desired outcome for Recommendation 2.4 was to 'ensure that sufficient information (cost, schedule and risk estimates) is provided to the Government to allow it to determine whether a project enters the DCP'.

40 The performance of a Gate Review, or similar process, at this point could provide assurance that an appropriate degree of scrutiny had taken place before entry of a project into the DCP is proposed to government for approval. This was recommended by the Senate Foreign Affairs, Defence and Trade References Committee in its 2012 report. The Government response to that report did not agree with this recommendation, stating that 'at that point there is often little for [DMO] to review'. (Senate Foreign Affairs, Defence and Trade References Committee, *Procurement procedures for Defence capital projects*, Final Report, August 2012, Recommendation 5, paragraph 10.77, p. 163.)

35. In the longer term, personnel and operating costs generally exceed the initial equipment acquisition costs, and it will remain difficult to attain adequate assurance of DCP affordability as envisaged by Mortimer[41] until these can be more reliably estimated and taken into account. Defence's December 2011 DCP Review found that the then proposed DCP 2013–22 was under-programmed (that is, it was forecast to require no more than the expected funding) over the decade. However, it also stated that more work was required on personnel and operating costs. This work has not yet been done, and this remains a constraint on the assurance that can be provided by Defence on the affordability of the DCP.

Improving advice to government when seeking approval[42]

36. Successive reviews have emphasised the criticality of Defence providing sound advice to government, as part of the two-pass process, to give 'confidence that financially and technically robust decisions are being made'.[43] The audit considered Defence's performance in relation to assessing technical risk; preparing whole-of-life cost estimates[44]; obtaining external verification of cost estimates; including off-the-shelf options in advice to government; and providing CEO DMO independent advice to government.

Improved technical risk assessment approach has been implemented

37. An area where there has been some improvement since the ANAO's Audit Report No.48, 2008–09, *Planning and Approval of Defence Major Capital Equipment Projects* was tabled in June 2009 relates to the rigour with which Defence approaches the assessment of technical risk during the two-pass process. The 2009 Pappas Review identified technical risk as the largest source

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41 Recommendation 1.3 of the Mortimer Review reads: 'The Defence Chief Finance Officer should assure the affordability of the Defence Capability Plan, including its impact on future personnel and operating costs, as part of the annual Defence budget considerations. To achieve this, the Defence Chief Finance Officer would audit the cost and schedule estimations within the Defence Capability Plan as developed by Capability Development Group to ensure they are as practical and as accurate as possible.'

42 The quality of advice to government after projects have been approved is discussed from paragraph 60 forward.

43 Kinnaird Review, p. 9.

44 Determining the whole-of-life costs, or lifecycle costs, of a capability involves more than determining the personnel and operating costs referred to in paragraph 35. Whole-of-life costing can be defined as:

A process to determine the sum of all expenses associated with a product or project, including acquisition, installation, operation, maintenance, refurbishment, discarding, and disposal costs.

(Standards Australia, Australian/NZ Standard ASNZS 4536:1999, *Life-cycle costing—An application guide*, p. 4.)

of post-second-pass schedule slippage for post-Kinnaird projects, and also observed that schedule slippage causes cost escalation.

38. Following a subsequent review by the Defence Science and Technology Organisation (DSTO), a new process was introduced in 2010 to identify technical risk earlier in the requirements phase of the Capability Development Lifecycle. This process results in the development of the Technical Risk Certification for a DCP project, which is the Chief Defence Scientist's position on the technical risk included in the project. The methodology for assessing technical risk and developing the Technical Risk Certification for capability development proposals has matured and is being performed according to a documented process. It has been consistently presented in relevant submissions to government examined by the ANAO, to provide advice on the technical risk level associated with capability options proposed for consideration. In this context, the ANAO considers that Defence has satisfactorily addressed the broad intent of the ANAO's earlier recommendation that Defence refine its methodology for technical risk assessment, and ensure that acquisition submissions do not proceed without a clear statement of technical risk.[45]

39. While Defence has put in place an improved approach to assess technical risk and provide that assessment to government, Defence's documented processes are not reflected in the requirements in the Cabinet Manual.[46] There would be benefit in updating the Manual to reflect the practice that has now been in place for several years. Although Defence is not the 'owner' of the Cabinet Manual and cannot directly change it, as the owner of the two-pass approval process, with responsibility for developing and maintaining that process, Defence has a responsibility to follow up the June 2010 recommendation of the Joint Committee of Public Accounts and Audit (JCPAA)[47] and work effectively with the Department of the Prime Minister and

45 ANAO Audit Report No.48, 2008–09, *Planning and Approval of Defence Major Capital Equipment Projects*, Recommendation No. 3.

46 In addition to recommending that Defence refine its methodology for assessing and describing technical risk for future acquisitions, and ensure that submissions to government do not proceed without a clear statement of technical risk, Recommendation 3 of Audit Report No.48, 2008–09, pointed out the requirement for consistency with the requirements of the Cabinet Handbook.

47 The JCPAA conducted an inquiry into Audit Report No.48, 2008–09, *Planning and Approval of Defence Major Capital Equipment Projects.* The issue of the lack of alignment between the requirements set out in the Cabinet Handbook and Defence's current practice arose during the public hearing for this inquiry, and the JCPAA subsequently made a recommendation that Defence work with the Department of the Prime Minister and Cabinet to pursue appropriate amendments to the Cabinet Handbook. See Recommendation 16 of the JCPAA Report 417: *Review of Auditor-General's Reports tabled between February 2009 and September 2009,* tabled in June 2010, which reported on the committee's inquiry into ANAO Audit Report No.48, 2008–09.

Cabinet (PM&C) to pursue amendments to the Manual 'to accurately reflect Defence's more specific risk measurement process'.

40. To improve the clarity of advice to government, there would be benefit in Defence providing to decision-makers an explanation of technical risk analysis and its interpretation in relevant documents. There would also be benefit in reviewing a selection of capability development projects at project closure to contribute to Defence's understanding of the usefulness and accuracy of the technical risk assessments it provides to decision-makers.

Capability whole-of-life cost estimation in advice to government could be made clearer

41. Defence has had a documented policy for whole-of-life (or lifecycle) costing for major capital acquisitions since at least the early 1990s. When a new or upgraded capability is being considered by government in an acquisition proposal, whole-of-life costs represent the total public investment Defence is seeking over the life of the capability. It is, however, inherently difficult to forecast whole-of-life costs accurately, especially over several decades, and decision-makers need to accept the uncertainties in these estimates.[48] Nonetheless, recognising the benefits for informed decision-making, successive reviews (including Kinnaird, Mortimer and Pappas) and audits have stressed the importance of Defence making clear to government its estimates of whole-of-life costs for capability proposals.

42. The Kinnaird Review, in particular, concluded that 'understanding the whole-of-life costs associated with particular platforms is a vital component of managing capability and must be considered throughout all phases of the life cycle of capabilities.'[49] Such an understanding underpins Defence's ability to communicate effectively with government on the costs of maintaining existing capability. The Kinnaird Review also concluded that:

> Until Defence financial systems are based on full cost attribution of individual capabilities, Defence and government will not have reasonable visibility of the costs of acquiring and sustaining capabilities. Nor will they be in a sound

48 Defence has pointed out (July 2013) that, in costing projects, 'rate of effort is not well understood early on, support concepts are not yet defined and inter-relationships between platforms and elements may be unclear' and that these factors contribute to the difficulty in forecasting costs.

49 Kinnaird Review, p. 27.

position to make resourcing decisions on the basis of capability consequences.[50]

43. Defence is now not pursuing its earlier intention to achieve full cost attribution of individual capabilities through its financial systems, because of the department's assessment that the cost and complexity of the task outweigh the expected benefits. Nevertheless, this should not inhibit the pursuit of further improvement to support Defence's capacity to make reasonable estimates of whole-of-life costs for individual capabilities to inform decision-making and the achievement of value for money.

44. Generally, the Defence submissions to government examined in this audit focused upon acquisition costs and the estimated Net Personnel and Operating Costs (NPOC) of using the capability over its expected life.[51] NPOC is derived from the difference between the estimated personnel and operating costs of the proposed option ('future POC') and the costs for the existing capability ('current POC'). NPOC therefore represents an estimate of the additional funds that Defence calculates it requires. NPOC and whole-of-life costs give different perspectives, and both are valuable to fully appreciate the financial implications of a proposal. The clarity of all capability development submissions, and the implications of the decisions sought from ministers, could be improved by:

- the use of consistent terminology in all acquisition submissions; and
- more prominence being given to a clear statement of the estimated whole-of-life costs of options in each submission.

Process established for Finance to verify Defence's cost estimates for capability development projects

45. Having cost estimates externally reviewed has long been recognised as a basic characteristic of preparing credible estimates.[52] An expectation of the Kinnaird Review was that, as part of the strengthened two-pass approval process to be developed in accordance with the review's recommendation, the

50 ibid.

51 These findings are consistent with the findings of Audit Report No.48, 2008–09, *Planning and Approval of Defence Major Capital Equipment Projects*.

52 For example, the United States Government Accountability Office (GAO) stated in 2009 that the characteristics included in its 1972 report, *Theory and Practice of Cost Estimating for Major Acquisitions,* were still valid and should be found in all sound cost analyses. Those characteristics include that data should be independently verified for accuracy, completeness and reliability. See *GAO Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Capital Program Costs*, GAO Applied Research and Methods, GAO-09-3SP, Washington DC, March 2009.

Department of Finance (Finance) should be involved much earlier and continuously throughout the two-pass approval process and provide external verification of cost estimates.[53]

46. In its March 2004 response to the Kinnaird Review, the Government agreed that Defence and Finance would develop working arrangements to ensure that Defence would provide Finance with adequate, timely information that the latter would need as part of a thorough approach to verifying Defence's cost estimates. However, the ANAO's 2008–09 audit on planning and approval of Defence major capital equipment projects found that no agreed documented approach was in place to facilitate Finance's early and ongoing engagement to verify cost estimates for capability development proposals.

47. Testimony provided by Defence in October 2009 to the JCPAA's inquiry into Audit Report No.48, 2008–09 advised that agreement had been reached at a senior level between the two agencies on such an approach and that, in any subsequent ANAO audit, Defence would 'be able to provide the evidence that agreement had been reached on the new process'.[54] Notwithstanding this assurance to the JCPAA, when asked to do so during this audit, neither Defence nor Finance could find any record setting out such an agreement.

48. In October 2011, Finance issued *Estimates Memorandum 2011/36*, which outlines a process for costing new Defence major capability development projects. Finance subsequently informed the ANAO that, as a result, it generally received submissions from Defence with better notice and greater opportunity to verify costing estimates.

49. In September 2013, following consultation on an update to the Estimates Memorandum, Finance and Defence indicated that the memorandum had been revised and extended, in support of Defence's development of cost estimates and their verification by Finance.

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53 The Kinnaird Review's Recommendation 3 reads: 'Government should mandate, and enforce via revised Cabinet rules, a rigorous two-pass system for new acquisitions with government considerations dependent on comprehensive analyses of technology, cost (prime and whole-of-life) and schedule risks subjected to external verification.'

54 Hansard, Joint Committee of Public Accounts and Audit, 28 October 2009, p. 9.

Routine inclusion of adequate advice on off-the-shelf options in submissions to government yet to be achieved for all projects

50. The merits of acquiring off-the-shelf (OTS) versus Australian-designed or adapted defence equipment have long been discussed, and examination of this issue formed an explicit part of the Kinnaird Review's terms of reference. Under the strengthened two-pass system proposed by Kinnaird, the review's expectation was that 'at least one off-the-shelf option must be included in each proposal to government at first pass. Moreover, any option that proposed the 'Australianisation' of a capability would need to fully outline the rationale and associated costs and risks.'[55] The intention was to provide government with capacity to weigh the relevant costs, benefits and risks and decide which option or options to pursue.[56]

51. The Mortimer Review's terms of reference also required it to consider 'the potential advantages and disadvantages of greater utilisation of [MOTS] and [COTS] purchases'.[57] The Mortimer Review found limited progress with the Kinnaird proposal about OTS options. Mortimer further found: 'experience shows that setting requirements beyond that of off-the-shelf equipment generates disproportionately large increases to the cost, schedule and risk of projects.'[58] Mortimer concluded that Defence should increase its use of OTS equipment to reduce project cost and mitigate the risk of schedule delay and cost increases. The Mortimer Review then made a recommendation (2.3) which it recognised as being stronger than that made by Kinnaird:

> Any decisions to move beyond the requirements of an off-the-shelf solution must be based on a rigorous cost-benefit analysis of the additional capability sought against the cost and risk of doing so. This analysis must be clearly

55 Kinnaird Review, p. 15. Kinnaird expected that Defence would show unequivocally in advice to government:

- the estimated additional costs, time and risks of non-commercial off-the-shelf/military off-the-shelf (non COTS/MOTS) options; and
- the additional capability and other advantages attracted by these options.

56 Kinnaird Review, pp. 16–20. This was one of the primary considerations leading to Kinnaird's Recommendation 3, which is set out in paragraph 6.3 of this audit.

57 The Mortimer Review's terms of reference are set out in the review itself at its Annex A.

58 Mortimer Review, p. 17.

communicated to government so that it is informed for decision-making purposes.[59]

52. With no benchmark from the early 2000s for comparison, it is difficult to assess the progress Defence has made over the decade in implementing the 2003 Kinnaird and stronger 2008 Mortimer recommendations relating to including OTS equipment acquisition options in proposals to government. In February 2010, Defence's Mortimer Review Implementation Governance Committee (MRIGC) assessed that implementation of Recommendation 2.3 was complete in 'process' terms, because the *Interim Defence Capability Development Handbook* had, since November 2009, described the process to put forward an OTS option. However, the MRIGC papers show that, in 'outcome' terms, the status at that point remained 'still to be tested.'[60]

53. Subsequently, in a media release on 6 May 2011, Ministers identified 'benchmarking all acquisition proposals against off-the-shelf options where available' as one of the Kinnaird/Mortimer reforms which had not yet been fully implemented and whose implementation should be accelerated.[61] Later in 2011 Defence engaged a consultant to review a sample of submissions to assess progress against Mortimer's specific (and stronger) recommendation (2.3). The results of that review, completed on 15 November 2011, are equivocal, and show that Defence has more progress to make to institutionalise the arrangements recommended by Kinnaird and Mortimer and agreed by government.

54. On 28 November 2011, Ministers issued a media release that reported the status of this reform as 'Implemented—all future projects seeking second-pass approval that are not off-the-shelf will include a rigorous cost-benefit analysis against an off-the-shelf option.' Subsequently, Defence recorded Mortimer Recommendation 2.3 as implemented by 'outcome' as well as by 'process'.

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59 Mortimer Review, p. 20. In addition, further reviews strongly supported greater use of MOTS options. For example, the Pappas Review noted that 'there appears to be a deep cultural attachment [in Defence] to Developmental/Australianised projects' and recommended further enhancements to transparency in the presentation to government of any proposal to 'Australianise' a MOTS option (see Chapter 9 below).

60 Defence's MRIGC adopted a methodology which involved tracking the progress of each agreed Mortimer recommendation by *process* (achieved by agreeing a course of action and proceeding to follow it) and by *outcome* (achieved by having the effect intended by the recommendation). This approach is discussed further at paragraph 75.

61 Minister for Defence and Minister for Defence Materiel, *Strategic Reform Program*, media release, 6 May 2011.

55. Nevertheless, if the desired effect of this reform is to be delivered, in terms of better advice to inform capability decisions by government, Defence will need to improve on previous performance and ensure routine compliance with the requirement for all projects seeking approval of a capability option that is not OTS to include in the submission to government a rigorous cost-benefit analysis against an OTS option.[62]

Since 2011 a mechanism has been in place for the CEO DMO to provide independent advice to government as envisaged by Kinnaird

56. The Kinnaird Review envisaged independent advice flowing to government from the CEO DMO, who would 'report to government on detailed issues including tendering and contractual matters related to acquiring and supporting equipment.'[63] However, this was in the context of DMO becoming a separate executive agency within the Defence portfolio, a Kinnaird recommendation not agreed by government.

57. The Mortimer Review also proposed that DMO become an executive agency, and recommended that the Chief Executive Officer of DMO should provide independent advice to government on the cost, schedule, risk and commercial aspects of all major capital equipment acquisitions.[64]

58. The Government did not agree to the proposal to make DMO an executive agency, separate from the Department of Defence.[65] However, it agreed that the CEO DMO 'must be in a position to provide advice to Government on the cost, schedule, risk and commercial aspects of all major capital equipment acquisitions.'[66]

59. The Minister reaffirmed in 2011 the original view put by Mortimer in 2008, that the view of the CEO DMO is valued as an independent opinion that ministers wish to hear in the context of considering capability development

62 The requirement for this cost-benefit analysis against an OTS option is set out in the *Defence Capability Development Handbook*. It is an important risk mitigation step, given the well recognised risks of cost blow-out and schedule slippage that can attend the selection of developmental options.

63 Kinnaird Review, p. 25.

64 Mortimer Review, p. 27.

65 DMO remains part of the Department of Defence but, as a prescribed agency, is treated separately for financial management purposes.

66 Defence, *The Response to the Report of the Defence Procurement and Sustainment Review*, May 2009, p. 25. As to the presence of the CEO DMO at 'Government committees considering defence procurement', the Government response stated that agreement would be sought for his attendance at all National Security Committee of Cabinet meetings considering capability acquisition decisions.

submissions. It took two years and an explicit ministerial request in 2011 for this decision finally to be implemented.

Improving accountability and advice during project implementation

60. A recurring theme in Defence reviews over the decade has been a need to improve accountability for capability development and material acquisition outcomes, including related advice to government during project implementation. The response to this set of issues has included the introduction of a range of new mechanisms, both to add clarity to the parameters of projects and to provide a basis for later reconciliation. The audit considered Joint Project Directives, an initiative originating in the Government's response to the Mortimer Review; Materiel Acquisition Agreements (MAAs) between DMO and Defence, which function like a 'contract' for the purchase of equipment; project closure, which has been a source of difficulty for some years; and capability manager reporting, the origins of which lie in a Kinnaird Review recommendation that has yet to come to fruition.

Introduction of Joint Project Directives slower than expected, and individual JPDs taking longer to conclude than envisaged

61. Defence defines Joint Project Directives (JPDs) as:

> A project-specific directive issued by the Secretary, Department of Defence and the Chief of the Defence Force to the nominated [Capability Manager], assigning overall responsibility, authority and accountability for realisation of the capability system to an in-service state.[67]

62. The objective and potential benefits of introducing JPDs for each of Defence's major capability development proposals are clear. A written, practical statement setting out the relevant components of the decision the Government has authorised, and the contribution required of each part of the organisation in order to deliver the approved capability, should help each Defence Group remain on track and promote their respective accountabilities, in terms of scope, schedule and cost. It can also provide a sound basis for seeking a change where contingencies arise. Ministers have accepted that introducing JPDs has been a substantial reform. They have regularly and

67 Defence, *Defence Capability Development Handbook*, December 2012, p. 123. JPDs are 'joint' in that they are issued under the authority of both the Secretary of the Department of Defence and the Chief of the Defence Force, as joint heads of the Defence Organisation.

publicly reported on progress with their introduction, and represented JPDs as inhibiting any tendency for Defence to vary authorising decisions.

63. Despite continuing strong expectations from ministers and senior levels of the organisation, Defence has not introduced JPDs in the way that was expected. Contrary to the intention expressed in the 20-point government response to the Mortimer Review:

- JPDs have not been issued immediately after government approval; and
- JPDs cannot have been the basis of all other project documentation, because, generally, corresponding MAAs have been signed first.

64. Defence took over two years to begin to produce the first JPDs notwithstanding that a prime function of a JPD is to clearly express, in a working form, the essence of a government decision and assign responsibilities to Defence Groups. This delay occurred even though JPDs were a Defence initiative in response to the Mortimer Review. The senior committee responsible for implementing JPDs regarded the task as 'completed' in early 2010, when Defence had decided on processes but had not, at that time, produced a single JPD.[68] Only after ministerial intervention in May 2011 did Defence finalise any JPDs.

65. JPDs are intended to reflect government decisions. If JPDs are to be an effective instrument assigning responsibility and accountability for all the elements of a capability development project, they need to be put in place promptly.[69] However, with one exception, Defence had finalised MAAs without a signed JPD, notwithstanding the intention that JPDs should inform MAAs. This practice suggests that, at a working level, Defence did not perceive JPD production as essential, or a prerequisite, to the progress of a capability development project. In this circumstance, where JPDs are regularly finalised after the MAAs they are intended to inform, care will be required to ensure that JPDs properly reflect the relevant government decision, and that MAAs are appropriately aligned with the relevant JPD.

68 The senior committee was the Mortimer Review Implementation Governance Committee (MRIGC).

69 Defence has informed the ANAO that projects approved by government in 2013 have had their JPDs signed, on average, 31.5 working days after approval.

Further work is required to improve accountability

66. In seeking to improve accountability and ensure clarity of purpose across a large organisation, Defence has developed an elaborate system of documents. However, the practical implementation of that system has introduced a risk of misalignment, and substantial effort is required to ensure consistency of these documents with the original project approvals.

67. DMO undertook an Acquisition Baseline Review project between December 2010 and mid-2012 to verify that MAAs were consistent with project authorisation decisions. This was a worthwhile project that revealed a number of occasions where Defence had not advised government in a timely way of difficulties arising in major projects. More recent evidence also shows a lack of timely advice to government about difficulties affecting several individual major projects, including lengthy delays in advising the Minister. These delays extended for several years in some cases. In two particular cases, the Minister stated [70] that the projects illustrated the adverse effects of poor project management and the importance of full and ongoing implementation of reforms introduced by the then Government:

> These reforms include increased personal and institutional accountability in the delivery of major acquisition projects, earlier identification of projects which have exceeded agreed project performance thresholds, more timely advice to Government, and the need to obtain approval from the initial decision-maker for changes to the Project's scope, schedule or cost.[71]

68. The new and recently-announced regime of reporting on variations from original project approvals should help improve accountability, as would a reconciliation of the equipment ultimately delivered against the authorising decision or decisions.

Need for better arrangements to track capability development projects over their lifecycle and close completed projects

69. CDG did not generally follow its own procedure to formally close capability development projects over the period between 2006 and 2011, when it had the responsibility to do so.[72,73] Given that business case closure has not

70 Correspondence from Defence Minister Smith to Prime Minister Rudd, dated 14 and 15 August 2013.

71 See also paragraph 10.

72 CDG informed the ANAO that it was only able to locate about four business case closure reports, and that the practice was rarely followed.

generally been carried out, it is not clear how CDG tracks capability development projects, particularly once they have been included in the DCP. During the audit, Defence informed the ANAO that CDG had developed and fielded a 'Capability Development Management and Reporting Tool' (CDMRT) to track a project from its DCP entry through to second-pass approval.

70. Certain reforms undertaken by Defence in recent years show that the organisation recognises that capability development projects require active coordination and project management throughout their life and across the whole of Defence. However, there is no whole-of-Defence system that provides a means of easily tracking and reporting on the status of all capability development projects from conception to completion. As noted in an earlier ANAO performance audit, Defence has long sought to put in place seamless management of ADF capability from requirements definition through to withdrawal from service.[74] One of the challenges to overcome is the natural tendency for each Defence Group (such as CDG, DMO, the three Services and Defence Support Group) to focus largely on its own responsibilities. However, these challenges remain to be addressed if a whole-of-Defence view is to be achieved throughout each project's lifecycle.

71. Acquisition project closure has also been an enduring problem in DMO. Experienced DMO officers have put the view that projects have often remained open for many years after delivery of the relevant capability. In July 2009, the then CEO DMO identified this issue as a concern, and various estimates showed that DMO could expect to close about 50 major projects and recover residual funds held against projects in the order of $400 million to $800 million. Despite the CEO DMO's concern, and personal instructions for action in 2009[75], attempts to address this issue failed to gain traction until renewed impetus was provided in 2011 by the requirement to transition all open projects to a new MAA that included the Capability Manager as a signatory.[76] DMO identified 57 major projects as being ready for closure rather than requiring transition to

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73 Responsibility for project closure has been reassigned to Capability Managers, though it is not clear whether any resources accompanied that reassignment, or whether the function will be carried out more rigorously in future. Ideally, Capability Managers will acquit capability development projects promptly and fully, with reconciliation against the original JPD (or authorising decision where no JPD exists).

74 ANAO Audit Report No.57, 2010–11, *Acceptance into Service of Navy Capability*, p. 19 forward.

75 The then CEO DMO set out his concern and his instructions in an email to all DMO senior executive staff.

76 This was implementation of Mortimer Review Recommendation 2.6.

new MAAs. DMO's intention had been to close them by December 2011, but the deadline was extended in some cases.

Capability Manager reporting to government recommended by Kinnaird not in place nearly 10 years later

72. The Kinnaird Review first recommended in August 2003 that Capability Managers should have the authority and responsibility to report to government on the development of defence capability at all stages of the capability cycle. This would help to ensure that Defence, and ultimately, government, could be confident that they both receive an accurate and comprehensive report on all aspects of capability development at each stage in that cycle. Recommendation 4 of the Kinnaird Review also stated that, to undertake this role, Capability Managers should have access to all information necessary to enable them to fully inform government on all aspects of capability.

73. Five years later (August 2008), Defence agreed with the JCPAA finding that progress on this recommendation remained deficient and should be attended to as a matter of priority. That was about the time Mortimer reported and added further weight to the proposal. Several years later still, Defence is still 'at the initial step' of Capability Manager reporting. Action so far has taken nearly ten years since Kinnaird, but has not resulted in the envisaged reporting taking place.

Reporting on progress with reform

74. There is a clear need for Defence, both internally and when reporting externally on the reform process, to focus on goals and substantive outcomes rather than on process. In this context, the internal report on the Strategic Reform Program Mortimer Stream, provided to Defence senior management in May 2012, stated:

> The key risk to the success of the reforms remains the capacity and commitment of Defence personnel to implement the reforms. There is a perception by some senior Defence officials that the Mortimer reforms have been largely implemented, but the current [statistics are] that nine (9) recommendations by process and 26 recommendations by outcome remain open.[77]

77 Defence advised the ANAO in July 2013 that three recommendations remain open by process and 22 recommendations remain open by outcome.

75. The issue arising from this assessment is that, while there is value (as pointed out by both the JCPAA and Mortimer) in distinguishing between putting a process in place and achieving the intended outcome, a focus on process may assume excessive importance, displace attention from the intended goal, and create an exaggerated sense of progress among senior management. Specific examples identified by this audit include the introduction of Joint Project Directives (Chapter 11) and the inclusion of OTS equipment options in proposals put to government (Chapter 9). In a similar vein, ANAO Audit Report No.25, 2012–13, *Defence's Implementation of Audit Recommendations*, observed that internal processes such as monitoring and reporting are a necessary but not sufficient condition for achieving timely and adequate implementation of recommendations.[78]

76. While Defence's system for implementing audit recommendations exhibits many positive elements, such as having a clear process for assigning responsibility, and systematic monitoring and reporting on progress by Defence internal audit, there is no similar centralised long-term mechanism for managing the implementation of the recommendations of the various high-profile reviews of Defence. Further, Defence's current approach has been to report to ministers and senior managers on the implementation of reform recommendations against 'process'—whether action is underway—as well as outcome—whether the reform objective is being achieved. This approach to reporting can create an impression of momentum and achievement that may not always be warranted if the establishment of process is emphasised more than the delivery of outcomes.

77. The ANAO considers that there would be benefit in Defence implementing systems to centrally monitor progress over time and report on the implementation of review recommendations/reforms, consistent with Defence's approach to the monitoring and reporting of the implementation of audit recommendations, including those related to the reform of capability development.

Overall summary conclusion

78. As highlighted above, Defence capability development and acquisition have been the subject of over a decade of reviews, with the Kinnaird and Mortimer Reviews providing the backbone for reform. These two reviews alone

78 ANAO Audit Report No.25, 2012–13, *Defence's Implementation of Audit Recommendations*, p. 14.

generated several dozen major recommendations. As noted in paragraph 12, the audit assessed Defence's progress in four critical areas that encompass the recurring reform themes in Table S.1: the reform of capability development—organisation and process; improving advice to government when seeking approval; improving accountability and advice during project implementation; and, as an essential concomitant, reporting on progress with reform.

79. The outcomes sought by these reforms are that government is provided with the range and quality of information required to allow informed cost/capability trade-off decisions to be made when selecting capability development options, and that Defence is effectively positioned by this information to deliver the selected capability for the expected cost, in accordance with the estimated schedule and to the capability standard approved by government. While acknowledging the challenges, the process of developing appropriate advice and recommendations for government must involve Defence achieving an adequate understanding of the risks, to inform adequate costing and the development of robust schedule estimates for the delivery of the desired capability.

80. Overall, the audit shows that, notwithstanding government expectations, the work required to progress the reform of capability development in Defence has often taken much longer than might be expected, and has delivered mixed results. As a number of reviews have highlighted, the internal mechanisms adopted by Defence, including many of its committees, have a propensity to focus on processes rather than substantive results. In particular, there is a risk that once a process has been put in place, the issue is considered to have been addressed, with insufficient attention given to following up on whether the desired outcome is actually and satisfactorily being achieved.

81. While examining progress with reform, the audit has also identified instances of Defence not reporting to government on significant difficulties affecting individual major projects until long after those difficulties have been apparent within Defence. This is obviously an issue that requires attention by Defence management.

82. In addition to the inherent challenge of reform faced by the Defence Organisation, in the past decade Defence has had to progress this significant body of work, relating to capability development reform, in the challenging context of a high operational tempo, a tightening fiscal environment, and a high rate of turnover at the highest levels of decision-making. In the past 14 years, for example, before the change of government in September 2013,

there had been seven Ministers for Defence and six Defence secretaries, with an average tenure of 2 years and 2.2 years respectively.[79,80]

83. In the circumstances, sustained senior management attention is particularly important to maintain the direction and momentum of reform by ensuring that, through the development and implementation of effective accountability arrangements, the required priority is accorded by all levels in Defence to following through on the effective and timely implementation of improved processes and approaches. Senior management involvement is also a necessary precondition for the development and implementation of effective approaches to improve the CDG workforce's capacity to carry out its role, including through the review of current arrangements and the consideration of possible alternative approaches to ensuring the availability of critical skills and experience.

84. As noted in paragraph 15, successive governments have invested substantial effort into the various reviews of the past decade, as has Defence in the resulting reform agenda. While there have been improvements, such as the appointment of CCDG and the introduction of DSTO technical risk assessments, substantial work remains to be done to move many important reforms from the stage of directing that a new process be undertaken to achieving the substantive outcomes sought from the relevant reform recommendations.

85. To this end, the ANAO considers that Defence should give priority to:

- improving the quality and timeliness of advice to government, through management reinforcement of expectations at all levels in Defence;
- embedding the reforms aimed at improving accountability for capability development outcomes, in particular relevant reforms to the Defence committee system and the other accountability reforms flowing from the Black Review;
- developing, or otherwise securing access to, the full set of skills and experience required to support the effective development of capability proposals;

79 Further, there has been turnover at the CCDG level (see paragraph 3.22).

80 Both of these figures are significantly lower than for other complex, large Australian Government departments. See: James Brown, Lowy Institute for International Policy, Submission No.1 to the Joint Standing Committee on Foreign Affairs, Defence and Trade Committee Review of the Defence Annual Report 2011–12, p. 7.

- ensuring systematic approaches are in place to enable Defence to achieve cost attribution of individual capabilities, so as to provide government with a better understanding of whole-of-life cost estimates for proposals for new or upgraded capabilities, and to enable government and decision-makers to make informed cost/capability trade-offs in the context of managing budget constraints[81]; and
- implementing robust systems to centrally monitor and report on the implementation of review recommendations/reforms, consistent with Defence's approach to the monitoring and reporting of the implementation of audit recommendations, while also recognising the long timeframes sometimes required for effective reform. The development of appropriate systems would also enhance accountability by providing a sound basis on which to report to ministers and the Parliament.

86. In developing recommendations during this audit, the ANAO has taken into account the findings and recommendations of the range of reviews that have considered capability development in Defence over the last decade or so. Accordingly, the intention of the seven recommendations the ANAO has included in this report is to assist Defence in progressing those matters that should be given priority in pursuit of the reform outcomes.

87. In presenting these views, the ANAO is conscious that, for the reforms to succeed and be embedded, there are both process and people issues for Defence to manage. It is challenging but important work that will contribute to better Defence capability development outcomes for the nation.

Agency responses

88. Defence's covering letter in response to the proposed audit report is reproduced at Appendix 1. Defence's response to the proposed audit report is set out below:

> Defence acknowledges the considerable efforts expended by ANAO in conducting this audit since its commencement in August 2011, and notes that

81 The ANAO acknowledges that achieving full cost attribution may be resource-intensive and take some time. However, that is not a reason to postpone commencing work with some initial approximations, which might be achieved relatively inexpensively, with a view to later refinement as resources become available.

it represents the most extensive external review to date of capability and procurement reforms.

Defence has made significant and demonstrable improvements in project outcomes achieved since Performance Audit Report No.48 2008–09 *Planning and Approval of Defence Major Capital Equipment Projects*. This has been achieved through adopting recommendations of successive external reviews and internally developed reform initiatives.

Defence has agreed to six Audit recommendations, agreeing to the seventh recommendation to the extent that it can be implemented in accord with the requirements of securely managing sensitive information.

Defence also recognised the need for many of these reforms and the following initiatives are already underway:

- Strengthening the rigour of project entry into the Defence Capability Plan.
- Strengthening the links between capability development and strategic guidance.
- Introducing revised capability development committee governance procedures at key points of the capability life cycle.
- Provision of earlier and more detailed analysis of project technical risk.
- Improvements to Capability Manager reporting on key capabilities.
- Considering the formation of a dedicated career stream for capability development/acquisition.
- Optimising the utilisation of the Capability and Technology Management College.
- Identifying the pre-requisite skills and expertise required for Capability Development Group (CDG) project managers.

With respect to the ratio of APS and ADF positions within CDG, Defence will review the apportionment of ADF to APS (currently 1.1: 1), although continued downsizing of Defence APS could make this difficult.

89. Extracts from the proposed audit report were provided to the Department of Finance (Chapters 7 and 8) and the Department of the Prime Minister and Cabinet (Chapter 6) for any comments they wished to make. The Department of Finance's formal response is included at Appendix 1. The Department of the Prime Minister and Cabinet chose not to provide any comments.

Recommendations

Recommendation No.1 (paragraph 3.88)

To improve the skills and experience available during capability development, the ANAO recommends that Defence reconsider its staffing model for CDG project manager positions. This could include:

(i) considering whether the required military subject matter expertise can be adequately provided to capability development projects other than through having Service personnel in these positions; and

(ii) considering the formation of a dedicated ADF career stream for capability development.

Defence's response: *Agreed*

Recommendation No.2 (paragraph 5.65)

To improve the rigour of its assessment of capability development proposals before it recommends to the Government that they be included in the Defence Capability Plan, the ANAO recommends that Defence:

(i) review its current processes against the recommendations made by the Kinnaird Review, and the strengthened DCP entry process subsequently recommended by the Mortimer Review and agreed by the Government in 2003 and 2009 respectively;

(ii) undertake sufficient preliminary work on each proposal to inform a rigorous assessment (akin to a Gate Review) of the viability of the capability proposal and the likely reliability of the estimates of cost, schedule and risk; and

(iii) ensure that, subsequent to DCP entry, the scope of projects and estimations of cost, risk, and schedule continue to be reviewed and assessed as the project is further defined and developed for project initiation; and Government approval sought for any changes to the scope of the project, should it be required.

Defence's response: *Agreed*

Recommendation No.3 (paragraph 6.39)

To contribute to its understanding of the accuracy of its technical risk assessment process, the ANAO recommends that Defence conduct a review of the technical risk assessment advice it has provided to government for selected capability development projects in the light of subsequent experience in progressing those projects.

Defence's response: *Agreed*

Recommendation No.4 (paragraph 13.46)

To improve the transparency of its management of acquisition projects, the ANAO recommends that DMO supplement the acquisition project information on its website with acquisition project schedule data for all key milestones from contract signature to Materiel Acquisition Agreement closure, together with any approved variations and summary reasons for those variations.

Defence's response: *Partially Agreed*

Recommendation No.5 (paragraph 13.47)

To improve accountability for the management of its major projects, the ANAO recommends that Defence, through its Capability Managers, report each year all major projects closed during the year, including a reconciliation of the capability delivered against the most recent approval decision.

Defence's response: *Agreed*

Recommendation No.6 (paragraph 13.48)

To progress Defence's longstanding objective of seamless management of ADF capability throughout its lifecycle, the ANAO recommends that Defence consider the costs and benefits of introducing a system to allow Capability Managers to track and report on the progress of capability development projects from DCP entry through to project closure, with reports available, as required, to all Groups across Defence.

Defence's response: *Agreed*

Recommendation No.7 (paragraph 15.54)

To improve reporting and accountability for the achievement of expected outcomes from major reviews, the ANAO recommends that Defence implement systems to centrally monitor progress over time on the implementation of recommendations/reforms stemming from these reviews.

Defence's response: *Agreed*

Audit Findings

Part 1: Introduction and themes in Defence reviews

1. Introduction

This chapter provides an overview of Defence capability development and two-pass approval. It also introduces the audit, including the audit objective, scope and approach.

An outline of Defence capability development

1.1 Defence[82] is responsible for defending Australia and its national interests, and substantial public resources are devoted to achieving this. Total Defence funding for 2013–14 is estimated at $27.4 billion, of which a large proportion will be used in capital acquisition and sustainment.[83] In 2013–14 the Defence Materiel Organisation (DMO)[84] expects to receive approximately $8.7 billion from Defence, increasing to $12.3 billion in 2016–17, to acquire and sustain military equipment and services.[85]

1.2 The development of capability begins well before DMO commences capital equipment acquisition. This audit is about the effectiveness of the implementation of reform to capability development, particularly two-pass approval. Defence follows a sequence of defined phases as part of its capability development process: identifying a capability need; specifying requirements; acquisition; use in-service by the Australian Defence Force (ADF); and ultimate disposal. Defence's Capability Development Group (CDG) is responsible for managing a project from the end of the strategic planning work that identifies the capability need until the commencement of acquisition, when responsibility

82 The Defence portfolio comprises component organisations that together are responsible for the defence of Australia and its national interests. In practice, these are broadly regarded as one organisation known as 'Defence' (or the 'Australian Defence Organisation'). The three most significant bodies are:

- the Department of Defence, headed by the Secretary;
- the Australian Defence Force (ADF), comprising the three Services, Navy, Army and Air Force, commanded by the Chief of the Defence Force (CDF); and
- the Defence Materiel Organisation (DMO), a prescribed agency within the Department of Defence, headed by the Chief Executive Officer, DMO (CEO DMO). DMO is responsible for the bulk of Defence major capital acquisitions. However, other Defence groups also have acquisition responsibilities, for example, the Chief Information Officer Group for information and communications technology (ICT) acquisitions.

(Australian Government, Portfolio Budget Statements 2013–14, Defence Portfolio, p. 2.)

83 Australian Government, *Portfolio Budget Statements 2013–14, Defence Portfolio*, p. 10.

84 As a prescribed agency, DMO remains part of the department for general administration, and the CEO DMO remains accountable to the Secretary under the *Public Service Act 1999* and to the CDF under the *Defence Act 1903*.

85 Australian Government, *Portfolio Budget Statements 2013–14*, *Defence Portfolio*, p. 140.

generally passes to DMO. DMO acquires the equipment to achieve the capability, as approved by government, sustains it through its in-service life, and disposes of it when it is no longer needed.[86]

Responsibility for the phases

1.3 One of CDG's major responsibilities is the production of the Defence Capability Plan (DCP). The DCP articulates Defence capability needs as a series of projects intended to reflect government policy, which, in turn, is set out in the most recent Defence White Paper. The DCP, which was introduced in 2001, must be approved by the National Security Committee of Cabinet.[87]

1.4 To progress a major capability proposal, Defence must obtain approval through a two-pass process, with each pass providing government approval to proceed to the next stage of acquisition. Broadly, first-pass approval is in-principle authorisation that allows Defence to develop preferred options into more specific proposals for consideration at second pass. Defence must prepare comprehensive analyses of technology, cost and schedule risks to support government consideration of these proposals through each pass.[88]

1.5 CDG is responsible for seeking both in-principle government agreement for each project (first-pass approval) and, later, returning to government with a detailed proposal for final (second-pass) approval. The acquisition agency, generally DMO, formally assumes responsibility for acquiring the materiel aspects of a project after second pass. At this point, government has agreed to acquire a specific, defined capability option. The acquisition agency would generally be expected to work closely with the

86 For much of its existence, CDG has had responsibilities beyond requirements definition, including, for example, monitoring the performance of the main acquisition agency (DMO). Following the government response to the 2008Mortimer Review, Capability Managers (principally the Service Chiefs) have taken responsibility for delivering the agreed capability and co-ordinating all required elements. See Defence, *Defence Capability Development Handbook* (DCDH), December 2012.

87 The DCP exists in two versions. The public DCP is published, available in hard copy and on the Internet (see:<http://www.defence.gov.au/dmo/id/dcp/dcp.cfm> [accessed 23 August 2012]). There is also a version which includes a small number of additional, classified projects. Defence released the first public DCP in 2001 with subsequent versions released in 2004, 2006, 2009, 2011 and 2012.

88 The two-pass approval process is strongly associated with the 2003 Kinnaird Review. However, a two-pass system had already been in place in Defence for several years before that review took place. The Kinnaird Review sought to strengthen the two-pass system. This is discussed in more detail in Chapter 5.

relevant Capability Manager and be actively involved in the preceding requirements phase managed by CDG.[89]

1.6 Developing a project to the point of second-pass approval can take a great deal of work, sometimes over several years.[90] Thus, a project may have been underway for some years before acquisition of the required capital equipment starts and acquisition responsibility generally passes from CDG to DMO.[91]

Defence Capability Plan

1.7 The *Defence Capability Plan (Public Version) 2012* (DCP), which lists Defence major projects that Defence plans to present to government for approval over the next four years, contains about $153 billion of projects (or phases of projects). Earlier DCP editions have projected ten years forward but Defence has developed a new document to complement this DCP, the *Defence Capability Guide* (DCG).[92] This gives general guidance to industry on projects over the six years following the four-year period of the DCP.

1.8 In January 2013, Defence expected to replace or upgrade up to 85 per cent of its equipment over the coming 15 years.[93]

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89 Within Defence, achieving a capability requires more than purchasing a piece of equipment. A capability is provided by one or more systems, and is made up of the combined effect of multiple inputs. The inputs are known as the 'Fundamental Inputs to Capability' (FIC). Capability is therefore viewed as the effects provided by a system of interlocking and interdependent FIC, comprising: personnel, organisation, collective training, major systems, supplies, facilities and training areas, support and command and management. Capability managers are responsible for coordinating the FIC. DMO is normally the acquisition agency for materiel for DCP projects. Defence, *Defence Capability Development Handbook*, December 2012, p. 3.

90 The 2006 *Defence Capability Development Manual* notes that projects can take up to 10 years between a project's inclusion in the DCP to second-pass approval by government. The current successor document, the 2012 *Defence Capability Development Handbook*, does not make this statement.

91 The Mortimer Review noted that a project could be entered into the DCP 10 years before going to government for second-pass approval (Report of the *Defence Procurement and Sustainment Review*, 'Going to the Next Level', 2008, p. 11, <http://www.defence.gov.au/publications/mortimerreview.pdf> [accessed 11 January 2012].)

92 The Minister for Defence announced the *Defence Capability Guide* on 5 October 2012. See: <http://www.minister.defence.gov.au/2012/10/05/minister-for-defence-and-minister-for-defence-materiel-joint-media-release-defence-capability-guide/> [accessed 5 October 2012]. The Guide itself is available here: <http://www.defence.gov.au/Publications/CapabilityGuide2012.pdf> [accessed 9 October 2012].

93 Minister for Defence Materiel, media release, 31 January 2013. See http://www.minister.defence.gov.au/2013/01/31/minister-for-defence-materiel-sale-of-12000-retired-army-vehicles/ [accessed 4 February 2013].

Defence capability development and two-pass approval

1.9 Defence major capability development projects provide the ADF with new or upgraded military equipment such as armoured vehicles, ships, submarines, aircraft, weapons and communications systems. Capability development decisions have substantial long-term consequences for Defence's ability to meet the Government's strategic requirements, the priorities and activities of Defence, the allocation of national resources through the Federal budget, and investment decisions by industry.

1.10 Defence capital equipment projects—of which there can be several hundred in course at any one time—are broadly categorised as either 'major' or 'minor'. Generally, a project with an overall cost greater than $20 million is considered a major capital equipment project.

1.11 Currently, projects with a cost of $100 million or more require the approval of the Cabinet.[94,95] Projects from $20 million up to $100 million require the approval of both the Minister for Defence and the Minister for Finance (with either minister able to refer projects in this category to the National Security Committee of Cabinet (NSC)), and projects below $20 million require the approval of the Minister for Defence.[96]

The challenges facing Defence capability development projects

1.12 Major defence capability development projects are often complex and high-risk. It has long been recognised that such projects can be challenging to complete to schedule, within the approved budget and in accordance with the capability requirements of the ADF. More generally, the challenge of managing Defence functions cannot be underestimated. A major consultancy report in 2000 found that:

> Defence is the largest capital acquisitions, asset management, logistics business in the country and the contrast between the cultures of the fighting forces and

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94 The cost is the *estimated out-turned cost*. Out-turned costs are the cost of a completed project in dollars in the years in which funds are expended. In essence, it is the estimated cost of a project at current prices to which a cost escalation estimate is added for the period up to the date when the project is expected to be completed.

95 Defence capital investment projects attract additional approval requirements to those required under the *Financial Management and Accountability Act 1997* (FMA Act) and FMA Regulations. These additional requirements, set by government, depend on the estimated cost of the proposal and any sensitivities associated with it.

96 In March 2004, the Government increased the threshold for mandatory NSC consideration from $20 million to $50 million. In April 2009 it increased it further to $100 million.

> the management and operation of one of the largest 'businesses' in the country is unique in terms of corporate governance and administrative challenges.[97]

1.13 Further, the report observed that the nature of Defence acquisitions and the political environment present their own unique challenges for government and, therefore, Defence:

> [Defence] manages 10-year projects, it has a three-year financial program, it appoints people for two years and it deals with its money on a one-year basis. Without a strong set of effective corporate principles and practices, this combination of factors contains the ingredients for continuing problems.[98]

1.14 This view has been reinforced more recently by the Black Review (January 2011), which found capability development to be a process which 'has a profound effect on Defence as a whole, and is where much policy and organisational risk concentrates.'[99]

1.15 The last decade has seen successive reviews flowing from government concerns about delivery delays, cost increases and failures in major projects; management of the Defence budget; and Defence governance and accountability. The two reviews most relevant to this audit were:

- the *Defence Procurement Review 2003* (Mr Malcolm Kinnaird AO, chair), completed in August 2003, the 'Kinnaird Review'; and
- *Going to the Next Level: the Report of the Defence Procurement and Sustainment Review* (Mr David Mortimer AO, chair), completed in September 2008, the 'Mortimer Review'.

1.16 Each review, including these two, advocated that Defence undertake a major program of reform to the governance and management of planning, acquiring and accepting military capability.[100]

1.17 During 2011, the Minister for Defence and the Minister for Defence Materiel jointly announced that Defence would accelerate implementation of

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97 Department of Defence, *Report on Defence Governance, Acquisition and Support*, prepared by KPMG, April 2000, p. 4.

98 ibid., p. 5.

99 *Review of the Defence Accountability Framework* (the 'Black Review'), January 2011, p. 92.

100 Three other major reviews referred to frequently in this report are the Pappas Review (Defence, *2008 Audit of the Defence Budget*, 3 April 2009); the Black Review (Defence, *Review of the Defence Accountability Framework*, January 2011, Associate Professor Rufus Black); and the Rizzo Review (Defence, *Plan to Reform Support Ship Repair and Management Practices*, Paul J. Rizzo, July 2011).

outstanding reforms from the Kinnaird and Mortimer Reviews[101], and introduced further reforms to strengthen procurement and improve accountability.[102]

1.18 Some reviews have been concurrent, adding complexity to Defence's reform agenda, with initiatives from one review still in progress as the next is underway. Therefore, as well as managing the delivery challenges inherent in capability development, Defence has had to undertake substantial change, which itself has the potential to affect the delivery of capability to the ADF.

The current audit

Audit objective and scope

1.19 The objective of the audit was to examine the effectiveness of Defence's implementation of reforms to capability development since the introduction of the two-pass process[103] for government approval of capability projects, and government acceptance of the reforms recommended by the Mortimer Review.[104] The audit has not attempted to evaluate the anticipated or actual outcomes, including project outcomes, resulting from implementation of recommendations made by the various reviews which were agreed by successive Australian Governments.

1.20 During the audit, its scope was formally broadened primarily to make it clear that the focus was on the implementation of the reforms associated with two-pass approval for capability development, rather than having a narrower, compliance focus on the documentation produced during the two-pass process. Defence was advised of the change in audit scope in November 2012.

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101 Minister for Defence and Minister for Defence Materiel, Media Release, Strategic Reform Program, 6 May 2011, available from: http://www.minister.defence.gov.au/2011/05/06/strategic-reform-program/ [accessed 11 January 2012].

102 These were announced in the context of reporting on reforms to project management accountability (announced 6 May 2011); reforms to strengthen the Projects of Concern process (announced 29 June 2011); reforms to the disposal of military equipment (announced 29 June 2011); reforms to strengthen Australian industry (announced 29 June 2011); reforms to support ship repair and management practices, arising from the Rizzo Review (announced 18 July 2011); and reforms to improve accountability in Defence, arising from the Black Report (announced 9 August 2011). Minister for Defence and Minister for Defence Materiel, Media Release, *Progress of Implementation of Key Defence Reforms*, 28 November 2011. Available from: <http://www.minister.defence.gov.au/2011/11/28/minister-for-defence-and-minister-for-defence-materiel-progress-of-implementation-of-key-defence-reforms/> [accessed 11 January 2012].

103 In 2000.

104 In 2008.

1.21 The scope of this audit included the requirements phase and, to a limited extent, the acquisition phase of major capability development projects, focusing upon changes flowing from the major reforms. It considered aspects of Defence's management of capability development projects from their entry into the DCP through first-pass and second-pass approval. It also considered project completion and acquittal.[105] The audit drew, in particular, on a sample of projects from the start of the 2009–10 financial year to the end of 2010–11 and included approvals 'other than first or second pass'. It also examined measures to enhance accountability and guidance to Defence staff engaged in procurement.

1.22 The ANAO undertook to the Joint Committee of Public Accounts and Audit (JCPAA) in 2006 to incorporate in its forward work program an examination of post-Kinnaird activities in Defence and DMO to assess reform progress.[106] This audit contributes further to fulfilling that undertaking.[107]

1.23 Also, as part of the Government response to the Mortimer Review, there had been an intention to invite the ANAO to audit the progress of reform.[108] While not intended as a comprehensive audit of Defence's implementation of the Mortimer Review, this audit does address Defence's progress in implementing the major recommendations of that Review that were agreed by government and that relate to capability development, as well as additional undertakings made in the 20-point plan announced in the government response. Therefore, this report refers regularly to the work of Defence's Mortimer Review Implementation Governance Committee (MRIGC) and its supporting Mortimer Review Coordination Team (MRCT).[109]

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105 Note that this audit does not consider the strategic planning activities within the needs phase of capability development, which occur before a project's entry into the DCP.

106 ANAO submission to the JCPAA *Inquiry into financial reporting and equipment acquisition at the Department of Defence and Defence Materiel Organisation*, April 2006, p. 11; see: <http://www.aph.gov.au/Parliamentary_Business/Committees/House_of_Representatives_Committees?url=jcpaa/defence/subs.htm> [accessed 23 August 2012].

107 This undertaking is also addressed by the earlier performance audit of two-pass approval (Audit Report No.48, 2008–09 *Planning and Approval of Defence Major Capital Equipment Projects*), the more recent performance audit of DMO's Gate Review process (Audit Report No.52, 2011–12, *Gate Reviews for Defence Capital Acquisition Projects*), the ANAO's annual review of the DMO Major Projects Report, and, to an extent, ANAO performance audits of individual capability development projects.

108 Defence, *The Response to the Report of the Defence Procurement and Sustainment Review*, May 2009, p. 45.

109 The MRIGC was replaced in 2012 by the new Capability Development and Materiel Reform Committee.

Audit approach

1.24 In December 2011, the Senate Foreign Affairs, Defence and Trade References Committee expressed the view that, eight years after Kinnaird:

> having witnessed an endless merry-go-round of reviews and implementation programs, the committee is convinced that [Defence] is caught in a cycle of reforms that is adding further complexity to an already complicated and confused procurement process.[110]

1.25 Many of these reviews have considered aspects of Defence procurement. As noted in paragraph 1.6, Defence capability development projects often take several years to complete, and some run for over a decade. With a changing management environment and inherently lengthy projects, new reforms may be announced before the previous ones are settled or before it is possible to assess their outcomes empirically.

1.26 As the audit progressed, the audit team found that it was considering themes that had been raised by several reviews over the last decade. It became apparent that fresh reforms often emphasise, refine or give more impetus to existing initiatives. Sometimes, a reform is not complete when a further recommendation is made. In the light of this history and, as a preliminary to the remaining analysis, this audit has examined the reviews most relevant to capability development reform since the introduction of the two-pass system to identify common, and often persistent, themes. That examination is provided in Chapter 2. The audit then assesses Defence's progress in four critical areas that encompass the recurring reform themes in Table 2.1, and associated review recommendations, namely:

- reforming capability development—organisation and process;
- improving advice to government when seeking approval;
- improving accountability and advice during project implementation; and
- reporting on progress with reform.

110 Senate Foreign Affairs, Defence and Trade References Committee, *Procurement procedures for Defence capital projects*, Preliminary Report, December 2011, p. xiii.

1.27 The primary sources of evidence on Defence's progress with the capability development reforms considered in the audit were Defence's records of its management of their implementation.[111] These records suggested lines of inquiry which, when followed up, led to other Defence records and documents being analysed to assess relevant aspects of progress. For example, following up on progress with Materiel Acquisition Agreements led to the discussion of DMO's Acquisition Baseline Review (Chapter 12).

1.28 CDG project managers are responsible for managing individual projects through capability development. The capacity of CDG project managers to carry out their duties effectively received attention in ANAO Audit Report No.48, 2008–09, *Planning and Approval of Defence Major Capital Equipment Projects*.[112] Focus group discussions during fieldwork for the 2008–09 audit showed that staff turnover, training and skills affected the work of these managers. For this audit, the ANAO employed a professional survey organisation to conduct a survey of Capability Systems Division staff within CDG to assess any change in views more systematically. This was a census, rather than a sample survey. The full results are in Appendix 2.[113] These results formed the basis of much of the discussion in Chapter 3, but are also drawn upon intermittently through the rest of the audit.

1.29 To assess progress in documenting capability requirements (see Chapter 4) and to assess some aspects of advice to government (Chapters 6—10), the audit reviewed primary documents prepared during capability development for major capital equipment projects that had received first and/or second-pass approval in the 2009–10 and 2010–11 financial years. This included submissions to ministers seeking project approval. These documents comprise or underpin Defence's advice to government on major capital acquisitions, and are the basis on which government commits substantial funds to deliver the required capability to the ADF.

111 The audit has drawn on Defence records of updates to its implementation of the Mortimer reforms up until July 2013.

112 ANAO Audit Report No.48, 2008–09, *Planning and Approval of Defence Major Capital Equipment Projects*, June 2009, pp. 68 forward.

113 This survey could now form a useful baseline against which Defence could undertake further surveys from time to time to check on its progress and, potentially, identify any new issues emerging among CDG project management staff.

1.30 The audit team also met with central agencies, primarily the Department of Finance (Finance), on their involvement in the development and submission of Cabinet Submissions for Defence's major capital acquisition projects.

1.31 Defence was provided with an opportunity to review and comment on a draft audit report in June 2013 and the proposed audit report in August 2013.[114]

Audit criteria

1.32 The high-level criteria for the audit were that:

- the strengthened two-pass process has been implemented in the way envisaged by the Kinnaird and Mortimer Reviews and accepted by government;
- the organisational arrangements are appropriate for the development of Defence capability requirements;
- Defence provides appropriate advice to government on major capital acquisition proposals; and
- measures to enhance guidance and improve accountability on major capital acquisition projects have been implemented.

1.33 The audit was conducted in accordance with ANAO audit standards at a cost to the ANAO of approximately $592 000.

Relevant inquiries and performance audits

1.34 A recent parliamentary inquiry and several other recent ANAO performance audits are relevant to the current audit.

114 In addition, Defence provided comments on detailed issues papers circulated by the ANAO in November 2012.

Senate committee inquiry into Defence procurement procedures

1.35 During the audit, the Senate Foreign Affairs, Defence and Trade References Committee completed its inquiry *Procurement procedures for Defence capital projects* on a reference from the Senate of 9 February 2011. The Committee presented a preliminary report in December 2011 and its final report on 30 August 2012.[115]

Planning and Approval of Defence Major Capital Equipment Projects

1.36 In June 2009, the ANAO tabled Audit Report No.48, 2008–09 *Planning and Approval of Defence Major Capital Equipment Projects*.[116] The audit objective was to assess whether Defence had effectively implemented the strengthened two-pass approval process for major capital equipment projects.

1.37 The audit concluded that Defence had established the administrative framework for implementing the strengthened two-pass approval process. However, the execution of the capability development process for the case study projects in the audit sample differed at times from the documented authoritative guidance documents. The audit made four recommendations. The findings, recommendations and Defence's progress in implementing them are discussed at appropriate points in this report.[117]

Acceptance into Service of Navy Capability

1.38 In June 2011 the ANAO tabled Audit Report No.57, 2010–11 *Acceptance into Service of Navy Capability*.[118] The objective was to report on the acceptance into service of Navy capability, and to identify where Defence could use better practice to improve outcomes. The audit concluded that:

- There was still some way to go before Defence achieved the objective of seamless, well-developed processes and systems underlying the effective and efficient delivery of Navy capability.

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115 Information about the inquiry can be found here: <http://www.aph.gov.au/Parliamentary_Business/Committees/Senate_Committees?url=fadt_ctte/completed_inquiries/2010-13/procurement/info.htm> [accessed 19 February 2013].

116 ANAO Audit Report No.48 2008–09 *Planning and Approval of Defence Major Capital Equipment Projects*, June 2009, available here: <http://www.anao.gov.au/~/media/Uploads/Documents/2008%2009_audit_report_48.pdf> [accessed 13 September 2012].

117 This audit is occasionally referred to through these papers as 'the previous audit', being the last audit of related aspects of capability development in Defence.

118 ANAO Report No.57, 2010–11, *Acceptance into Service of Navy Capability*, June 2011.

- The overall picture was of a capability development system that had not consistently identified and responded to, in a timely and comprehensive way, conditions that adversely affected Navy capability acquisition and support. Opportunities to identify and mitigate cost, schedule and technical risks had been missed, resulting in chronic delays to major capital projects essential to Navy capability.
- At the highest level, the Acquisition Business Cases, project plans and inter-group agreements for some projects examined had not set out clearly the government-authorised parameters at the time of project approval. Consequently, compliance with government requirements, a fundamental responsibility of Defence, could not be confirmed by Defence.

1.39 The report found deficiencies in Defence's processes and practices relating to obtaining formal and comprehensive agreement between the various groups within Defence on roles, responsibilities and requirements associated with Navy major capital equipment projects.[119]

Gate Reviews for Defence Capital Acquisition Projects

1.40 The ANAO tabled Audit Report No.52, 2011–12, *Gate Reviews for Defence Capital Acquisition Projects* in June 2012.[120] DMO Gate Reviews are part of DMO's assurance framework for major capital equipment projects, and are intended to ensure that DMO can provide high-quality and reliable advice on a project's health and outlook. They involve an assessment of a project's readiness to proceed to the next stage of its lifecycle.[121]

1.41 The audit found DMO had developed an approach that is providing better assurance, with potential to improve the management of projects. The program had strengthened and was better regulated following the establishment of DMO's Independent Project Performance Office in July 2011 and the introduction of centralised Gate Review management.

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119 ibid., pp. 20–21.

120 See http://www.anao.gov.au/Publications/Audit-Reports?year=2011-2012&portfolio=8 [accessed 8 July 2013]

121 Hansard, Joint Standing Committee on Foreign Affairs, Defence and Trade, Defence Sub-Committee, Review of the Defence annual report 2006–07, 10 July 2008, pp. 10–11.

Report structure

1.42 Chapter 2, *Themes in Defence reviews*, completes the first part of this report. It summarises the main reviews of Defence capability development since 2000, and identifies the recurring themes that are examined in later chapters. It also provides a brief overview of additional reviews initiated during the audit. Thus it provides a guide and a framework to which the findings of later chapters relate. The remaining chapters are structured into four further parts, as follows:

- **Part 2: Reforming capability development—organisation and process**
  - Chapter 3—*Organisational reform.* This chapter considers the creation of CDG in early 2004, and the skills, experience and turnover of its project manager staff, who have a central responsibility in capability development projects.
  - Chapter 4—*The capability development process.* This chapter examines the formal guidance provided to CDG staff to define and assist with capability development, the production and review of documentation to meet Defence requirements, and the use of committees to oversee capability development.
  - Chapter 5—*Two-pass approval and the Defence Capability Plan.* This chapter examines the relationship between Defence's capability systems lifecycle and two-pass approval. It considers the entry of projects into the DCP and assurance that the DCP is affordable.
- **Part 3: Improving advice to government when seeking approval**
  - Chapter 6—*Assessing technical risk.* This chapter is the first of several examining how Defence advises government when putting forward capability development proposals under the two-pass process. It provides an introduction to the subject and addresses the first topic, technical risk.
  - Chapter 7—*Preparing and advising on whole-of-life cost estimates.* This chapter examines the basis for including whole-of-life cost estimates in advice to government about capability development projects and proposed materiel acquisitions, and the development of Defence practice in this area.

- Chapter 8—*Obtaining external verification of cost estimates.* This chapter examines Defence's progress with the requirement to have its cost estimates verified independently by the Department of Finance.
- Chapter 9—*Including off-the-shelf options in advice to government.* This chapter considers Defence's progress in implementing Kinnaird's proposal for inclusion of off-the-shelf options among those put to government for capability development projects.
- Chapter 10—*CEO DMO providing independent advice to government.* This chapter examines Defence's implementation of the Kinnaird recommendation that the CEO DMO provide independent advice to government on capability development proposals.

- **Part 4: Improving accountability and advice during project implementation**
  - Chapter 11—*Introducing Joint Project Directives.* This chapter examines the introduction of Joint Project Directives, issued by the Secretary of the Department of Defence and the Chief of the Defence Force to help ensure that capability development projects observe government requirements.
  - Chapter 12—*Preparing and reconciling against Materiel Acquisition Agreements.* This chapter considers Materiel Acquisition Agreements (MAAs) between Defence and DMO, and the time taken to put them in place. It also reviews the DMO Acquisition Baseline Review, in which DMO sought to reconcile the requirements in MAAs with original authorising decisions.
  - Chapter 13—*Closing projects.* This chapter considers how Defence closes capability development projects and, in particular, DMO's work to close a large number of projects which had been substantially complete but remained formally open.
  - Chapter 14—*Capability Manager reporting.* This chapter considers the Kinnaird Review recommendation that Capability Managers be given responsibility for reporting on the development of Defence capability, and progress with implementation.

- **Part 5: Reporting on progress with reform**
  - Chapter 15—*Reporting on progress with reform.* This chapter examines Defence's reporting to Parliament on its progress with the implementation of reforms, focusing particularly on Kinnaird and Mortimer. It also considers reports originating in DMO, which have been presented in a variety of contexts as a basis for claims regarding project schedule performance.

2. Themes in Defence reviews

This chapter summarises the main reviews of Defence capability development since 2000, and identifies the recurring themes that are examined in later chapters. It also provides a brief overview of additional reviews initiated during the audit.

A decade of reviews

2.1 Defence's performance with major capital acquisition projects has been the subject of numerous parliamentary inquiries, independent reviews and ANAO audits. Figure 2.1 shows those reviews where a substantial part of the review focused on capability development and materiel acquisition.

2.2 Defence is aware of recurring themes in the reviews. At a meeting in September 2011 of the senior committee overseeing implementation of the Mortimer Review recommendations, a senior officer noted that:

> the Kinnaird, Mortimer, Black and Rizzo reviews were broadly aligned noting that the Black Review should not be seen as road map for major capability systems improvements. [The officer] also noted that if there were to be conflicts between the reviews it is likely to be minor in nature. It was agreed that mapping the recommendations of the respective reviews would be a useful exercise.[122]

2.3 The committee agreed that Defence would 'map recommendations from the Kinnaird, Mortimer, Black and Rizzo Reviews to ensure recommendations are appropriately assigned and actions underway where applicable'.[123] Defence advised that this work is being carried forward through the Capability Development Improvement Program (CDIP) initiative, which commenced in early 2012.[124]

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122 Defence, MRIGC, Minutes of meeting, 20 September 2011, p. 2.

123 A reduced copy of Defence's map of the reform recommendations is at Appendix 3. Although the individual elements are not legible in this reduced image, it serves to indicate the number of reform elements perceived by Defence as affecting CDG and the complexity of interaction among them. Defence advised in September 2013 that 'a review of the mapping work for capability development related recommendations from all reviews and inquiries is planned to be completed by end of 2013. At the time of this response, the scope of the Capability Development Improvement Program (CDIP) encompassed management of all reform activities impacting on CDG business. Apart from capturing relevant initiatives flowing from major external and internal reviews, the CDIP also captures all capability reform announcements (as they relate to CDG business) made by Minister for Defence and Minister for Defence Materiel since October 2010. Oversight of the progression and implementation of capability development reforms being managed under the CDIP is undertaken through the Capability Development and Materiel Reform Committee (CDMRC).'

124 CDIP is a CDG program of continuous improvement. It is discussed further at paragraph 2.53.

2.4 The alignment among these reviews is indicative of reform ideas persisting over the last decade. This chapter seeks to discern consistent proposals for reform recurring in the more prominent reviews, among which the Kinnaird and Mortimer Reviews are the cornerstones. This is not an attempt to analyse comprehensively these reviews' findings. Rather, it seeks to simplify the apparent diversity of capability development reform proposals Defence has been dealing with, which are the subject of this audit.

2.5 Programs of change and reform in Defence continue. However, even though capability development has experienced frequent waves of reform, the capability lifecycle backbone and main documentary requirements have not changed substantially since Defence first adopted the two-pass system in 2000.

2.6 A summary analysis of major reviews follows, which sets out the development of the reform agenda in Defence over the last decade. The starting point is the Defence Governance, Acquisition and Support Review, which introduced the two-pass system.

Figure 2.1: Major reviews and audits of Defence capability development since 2000

April 2000 Defence completes the *Defence Governance, Acquisition and Support Review.*	The review examined performance of Support Command Australia (SCA), established in 1997 following the 1997 Defence Efficiency Review, and Defence's proposal to merge SCA and the Defence Acquisition Organisation (DAO). The review supported the merger, and DMO was established on 1 July 2000.
March 2003 Senate Foreign Affairs, Defence and Trade References Committee tables a report entitled *Materiel acquisition and management in Defence.*	The inquiry was conducted in light of a history of troubled Defence acquisition projects and at a time of structural reform within Defence that included creation of DMO.
September 2003 Government releases report of the *Defence Procurement Review* (the 'Kinnaird Review') and largely accepts the advice of the Review.	The review examined problems associated with major Defence acquisition projects and identified where improvements could be made.
August 2008 Joint Committee of Public Accounts and Audit (JCPAA) tables Report 411 *Progress on equipment acquisition and financial reporting in Defence.*	The inquiry considered, amongst other things, Defence's progress in implementing the recommendations of the Kinnaird Review.
September 2008 Government releases the *Report of the Defence Procurement and Sustainment Review* (the 'Mortimer Review').	The review evaluated the progress Defence had made towards implementing the recommendations of the Kinnaird Review, and also examined Defence's current acquisition and sustainment processes.
April 2009 *2008 Audit of the Defence Budget* (the 'Pappas Review') completed.	The aim of the review was to advise Ministers on the efficiency and effectiveness of, and future risks associated with, the Defence budget, and to recommend improved arrangements for its management.
June 2009 ANAO tables Audit Report No.48 2008–09 *Planning and Approval of Defence Major Capital Equipment Projects.*	The objective of this audit was to assess whether Defence, in response to a Kinnaird recommendation, had effectively implemented a strengthened two-pass approval process for major capital equipment projects.
June 2010 JCPAA tables Report 417 *Review of the Auditor-General's Reports tabled between February 2009 and September 2009.*	This inquiry examined the findings of ANAO Report No.48 2008–09 *Planning and Approval of Defence Major Capital Equipment Projects.*
January 2011 *Review of the Defence Accountability Framework* (Black Review) presented to Government.	The review examined Defence's accountability framework from a strategic, whole-of-Defence perspective.
August 2012 The Senate Foreign Affairs, Defence and Trade References Committee tables the final report of its inquiry into the *Procurement procedures for Defence capital projects.*	The Committee examined longstanding problems with Defence procurement, and identified entrenched attitudes as the main underlying problem in Defence's management structure.

Source: ANAO

Report on Defence Governance, Acquisition and Support, April 2000

2.7 The *Report on Defence Governance, Acquisition and Support* examined the concept and performance of Support Command Australia (SCA) and Defence's proposal to merge SCA and the Defence Acquisition Organisation (DAO).[125] The report supported the merger, and the resulting organisation, the Defence Materiel Organisation (DMO), was established on 1 July 2000.

2.8 The report identified constraints on Defence's ability to translate high-level government policy and strategic direction into the advice that supports Defence capital project decisions—decisions with major, long-term financial and strategic implications for Australia—including:

- inadequate governance arrangements amplified by the lack of transparent, clear accountabilities and a lack of rewards and sanctions;
- traditions and supporting mechanisms within Defence neither designed nor operating to maximise the benefits of capital decisions, nor linking those plans and decisions with whole-of-life support;
- the absence of an effective knowledge management system and the risk that the volume of capability planning 'information' would continue to increase without adding value and accountability;
- systems and structures that support acquisition advice to government not being adequate to give assurance that its strategic decisions are the best and matched by the highest return on investment in capability;
- a disconnect between the planning and provision of logistics and major capital acquisition programs and a capital budgeting system that did not effectively capture whole-of-life capital, support and operating costs for major capital acquisitions; and
- management by committee, and diffusion of responsibility, demonstrated by the continuing difficulty in finding someone with clear, transparent responsibility for decision-making for materiel acquisition and support.

125 SCA was formed in 1997 by merging the three single-service (Air Force, Army and Navy) Support and Logistic Commands, as recommended in the report of the *1997 Defence Efficiency Review*.

2.9 On 22 June 2000, the then Minister for Defence agreed to establish DMO and to a suite of reforms based on the above review, including:

- introducing two-pass approval to allow for more government involvement in Defence capability planning and decision-making;
- emphasising whole-of-life considerations and costs in capability and acquisition planning;
- increased and more effective involvement of industry in capability definition and acquisition processes;
- improved risk management, emphasising increased investment in risk reduction before committing to acquisition;
- streamlined decision-making, with clear identification of accountabilities and responsibilities; and
- initiatives to attract, develop and retain skilled personnel.[126]

2.10 Announcing the then Minister's decision, the then Secretary stated:

> Since the 1970s, successive reviews of Defence acquisition have identified too many Defence major capital acquisition projects as failing to achieve budget, schedule or technical requirements. In addition, through-life support needs and costs are seldom optimised and are generally inadequately assessed prior to equipment delivery. These failings have arisen due to poor requirements definition and project planning, cumbersome and bureaucratic acquisition processes, and a lack of appropriately skilled staff ...
>
> The acquisition reform program is a comprehensive range of measures to enhance accountability; increase Government and industry involvement in capability development and acquisition planning; reduce tendering costs; and improve the cost, timeliness and effectiveness of Defence acquisitions.[127]

Kinnaird Review, August 2003

2.11 The 2003 *Defence Procurement Review* (Kinnaird Review) was commissioned in 2002 by the then Government in response to renewed concerns about Defence procurement.[128] The review's findings were grouped around the phases of Defence capability development, including: communication with

126 Defence, *One Year On*, transcript of address by Dr. Allan Hawke, Secretary, Department of Defence to the Defence Watch Seminar, 27 February 2001, The National Press Club, Canberra.

127 ibid.

128 Department of the Prime Minister and Cabinet, *Defence Procurement Review 2003*, August 2003.

government; defining and assessing capability; management of capability; and the procurement and ongoing support of Defence equipment. It made ten major recommendations and a number of additional points for consideration.

2.12 Two findings are of particular relevance to this audit:

- government had often been asked to sign off on capital acquisition proposals when there had not been sufficient analysis within Defence to give confidence that financially and technically robust decisions were being made. Two-pass approval at the time lacked rigour and discipline.[129] It was not based on mandatory endorsement of decisions by relevant stakeholders, nor was external scrutiny applied to major aspects of proposals forwarded to government; and
- accountability for managing the definition and assessment of capability and achieving robust outcomes was diffuse and overlaid by a complex system of committees.

2.13 These findings led to two recommendations aimed at improving capability definition and assessment in Defence:

- first, that Defence appoint for a defined minimum tenure of five years a military or civilian officer at the three-star/Band 3 level, responsible and accountable for managing capability definition and assessment; and
- second, that Defence strengthen the then existing two-pass approval process for major capital equipment projects.

2.14 In September 2003, the Government broadly accepted the Kinnaird Review's recommendations. Three months later, Defence appointed a three-star ADF officer as Chief, Capability Development Group (CCDG), and it established CDG in February 2004. In March 2004, CDG started implementing strengthened two-pass approval.

JCPAA inquiry, August 2008

2.15 In March 2006 the JCPAA began an inquiry which, among other things, would consider Defence's progress with the reforms recommended by the Kinnaird Review. The committee released its report in August 2008, finding that Defence had almost completed implementing the Kinnaird Review

129 The two-pass process where Defence submits proposals for major capital equipment acquisitions or upgrade projects to government for approval at two key points within the project's development as set out in the Defence *Capability Systems Life Cycle Management Manual 2002*.

recommendations and had finalised arrangements to implement strengthened two-pass approval. It also found that the process for determining the effectiveness of the Kinnaird reforms was in its infancy, and Defence had paid insufficient attention to developing techniques to measure the status of the reform agenda.[130]

2.16 The JCPAA also found that:

> a number of issues were raised during the [JCPAA] inquiry relating more broadly to defining and assessing capability. These included a lack of clarity in the articulation of capability requirements, managing technical risk and the relationships that impact on this aspect of the capability cycle.[131]

Mortimer Review, September 2008

2.17 In May 2008 the Government commissioned the *Defence Procurement and Sustainment Review* (Mortimer Review), to evaluate Defence's progress against the Kinnaird reforms and to examine Defence's current acquisition and sustainment processes.[132] The Minister for Defence released the report in September 2008.[133] It identified five main areas of concern, including: inadequate project management resources in CDG; inefficiency in the process leading to government approvals for new projects; shortages in DMO personnel; delays due to inadequate industry capacity; and difficulties in introducing equipment into full service.

2.18 The report made 46 recommendations to improve capability development, acquisition and sustainment. In May 2009, the Government released its response, including a 20-point plan of action, and agreed to 42 of the recommendations in full and to the partial implementation of a further three.[134]

2.19 The Mortimer Review found strengthened two-pass approval had been largely implemented, though Defence practice differed from Kinnaird's original recommendation, as agreed by the then Government.[135] It also found

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130 JCPAA, Report 411, *Progress on equipment acquisition and financial reporting in Defence*, 2008.

131 ibid., p. 71, par. 3.32.

132 Mortimer Review, p. xi.

133 Minister for Defence, media release, *Mortimer Review of Defence Procurement and Sustainment*, 23 September 2008, <http://www.defence.gov.au/minister/70tpl.cfm?CurrentId=8253> [accessed 20 August 2013].

134 Defence, *The Response to the Report of the Defence Procurement and Sustainment Review*, May 2009, p. 15.

135 This is discussed further in Chapter 5, *Two-pass approval and the Defence Capability Plan*.

that, as a result of the processes Defence developed in response to Kinnaird, all major projects underwent the same two-pass process—entailing broadly the same detail—regardless of complexity, maturity or risk. Projects worth $60 million and $1.5 billion generated the same amount of paperwork and took the same time to be approved.[136] Mortimer described this as inefficient, and recommended strengthening DCP entry and tailoring the approval process.

2.20 In its response to Mortimer, the Government stated its expectation that:

> the scope, cost and schedule of Defence equipment acquisitions will be better defined in the business cases considered by Ministers (or the National Security Committee of Cabinet—NSC), through the Two-Pass process.[137]

2008 Audit of the Defence Budget, April 2009

2.21 The *2008 Audit of the Defence Budget* (Pappas Review) was a far-reaching review of Defence's finances, operations and management. Its two major aims were to advise ministers on the efficiency and effectiveness of, and future risks associated with, the Defence budget; and to recommend better ways to manage it. The review found the primary determinants of Defence cost to be 'the strategic objectives the Federal Government requires from Defence, and the capabilities Defence needs to acquire and sustain'.[138] The Pappas recommendations are the foundation of Defence's Strategic Reform Program (SRP).

The Strategic Reform Program, May 2009

2.22 On 2 May 2009 the Government launched both the 2009 Defence White Paper and the SRP.[139,140] Defence stated that successful delivery of the 2009 White Paper would depend on the SRP:

> Our choice is a simple one—if we do not achieve the reforms we need to make as part of the SRP we will not have an organisation that can deliver and sustain Force 2030.[141]

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136 Mortimer Review, p. 12.

137 Defence, *The Response to the Report of the Defence Procurement and Sustainment Review*, May 2009, p. 8.

138 Pappas Review, p. 16.

139 Defence, *Defence White Paper 2009*, May 2009.

140 Defence, *The Strategic Reform Program 2009: Delivering Force 2030*, May 2009.

141 Defence, *The Strategic Reform Program, Making it happen: Make every minute, dollar and round count*, 2010, p. v.

2.23 Defence expected the SRP to improve accountability, planning and productivity and deliver savings of $20 billion over the decade 2009–10 to 2018–19. Both the 2010–11 and 2011–12 *Defence Portfolio Budget Statements* identified the SRP as the 'Government's key initiative' in Defence, placing it second only to the conduct of current operations.[142]

2.24 The SRP brought together 11 reviews—including eight internal 'Companion Reviews' (prepared for the 2009 White Paper), a review of intelligence capabilities (the 'Brady Review'), the Pappas Review and the Mortimer Review. The SRP comprises 15 separate reform streams, each established under the oversight of a senior management governance committee led by an SES band-three or military three-star officer.[143] The two SRP streams most relevant to the current audit are the Procurement and Sustainment Stream (comprising those reforms emanating from the Mortimer Review) and the Capability Development Stream.

2.25 Progress reports were to be provided quarterly to the Minister for Defence and biannually to the NSC.[144] Defence informed the ANAO that, as of January 2013, four such progress reports had been considered by NSC and a fifth was in progress.

2.26 The Defence Audit and Risk Committee (DARC) was to receive regular updates on the achievement of savings and management of risks involved under the SRP. The DARC would provide the Secretary and CDF with an annual assurance that Defence is implementing reform and achieving the required savings.[145] In November 2012, advice to the DARC from the Strategic

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142 Defence, *Portfolio Budget Statements (PBS) 2010–11*, p. 143, see: <http://www.defence.gov.au/budget/10-11/pbs/2010-2011_Defence_PBS_full.pdf> [accessed 23 May 2012] and *PBS 2011–12*, p. 22, see: <http://www.defence.gov.au/budget/11-12/pbs/2011-2012_Defence_PBS_Complete.pdf> [accessed 23 May 2012].

143 The 'Companion Reviews' underpinned the 2009 Defence White Paper and covered communications technology; logistics; preparedness, personnel and operating costs; estate; workforce; science and technology; capability development; and industry capacity. Reform streams comprise: Capability Development; the Defence Estate; Information and Communications Technology; Intelligence; Smart Maintenance; Inventory; Procurement and Sustainment; Logistics; Non-Equipment Procurement; Preparedness, Personnel and Operating Costs; Reserves; Science and Technology; Output-Focused Budget Model; Strategic Planning; and Workforce and Shared Services. Defence, *Strategic Reform Program 2009: Delivering Force 2030*, May 2009, and Defence response to questions on Notice (Fielding W01 03 Mar 11 Post-election briefings) 'Attachment: to question W01', Budget supplementary estimates 2010–11, October 2010.

144 ibid.

145 Defence response to questions on Notice (Fielding W01 03 Mar 11 Post-election briefings) Attachment to question W01: Defence, 'Incoming government brief' (loc. cit.).

Reform Management Office noted that 'declining schedule, business and capability metrics indicate continued fragility in the program [as at June 2012]'.

2.27 The 2012–13 *Defence Portfolio Budget Statements* state that 'in 2012–13 Defence will continue with the Strategic Reform Program activities already underway. While reform must, and will proceed, all activities will be subject to review. Further details of future strategic reform in Defence will be advised in the 2013 White Paper'.[146]

Capability Development SRP stream

2.28 Most of the Pappas Review recommendations relating to CDG activities, along with selected Mortimer Review recommendations, were incorporated into the Capability Development Stream of the SRP. This stream, led by CCDG, comprised 12 major reform deliverables under four broad themes:

- new governance arrangements for Defence to enable the translation of the Government's strategic requirements into capability decisions through improved committee processes;
- a cost forecasting initiative to improve the quality of long-term cost forecasts for capability planning and decision-making, through enhanced costing methodologies, procedures and tools;
- improved management of funding for major acquisitions, through reforms to the management of technical risk and maturity and financial programming; and
- reducing the cost of major equipment procurement through a focus on off-the-shelf (OTS) equipment that can deliver capabilities that are not higher than strategic needs.

2.29 Defence finalised an implementation plan for this stream in October 2009. The Capability Development Reform Governance Committee first met in June 2009 and last met in August 2010. The Committee's records from that time show that, although Defence had planned to implement the Mortimer reforms in the period January–December 2010, it still had some way to go in implementing most of the SRP initiatives under this stream.[147] By April 2011, CDG acknowledged internally that it had 'lost momentum'.[148] The ANAO

146 PBS 2012–13, p. 18, see: <http://www.defence.gov.au/budget/12-13/pbs/2012-2013_Defence_PBS_complete.pdf> [accessed 15 June 2012].

147 Defence, SRP, Portfolio-level Implementation Plan, February 2010, p. 31.

148 Defence, Capability & Plans Branch Weekly Report—Week Ending 1 April 2011.

found no record of any active monitoring of the work after August 2010, when just over half the tasks remained outstanding.

Procurement and Sustainment SRP stream

2.30 The stated objective of the Procurement and Sustainment Stream (led by CEO DMO) is to 'fundamentally improve procurement and sustainment practices to build a stronger business-like culture and deliver capital projects and sustainment products on time and on budget'.[149] Defence finalised an implementation plan for this stream in September 2009.

2.31 Defence considers some of these SRP initiatives, originating from the Mortimer Review, to be closed or complete. However, the ANAO found that this assessment has been premature in some cases. Defence has based its assessment on the adoption or announcement of a new process rather than on an informed assessment of actual implementation or its effect on the underlying problem the recommendation set out to address.[150]

Reform of the SRP governance arrangements

2.32 In March 2012, the Secretary and CDF approved a proposal to simplify SRP governance. A directive from the Chief Operating Officer of 11 May 2012 announced new governance arrangements for the SRP agreed by the Secretary and CDF, including a reduction in SRP governance committees from 21 to four.[151] Existing arrangements would cease on 29 June 2012, and new arrangements would apply from 1 July 2012. In May 2012, during the audit, Defence informed the ANAO that CDG was about to reinvigorate the SRP reform activities for which it was responsible. This was to occur through the introduction of the Capability Development Improvement Program (CDIP, see paragraph 2.53).

2.33 The governance arrangements for capability development aspects of the SRP program had, by then, ceased to operate. CDG revived the former committee (CDRSGC), which had not met since August 2010, to meet once (26 June 2012) and develop the handover arrangements for a new committee, the Capability Development and Materiel Reform Committee (CDMRC).

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149 Defence, SRP, Procurement and Sustainment Stream, Implementation Plan, September 2009, p. 3.

150 Defence's progress against Mortimer reforms is addressed in later chapters. See Chapter 15, also, for discussion of Defence's reporting on progress.

151 The four committees are the Defence Reform Board; Capability Delivery Reform Committee; Service Delivery Reform Committee; and Capability Development and Materiel Reform Committee.

ANAO performance audit and subsequent JCPAA inquiry

2.34 In June 2009, the ANAO tabled Audit Report No.48, 2008–09, *Planning and Approval of Defence Major Capital Equipment Projects*.[152] The objective was to assess whether Defence had effectively implemented strengthened two-pass approval. The audit concluded that Defence had established an appropriate administrative framework for implementing strengthened two-pass approval, including high-level oversight, and had established CDG within Defence to administer the system. However, the execution of capability development for the case study projects in the audit sample differed at times from the authoritative guidance in the *Cabinet Handbook* and the *Defence Capability Development Manual* (DCDM).[153,154]

2.35 The ANAO found substantial non-adherence, across the sample, to *Cabinet Handbook* requirements. The most important related to the assessment and description of technical risk and the presentation of costs of acquiring new capability. The ANAO made four recommendations. By 30 June 2010, Defence had marked all of these as 'completed' in its Audit Recommendation Management System (ARMS).[155] In June 2010, the JCPAA tabled *Report 417*[156] which included the findings of the Committee's examination of the Audit Report.

Review of the Defence Accountability Framework, January 2011

2.36 In August 2011, the Government released the *Review of the Defence Accountability Framework* (the 'Black Review', completed in January 2011). The review, described by Defence as the first comprehensive review to examine personal and institutional accountability in Defence as a whole, was commissioned by the Secretary and CDF. The review found substantial

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152 See: <http://www.anao.gov.au/~/media/Uploads/Documents/2008%2009_audit_report_48.pdf> [accessed 3 September 2012]. This audit was substantially contemporaneous with the Pappas Review.

153 The *Cabinet Handbook* lays down the principles, procedures and conventions by which the Cabinet system operates. The associated Drafter's Guide (replaced in June 2013 by the *Cabinet Manual*) also contains rules for submissions and memoranda related to defence procurement. These rules are aligned to the Kinnaird Review's recommendations for a strengthened two-pass approval system.

154 ANAO Audit Report No.48, 2008–09, *Planning and Approval of Defence Major Capital Equipment Projects*, pp. 16–18.

155 Defence's Audit and Fraud Control Division uses ARMS to record progress in implementing recommendations for both internal and external reviews undertaken in Defence and the DMO. Defence's use of ARMS was considered in ANAO Report No.25 2012–13 *Defence's Implementation of Audit Recommendations*.

156 JCPAA, *Report 417, Review of the Auditor-General's Reports tabled between February 2009 and September 2009*, June 2010.

problems with performance in many parts of Defence, including capability development. Capability development 'has a profound effect on Defence as a whole, and is where much policy and organisational risk concentrates.'[157]

2.37 Although improvements had followed other major reviews, challenges persisted, including:

- poor cost forecasting;
- technical risk issues and challenges in projects;
- serious skill shortages exacerbated by Defence's career management models and high turnover;
- decision-making in Defence, including the number and operation of committees and lack of contestability for key decisions;
- the lack of an accountable and outcomes-based culture in Defence; and
- the lack of rigorous performance management for individuals, Groups and Services to facilitate the achievement of Defence outcomes.[158]

2.38 The Black Review made several recommendations relating to capability development. At its release in August 2011, the then Minister for Defence announced that progress would be reported quarterly to ministers. However, by January 2013 no quarterly report had been produced since the announcement. Defence informed the ANAO in January 2013 that it provides the Minister with updates on progressing the implementation of the Black Review recommendations through a variety of means.

Common themes in reviews

2.39 After years of reform and reviews, many of the challenges identified by reviews have persisted. In May 2011, the then Secretary of the department explained Defence's ongoing efforts at tackling the long-standing problems:

> We have struggled to match our capability aspirations with our capacity to deliver. There are numerous reasons for this, but broadly they fall into three categories. First, we need to identify problems in the development and acquisition of major capabilities earlier ... Second, Defence has expressed difficulty in attracting and retaining an appropriate number of skilled staff to progress our projects ... Third, major Defence projects are technically complex,

157 Black Review, p. 92.

158 Black Review, pp. 94–5.

> and some have taken more time than was originally anticipated in order to mitigate technical risks ahead of government consideration.[159]

2.40 Most of the reviews considered in this audit acknowledge that Defence can demonstrate incremental improvements in some areas of capability development but finds it harder to demonstrate lasting change. For example, the Black Review found:

> Despite much work in recent years, the capability development process continues to suffer from delivery shortfalls related to poor accountability (p. 11).
>
> There are many problems with the capability process. Perhaps the most fundamental underlying issue is that it is a complicated process that spans multiple organisational entities and at the project level can span long periods of time. Yet current management practices do not fully address this reality (p. 92).
>
> The current process has many problems, not the least the fragmentation of oversight and control (p. 93).

2.41 Table 2.1 identifies themes in capability development that were identified in successive reviews in the decade or so before the commencement of this audit. The first column of the table indicates where in this audit report a particular topic identified in the table is discussed.

159 Hansard, Senate Foreign Affairs, Defence and Trade Legislation Committee, Estimates, 30 May 2011, pp. 12–13.

Table 2.1: Recurring themes in reviews of capability development in Defence

Theme	Review				
	April 2000 Defence Governance, Acquisition and Support	Aug. 2003 Kinnaird Review	Sept. 2008 Mortimer Review	April 2009 Pappas Review	Jan. 2011 Black Review
Turnover of capability development staff (*See discussion of staff turnover in Chapter 3.*)	High turnover of capability development staff prevents the development of skills and experience necessary in such a complex and specialist area.				
	✓[a]	✓[b]	✓	✓	✓
Chronic and critical shortage of skills essential to develop robust major capability proposals (*See discussion of skills in Chapter 3.*)	Cost estimation is a technical discipline and requires specialist skills. High levels of skill are critical to delivering capability and making accurate cost estimates that enable informed capability/cost decisions. CDG personnel (both cost estimators and Desk Officers—now known as 'project managers') have low average cost-estimating experience. Cost estimates must reflect whole-of-life costs.				
	✓[a]	✓	✓	✓	✓
Initial entry of a project into the DCP warrants close attention. The DCP should be realistic, affordable, prioritised and consistent with government expectations. (*See Chapter 5.*)	Underestimation of the cost of new equipment specified in the DCP and of the associated operating costs, and lack of prioritisation of DCP projects. Over-programming and over-planning, which include both including more projects in the DCP than Defence can afford, and starting more projects than required, to accommodate potential schedule slippage in projects.				
	✗	✓[c]	✓[d]	✓	✓
Lack of independent scrutiny of proposals undermines quality. *(See discussion of tech-nical risk, Chapter 6, external verification of cost, Chapter 8 and independent advice from CEO DMO, Chapter 10.)*	Absence of scrutiny of capital investment proposals to assess affordability, schedule risk and commercial aspects of acquisition by staff who are organisationally independent of the proposal sponsor.[e]				
	✓	✓	✓[f]	✓	✓
Technical risk is critical and should be clearly and consistently assessed and communicated to government. (*See discussion of technical risk in Chapter 6.*)	Technical risk is a major factor to be considered in the acquisition of new defence capabilities. It is the major cause of both post-approval project slippage and cost escalation.				
	✗	✓	✓	✓	✓

Theme	Review				
	April 2000 Defence Governance, Acquisition and Support	Aug. 2003 Kinnaird Review	Sept. 2008 Mortimer Review	April 2009 Pappas Review	Jan. 2011 Black Review
Acquisition decisions should be based on a comprehensive **whole-of-life cost estimate**.[g] *(See discussion of whole-of-life costs in Chapter 7.)*	Understanding whole-of-life costs is essential to effective decision-making on capability options. Inadequate attention given to managing and costing defence capabilities on a whole-of-life basis results in funding shortfalls for ongoing operating, maintenance and support costs.				
	✓	✓	✓	✓	✓
Effective **information systems that provide cost information** for major capabilities (*See discussion of costs in Chapter 7.*)	Defence systems cannot readily provide consistent, reliable or complete information of the operating cost of current capabilities. Incomplete cost information about current capabilities prevents Defence from making reliable fact-based estimates of future operating costs, and means estimates of those costs are based on general assumptions rather than reliable historical data on cost drivers.[h]				
	✓	✓	✓	✓	✓
Rigorous analysis of costs and risks associated with requirements set beyond those of **off-the-shelf** equipment[i] (*See discussion of COTS/ MOTS in Chapter 9.*)	Requirements beyond OTS equipment generate what Mortimer described as 'disproportionately large increases to the cost, schedule and risk of projects'[j] and therefore should be based on 'a rigorous cost-benefit analysis of the additional capability sought against the cost and risk of doing so'.[k] This analysis must be clearly communicated to government.[l] Each and every decision to pursue a unique Australian solution needs to be made with a full understanding of not just the benefits but also the extra cost and risk of doing so.[m]				
	✓	✓	✓	✓[n]	✓
Committees and accountability *(See discussion of accountability in Chapter 3 and Chapters 11–14, and committees in Chapter 4.)*	Too many committees with too many members; representational in nature rather than limited to those essential to provide informed advice to accountable decision-makers; features of committees result in dissipated accountability and responsibility; improved committee processes required.[o]				
	✓	✓[p]	✓	✓	✓

Source: ANAO analysis

Notes to Table 2.1:

a Finding relates to capability development and acquisition staff in the Defence organisation before the creation of DMO and CDG.

b The review recommended appointment of a three-star officer, military or civilian, full-time, responsible and accountable for managing capability definition and assessment with a defined tenure (minimum five years) to ensure a coherent, cohesive, holistic and disciplined approach.

c Kinnaird envisaged first-pass approval would precede DCP entry: 'the capability gap, options for which have received first-pass approval, would form part of the DCP'. Kinnaird Review, pp. 15 and 21.

d Mortimer noted that government approval points had evolved from those recommended in the Kinnaird Review and that 'most significantly, DCP entry is now separate and distinct from first-pass approval.' Mortimer recommended a strengthened DCP entry, which would then form the foundation of a two-pass approval process that would be tailored according to a project's complexity. Mortimer Review, pp. 11–16.

e Also discussed in Thomson, M., *Improving Defence Management*, 2007; and Davies, A., *Let's test that idea—contestability of advice in the Department of Defence*, 2010.

f Recommendation 2.10 of the review was that the CEO DMO provide government with independent expert advice on cost, schedule, risk and commercial aspects of major capital acquisitions at DCP entry, first and second-pass approval.

g The aim of whole-of-life costing is to provide decision-makers with the total cost of acquiring equipment, operating and maintaining it throughout its entire life, and then retiring and disposing of it. It includes the acquisition cost, the cost of integrating, operating, maintaining and supplying the equipment, training the operators and maintenance staff, and the cost of retiring and disposing of the equipment. Post-acquisition costs can be equal to or greater than the acquisition cost.

h Finding also in *Defence Management Review* 2007 and *Improving Defence Management*, Australian Strategic Policy Institute (ASPI), 2007.

i That is, equipment already established in-service with the armed forces of another country or Australia; sourced from an established production facility (not just a MOTS design); and has, at most, minor modifications to deliver interoperability with existing ADF and/or allied assets. ASPI, *The Cost of Defence: ASPI Defence Budget Brief 2008–09*, pp. 161–2, cited in Mortimer Review, p. 17.

j Mortimer Review, p. 18.

k Mortimer Review, p. 20.

l Kinnaird, Mortimer and Pappas recommended that a MOTS alternative be among options put to government to provide a benchmark against which all proposals could be assessed. As reported in the 2010–11 DMO Major Projects Report (pp. 160–2), generally, MOTS projects are more likely to finish on time. Australianised MOTS and developmental acquisitions are prone to underestimating technical complexity, platform unavailability and systems integration. See also *Three views of risk—Selecting and acquiring military equipment*, (ASPI 2011).

m Mortimer Review, p. 19.

n The Defence Budget Audit Report endorsed Mortimer's recommendation and added the recommendation that 'Defence should classify any modifications required to an existing platform into four categories: (i) external regulatory requirements; (ii) internal technical regulations; (iii) integration requirements; and (iv) capability enhancements. The rationale for, and the cost, benefit and risk of, each type of modification should be specified. This assessment should form part of the first-pass and second-pass documentation.' Pappas Review, p. 80.

o Also findings in *Defence Efficiency Review* 1997, *Defence Management Review* 2007, *Improving Defence Management* (ASPI) 2007, and *Plan to Reform Support Ship Repair and Management Practices* 2010, *Serving Australia, Control and Administration of the Department of Defence* (ASPI) 2011.

p Accountability for managing the definition and assessment of capability and achieving robust outcomes was found to be diffuse and overlaid by a complex system of committees. A review of Defence's committee system was one of the 12 'minor' Kinnaird recommendations.

Reviews concluding during the current audit

2.42 A number of further reviews have concluded during the audit. Relevant findings are summarised briefly here.

Defence Capability Plan Review

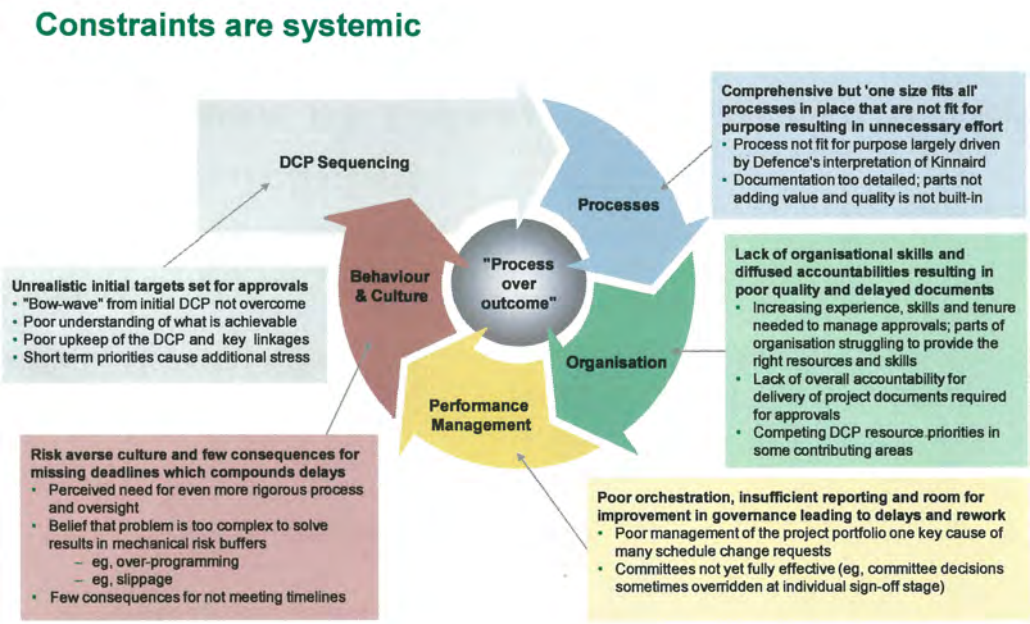
2.43 In December 2011, an internal Defence review of the DCP identified systemic internal constraints in CDG. These derived from:

- DCP sequencing affected by unrealistic initial targets set for approvals;
- comprehensive but 'one size fits all' processes that are not fit for purpose and result in unnecessary effort;
- lack of organisational skills and diffused accountabilities, resulting in poor quality and delayed documents;
- poor orchestration, insufficient reporting and room for improvement in governance, leading to delays and rework; and
- a risk-averse culture and few consequences for missing deadlines, which compounds delays.

2.44 The review depicted the central problem as a focus on 'process over outcome'. The review's summary of key outcomes is in Figure 2.2 below.

Figure 2.2: Key outcomes from Defence's DCP Review

'Identified systemic internal problems limiting sustainable approval throughput capacity'



Source: CDG, Defence, DCP Review, December 2011, p. 31.

Senate Committee inquiry

2.45 On 9 February 2011, the Senate referred *Procurement procedures for Defence capital projects* to the Senate Foreign Affairs, Defence and Trade References Committee for inquiry and report. The Committee's final report was tabled on 30 August 2012.[160]

2.46 The Committee considered Defence's management structure to be flawed. In the Committee's view, it had:

> produced an organisation that lacks a robust risk management regime: an organisation where its personnel are insensitive or unresponsive to risk, where no one owns risk.[161]

160 Senate Foreign Affairs, Defence and Trade References Committee, *Procurement procedures for Defence capital projects*, Final Report, August 2012. <http://www.aph.gov.au/Parliamentary_Business/Committees/Senate_Committees?url=fadt_ctte/completed_inquiries/2010-13/procurement/report/index.htm > [accessed 19 February 2013].

161 ibid, p. xxi.

2.47 Defence's Capability Development and Materiel Reform Committee (CDMRC) is responsible for overseeing implementation of the 24 Senate Committee recommendations to which the Government agreed in full, in principle or in part. The CDMRC was advised at its 27 November 2012 meeting that, taking account of sub-recommendations, there were 37 separate actions for it to monitor. Defence consideration had shown that, for 24 of these, action was already underway or in hand (including a number where the recommendation status has been endorsed 'Reflects status quo—No implementation action required'). Action was identified as required on 13 remaining items.

P3M3 Assessment of CDG, September 2011

2.48 In 2011, CDG initiated a review of its management, which was subsequently highlighted in the 2012 DCP. The DCP stated that, since the release of the 2011 DCP, CDG had 'taken steps to improve its approach to Program and Sub-Program management.' In particular, it had commissioned a formal Portfolio, Program and Project Management Maturity Model (P3M3) review. This assessment of program and project management processes within CDG was completed in September 2011. Specifically the assessment looked at the requirements phase of the Defence Capability Development Lifecycle, namely from DCP entry to second-pass approval.[162] As a result:

> A 'P3M3 Model Capability Improvement Roadmap' was developed to inform and guide specific improvement initiatives, a range of which are being implemented through a formal program within the Group.[163]

2.49 Under the P3M3 model, the maturity of an organisation's project, program and portfolio management processes is rated on a scale of 1 (lowest) to 5 (highest). The certified ratings of the project, program and portfolio-level management capability in CDG at the time of this review were:

- ***Project Management***—*Level 2: Repeatable Process.* A Level 2 Project Management maturity indicates that each project is run with its own

162 Defence, 'PCU3ED Ingenuity Meets Implementation, P3M3 Assessment Findings, CDG', Version 1.0, August 2011, p. 4. The P3M3 framework was developed in 2006 by the UK Government's Office of Government Commerce (OGC). It was developed to complement other non-proprietary OGC best practice guidance such as Prince2, Managing Successful Programmes (MSP), and Portfolio, Programme and Project Offices (P3O). Details of P3M3 are available from: <http://www.p3m3-officialsite.com/P3M3Model/P3M3Model.aspx>. All FMA Act agencies with an annual ICT spend greater than $2 million are required to implement the P3M3 model.

163 Defence, *Defence Capability Plan*, Public Version, 2012, p. 1.

processes and procedures to a minimum standard; however, there is limited consistency or coordination between projects.

- ***Program Management***—*Level 1: Awareness of Process.* A Level 1 Program Management maturity indicates that the organisation does not consistently recognise programs as running differently from projects, and there is no standard Program Management process.
- ***Portfolio Management***—*Level 1: Awareness of Process.* A Level 1 Portfolio Management maturity indicates that the organisation recognises the portfolio, but has little or nothing in terms of documented process or standards for managing the portfolio.

2.50 The ratings show that CDG has some way to go to develop its capacities beyond the base levels of the recognised better practice standard.[164] Defence informed the ANAO that the recommendations of the P3M3 assessment are to be implemented through CDG's Capability Development Improvement Program (CDIP), which commenced in 2012. The P3M3 Model Capability Improvement Roadmap, produced as part of the P3M3 assessment and referred to above, has target dates concluding in September 2013.

Capability development business process review

2.51 In May 2011, Defence informed a Senate Committee of an imminent independent review of capability development business processes. Defence advised that it was developing terms of reference and the review would be complete by the end of 2011.[165] In mid-2011, CCDG advised the Defence Audit and Risk Committee (DARC):

> *Business Process Review*—The Strategic Reform and Governance Executive (SRGE) will commence an independent review of CDG's business processes in September 2011. The purpose ... is to assess CDG's implementation of Mortimer and Strategic Reform Program initiatives and identify/recommend areas for further improvement ... Current initiatives are being managed with the SRGE review in mind to minimise any duplication and/or rework.

164 The Department of Finance has urged caution in interpreting P3M3 levels. This caution includes the view that maturity levels 2 and 3 are a substantial and, in most cases, satisfactory capability level. See: <http://www.finance.gov.au/budget/ict-investment-framework/interpreting-p3m3-result.html> [accessed 3 September 2012].

165 Hansard, Senate Estimates, Foreign Affairs, Defence and Trade Legislation Committee, Estimates, 30 May 2011, pp. 32–4.

2.52 In December 2011, responsibility for the Business Process Review (BPR) passed from SRGE to CDG. In January 2012, Defence described the BPR and the CDIP as 'a significant program to improve the capability development process and give Government greater confidence that Defence will be able to deliver the DCP on schedule and to budget'.[166] In May 2012, Defence advised that CCDG had decided not to proceed with the BPR because the CDIP was sufficient to meet the intent of the BPR.

2.53 In early January 2012, CCDG had initiated the Capability Development Reform Program which, in late January 2012, became CDIP. The ten initiatives comprising CDIP were, in part, informed by the DCP Review mentioned above (paragraph 2.43). CDG established a CDIP Board in July 2012 to govern the program. By September 2012, Defence division heads were being briefed that some CDIP timeframes reported to the Minister for Defence had slipped and would not be achieved. This was attributed to the complexity of implementation. Moreover, CDIP had 'few quantitative or qualitative metrics to measure improvement ... Even if CDIP did have metrics, there is no (accessible) baseline data against which to measure improvement.'[167] However, Defence informed the ANAO that it has developed an approach to monitor and assess progress.[168]

166 Defence, Senate Estimates Brief, CDIP, 30 January 2012, p. 1.

167 Defence, Decision Brief for Division Heads, Capability Development Group Continuous Improvement Program, September 2012.

168 Defence informed the ANAO that all new CDIP initiatives will be subject to controlled implementation and monitoring through a five-stage implementation process, and that CDIP progress is reported by CCDG to the Capability Development and Materiel Reform Committee, the Defence Capability and Investment Committee, and the Minister. Defence did not provide evidence of such reporting.

Conclusion—there have been strong, enduring themes in reviews of Defence capability development and acquisition over the last decade

2.54 The analysis in this chapter shows that there have been strong, enduring themes recurring through the reviews of Defence capability development and acquisition over the last decade or so. These themes are examined in the following chapters, with a view to identifying their origin, how the implementation of the relevant reforms to address them has been managed by Defence, and progress achieved to date. As indicated in Chapter 1, the remaining chapters of the report are grouped in four parts that encompass the recurring reform themes in Table 2.1:

- reforming capability development—organisation and process;
- improving advice to government when seeking approval;
- improving accountability and advice during project implementation; and
- reporting on progress with reform.

Part 2: Reforming capability development—organisation and process

To assess Defence's progress with structural and process reforms flowing primarily from the Kinnaird and Mortimer Reviews, the audit considered:

- *the skills and turnover of Capability Development Group staff (Chapter 3);*
- *the documentation and committee-based processes used to progress capability development projects (Chapter 4); and*
- *the relationship between Defence's capability systems lifecycle and two-pass approval (Chapter 5).*

3. Organisational reform

This chapter considers the creation of the Capability Development Group in early 2004, and the skills, experience and turnover of its project manager staff, who have a central responsibility in capability development projects.

Capability Development Group

3.1 Capability development in Defence, as described by the Black Review and noted earlier, 'is a process that has a profound effect on Defence as a whole, and is where much policy and organisational risk concentrates'.[169] Defence's CDG is responsible for managing the DCP and developing capability specifications and proposals for government approval through the two-pass process. Defence describes CDG's responsibility as to 'develop and gain government approval for future defence capabilities'. Its mission is 'to shape Defence's future joint war fighting capability'.[170, 171]

3.2 The creation of CDG itself was one of the major reforms of the last decade. Much of the analysis in the remainder of the audit relates to CDG's work.

Reform affecting CDG

3.3 Defence informed the Senate Foreign Affairs, Defence and Trade Legislation Committee in May 2011 that, as part of its Strategic Reform Plan (SRP), it would review and re-engineer 'our major capability development and acquisition process', from idea to delivery. As discussed in Chapter 2, it was then developing terms of reference for a business process review (BPR), with a report to be finalised towards the end of 2011.[172] A further review—a 'Portfolio, Program and Project Maturity Management Model' (P3M3) assessment—of CDG's business processes had also been completed in late 2011. According to a

169 Black Review, p. 92.

170 See: <http://www.defence.gov.au/capability/_home/Default.asp> [accessed 3 September 2012].

171 Defence has informed the ANAO (8 July 2013) that CDG's average funded strength is 194 Service personnel (59 Navy, 65 Army and 70 Air Force) plus 163 APS staff (total 357). Actual staffing (5 December 2012) was 168.5 Service personnel (47 Navy, 64.5 Army and 57 Air Force) plus 156 APS staff (total 324.5).

172 Hansard, Senate Foreign Affairs, Defence and Trade Legislation Committee, Estimates, 30 May 2011, pp. 12 and 33.

Defence 'Initiative Information Sheet', the outcomes were being incorporated into the BPR for prioritisation and implementation.

3.4 Defence has since decided not to proceed with the BPR, informing the ANAO that the 'BPR is essentially being conducted via the Capability Development Improvement Program' (CDIP, see Chapter 2). CDIP represents a further round of reform in CDG and was underway during the audit. In part, this reform flows from the 2011 DCP Review. The DCP Review focus was on increasing project approval throughput, as (according to the review itself) 80 per cent of project schedule changes were due to internal factors.[173]

Challenges in organising capability development

3.5 Reports and reviews over the last decade have identified a range of difficulties in organising capability development in Defence. The Kinnaird Review recommended a single point of accountability in capability development. This gave rise to the creation of CDG in February 2004.

3.6 After CDG had been in place for several years, a 2008–09 ANAO performance audit identified factors affecting capability development desk officers' capacity to work effectively, including staff turnover and skills.[174] These came to attention in mid-2008 in focus groups conducted by the audit team with CDG desk officers (now called 'project managers'). They echoed matters raised by CDG desk officers in interviews Defence itself had conducted in March 2007.

3.7 CDG project managers have a central responsibility in capability development: they manage the development of the document suite that supports major projects to produce a capability proposal, leading to a submission to government. The duties are set out in full in the box below.

173 Because of the timing, the effects of any changes that may flow from the CDIP could not be assessed during the course of this audit.

174 ANAO Audit Report No.48, 2008–09, *Planning and approval of Defence Major Capital Equipment Projects*, pp. 68–9. See: <http://www.anao.gov.au/~/media/Uploads/Documents/2008%2009_audit_report_48.pdf> [accessed 3 September 2012].

The duties of the CDG project manager[175]

(a) To ensure that DCP projects are developed and managed in accordance with the key tenets of capability development.

(b) To articulate the link between strategic policy and the capability proposal.

(c) To arrange, as part of ongoing DCP Forward Work Program review activities, the schedule for the project to be considered and approved by government for entry to the DCP, first-pass and second-pass approvals.

(d) To ensure the overall and effective management of all risks and issues within the project in accordance with the CDG Project Risk and Issue Management (PRIM) Guide.

(e) To provide early advice to their Branch Head of any critical risks and issues as well as ensuring those risks and issues are included in the Defence Capability Investment Committee (DCIC) Early Indicators and Warnings report.[176]

(f) To ensure that risk information received from other Defence Groups is analysed and considered holistically to enable Defence and government to make meaningful decisions about the risk versus benefits of the capability solution being presented.

(g) To develop affordable, well-defined capability options that satisfy the Statement of Strategic Guidance and the Capability Needs Statement.

(h) To ensure that the capability options comply with government and Defence policy and legislative requirements.

(i) To chair Integrated Project Team (IPT) meetings and regularly facilitate risk assessment workshops with IPT members and other key stakeholders to identify, analyse and validate new and existing risks.

(j) To coordinate Capability Development Stakeholder Group (CDSG) meetings.

(k) To manage the development of the Project Document Suite.

Source: Defence, *Defence Capability Development Handbook*, December 2012, pp. 13–14. Note that the Handbook reflects the duties of the CDG project manager at the time it was released, and these duties may have varied over the period considered by the audit.

3.8 As part of the current audit, the ANAO conducted an anonymous survey of CDG staff (including all CDG project managers) in April 2012 to obtain information about their skills and experience and their views on related

175 In December 2011, Defence rebadged the position of *desk officer* to *project manager*. There was no associated change of functions or staffing of these positions. The term 'project manager' is used consistently in this report to reduce confusion.

176 DCIC is a senior Defence committee, chaired by the Secretary, which reviews the DCP and major capability and investment risks and issues to ensure that resourcing, including capital investment and operating costs, is consistent with Defence's strategic priorities and resourcing strategies.

matters.[177] The results of this survey are discussed in the relevant sections below. (Full survey results are in Appendix 2.)

3.9 To examine progress with the Kinnaird recommendation and the staff-related issues identified in the 2008–09 ANAO audit, this chapter considers the following matters:

- creation of the proposed single point of accountability;
- the challenge of high staff turnover; and
- whether staff have appropriate skills.

3.10 CDG's processes, documentation and committee arrangements are considered in the next chapter, Chapter 4.

3.11 At the time the ANAO undertook its survey of CDG staff, CDG had recently initiated the CDIP. Defence has since confirmed that the CDIP is seeking to address the same issues as were raised in the survey. The ANAO has not audited the CDIP or its outcomes.

Creating a single point of accountability

3.12 The duration of Defence's capability development projects, sometimes exceeding a decade, has long been identified as a challenge in organising the entire function. Long project duration interacts adversely with staff turnover, including at senior levels, making project management more difficult. This is because managers need to acquire project knowledge, and having multiple managers brings an increased risk of differing perspectives being introduced over time.

3.13 Over a decade ago, the *Report on Defence Governance, Acquisition and Support* observed that acquisition, from concept to implementation, usually took about five years and, in some cases, could take much longer:

> In that time it is possible there might be a change in government, a change in Minister, a change in Departmental Secretary and on the basis of the current process for appointing very senior military people there will most certainly have been a change in CDF, VCDF and the heads of each of the single Services. There will also have been changes in personnel ... undertaking detailed work.

177 The survey represents the most recent available information on these matters, notwithstanding the possibility that some skills, experience and opinions may have changed since the survey.

> It is not surprising that under these conditions there is little chance to accumulate corporate memory or assign responsibility to individuals. Creation and operation of a myriad of Committees is a means of trying to overcome the continual movement of personnel but it has the effect of dissipating responsibility and accountability.[178]

3.14 Consistent with this, the 2003 Kinnaird Review found accountability for managing capability development to be diffuse and overlaid by a complex committee system. The position of Vice Chief of the Defence Force (VCDF) had been intended to bring focus to capability development but, according to Kinnaird, 'given the numerous functions encompassed by the VCDF role, it has been difficult for any incumbent to give close and sustained attention to the vital task of capability definition and assessment.'[179]

A single point of accountability with defined tenure

3.15 The Kinnaird Review concluded that a single point of accountability would 'provide better integration of the capability definition and assessment process and to ensure that it maintains a joint warfare focus.'[180] To this end, the review recommended that a three-star/band-three officer should head this function.[181] It proposed the appointment be full-time: 'with a defined tenure (minimum five years) to ensure a coherent, cohesive, holistic and disciplined approach'. Thus there were two aspects to improving accountability: first, the creation of a single, senior position responsible for the function and, second, ensuring relatively enduring occupancy with a five-year minimum tenure.

3.16 On 17 September 2003, the National Security Committee of Cabinet agreed to this recommendation (with others made by Kinnaird) and that the Minister for Defence should direct that the necessary administrative arrangements be put in place in relation to this recommendation.

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178 Department of Defence, *Report on Defence Governance, Acquisition and Support*, April 2000, p. 16.

179 Kinnaird Review, p. 10.

180 Kinnaird Review, pp. iv–v. Although the Kinnaird report does not elaborate, 'joint warfare focus' is taken to mean a perspective on capability development that transcends the individual perspective of any one of the Services but takes due and proportionate account of the views of all of them and their interactions, to obtain coherence.

181 In armed forces terms, a Vice-Admiral (Navy), Lieutenant-General (Army), or Air Marshal (Air Force). In civilian terms, a Deputy Secretary.

Defence's implementation of the recommendation

3.17 In December 2003, Defence created the three-star/band-three position, Chief, Capability Development Group (CCDG) as the single point of accountability for capability development. The then Minister for Defence announced in a media release on 22 December 2003 that the first CCDG had been selected by the Secretary and CDF for an initial appointment of three years.

3.18 The media release also mentioned that the post could be filled by either a civilian or a military officer, which is consistent with Kinnaird's proposal. In practice, Defence has consistently chosen to fill the position with an ADF officer.

3.19 CDG itself was established in February 2004.

CCDG tenure has been less than Kinnaird recommended

3.20 Although the first CCDG was appointed for three years, he ultimately remained in that position for three years and nine months. In 2008, the JCPAA observed that this fell short of the recommended minimum:

> While the Committee naturally endorses the idea that personnel should not be denied promotional opportunities, it strongly reiterates the importance of ensuring the position of Chief of CDG is equivalent to a three-star officer and is subject to a defined tenure of at least five years where possible.[182]

3.21 The implication of the Committee's remarks is that tension can arise between military career interests and succession planning, and the benefits to capability development of longer tenure as envisaged by Kinnaird.

3.22 There have been three further appointments to the position of CCDG. The actual durations of occupancy of the next two were 36 months and 13 months (a resignation) respectively. The current CCDG was posted to the position in November 2011 for three years. The mean completed tenure of the first three occupants was about two years and seven months, just over half the five-year minimum agreed by government in its decision on Kinnaird's

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182 JCPAA, Report 411, *Progress on equipment acquisition and financial reporting in Defence*, August 2008, pp. 67–8. The Government response to the JCPAA report (January 2009) did not address the duration of occupancy of CCDG. (See the Executive Minute in response to JCPAA Report 411: <http://www.aph.gov.au/Parliamentary_Business/Committees/House_of_Representatives_Committees?url=jcpaa/defence/execmin.htm> [accessed 3 September 2012].) On 19 August 2009, the JCPAA held a follow-up public hearing to examine the progress on its findings. However, CCDG tenure was not addressed on that occasion either.

recommendations. More recently, another parliamentary committee has commented that 'tenure has decreased with each subsequent appointment.'[183]

3.23 Therefore, although Defence implemented the first part of the recommendation quickly (creation of the new senior position), the second part (minimum five-year tenure) has not been achieved, even though this has attracted critical comment from two parliamentary committees. Nonetheless, Defence has regarded its implementation of the recommendation as complete.[184]

3.24 There are limits on the control Defence has over the tenure of CCDG—it cannot, for example, stop resignations. In relation to the term of duration of the CCDG, Defence stated:

> Defence's approach has been to place the officer on a three-year contract, consistent with other three-star officers and provide the option to extend the officer. While no incumbent has yet to serve five years in post (for different reasons), all but Air Marshal Harvey had previously served as Head Capability Systems. As a result there has been a high degree of continuity.

3.25 Defence further advised the ANAO, in September 2013, that:

> In announcing CDG's formation, Senator Hill, as Minister for Defence, stated on 22 December 2003 that: 'The new group will be headed by the current Land Commander Australia, Major General David Hurley, who will be promoted to Lieutenant General. His appointment is for an initial three years.' Hence, Defence is comfortable that CCDG's tenure is consistent with the Government's specific announcement in 2003 and its ongoing expectations on this matter.

3.26 While Defence has interpreted the Minister's media release as endorsing its decision to appoint the CCDG for three years, this is not consistent with the then Government's earlier agreement to the minimum five-year tenure as recommended by Kinnaird. That minimum had a clear purpose of providing a 'single point of accountability ... to provide better integration of the capability definition and assessment process' in an environment where projects may take many years to progress.[185]

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183 Senate Foreign Affairs, Defence and Trade References Committee, *Procurement procedures for Defence capital projects* (Final Report), August 2012, paragraph 11.28, p. 176. See: <http://www.aph.gov.au/Parliamentary_Business/Committees/Senate_Committees?url=fadt_ctte/completed_inquiries/2010-13/procurement/report/index.htm> [accessed 19 February 2013].

184 Defence submission to the JCPAA inquiry *Progress on equipment acquisition and financial reporting in Defence*, (undated but c. 2006), p. 87.

185 Kinnaird Review, p. iv.

CDG staff turnover

3.27 The Kinnaird Review identified the limited duration of staff postings to Capability Systems Division (CSD, now a core part of CDG) as limiting the acquisition of skills and experience needed to produce robust capability proposals. The review proposed longer employment periods in the capability definition and assessment function: 'Longer postings would improve accountability and support the development of corporate memory.'[186] Annual staff turnover in CSD was then reported as exceeding 50 per cent.[187]

3.28 Subsequent audits and reviews have continued to report high turnover of CDG project managers. In 2008, the Mortimer Review found:

> Currently, the core personnel in CDG are military officers on short term postings. The tenure of CDG staff is very short, averaging just 18 months, in an area where the work is complex in nature.[188]

3.29 With projects lasting much longer than 18 months or even three years, a project manager is likely to have moved on before the project they are working on is complete or even past the next milestone. In 2009, the ANAO's previous audit in this area reported a 41 per cent annual turnover rate for all CDG project managers and 49 per cent for CDG military project managers.[189] At about the same time, the Pappas Review found the average tenure of a CDG project manager was only 1.6 years.[190]

3.30 In August 2011, the Minister for Defence announced improvements to accountability in Defence. This included increasing posting duration in capability development and acquisition, and development of relevant career streams:

> In its response to the Mortimer Review, the Government agreed that the Capability Development Group should be adequately resourced in terms of workforce numbers and skills to develop capability proposals. Skilling remains the major challenge in this area.

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186 Kinnaird Review, p. 16.

187 GA Durant-Law & P Byrne, 'Knowledge Productivity in a Project-Focused Government Department: What Works, What Doesn't', *The International Journal of Knowledge, Culture & Change Management*, vol. 7, no.4, 2007, p. 34.

188 Mortimer Review, p. 24.

189 ANAO Audit Report No.48, 2008–09, *Planning and approval of Defence Major Capital Equipment Projects*, p. 69. The earlier term 'desk officer' is used in place of 'project manager' in that report.

190 This average tenure calculation includes prior CDG experience at another level. (Pappas Review, p. 52.)

> Defence will give priority to developing career streams for both ADF and civilian staff in capability development and acquisition. Reform will include implementation of three-year postings for ADF personnel into capability projects, and the development of employment incentives to retain key civilian staff.[191]

3.31 Some months later, in response to matters raised at a public hearing before a Senate Committee, Defence advised that 'the duration of postings for each of the Services is generally three years, with a minimum of two' and that 'the current average tenure of Service personnel in CDG is above three years'.[192] However, in January 2013, Defence informed the ANAO that:

> The Ministerial commitment in terms of the three-year postings for ADF personnel has not been fully implemented. It will take some time to achieve, due in part to the continuing operational tempo of current operations and the planning cycles involved in career management across the three Services. Career Pathways for capability development and acquisition functions have or are being developed by the Services to support this commitment.

3.32 The risks of short tenure continue to be raised within Defence. Defence's June 2013 assessment of a major capability development project noted that:

> By this time [*September 2012*], a multiplicity of project staff, both military and civilian, had rotated through [*the project*]. This ... also highlights the risks to the capability development process by projects being 'passed through multiple hands'. The risks to corporate knowledge retention inherent in constant staff turnover can be mitigated through the use of effective records management practices. However, in the case of [*this project*], deficient records management exacerbated and accelerated the loss of critical project knowledge.

191 Minister for Defence, media release, 9 August 2011, *Improving personal and institutional accountability in Defence.*

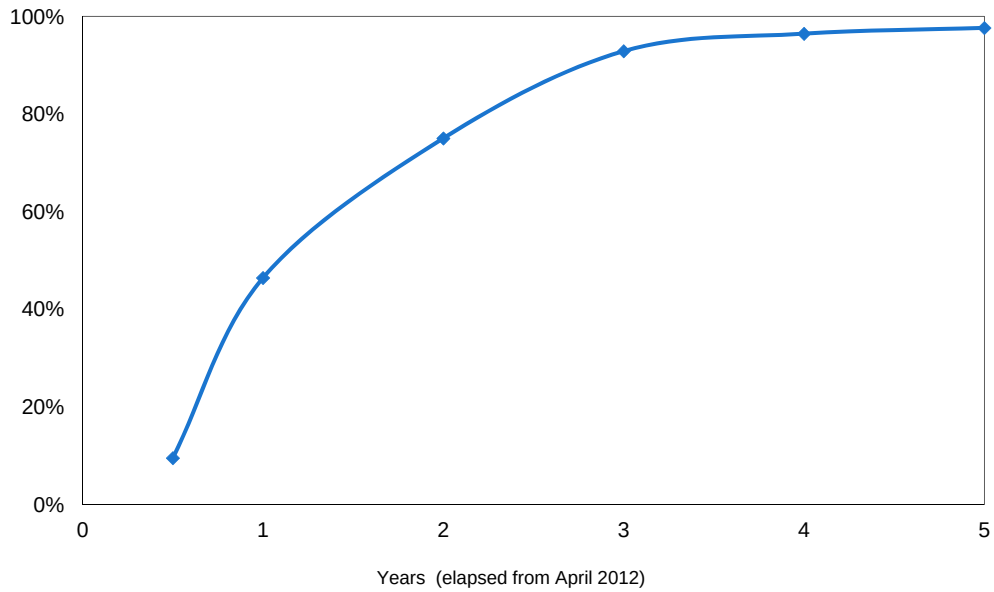
192 Defence, [Undated], Answers to questions on notice, Senate Standing Committee on Foreign Affairs, Defence and Trade, public hearings of 5 and 7 October 2011, p. 18. Defence informed the ANAO that these figures were based on actual and *expected* posting tenure of the 100 military project managers in CDG at the time (advice of 18 January 2013).

Survey results show turnover remains high

3.33 The April 2012 ANAO survey found that most project managers (93 per cent) expected to have moved from CDG within three years, with over 42 per cent expecting to have left within twelve months (Figure 3.1).[193]

Figure 3.1: When did project managers expect to leave CDG?

Proportion of CDG project managers who expected to have separated from CDG, by time from the date of the survey (April 2012)



Source: ANAO survey of CDG staff, 2012.

3.34 Based on these expectations, staff turnover is likely to remain high, especially in comparison with the duration of capability development projects.[194] In the survey, most CDG project managers stated they were Service personnel (66 of the 71 who responded). This is consistent with the findings of the Mortimer Review noted in paragraph 3.28. In the ANAO survey, ADF project managers reported having spent an average total time working in CDG of 20.3 months.[195] However, most brought long Defence experience, with

193 Evidence provided by Defence at the June 2013 Senate Estimates hearing confirmed that the high rate of CDG staff turnover continues: 'we turn over about one-third of our staff every 12 months.' (Senate Foreign Affairs, Defence and Trade Legislation Committee, 4 June 2013).

194 Project managers' expectations of tenure in CDG were virtually identical to the expectations of the broader group of CDG staff surveyed.

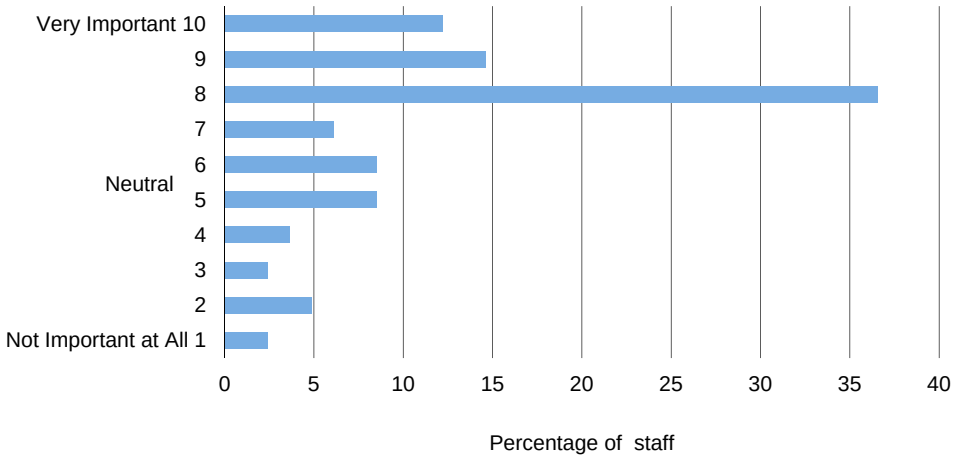
195 Consistent with the data reported by Pappas, these figures include total time on all postings to CDG.

nearly three-quarters (73.2 per cent) reporting having spent over fifteen years in the ADF or Department of Defence.

Whether longer-term postings would help

3.35 The ANAO survey of CDG staff sought to identify factors which, in project managers' perception, could improve their performance. Most project managers agreed that longer-term placement of project managers was important in improving their performance (Figure 3.2). This view was consistent among project managers as a group and the broader group of CDG staff surveyed.

Figure 3.2: Improving performance: project managers' views on the importance of longer-term placement



Source: ANAO survey of CDG staff, April 2012. Data drawn from CDG staff who were a project manager at the time of the survey or had been one within the 12 months before (n = 82).

3.36 To seek an explanation for this view, the ANAO considered the open-ended comments made by CDG staff in their survey responses. Many expressed concern that the short period of postings reduced the opportunity to achieve progress with their projects and get satisfaction from that achievement. For example, a CDG deputy director said that 'due to posting cycles, the relatively short turnaround of people and the project cycles may mean nothing will be delivered and there will be little opportunity to influence events.' Another stated: 'the length of time taken to get a capability approved under this process often means that personnel can see out an entire posting in CDG without getting a project through the approval process.' This did not, in this manager's view, provide any sense of achievement.

3.37 There is a risk of adverse consequences from this experience for attempts to attract staff to CDG. Several CDG project managers expressed reluctance to recommend such work because of the same issue, for example:

> [My] reservation is that the process is so long that a person is hardly there for the whole time between the Government milestones. This means that a sense of project ownership is difficult to develop and, if it does develop, the constant checkers cause, at times, unbearable frustration.

3.38 Some CDG project managers put the view that the CDG environment should be treated more as a vocation than a rotation. For example:

> I remain unconvinced that a short term posting is appropriate to Capability Development Group. I feel that Defence should be looking to have personnel working in this area for entire careers rather than one to two years.

3.39 This raises the broader question of how best to access and bring to bear the appropriate skills and expertise for the CDG project manager job.

The skills of CDG project managers

3.40 The availability of the right skills in capability development has been an enduring topic in reviews since 2000. Three themes emerge:

- the interaction of skills, posting duration and career management;
- equipping CDG project managers with skills; and
- the particular need for (and scarcity of) skills in cost estimation.

The interaction of skills, posting duration and career management

3.41 Apart from the question of seeing a project through to the next milestone, short postings also limit a project manager's capacity to acquire skills for the job. The Kinnaird Review had argued that longer tenure in capability definition, assessment and investment analysis would help staff to gain the skills and experience necessary for achieving high-quality outcomes.[196]

3.42 Five years later, Mortimer concluded that 'While staffing CDG with military personnel ensures that capability requirements are informed by expert domain knowledge and recent operational experience, it falls short of providing the full range of skills needed to plan the multi-billion dollar acquisition

196 Kinnaird Review, p. 16.

program.'[197] At about the same time, the Pappas Review came to a similar view: while uniformed desk officers were experts in the military context, their short CDG tenure meant they did not necessarily develop expertise in the complex technical task of specifying requirements for equipment acquisition:

> These short assignments also create continuity problems in acquisition program management because multiple desk officers may be responsible for the evolution of the specifications for a single platform.[198]

3.43 The then CCDG advised the JCPAA in 2009 that career management of military personnel is a factor in the turnover of CDG project managers:

> In a military sense, it would be deleterious to a military person's career to keep them here and not on the field; we want them to keep going back. It is about getting the right balance, without stopping their advancement in a military career. I personally have a view that I would never stand in the way of someone's advancement in a military career by demanding that they stay ... If we do get longer it should not impact on the military officer's career.[199]

3.44 Similarly, Defence evidence to a Senate Committee inquiry framed the question of longevity in project management positions thus: 'So it is about stability in career rather than stability in a particular job.'[200]

3.45 This raises again the tension between military career management interests—associated with two- or three-year postings—and the benefits of achieving greater tenure among project managers through capability development. On the face of it, the former aspect takes precedence in practice.

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197 Mortimer Review, p. 24.

198 Pappas Review, p. 52. Similar issues may also affect later parts of the capability development and acquisition cycle. In 2010, a report prepared by consultants for DMO on the complexity of DMO sustainment operations identified the following among business constraints placed on DMO:

- *Military posting cycles:* posting reduces leadership effectiveness in creating sustainable support models, which require longer time horizons to achieve. The ADF requires that staff be frequently posted from one role to another. This is a significant constraint on the DMO where roles require multi-year strategic leadership around change. Complex changes generally require a sense of accountability, and the ownership of the results of change. This is difficult to achieve when the staff have limited duration in leadership roles.
- *Lack of business experience in military appointments*: decision-making efficiency is reduced by the requirement to have military trained personnel in business oriented roles. While military backgrounds create strong leadership, strategic and management skill, they do not generally include deep understanding of finance, economics and the reality of profit-based organisations. This results in difficulties in managing the substantially business-oriented sustainment activities (*The Helmsman Sustainment Complexity Review,* July 2010, p. 20).

199 Hansard, JCPAA, (Reference: *Financial reporting and equipment acquisition at the Department of Defence and Defence Materiel Organisation*), transcript of public hearing, 19 August 2009, p. 14.

200 Defence, [Undated], Answers to questions on notice, Senate Standing Committee on Foreign Affairs, Defence and Trade, public hearings of 5 and 7 October 2011, p. 9.

The significance of any such tension may depend on whether it is reasonable and practical for project managers to learn the necessary skills on the job.

3.46 When asked why it had consistently placed priority on having uniformed personnel in its project manager jobs, CDG informed the ANAO that 'Military officers are appropriate where the requirements definition work demands a background in related capability areas.' This may mean that project managers are being recruited from a pool which, while rich in one set of skills, is less likely to have project management, systems engineering and cost estimation skills. External reviews have consistently highlighted these skills as desirable but found them to be largely absent among recruits to CDG project manager positions.

3.47 In May 2011, the Australian Strategic Policy Institute (ASPI) noted that 'after more than a decade of reform, the delivery of defence projects continues to frustrate governments and the defence force'. It made four suggestions.[201] One related to Defence's persistence with the CDG staffing model:

> *Improve capability development:* The development of project proposals continues to be the responsibility of military officers on short-term appointments. While military input is critical to capability development, the function should be increasingly performed by a professional cadre.[202]

3.48 The Pappas Review had also pointed out that there is agency risk in having service personnel specify capability requirements, particularly in the presence of vague guidance and an interpretive process.[203]

3.49 Defence informed the ANAO that the option of a professional cadre, as suggested by ASPI, is not appropriate for CDG when balanced against the value of the subject matter expertise provided by Service personnel. It is not clear, however, that this subject matter expertise could not be brought to bear on a project without the project manager belonging to one of the Services.

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201 Australian Strategic Policy Institute (ASPI), *Cost of Defence, ASPI Defence Budget Brief 2011–12*, May 2011, p. 114. The four suggestions comprised: (i) Continue with the current reforms; (ii) Improve capability development; (iii) Buy more Military-Off-The-Shelf (MOTS) Equipment; and (iv) Manage rather than avoid risk.

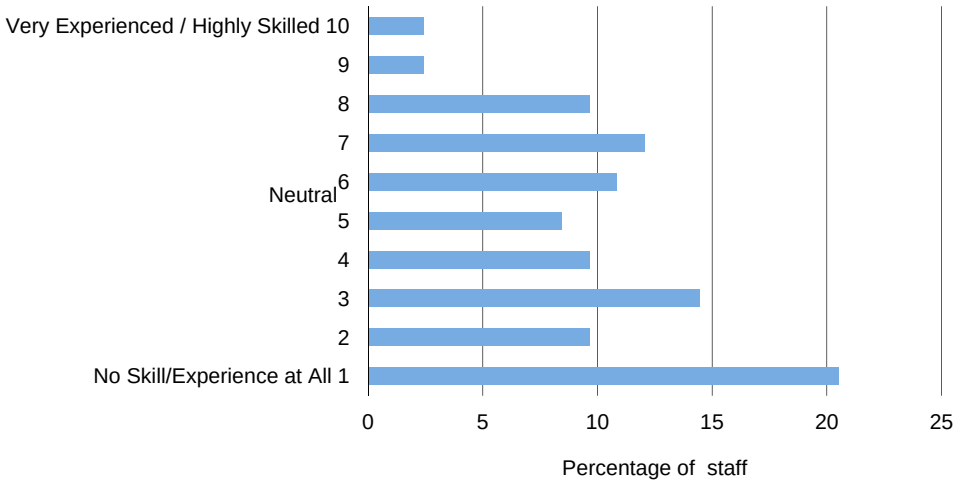
202 ibid.

203 Pappas Review, p. 52. In response to this observation by Pappas, Defence put the view to the ANAO (18 January 2013) that this risk is controlled by: the introduction of a *Statement of Strategic Guidance* for each project, which informs primary project documentation, such as the Operational Concept Document; and by not allowing CDG project managers to work in isolation but in integrated project teams (IPTs). IPTs are described by the Defence Capability Development Handbook (2012 edition, p. 123) as 'A cross-function group of people with project-related skill sets, who are responsible for managing a capability proposal from First Pass approval to Second Pass approval. The IPT is led by the Capability Systems Division Project Manager assigned to the project.'

Equipping CDG project managers with the right skills

3.50 The ANAO survey found that, overall, CDG project managers assessed as low their own level of skill and work/practical experience in managing projects before managing their first project as a CDG project manager (Figure 3.3). However, the profiles varied markedly by Service affiliation, with Army project managers assessing their skills/experience, on average, as moderately high, whereas both Navy and Air Force, on average, indicated relatively low or no skills or experience.

Figure 3.3: How CDG project managers rated their level of skill/practical experience in managing projects before managing their first CDG project



Source: ANAO survey of CDG staff, April 2012. Data drawn from CDG staff who were a project manager at the time of the survey or within the 12 months before (n = 83).

3.51 Given that Defence's position is that recruitment of project managers must be primarily from the Services, the question is whether these staff can be adequately trained in a timely way to undertake the CDG project manager function effectively during their posting. The Pappas Review warned that the risks flowing from project managers' lack of expertise could be only partially mitigated by training and an experienced chain of command.[204]

3.52 The nature of the work in moving a project forward from a capability requirement to second-pass approval of a capability solution is different from

204 Pappas Review, p. 52.

progressing it from that approval to the release of equipment into operational service. The Mortimer Review drew attention to this difference:

> The former requires skills to deal with ambiguity, the latter to rigorously achieve a specific outcome. For this reason, CDG needs to augment its existing workforce to enhance its project management expertise; it is unrealistic to expect military personnel with limited training in project management to plan major acquisition projects.[205]

3.53 The Mortimer Review then recommended (Recommendation 2.8):

> Capability Development Group should be adequately resourced in terms of workforce numbers and skills to develop capability proposals and incorporate specialist advice from DMO and the Defence Science and Technology Organisation.[206]

3.54 In response to the Mortimer Review, the Government agreed to the recommendation, but this agreement was framed in terms of ensuring that the workforce was able to undertake high-quality capability development projects, deepen expertise in cost and schedule estimation and project management, and improve existing training. Thus, although the clear implication of the Mortimer Review discussion was that broader recruitment might be necessary to obtain the relevant skills, the response did not include consideration of such an option. Rather, the focus was on more training.

3.55 In early 2009, following the Mortimer Review and, during the previous ANAO audit, Defence conducted a CDG project manager training needs analysis. It concluded that it was 'vital that action be taken to ensure that [project manager] skilling needs are met.'[207] An observation in this study was that project managers' initial understanding of their job was limited, and it recommended that an agreed statement of the role be developed.

3.56 Defence advised the Senate Foreign Affairs, Defence and Trade References Committee that it began developing its Desk Officer Skilling Program in 2009 in response to the ANAO findings.[208] Defence stated that this program, targeting CDG project managers and their supervisors, began delivering specialised skilling sessions in 2010 and had undergone continuous

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205 Mortimer Review, p. 25.

206 ibid., p. 26.

207 Defence, CDG Desk Officer Training Needs Analysis Report, 20 May 2009.

208 Defence, [Undated], Answers to questions on notice, Senate Standing Committee on Foreign Affairs, Defence and Trade, public hearings of 5 and 7 October 2011, p. 8.

improvement. The Desk Officer Skilling Program was subsequently renamed the 'Capability Development Skilling Program'.

3.57 Defence's Mortimer Review Implementation Governance Committee (MRIGC) considered implementation of Recommendation 2.8 to be complete as of June 2010. This was predicated on the advice that CDG training aspects of the recommendation would be addressed primarily via the Capability Development Skilling Program.

3.58 The Black Review, in 2011, reiterated the importance of the right staffing structures and skills sets in CDG, and noted that Defence was yet to implement recommendations made in the Pappas Review (2008) that sought to address shortcomings in this area:

> Hence, we recommend Defence implement the [Pappas Review] recommendations with respect to career development and specialist skills noted in Section 3.4.1.2, both: (i) the specific recommendations with respect to capability development skills (which have not yet been taken up by Defence) and (ii) the general recommendation to institute a new career development model. In the immediate term, the skills shortage remains acute and urgent in the area of capability development where severe skills shortfalls continue to hamper timely and effective delivery of capability proposals for approval.[209]
>
> Cost forecasting and commercial skills like project management and procurement are in short supply in Defence and many people working in these areas continue to do jobs for which they have not, in terms of training or experience, been properly prepared.[210]

3.59 In October 2011, the then CCDG stated to the Senate Foreign Affairs, Defence and Trade References Committee, that project manager skills in CDG had largely been addressed:

> Overall, CDG managers currently deem 90 per cent of the desk officers to be sufficiently skilled to perform the full range of assigned duties without additional support.[211]

3.60 Defence informed the ANAO that this information on skill levels was based on professional judgement and was provided to CCDG by CDG branch coordinators.

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209 Black Review, p. 75.

210 ibid., p. 95.

211 Testimony of CCDG, Defence, Senate Foreign Affairs, Defence and Trade References Committee, Hansard, 7 October 2011, p. 3.

3.61 In contrast to the October 2011 evidence to the Senate Committee, Defence's P3M3 assessment of CDG in September 2011 formed similar views to those of the Mortimer Review some three years earlier. For example, among its findings about project managers are the following:

> The quality of the business cases produced is subject to the skills and experience of the Project Manager. There is a level of inconsistency in the quality of deliverable produced.
>
> The accuracy of the cost estimate is dependent on the skills and experience of the Project Managers who often don't have a cost estimation background.
>
> There are high expectations placed on project managers to deliver 'technical' content when few have a professional background in Project Management, Systems Engineering, and Cost Estimation (their strengths being in Capability Definition).[212]

3.62 At about the same time (November 2011), MRIGC papers show that, in terms of the intended outcomes of Mortimer recommendation 2.8 about the appropriate resourcing of CDG, the committee believed work on their achievement was not yet complete but 'underway and progressing'.[213] The recommendation remained 'open' by outcome in July 2013.

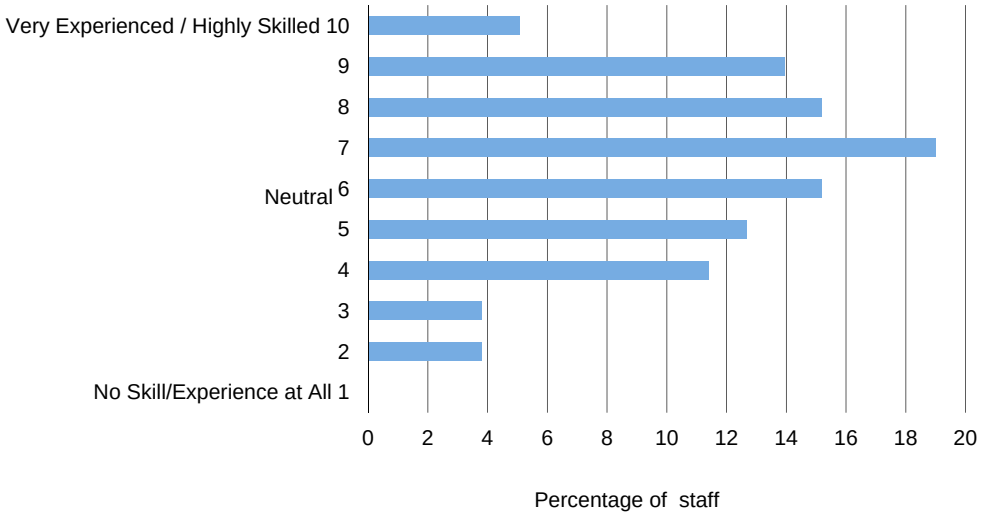
CDG project managers' perceptions of their level of skill/practical experience after working for a period in CDG

3.63 As might reasonably be expected, CDG project managers rated their own skills and experience more highly after working for a period in CDG (Figure 3.4). This is encouraging, and likely to be indicative of their having made progress, but unlikely to be an adequately objective measure to assess whether that skill and experience matched the requirements of the position.

212 Defence, P3M3 Assessment Findings, CDG, September 2011, p. 13.

213 Defence, MRIGC, Status Summary of Mortimer Reforms, 16 November 2011, p. 19.

Figure 3.4: CDG project managers' self-rating of their level of skill and work/practical experience in managing their project



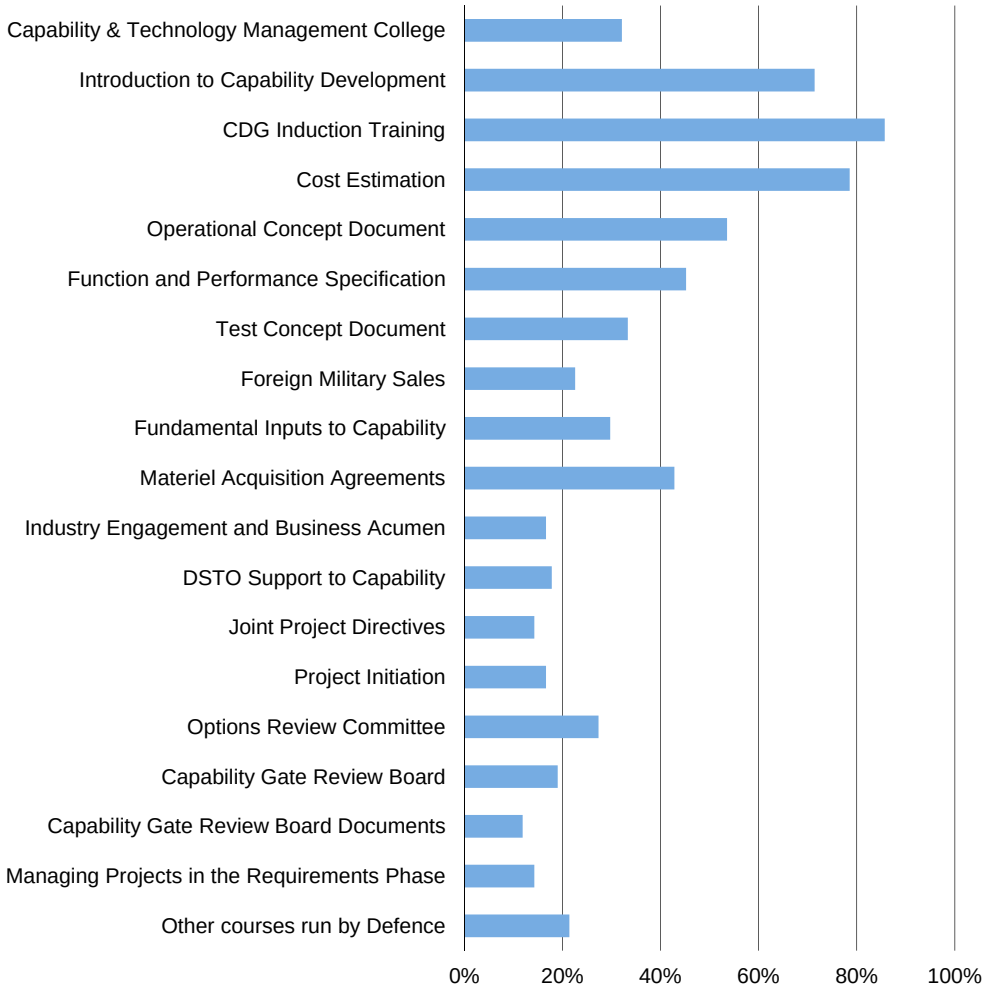
Source: ANAO survey of CDG staff, April 2012. Data drawn from CDG staff who were a project manager at the time of the survey or within the 12 months before (n = 79).

Note: This reflects project managers' views at the time of the survey and will include, therefore, project managers of various levels of duration in their position, from those recently-appointed to those of the greatest experience in CDG.

Qualifications, courses and training completed by project managers

3.64 The ANAO also invited CDG project managers to indicate which of the training courses available to them they had completed (Figure 3.5). The courses comprising the Capability Development Skilling Program are among those listed here.

Figure 3.5: Percentage of CDG project managers who completed courses relevant to their responsibilities in CDG



Note: Capability & Technology Management College (CTMC) delivers the Capability & Technology Management Program (CTMP). Defence describes CTMP as a 'very demanding year-long technical staff college program that prepares selected career officers for appointments as Capability Technology Managers and project leaders, within the Defence capability management continuum. The CTMP curriculum consists of a Masters-level academic program plus military modules and other technical staff studies, including a portfolio of relevant short courses and industry visits.' Defence has informed the ANAO (July 2013) that APS staff now attend CTMC courses.

Source: ANAO survey of CDG staff, April 2012. Data drawn from CDG staff who were a project manager at the time of the survey or within the 12 months before (n = 84).

3.65 The responses showed that most project managers had completed the courses *Introduction to Capability Development*, *CDG Induction Training* and *Cost Estimation*. Those courses aside, only the course *Operational Concept Document* had been attended by more than half (52 per cent). At the time of the survey, most courses had been attended by only a minority of CDG project managers.[214]

3.66 The only marked difference among course attendance, split by Service affiliations of project managers, was that the majority (71 per cent) of those from Army had attended Defence's Capability and Technology Management College (CTMC) whereas only a small proportion of Navy (14.3 per cent) and fewer still of Air Force (7.1 per cent) had done so.

3.67 Lack of attendance at courses may be attributable to matters beyond a project manager's control, including workload and resource constraints. Several CDG project managers explained, in free text responses to the ANAO survey, that often, they could not be released for training. For example:

> A key consideration with regard to training at present is that all too often, the people that need the training are far too busy to undertake the training. With single Project Managers for multiple projects, the workload is high and they are also a single point of failure. If I take time off to do a course, there is no-one to take on my workload. All too often this means that I don't do training.[215]

How training can improve performance: CDG project managers' views

3.68 In thinking about how their performance could be improved, CDG project managers placed a moderate to high degree of importance on access to training (Figure 3.6) but a higher degree of importance on an improved quality of training content (Figure 3.7). However, another factor raised by CDG staff was that training should be a prerequisite to a posting in CDG rather than it being, as at present, a matter of training-on-the-job. In particular, posting to Defence's CTMC was nominated by several respondents as an essential preparation for the project manager job.

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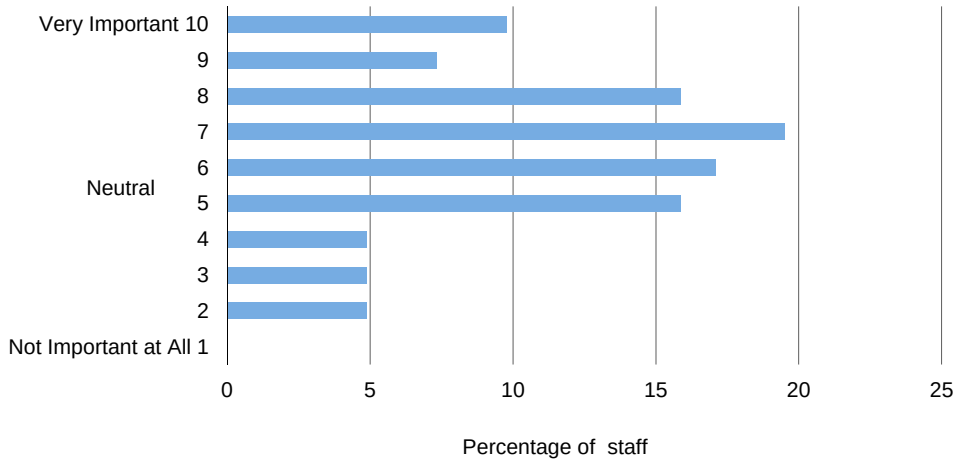
214 Most CDG project managers (90 per cent) indicated that they had tertiary qualifications, often a master's degree (64 per cent), showing a widespread ability to undertake high-level, disciplined education. This was strongest among Army personnel (100 per cent with tertiary qualifications, 89.5 per cent with a master's degree) and lowest among Air Force personnel (81 per cent with tertiary qualifications, 45.2 per cent with a master's degree). In addition, some 40 per cent had attended other unspecified project management course(s) or training.

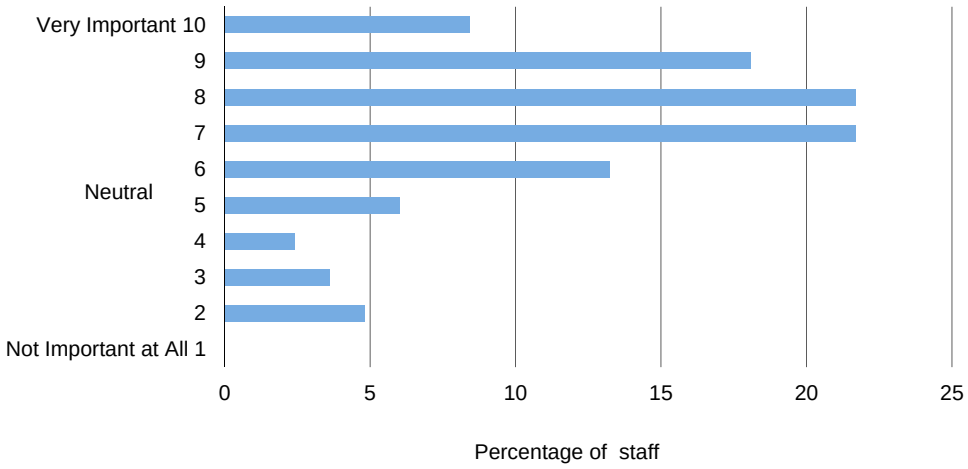
215 Comments by a CDG deputy director in the ANAO survey.

Figure 3.6: Improving performance: project managers' views on the importance of access to training



Source: ANAO survey of CDG staff, April 2012. Data drawn from CDG staff who were a project manager at the time of the survey or within the 12 months before (n = 82).

Figure 3.7: Improving performance: project managers' views on the importance of improved quality of training content



Source: ANAO survey of CDG staff, April 2012. Data drawn from CDG staff who were a project manager at the time of the survey or within the 12 months before (n = 82).

The lack of skills in cost estimation

3.69 The Mortimer Review drew particular attention to the need for both CDG and DMO staff to develop or obtain greater expertise in cost estimating for their respective responsibilities in capability development and procurement projects:

> CDG is responsible for other cost estimates and, ultimately, for bringing together the full range of through-life costs including equipment, personnel, training, sustainment and facilities. To ensure that the cost estimates in these domains are as accurate as possible, the Review believes that both CDG and DMO should improve their capability to estimate costs.[216]

3.70 The review went on to recommend (Recommendation 2.9):

> Capability Development Group and DMO should further develop their ability, and be adequately resourced to accurately estimate the cost and schedule of major acquisition projects.[217]

3.71 The May 2009 Government response to this recommendation was 'agreed' but the terms of that agreement focused on cost estimation in DMO and did not refer to CDG. The matter then passed to the MRIGC to oversee implementation.[218]

3.72 In February 2010, the MRIGC was advised that:

> In relation to Mortimer Recommendation 2.9 (CDG and DMO to improve skills and resources), DR&COORD [Director, Reform and Coordination] advised the Committee that the Capability Development Group (CDG) has put in place all necessary processes to improve and align cost estimation techniques and training in cost estimation. The Committee agreed that the progress report should be amended to acknowledge CDG's efforts in this area.[219]

3.73 However, the papers provided to the MRIGC did not clarify the meaning of 'all necessary processes'. On the basis of these papers, the MRIGC then concluded that the process to implement this recommendation in CDG was complete. Another committee closed the action 'by process' for DMO in September 2012.[220]

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216 Mortimer Review, p. 25.

217 ibid., p. 26.

218 In 2009, ANAO Audit Report No.48, 2008–09, *Planning and approval of Defence Major Capital Equipment Projects* also found that project managers in CDG lacked cost estimating skills (p. 69).

219 Minutes of meeting No.01/2010, Mortimer Review Implementation Governance Committee, February 2010, p. 4.

220 Closing an action 'by process' indicates that management is satisfied that action is in hand to give effect to a recommendation. This is to be contrasted with closure 'by outcome', which indicates that management is satisfied that the outcome intended by the recommendation has been achieved. From early 2010 the MRIGC received progress reports with status cast in these terms.

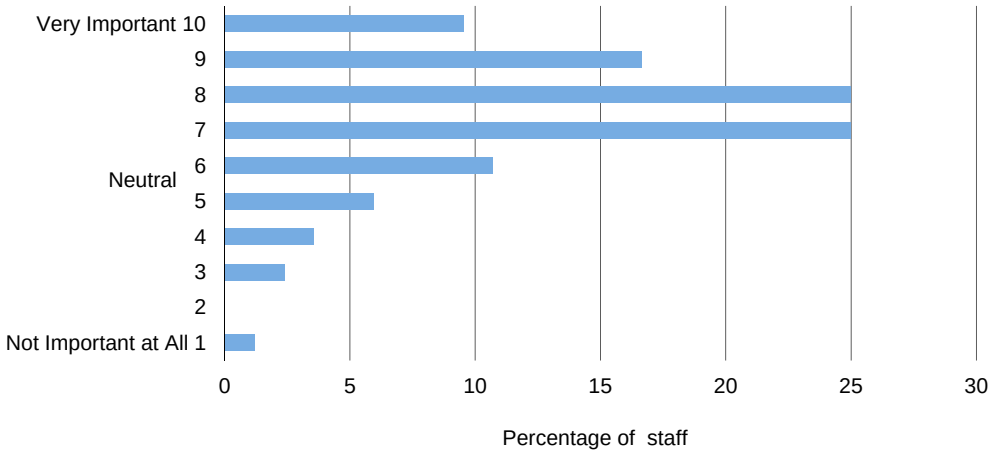
3.74 Defence informed the ANAO in January 2013 that:

> Due to the nature of this change in process, the outcome will take time to be realised. CDG and DMO will report to the Capability Development Materiel Reform Committee as the outcome becomes realised.

3.75 The recommendation remained 'open' in terms of outcome in July 2013, just over four years after it was agreed by the Government (May 2009).

3.76 The ANAO sought CDG project managers' views on the importance of cost estimating in performing their work and on how well cost estimating is performed within CDG for their specific project(s) (noting that some two-thirds of CDG project managers report having more than one project). They attribute moderate to high importance to cost estimating (Figure 3.8) but most tend to believe it is not done well (Figure 3.9).

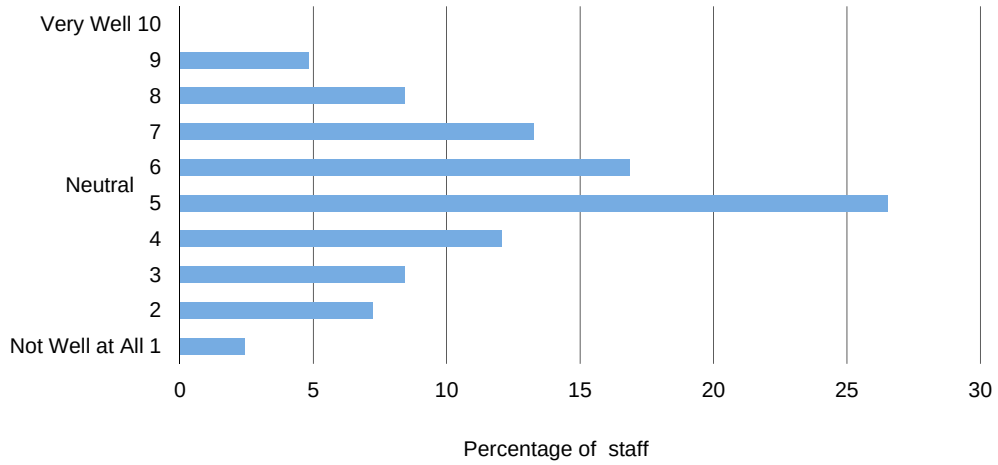
Figure 3.8: The importance of cost estimating in enabling CDG project managers to perform their work



Source: ANAO survey of CDG staff, April 2012. Data drawn from CDG staff who were a project manager at the time of the survey or within the 12 months before (n = 84).

Figure 3.9: How well cost estimating is performed within CDG

CDG project managers' views on how well cost estimating is performed within CDG for their specific project(s).



Source: ANAO survey of CDG staff, April 2012. Data drawn from CDG staff who were project managers at the time of the survey or within the 12 months before (n = 83).

Remediation: CDG Skills Outsourcing Contract

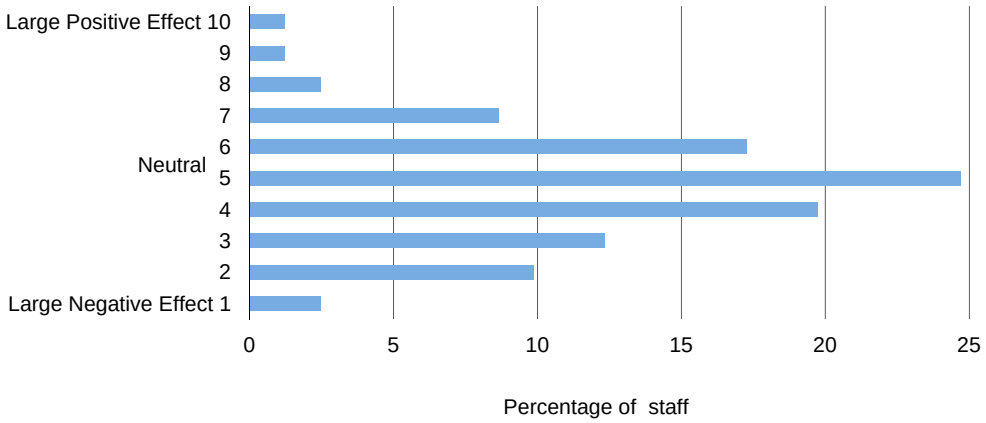
3.77 In late 2011, CDG recognised a need to improve cost estimating and other critical skills. Defence signed a contract in mid-January 2012 with a commercial organisation to provide these skills. The contract value was some $5.3 million and was to run until 30 June 2013. Under this contract, Defence originally estimated that it would spend approximately $1.4 million by 30 June 2012 on cost estimation services, support for developing capability development documentation and project scheduling services. Defence informed the ANAO that, during the early stages of the contract, the selected firm did not have sufficient resources available to provide Defence with the necessary services. Consequently, an additional $165 000 has been spent on an arrangement with a second consulting firm for additional services to help CDG with costing work.

3.78 Defence informed the ANAO that, as the main contract has been in place for only a limited time, it is too early to assess whether there has been any skills transfer to CDG under these arrangements. Defence also indicated that it had not assessed project managers' cost estimating skills recently.

Effect of reforms: project managers' perceptions

3.79 CDG staff were asked, as part of the ANAO survey, to rate the overall effect of reforms to defence policies, procedures and processes over the preceding 12 months, in terms of their teams' ability to achieve their goals. Project managers' responses to this question are reflected in Figure 3.10.

Figure 3.10: CDG Project Managers' perceptions of the effects of reform over the preceding twelve months



Source: ANAO survey of CDG staff, April 2012. Data drawn from CDG staff who were project managers at the time of the survey or within the 12 months before (n = 81).

3.80 Overall, CDG project managers formed a negative view of the effects of reforms on their teams' ability to achieve their goals (as at April 2012). Respondents were asked to elaborate and include specific examples of positive and/or negative impacts. Most gave primarily negative examples, frequently stating that reforms had only added process, that there had not been any perceptible reform or that it had not had a substantial effect on the ability of staff to achieve their goals. Most common among positive examples were an optimistic outlook for the CDIP (which commenced in January 2012) and initial implementation of the Capability Development Management Reporting Tool (CDMRT).[221]

221 The CDMRT, a reporting and scheduling tool introduced during the audit, is described by Defence as 'a SharePoint-based tool residing on the Defence Secret Network (DSN) [which makes] elements of project-related information readily accessible to Defence personnel with access to the DSN.'

Conclusion—further organisational reform required

3.81 The establishment of CDG in 2004, following the Kinnaird Review, created an opportunity for the critical work of capability definition and development to be focused in a single area of Defence. One of Kinnaird's objectives was met in the creation of the position of Chief of Capability Development Group (CCDG) in a timely manner, within some months of the original recommendation. However, terms of appointment and the duration of occupancy of the CCDG position have both fallen short of the minimum tenure of five years envisaged by the Kinnaird Review and agreed to by the then Government. Accordingly, the stable long-term leadership, through CCDG, that Kinnaird considered essential to achieving better capability development outcomes, has not eventuated.

3.82 While, inevitably, there will be circumstances which mean that a five-year term cannot always be maintained, the message from the Kinnaird Review, accepted by government, was that this goal was a key factor in driving improvements in Defence capability development. In relation to CCDG appointments, in July 2013, Defence advised the ANAO that its approach had been 'to place the officer on a three-year contract, consistent with other three-star officers and provide the option to extend the officer.' Defence further advised the ANAO, in September 2013, that it was 'comfortable that CCDG's tenure is consistent with the Government's specific announcement in 2003 and its ongoing expectations on this matter', referring to the media release by the then Minister for Defence announcing the appointment of the first CCDG for an initial three years.

3.83 While Defence has interpreted the Minister's media release as endorsing its decision to appoint the CCDG for three years, this is not consistent with the then Government's earlier agreement to the minimum five-year tenure as recommended by Kinnaird. That minimum had a clear purpose of providing a 'single point of accountability ... to provide better integration of the capability definition and assessment process' in an environment where projects may take many years to progress.[222]

3.84 In the same vein, capability development project manager positions, predominantly filled by ADF members, have been subject to continuing high turnover. Both operational demands for many of the same staff, and career

222 Kinnaird Review, p. iv.

management considerations for the individual ADF members, have resulted in the high turnover and, hence, short average duration in these positions within CDG. Although this has been pointed out regularly as a serious issue by reviews over the decade, the ANAO's survey of CDG staff indicates that the problem remains.

3.85 There have been efforts to extend the duration of capability project manager postings in CDG, but this remains work-in-progress. The high turnover detracts from the development of the experience and skills needed in the capability project manager positions. Earnest attempts have been made to provide necessary training to these staff but, as the 2009 Pappas Review pointed out, this can, at best, only partially address the risks flowing from lack of opportunity to develop expertise.

3.86 The ANAO's April 2012 survey of CDG staff, which represents the most recent available information on these matters, identified that there is both a marked variation in the degree of preparatory training undertaken by prospective capability project managers across the various Services and in the take-up by individuals of available courses once they are employed in CDG. There is also tension between improving staff skills and achieving longer tenure in CDG, on the one hand, and the military posting system and related career interests on the other; with the latter generally prevailing.

3.87 Sustained senior management attention will be required to develop and effectively implement approaches to improve the CDG workforce's capacity to successfully carry out its role in the longer term. Defence has advised that its Capability Development Improvement Program (CDIP), which commenced shortly before the ANAO survey, is informing the development of reform initiatives 'to deal with the same issues raised in the survey'. This could involve considering whether alternative strategies might better achieve the goal of an improved definition and assessment function as envisaged by Kinnaird. Alternative approaches that could be assessed include the potential to use a professional group of specialists, who are not serving members of the military (and therefore not subject to regular reassignment), to fill more enduring project manager roles within CDG; and/or the creation, supported by senior management advocacy, of a capability development career stream that would highlight the importance of capability development work and increase its attractions as a career option for both ADF and civilian staff. Any adjustments to the current model would need to ensure that military expertise appropriately informs the capability definition and development process.

Recommendation No.1

3.88 To improve the skills and experience available during capability development, the ANAO recommends that Defence reconsider its staffing model for CDG project manager positions. This could include:

(i) considering whether the required military subject matter expertise can be adequately provided to capability development projects other than through having Service personnel in these positions; and

(ii) considering the formation of a dedicated ADF career stream for capability development.

Defence response: *Agreed*.

4. The capability development process

This chapter examines the formal guidance provided to CDG staff to define and assist with capability development, the production and review of documentation to meet Defence requirements, and the use of committees to oversee capability development.

Capability development guidance and the two-pass process

4.1 A lengthy and complex process such as Defence capability development requires a comprehensive and systematic set of procedures to support a careful and thorough approach. Changes over time to the capability development process, such as the adoption of two-pass approval in 2000 and subsequent government-agreed reforms, should be reflected in the relevant guidance. For each capability development project, it should be possible to identify the project documents produced in accordance with these procedures and see how they are used to support and inform decision-making along the capability development path. Under current arrangements, this involves a range of senior Defence committees.

4.2 The 2008–09 ANAO performance audit of two-pass approval found that CDG could not provide essential capability development documentation for projects in the audit's sample. It was unclear whether this was due to the material not having been prepared or an inability to retrieve it. The current audit sought capability development documentation and examined related government decisions for a sample of projects to assess any improvement in these aspects of CDG's management of capability development.

4.3 To examine the capability development process, the ANAO considered:

- Defence's capability development guidance documentation, such as capability development manuals and handbooks;
- the production of project documents under the guidance of those manuals/handbooks, and the documents' review and sign-off; and
- the committee structure that oversees the process.

The development of guidance documentation

4.4 Defence's keystone guidance document for its capability development lifecycle is currently the *Defence Capability Development Handbook* (DCDH).[223] The *Capability Systems Life Cycle Management Guide* of 2001 was the first Defence guidance to incorporate the two-pass process as adopted by government in 2000. Defence has issued numerous new editions since then, which have taken the form, at different times, of a manual or a handbook (Table 4.1).

Table 4.1: Defence capability development keystone guidance document 2001–13

Date	Document	Comment
December 2001	*Capability Systems Life Cycle Management Guide*	Incorporated the two-pass process, approved by government in 2000.[224]
November 2002	*Capability Systems Life Cycle Management Manual 2002*	Manual issued by VCDF.
February 2005	*Defence Capability Development Manual 2005*	First document to incorporate reforms from the Kinnaird Review. First issued after creation of CDG; issued by CCDG. Authoritative guidance for the development of capability proposals.
February 2006	*Defence Capability Development Manual 2006**	
February 2010	*Interim Defence Capability Development Handbook* (initial release)	Incorporated changes from the Mortimer Review and SRP-related initiatives.
March 2010	*Interim Defence Capability Development Handbook* (release 2)	
April 2010	*Interim Defence Capability Development Handbook* (release 3)	
March 2011	*Interim Defence Capability Development Handbook* (release 4)	

223 Defence, *Defence Capability Development Handbook* (DCDH), December 2012. The DCDH is supported by a collection of Defence Instructions, manuals and additional guidance documents.

224 Defence has been unable to provide a copy of this document, which it referred to in a submission to a Senate Inquiry into materiel acquisition and management in Defence (March 2003).

Date	Document	Comment
August 2011	*Defence Capability Development Handbook*	Not described as authoritative guidance but as a guide, approved by the Defence Committee, 'on an interim basis'.
December 2012	*Defence Capability Development Handbook*	Revised edition to take account of SRP and CDIP.
End 2013 (expected date)	*Defence Capability Development Manual* (first chapters only)	Expected to be issued under Defence's System of Defence Instructions (SoDI).

* This version of the DCDM applied at the time of the audit work for ANAO Audit Report No.48, 2008–09, *Planning and Approval of Defence Major Capital Equipment Projects*.

Source: ANAO

4.5 As would be expected, each new wave of reform directly affecting capability development has brought change to the instruction/handbook/manual, and has prompted a new release. In addition, a new iteration has generally followed upon each change of occupancy of the position of CCDG—which is the single point of accountability for the requirements phase of the capability development lifecycle. Defence has put the view (July 2013) that 'while the DCDH has undergone regular amendment, there have been very few substantial changes to the document'. However, this downplays the effects of the program of reform over the past decade, including Kinnaird, Mortimer, SRP and CDIP.

4.6 In late 2012, CCDG stated 'the Handbook itself is being improved through its transition to an authoritative Manual that will go through the formal [SoDI] process.' [225] Defence advised that SoDI clearance is time-consuming and the first chapters are now not expected to be published before the end of 2013 (Defence advice of 11 January 2013). In the meantime, CCDG issued a new edition of the DCDH (21 December 2012). The preface acknowledges that the handbook is to be re-released as a manual in 2013.

Managing the documentation of the requirements phase

4.7 The JCPAA noted in August 2008 that:

> It is clear from the evidence that decisions made in the early stages of the capability lifecycle are critical to the long-term success of any Defence

225 CCDG, 'Cost Estimation—Its Importance to Future Capability', Defence Cost Estimation Conference, October 2012,<http://www.defence.gov.au/capability/_home/2012_cab.asp> [accessed 7 January 2013].

acquisition process. Ensuring that requirements are clearly articulated and communicated and that high levels of technical risk are managed effectively underpin the success of that process.[226]

4.8 To achieve this, Defence requires good records management and a robust process that provides the appropriate level of assurance to decision-makers in Defence and government that the requirements have been documented, reviewed and signed off by the appropriate areas in Defence.[227]

4.9 The core principles of the requirements phase have remained largely consistent over the last decade despite changes in format and name. This includes many documents necessary to articulate requirements and support proposals to government. However, as the process has developed through reforms and changes in capability development leadership, the volume of documents required to support decision-making has tended to increase.

4.10 The previous ANAO performance audit in this area found Defence unable to demonstrate, by providing project documents, that it had consistently followed procedures in the 2006 DCDM and related Defence guidance. Nor could Defence show that appropriate alternative procedures had been authorised and followed.[228] Defence stated at the time that deviations from the documented processes were the result of evolution of the capability development system subsequent to the release of the 2006 DCDM rather than departures from the process and that, in practice, the capability development process was tailored for each project.[229]

4.11 As part of the current audit, the ANAO sought copies of:

- capability development documentation for major capital equipment and ministerial first and second-pass approvals over the period from July 2009 to June 2010;
- evidence of testing, review and quality control for capability development project documentation; and

226 JCPAA, Report 411, *Progress on equipment acquisition and financial reporting in Defence*, August 2008, p. 75.

227 See ANAO Better Practice Guide, *Implementation of Programme and Policy Initiatives*, 2006, p. 58.

228 ANAO Audit Report No.48, 2008–09, *Planning and Approval of Defence Major Capital Equipment Projects*, p. 16.

229 ibid.

- evidence of consideration of and approval to vary or 'tailor' the process where that had been found appropriate (particularly where that might change the document set produced).

Project documentation is substantially complete

4.12 Defence supplied copies of the documentation for the specified approvals. The ANAO's examination found that the suite of documents was complete, or substantially so, for the sample of projects it reviewed. This is in contrast to the previous audit when about half the project documents could not be provided for the sample of projects then under review. It may also represent an improvement in Defence's capacity to retrieve documents.

4.13 When the ANAO reviewed the full suite of documentation, it was apparent that elements of the documents can become repetitive. This occurs especially in preliminary material explaining the context of the project. This observation was consistent with comments from CDG staff in responses to the open-ended questions included in the ANAO's survey. A question inviting comments on the changes respondents would like to make to the capability development process (if any), if they were given the opportunity, attracted comments of which the following are typical:

> Streamline the Documents! How many times do we have to ask for this? Only one document, the Capability Proposal, with no more than ten specialist annexes. Annex A is the Cost Schedule. No repetition in the document. This was often done before 2005 (*CDG deputy director*).

> Documentation made up of chunks or fragments that can be automatically stitched together to form documents as required for committees, stakeholders etc. This would mean that the introduction paragraph (among many others) does not need to be repeated multiple times and that consistency between documents would be automatically assured (*CDG project manager*).

4.14 The size of the current document suite was the subject of many comments from CDG staff, often expressing doubt as to whether it was read by anyone among the committees it was intended to inform, for example:

> Focus on QUALITY of content (in terms of documents), not quantity. As it is, most documents are not read due to the sheer volume of paperwork shuffling around Defence. Many documents appear to be there for auditing purposes only (*CDG project manager*).

4.15 Many other CDG staff made briefer remarks such as 'reduce the documentation suite' and 'reduce duplication in the documentation'.

4.16 Under the latest suite of reforms in CDG (the CDIP), one element is an initiative to 'simplify the documentation set.' Several CDG staff who proposed simplification of the document set in their remarks in the ANAO survey mentioned both that a move of this sort was alreadyunder way and that they valued it. The proposal to simplify the documentation set initially emerged as an outcome of the 2011 DCP Review as part of a range of initiatives to 'increase approval throughput [of projects]'. It should be noted, however, that the problem of excessive documentation is long-standing, pre-dates the Kinnaird Review, and had been clearly identified in the *Report on Defence Governance, Acquisition and Support* in April 2000.[230]

Review and quality control of documentation

4.17 The Capability Development Board (CDB, replaced by the Capability Gate Review Board (CGRB) in 2011) has long been the quality control point for capability development documents supporting major capability proposals to government under the two-pass process.[231] According to the CDB's business rules its job was to:

- provide guidance and direction to project directors on the way forward for projects; and
- provide a forum for Head, Capability Systems (HCS) to test, review and clear capability proposals and supporting documentation for presentation to the higher Defence Committees principally the Defence Capability Committee.[232]

4.18 Further, the business rules stated that 'the CDB has a focus of quality control ensuring that documentation produced within CS [Capability Systems] Division is complete and of a standard that allows effective decision-making by the higher Defence committees and Government in general'[233] and:

> The documentation to be reviewed by the CDB includes the [Defence Capability Committee] Sponsors Paper [Initial Business Case/Acquisition

230 Defence, *Report on Defence Governance, Acquisition and Support*, April 2000, p. 11.

231 Defence stated, in September 2013: 'When CCDG transitioned the CDB to the CGRB, this change also affected the DCC. In the CDB–DCC construct, the documentation suite was reviewed at both committees. The capability submission for government was drafted after the DCC. However, with the CGRB–DCC construct, the CGRB is the final gate to review the project's documentation suite. The DCC's focus is now the review of the draft capability submission that will go to government to seek a first or second pass approval.'

232 Defence, Capability Development Board Business Rules. The latest CGRB business rules were approved on 13 May 2013.

233 ibid.

Business Case], and the appropriate supporting Capability Development Documentation such as the Operational Concept Document, Test Concept Document and Acquisition Strategy. Documentation is to include a short dot point brief (not more than two pages) outlining the purpose of the consideration, the significant issues to be addressed by the committee and sponsor's recommendations. The sponsoring DG [Director-General] is to clear documentation prior to its release to the Secretariat for release to CDB members.[234]

4.19 The ANAO sought evidence of the assurance process supporting the various capability committees' and boards' review and approval of capability development documentation as it progressed through the committee system under two-pass approval. In particular, the ANAO focused on the CDB, because of the board's function as the quality-control point for capability development documentation. However, a similar issue arises for the Options Review Committee (ORC), Defence Capability Committee (DCC), and the Defence Capability Investment Committee (DCIC).[235]

4.20 For the projects in the ANAO audit sample, there was no evidence of CDB consideration of relevant documents or testing, review, quality control and sign-off of capability development documents as required by the committee's business rules and stated in the DCDH.[236] Defence has confirmed that fewer than half of all projects in the relevant years were considered by CDB and some went direct to the DCC and/or DCIC.

Introduction of checklists to verify endorsement

4.21 In the March 2011 interim version of the DCDH, Defence introduced a 'document checklist' for each of the three major capability boards and

234 ibid.

235 The Options Review Committee, an internal management board for CDG, provided early Defence stakeholder involvement in identifying FIC issues and shaping Business Case options and, in particular, eliminated options that were not a strategic fit with government policy. The ORC was abolished in 2012 but was in place for the projects sampled during the audit. The functions of the ORC were subsequently absorbed into those of the new Project Initiation Board. The Project Initiation Board has since expanded its role to include an option review function and is now called the 'Project Initiation and Review Board'.

236 Defence (July 2013) has informed the ANAO that some 25 of the 56 projects approved over the two financial years 2009–10 and 2010–11 were considered by a CDB, and that committee minutes exist for these projects. However, the essential point is that, under Defence's own rules, the CDB formed a critical review stage for formal endorsement of the project's maturity, and not just an opportunity for interested parties to share their views. As mentioned in paragraph 4.17, the CDB was replaced by the CGRB in 2011.

committees which, at that time, were the ORC, the CDB and the DCC. In the case of the CDB, this interim edition of the DCDH states:

> *CDB Document Checklist*. This checklist (see annex F.10) attests that the required documents have been completed and [are] of the relevant quality and have been endorsed by the relevant stakeholders (normally, the documents do not need to be presented to the CDB for review).[237]

4.22 The checklist was to be completed by the project manager and cleared by the relevant Branch Head in Capability Systems Division (part of CDG) before the project was submitted to the committee. The checklist was to record the configuration of the project documentation at the time the project was reviewed by CDB. A copy of the checklist was then to be submitted to the senior committee, the DCC, to provide 'DCC with a record that all documents have been considered by the CDB and have been endorsed and approved by the relevant authority'.[238] These documents, when appropriately completed, provide assurance that the necessary work has been done to a satisfactory standard.

4.23 Six projects in the ANAO's audit sample were approved following the March 2011 introduction of this requirement.[239] The ANAO therefore expected to see completed committee checklists for the relevant projects. However, Defence was unable to provide signed checklists for any of these projects. Subsequently, in January 2013, Defence provided 10 signed checklists which were dated between December 2011 and October 2012 (that is, for a later period than the audit sample and, therefore, including none of the checklists the ANAO had expected to see). Defence also informed the ANAO that it has now amended the rules further so that the checklist function is incorporated into the project document suite index.

4.24 When the August 2011 version of the DCDH was released, the annexes containing the requirement for the board/committee checklists had been removed, as had the references in the body of the handbook to the use of such

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237 Defence, *Defence Capability Development Handbook*, Interim release 4.0, March 2011.

238 ibid., p. 178.

239 The audit sample included all projects approved in the 2009–10 and 2010–11 financial years. The six projects to which the new requirement applied were: Battlespace Communications System (Land) (JP 2072 Phase 2B); Defence Management Systems Improvement—PMKeys (JP 2080 Phase 2B.1); Additional Bushmasters (Land 116 Phase 3.1); Seahawk Capability Assurance Program (Air 9000 SCAP 1); MH-60R (Romeo) Multi-mission Naval Helicopter (Air 9000 Phase 8); and Military Satellite Capability—Wideband Terrestrial Terminals (JP 2008 Phase 3H). Three further projects were approved in March 2011; however, these projects would have been well past most of the committees by the time the requirement came in—Digital Topographical Systems (DTS) Upgrade (JP 2044 Phase 4); C-17 Globemaster III (AIR 8000 Phase 4); and Largs Bay (JP 3030 Phase 1).

checklists. However, the checklists were put on the CDG intranet site as additional guidance documents.

Capability development committees

Reviews have found committees to be too large and numerous

4.25 Many reviews of Defence have found that too many committees are involved in capability development and that they have too many participants. The committees are seen as representational in nature rather than limited to those needed to give informed advice to decision-makers. The result is a dissipation of accountability and responsibility.[240]

4.26 This view has been evident from the 2003 Kinnaird Review forward. Kinnaird found the committee framework 'overly complex with a series of committees reporting to committees' and recommended that 'the complex committee system should … be reviewed'.[241] Mortimer found that Defence had made limited progress on this Kinnaird recommendation. Another review, the 2007 Defence Management Review, made further recommendations, including that Defence review the need for all committees. Defence agreed with this recommendation, but it is not clear if it took any action to implement it. In response to the ANAO's request for information about its progress, Defence informed the ANAO that, following the inception of the Black Review [in 2011], 'any other considerations of committee structures, if any, would correctly have been held in abeyance.'

4.27 On 9 August 2011, following the findings from the Black and Rizzo reviews, the Minister for Defence Science and Personnel announced:

> Defence will ensure that Committees are only established as advisory bodies to accountable decision-makers. Members of Committees will be advisers to the accountable decision-maker on the Committee, and the accountability of Committee members will be defined in Committee charters.

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240 *Report on Defence Governance, Acquisition and Support*, April 2000; Kinnaird Review, August 2003; Mortimer Review, September 2008; Pappas Review, April 2009; Black Review, January 2011. Also findings in the *Defence Efficiency Review* (1997), *Defence Management Review* (2007), *Improving Defence Management* (ASPI) (2007), *Plan to Reform Support Ship Repair and Management Practices* (2010), *Serving Australia, Control and administration of the Department of Defence* (ASPI) (2011), and the Senate, Foreign Affairs, Defence and Trade References Committee, *Procurement procedures for Defence capital projects*, Final Report, August 2012.

241 Kinnaird Review, August 2003, Minor Recommendation 8, p. 10.

> All Committees will be placed on a 12 month sunset clause, with existence beyond that date only on approval from the Secretary and CDF.[242]

4.28 Defence informed the ANAO in January 2013 of its progress:

> Following the Minister's announcement in August 2011 a suitable approach to addressing the accepted recommendations was developed but interrupted by the period between Secretaries. Implementation commenced in earnest in December 2011 ... Since [February 2012], 335 committees have been reviewed, with 82 already disestablished. The Secretary and CDF Advisory Committee (SCAC) will review progress in early 2013.[243]

4.29 In September 2013, in response to an ANAO request for an update on progress, Defence stated:

> Defence's Senior Committee Secretariat has continued to work closely with the Defence Groups and Services to ensure that a suitable approach to the Black Review has been implemented within each Group and Service.

Most recent reviews also found problems with committees

4.30 The findings of two of the most recent reviews relating to CDG indicate that challenges have persisted for Defence in reforming the committee system.

4.31 The December 2011 review of the DCP identified the committee process as one of the 'systemic internal problems' limiting Defence's ability to identify and achieve a sustainable number of government approvals of DCP projects. It found that capability committees were not fully effective and were seen as information-sharing meetings rather than decision-making forums; action items were not always followed up; and committee decisions were sometimes overturned by senior stakeholders after meetings.[244]

4.32 The 2011 P3M3 assessment of CDG made a more detailed assessment of the committees. This was part of a project management capability maturity assessment from an organisational governance perspective. That assessment

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242 Minister for Defence Science and Personnel, media release, *Improving personal and institutional accountability in Defence*, 9 August 2011.

243 Defence provided further information in response to a Question on Notice at the 3–4 June 2013 Budget Estimates (Question No.28), where it stated that it had identified 311 committees, of which 104 had been abolished and six merged. It did not state how many new committees had been established.

244 Defence, Defence Capability Planning Review (Extract), December 2011, p. 31. Defence has since advised the Parliament that 'Senior Committees are solely decision-making bodies and no longer consider noting/for information items. The chair of each committee has also been appointed as the sole decision-maker for the committee, to ensure that excessive consultation and disagreement will not prevent a decision being made.' (Senate Standing Committee on Foreign Affairs, Defence and Trade, response to Question on Notice No.122, Budget Estimates, 3–4 June 2013).

found strengths in the governance structure but also catalogued many weaknesses, almost wholly associated with the committees (see box below).

P3M3 assessment: Weaknesses associated with capability development committees

- Project delivery is perceived as being skewed towards 'getting through committee' rather than 'delivering the project', with much effort and resource put into the committee process rather than expended on developing the capability. The key project performance metric is seen as hitting forecast committee dates.
- Although business rules nominally exist for committees, their application is inconsistent. Process discipline and/or commitment to the specified processes are generally an issue.
- Committees are often focused on the same overlapping objective, the scrutiny of detailed project deliverables, only differing in increasing levels of seniority of committee members rather than cascading levels of approval and escalation of risks and issues within the committee hierarchy. There is not enough weight placed on approvals or recommendations from more junior committees.
- There are issues with senior personnel raising objections/countermanding decisions outside of the committee process.
- The documentation produced for committee approval is perceived as bloated and unwieldy, often produced for review at a level that is inappropriate. This has led to scrutiny of detail at senior levels without full understanding of the detail, and subsequent 'red cards' on minor issues or due to misunderstanding or misinterpretation. Delays due to rework at senior committee levels could be avoided if corrective actions are taken earlier outside of the committee structure or at more junior committee levels.
- Approvals for decisions/project interventions can take a long time, given the lead time for committee submissions, limited availability of the committee members, the number of projects, and the various decisions being briefed through multiple governance structures prior to sign-off.

Source: Defence, CDG P3M3 Assessment, 2011.

4.33 The assessment offered a range of proposals as opportunities for improvement, including: better adherence to committee business rules; reducing the number of attendees at committees; focusing the committee role on making decisions and empowering them to do so without later countermanding.

4.34 Defence informed the ANAO that it is addressing capability development committee effectiveness through its CDIP initiative, with a view to assessing improved performance later in 2013.

Committees with specific responsibilities in two-pass approval

4.35 The previous ANAO performance audit provided a description of the Defence committees and boards with specific responsibilities in the management of capability development and approval.[245] At the time of that audit there were four such entities—the ORC, the CDB, the DCC and the DCIC.[246]

4.36 The standard process required each major capital equipment proposal to pass through most of these committees before going to government, though there were exceptions. In addition to the formal committee structure, there were other groups and teams involved, such as Integrated Project Teams, Capability Development Stakeholder Groups and DMO Emerging Project Teams.[247] These were also intended to capture and provide input into capability development from various areas in Defence.

4.37 The need for reform among these committees was mentioned by the CCDG in his weekly email to CDG staff in March 2012. He stated that he believed that 'ORC occupies the time of too many people and, at one point we had 42 people in the room this week.'[248]

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245 ANAO Audit Report No.48, 2008–09, *Planning and Approval of Defence Major Capital Equipment Projects*, Appendix 1.

246 The DCDH (Interim edition, 2010) set out the roles of these committees thus: ORC meets early in the requirements phase to provide direction on the options that should be developed for First Pass consideration. It provides early Defence stakeholder involvement in shaping business case options and identifying [Fundamental Input to Capability] issues. CDB is the mechanism for ensuring quality control of project development within [Capability Systems Division]. Through the board, the chair agrees to the release of capability proposal and supporting documents for presentation to the DCC or DCIC. DCC reviews the capability proposal and associated business cases to provide assurance that the proposal will provide a capability that is within scope and budget. Proposals approved by this committee are developed into a Cabinet submission or ministerial submission. DCIC reviews major capability and investment issues by seeking to ensure that resourcing, including capital investment and operating costs, is consistent with Defence's strategic priorities and resourcing strategy. Only projects of significant strategic imperative would be considered by the DCIC.

247 The DCDH (Interim edition, 2010) set out the roles of these teams and groups thus: The *Integrated Project Team* (IPT), chaired by the [Capability Systems Division Project Manager], is a working group whose members have a collective responsibility for the success of the project by ensuring that the project is defined (including system and FIC integration activities), costed, and scheduled, with risks identified and treated. Its membership should be drawn from various stakeholders. Each project must establish an IPT as soon as practicable after project initiation, although for some complex projects an IPT may be formed during the needs phase. The *Capability Development Stakeholder Group* (CDSG) is the formal means for obtaining senior-level stakeholder involvement in and commitment to capability development projects. The CDSG is chaired by the relevant CDG branch head during the requirements phase and includes one-star/SES Band 1 representation from the Capability Manager, DMO and relevant enabling groups. *Emerging Project Teams* (EPTs) are an embedded core group of DMO professionals within CDG. The EPT provides the project with access to specialist skills (including project management, commercial, engineering and logistics). EPTs provide a central point of contact for communication between CDG and DMO on issues relating to projects in the needs phase and First Pass approval stage.

248 CCDG Weekly Email, 2 March 2012.

4.38 During the audit, Defence made these changes to the major committees:

- it created a new board within the capability development process, the Project Initiation Review Board (PIRB); and
- it disbanded the ORC effective July 2012, with the members of this committee now included in the PIRB, and some of the ORC functions split between the PIRB and the DCC.

4.39 Defence has not changed the number of committees and boards with specific responsibilities in capability development. This has been observed by CDG staff, who made comments such as the following in the ANAO survey:

> It was announced that the number of committees would be reduced and greater accountability was required—this didn't happen. We still have the same number of committees and they still don't make decisions. [*CDG Deputy Director*].

> In effect, the Black Review sought to remove the paralysis that the Committee structure brings to the Capability Community, however I can safely say that we have created another new Committee (the Project Initiation Board) and reinvigorated [Capability Development Stakeholder Groups] and [Project Management Stakeholder Groups] since the Black Review was published. Further, the latter two bodies cannot decide a course of action, and must always refer any decisions to higher Committees, which of itself is an increased administrative burden [*CDG Sub-program director*].

Conclusion—continuing requirement for improved effectiveness of the capability development process

4.40 Capability development is inherently complex, and the process has been incrementally amended many times over the past decade to improve outcomes. That process is set down in the *Defence Capability Development Handbook* (DCDH), which Defence sees as an essential foundation for a consistent, rational process of capability development and, consequently, devotes considerable effort to maintaining.

4.41 Effective recordkeeping is a necessary element of sound public administration. The previous audit found that, notwithstanding the requirements of Defence's own guidance, CDG could not provide essential capability development documentation for projects examined in the audit. There has been a noteworthy improvement in this aspect of CDG's performance, with this audit identifying that Defence now generally produces and retains for each project the full capability development documentation

suite required. While improving its compliance with the extant guidance on the capability development process and this aspect of its recordkeeping, Defence has identified duplication in the document suite and opportunities for simplification. CDG is now progressing this matter under its program of continuous improvement, the Capability Development Improvement Program (CDIP), begun in early 2012.

4.42 Successive reviews have emphasised the importance of Defence ensuring that committees operate effectively, and that accountability in capability development is made clear. In this context, and following the release of the Black Review in January 2011, Defence had been considering a proposal to undertake a business process review of CDG to identify improvement opportunities. Originally, the review was to have been led by the Strategic Reform and Governance Executive (SRGE), but it has now been folded into CDG's internally-led CDIP. To derive the expected benefits from this business process review, it will be important that its conduct is accorded appropriate priority, and that the perspectives of stakeholders external to CDG are taken into account by the review.

4.43 Notwithstanding the ongoing efforts to refine the capability development process, it is also clear that further opportunities for improved effectiveness remain, as the committees, procedures and processes involved in capability development have continued to attract criticism, including from those whose work flows through the system. This has been identified in past reviews and in responses to the ANAO's April 2012 survey of CDG staff conducted as part of this audit. CDG is giving attention to these issues under its CDIP program. Sustained effort, including senior management attention, will be required to embed improvements to the capability development process—such as improved committee arrangements and performance, and streamlined processes and documentation.

5. Two-pass approval and the Defence Capability Plan

This chapter examines the relationship between Defence's capability systems lifecycle and two-pass approval. It considers the entry of projects into the DCP and assurance that the DCP is affordable.

The requirements phase and the DCP

5.1 The requirements phase of Defence's capability systems lifecycle is about Defence preparing options to fill the capability gaps identified in the preceding needs phase. These options are expected to form robust and timely proposals to government, usually centred on upgrading or buying new equipment.[249] To progress a major capability proposal, Defence must generally obtain government approval in a two-pass process, each approval allowing Defence to proceed to the next stage.[250] The primary objective of two-pass approval is to give government sufficient visibility of, and control over, capability development with enough information, and in good time, so it can make informed and deliberate decisions on each project.[251]

5.2 Project entry into the DCP is important, a matter considered by several major reviews. Approving the DCP and verifying its affordability are also important to sound procurement. This chapter considers:

- the structure and purpose of two-pass approval;
- the entry of projects into the DCP; and
- approval of the DCP and assurance that it is affordable.

The structure and purpose of two-pass approval

5.3 The Government first agreed to two-pass approval for Defence major capital equipment projects in June 2000, three years before the Kinnaird

249 The *2008 Audit of the Defence Budget* noted that strategy is not the only input into capability decisions, with short-term operational requirements and bottom-up gap analysis within the Services also leading to the earlier acquisition of capabilities that are not a long-term strategic priority.

250 Under the two-pass process, the Government may agree to more or fewer decision points for government, such as combined passes, intermediate passes and, in some cases, multiple second passes.

251 Defence, *Defence Capability Development Handbook*, December 2012, p. 8.

Review. This approach was part of a suite of reforms under the Acquisition Reform Program (ARP) described by the then Secretary of Defence as 'a comprehensive range of measures to enhance accountability; increase Government and industry involvement in capability development and acquisition planning.'[252]

5.4 Defence set out its new approach in its *Capability Systems Life Cycle Management Manual* (CSLCMM). The CSLCMM emphasised the need for Defence to engage government at critical stages during the requirements and acquisition phases of major capital acquisitions:

> During the Requirements phase this involves formal Government consideration of future capability on two occasions, known as the First Pass and the Second Pass, with the latter being the most important as it seeks Government approval to proceed with capital investment. The two-pass approach ensures that Government is able to exert early influence over the MCI [Major Capital Investment] Program.[253]

5.5 Under this arrangement, when the Government approves a project in principle at first pass, Defence can then progress that project with detailed analysis. This work, which could take time and require funding, may develop several options for government consideration at second pass. The CSLCMM also showed that an outcome of first-pass approval was that the project could then be included in the DCP.[254] Subject to approval at second pass, Defence can then acquire a specific 'solution' within a defined budget, schedule and performance level.

5.6 To gain first-pass approval, the CSLCMM required Defence to prepare a Capability Requirements Business Case, including details such as:

- the capability gap to be reduced;
- the proposed YOD [year of decision] and ISD [in service date];
- an estimate of the likely cost band;

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252 Secretary of the Department of Defence, 'Address to the Defence Watch Seminar, on 27 February 2001', Attachment B, 'The Defence Materiel Organisation and Acquisition Reform'. See:<http://www.defence.gov.au/media/SpeechTpl.cfm?CurrentId=538> [accessed 20 April 2012].

253 Defence, *Capability Systems Life Cycle Management Manual* 2002, Chapter 3, pp. 3–4.

254 Defence's 2002 CSLCMM states: 'First Pass seeks Government agreement to include the proposal in the early years of the DCP and the [Major Capital Investment] Program.' (Defence, *Capability Systems Life Cycle Management Manual 2002*, November 2002, Chapter 3, p. 4 and Annex A to Chapter 3.)

- a brief description of generic options for reducing the capability gap, including those options recommended for exclusion and those to be developed further;
- industry implications; and
- the planned date for the second pass to Government and the possible need for additional Government consideration.[255]

5.7 These requirements were cast in terms independent of solutions Defence might propose at second pass, such as particular platforms or equipment.

First-pass approval and DCP entry

5.8 The public version of the DCP, first released in 2001, declared its purpose as: 'to inform Australian defence industry about the Government's major capital investment intentions.' The DCP 2001 succeeds an earlier document, the 'Pink Book'. The DCP 2001, however, stated that it:

> provided an unparalleled level of detail about our planning for specific capability proposals—so that industry can contribute more effectively to Defence capability over the coming decade and beyond.[256]

5.9 When the Kinnaird Review (2003) considered capability development, it observed that first-pass approval, as envisaged by the CSLCMM, had been overtaken by development of the DCP. But some projects in the DCP were 'poorly defined, which, in those cases, [had] led to a high degree of cost risk.' The review's concern was that 'the result is that the DCP tends to be a collection of platform solutions that have not always been subjected to consistent and robust analysis and scrutiny.' However, once a project is in the public DCP, it rightly attracts industry support and otherwise gains authority and momentum, as it has been publicly identified as a Defence capability development priority.[257,258] Kinnaird then proposed a strengthening of two-pass approval. Consistent with the CSLCMM, first-pass approval would:

255 ibid.

256 Defence, DCP 2001, Foreword.

257 See, for example, the foreword to the Defence 2012 Public DCP, in which (p. i) the Minister for Defence describes the purpose of the DCP as 'to provide industry with guidance regarding Defence's capability development priorities'. Further, the Minister explained that the DCP contains 'those priority projects planned for either first or second pass approval over the four year Forward Estimates period.'

provide funding for the approved options to be fully analysed and developed prior to second-pass consideration by government. The capability gap, options for which have received first-pass approval, would form part of the DCP.[259]

5.10 In September 2003, the Government accepted Kinnaird Recommendation No.3 that it should mandate, and enforce via revised Cabinet rules, a rigorous two-pass system for new acquisitions, with government considerations dependent on comprehensive analyses of technology, cost (prime and whole-of-life) and schedule risks subjected to external verification. This decision led to a reference to two-pass approval being incorporated into the *Cabinet Handbook*, 'to provide a strong underpinning for the process [and] thus ensuring all proposals are considered using the same disciplined approach.'[260]

5.11 The important point to note here is that, under the proposal envisaged by Kinnaird, a project entering the DCP would receive the robust analysis and scrutiny he thought appropriate by the rigours of having been considered and agreed to at first-pass approval. Kinnaird envisaged that, in the longer term, the DCP would comprise two sections: the first listing capability gaps, options for which have achieved first-pass approval by government; and the second listing capabilities that have achieved second-pass approval but are not yet in contract (Kinnaird Review, p. 21). Thus it is clear that the Kinnaird Review envisaged that the DCP would comprise only projects that had at least been approved by government at first pass and thereby received robust analysis as a precondition to entering the DCP.

5.12 The Cabinet rules subsequently proposed to and agreed by the then Government introduced a model of two-pass approval which incorporated an additional element, beyond those envisaged in the Kinnaird Review or in the CSLCMM. This was a 'precondition' where the capability project being considered by Cabinet at first pass would relate to a capability need which had already been agreed to by government. Thus, a capability requirement would be subject to consideration by government on at least three occasions: agreement to the capability need, followed by first and second pass. In 2004,

258 In September 2013, Defence noted that: 'Governments do not make decisions lightly, so once a project is in the DCP, it is also reasonable to assume there are strong grounds to support the proposal. However, the Government can reconsider these grounds and make a decision to remove the project.'

259 Kinnaird Review, p. 15. See also Annex A to Chapter 1 of the 2002 CSLCMM.

260 Kinnaird Review, p. 13.

this model was incorporated in the Drafter's Guide associated with the *Cabinet Handbook*.[261]

5.13 The Defence *Annual Report* 2003–04 (p. 30) noted that:

> The 'two-pass' implementation process consists of three distinct stages and decision points for the Government: entry of projects into the Defence Capability Plan, and first pass and second pass approval.
>
> The acquisition cycle is initiated when Defence identifies a capability gap. Defence seeks the Government's approval to address the gap by inclusion of the proposal to meet the identified gap in the Defence Capability Plan ...

5.14 This process has the effect of placing DCP entry before the analysis and scrutiny of first-pass approval, and creates a risk that sufficient analysis might not be done before that entry takes place, albeit through government approval of an edition of the DCP.

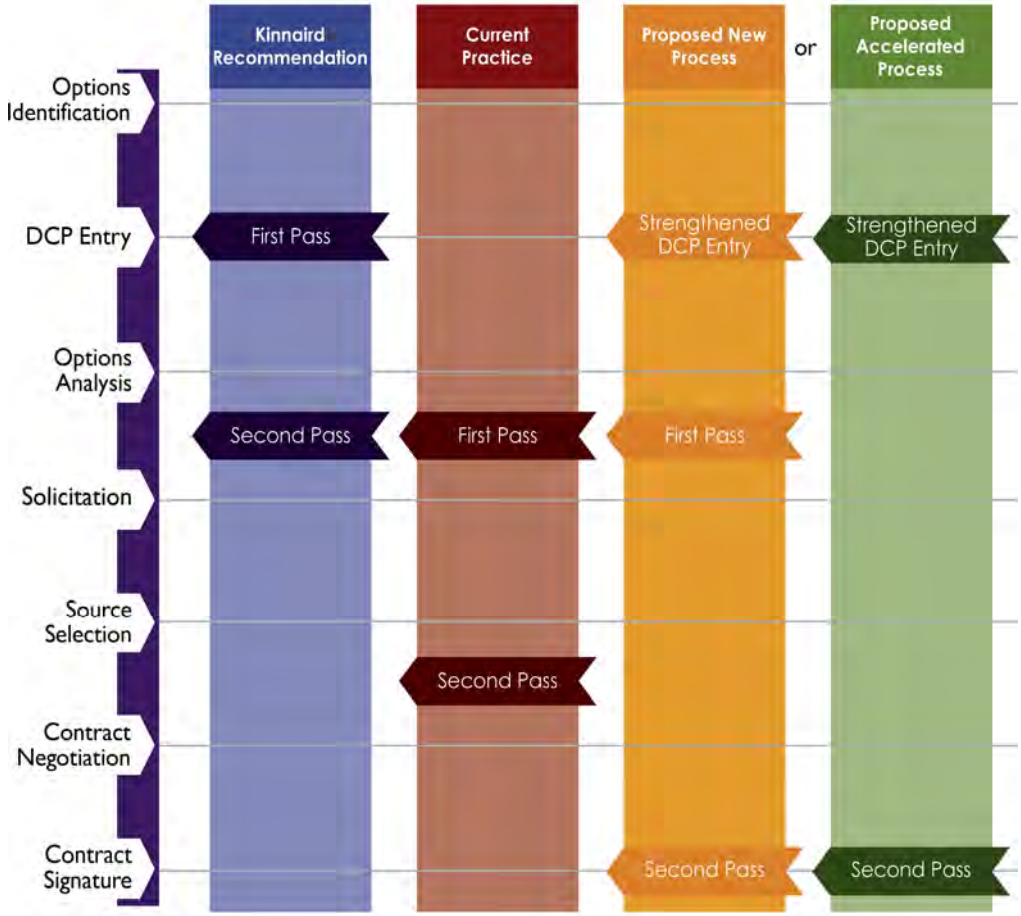
Change in Government approval points

5.15 The CSLCMM and the Kinnaird Review had both envisaged that first-pass approval should precede entry of a project into the DCP and, moreover, draw on analyses of costs, schedule and risks that should accompany that approval. In practice, under the procedures agreed by government, Defence seeks first-pass approval from government after DCP entry. The analysis that supports first pass also occurs after DCP entry (see Figure 5.1 below, first two columns).

261 The Cabinet Handbook was amended in March 2004 and thereafter incorporated a section dedicated to Defence procurement (*Section 8: Defence Procurement—Rules for Submissions and Memoranda*). This material was transferred in later editions of the Cabinet Handbook to the associated *Drafter's Guide*, (Attachment G). However, the wording of the requirement was unchanged. The Drafter's Guide has now been replaced by the Cabinet Manual (June 2013).

Figure 5.1: Mortimer's view of timing points for first-pass and second-pass approval

Note: The first column below represents Kinnaird's recommendation, where DCP entry is enabled by first-pass approval. 'Current Practice' in the second column represents the position as implemented by Defence and current at the time of the Mortimer Review, in 2008. 'Proposed processes' are those proposed by Mortimer.



Source: Mortimer Review, p. 14.

5.16 The Mortimer Review drew attention to this in 2008:

> Over time, the two-pass process proposed by the Kinnaird Review has evolved. Firstly and most significantly, DCP entry is now separate and distinct from first-pass approval.[262]

5.17 The analysis above shows that the process had not so much evolved: rather, it had taken a different form from that recommended by Kinnaird and

262 Mortimer Review, p. 11.

proposed by Defence to government when government was considering the Kinnaird Review recommendations. Capability development then became, in effect, a three-pass process, with a preliminary pass when government considers a DCP or any revisions to the DCP.[263]

Consequences of early DCP entry

5.18 A major reason for introducing two-pass approval was to give government better control over major capital acquisitions. Nominally, the DCP comprises projects that are considered 'unapproved' at an individual level; the plan is indicative or 'planned for government consideration'. While the government of the day approves the DCP, formal approval for specific projects still takes place at the subsequent first and second passes. There remains the question of whether the analytical work envisaged by Kinnaird is done before DCP entry.

5.19 The content of the DCP shapes the profile of future major capital proposals to government and, in turn, shapes the cost and capability profile of Defence for decades to come. A project's entry into the DCP is also its launching point into the requirements phase of the capability development lifecycle. Once the project has entered the DCP it attracts status. Entry into the public DCP also creates industry expectations, as it is intended to, further complicating any decision not to proceed with a project in the public DCP. This helps to give a project momentum, which will often be sustained by those with an interest in it, both within Defence and in industry.

5.20 An example of an enduring consequence of DCP entry flows from the cost estimates that accompany that entry. CDG's P3M3 review in late 2011 found:

> Cost is perceived to be fixed at DCP entry (with little rigour around the generation of this estimate), schedule is generally constrained and capability is optimised to fit within the other two parameters described in the DCP. This potentially leads to sub optimal solutions being delivered.[264]

263 The DCDH acknowledges this, referring to the Government's approval of the DCP: 'The DCP is prepared by CDG ... and approved by the National Security Committee of Cabinet (NSC). [DCIC] will endorse the capability proposals and recommend any changes to the DCP before it is provided to Government for approval. Defence capability committees may endorse proposed changes to the DCP, but they are not given effect until they are approved by the Government.' (December 2012, p. 8, paragraph 1.5.4.)

264 Defence, Capability Development Group, P3M3 Assessment Findings, August 2011, p. 15.

5.21 Defence has stated (July 2013) that expected project costs are updated in annual DCP updates.[265] However, to the extent that cost is perceived as fixed, there is a risk of ongoing reliance on the DCP estimates because they may not have been rigorous, as the P3M3 review found[266], or cannot be expected to be accurate at this point in the project, as Defence has stated.

5.22 These dynamics highlight the importance of entry of a project into the DCP, government approval of each DCP update and tailoring of two-pass approval itself. This is particularly important given the government expectation that the budget provision made at the time of publication of the DCP is 'the best available information at that time'[267] while also recognising that the DCP will often rely on cost estimates drawn from like projects, as a specific capability solution may not have been developed.

Strengthened DCP entry recommended

5.23 Both the Kinnaird and Mortimer Reviews stressed the importance of applying rigour to a project's entry into the DCP.[268] Mortimer emphasised that initial entry warrants close attention because 'there are always more capability gaps to be filled than available resources can meet.'[269] The Mortimer Review recommended that DCP entry be strengthened, with more rigorous analysis applied to the entry of projects (Recommendation 1.2):

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265 Defence has also stated as follows (September 2013): 'To allow forward planning of the DCP, at DCP entry, it is typical to base the DCP entry cost estimate on an exemplar capability solution. This exemplar is not in itself a formal capability option.

'Options are developed post-DCP entry. From DCP entry to the Government's consideration at first pass, CDG develops a set of options, with each option the subject of an Initial Business Case (IBC). As the options are developed, the cost estimate evolves. As the cost estimate evolves, the DCP provision may vary (i.e. the DCP entry cost estimate is not always the same figure in the DCP as the project evolves).

'When the project is considered by the Government at first pass, the expected costs for each option are evaluated by the Government against the then DCP provision. The Government selects the options it wants developed for second pass consideration and during the first-to-second pass activities, the cost estimate for the project continues to evolve. As the quality of the cost estimate matures, the annual DCP updates provide an opportunity for updating the project's DCP provision, both in the overall amount and also in the expected mix of foreign currency expenditure and the likely phasing of this expenditure. None of this information is available with any degree of accuracy at DCP entry nor should such accuracy be expected.'

266 As discussed in paragraph 2.48, the 2012 DCP highlighted the role of the P3M3 review in capability development management reform.

267 Defence, DCP 2012, p. 2.

268 Defence has noted (July 2013) that the White Paper and Force Structure Review processes also contribute heavily to entry into the DCP.

269 Mortimer Review, p. 4.

> Defence should increase the rigour with which projects are assessed for entry into the Defence Capability Plan. Capability Development Group should develop the relevant information for a project's entry into the Defence Capability Plan and it should focus on achieving more disciplined cost, schedule and risk information for a project's entry. The information provided to Government should allow an informed decision on a project's suitability for entering the Defence Capability Plan.[270]

5.24 More robust DCP entry could then permit a tailored two-pass approval by allowing government to decide whether, based on cost and complexity, a project needs one, two or more subsequent approvals.

5.25 This was further supported by Mortimer Recommendation 2.4:

> Prior to a project's entry into the [DCP], [CDG] should prepare a capability submission that addresses the capability required along with the initial data relating to cost, schedule and risk. The cost, schedule and risk information would be developed by the relevant expert—DMO for military equipment estimates and appropriate Defence Groups for all other inputs to capability.[271]

5.26 In May 2009, the Government agreed, in response to Mortimer Recommendation 1.2, that more rigour must be applied to cost, schedule and risk information for proposals entering the DCP, and that Defence would 'improve early scoping' of cost, schedule and risk information on projects to be included in the DCP.[272] It also agreed to Recommendation 2.4, stating that 'We understand that the purpose of this submission would be to put more discipline, rigour and an accountability framework around Defence's internal consideration of capability proposals and the entry of the project to the DCP.'

5.27 Defence was to establish an internal 'tiger team' (project team) to consider how to improve performance in this area, with initial results to be reported to the Government by the end of the second quarter of 2009. Defence gave CCDG the lead on the implementation of this recommendation. However, it was only towards the end of 2009 that the Mortimer Review Implementation Governance Committee (MRIGC), the senior committee responsible for overseeing implementation of the Mortimer reforms, first met.

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270 Mortimer Review, p. 5.

271 Mortimer Review, p. 19.

272 Defence, *The Response to the Report of the Defence Procurement and Sustainment Review*, May 2009, p. 18.

Progress with the recommendation to improve rigour at DCP entry

5.28 In February 2010, MRIGC concluded that Mortimer Recommendation 2.4 ('More rigorous project submission to support entry into DCP') had been completed in terms of process (but not outcomes). It reached a similar conclusion for Mortimer Recommendation 1.2 ('Increased rigour for project entry to DCP') in September 2011.

5.29 The MRIGC had identified desired outcomes for each Mortimer Review recommendation and, for Recommendation 1.2, that outcome was to 'ensure that sufficient information (cost, schedule and risk estimates) is provided to Government to allow it to determine whether a project enters the DCP.' In some circumstances, where sufficient information was available, 'this should be provided to allow the Government to agree to tailor the approval process if the project is less complex or supporting information is mature.'[273]

5.30 Although the report from the 'tiger team' had been submitted to the CCDG in 2010, as at November 2011, CDG was 'developing a number of proposals to progress this task'.[274] In outcome terms, action was reported as still 'underway and progressing' and remained so in July 2013.

5.31 The delay in completing this action may have consequences for projects that have been commencing recently. This is indicated, for example, from the Government response to the Senate Foreign Affairs, Defence and Trade References Committee's 2012 report *Procurement procedures for Defence capital projects*, where it responded to the recommendation that Gate Reviews be mandatory at DCP entry.[275] It went on to say, in its response:

> However, Gate Reviews have not been held for 'DCP Entry' as there is currently no clear milestone for this event and at that point there is often little for [DMO] to review.[276]

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273 Defence, Status Summary of Mortimer Reforms, Status at 7 Sep 2011 (paper provided to MRIGC for its meeting of 20 September 2011).

274 MRIGC, Progress Report on Implementation of Mortimer Reforms, as at 16 November 2011, p. 12. The proposals included a DCP Review. However, contrary to the MRIGC's expectations, the CDG DCP Review did not address the question of how projects enter the DCP or the timing of that process with respect to government approval. The DCP Review is mentioned further, below, on the topic of the affordability of the DCP at paragraph 5.52 forward.

275 Senate Foreign Affairs, Defence and Trade References Committee, *Procurement procedures for Defence capital projects*, 2012, paragraph 10.77, p. 163.

276 See:<http://www.minister.defence.gov.au/2012/10/16/minister-for-defence-and-minister-for-defence-materiel-response-to-senate-inquiry-into-defence-procurement/> [accessed 16 October 2012].

5.32 Defence subsequently informed the ANAO (January 2013) that 'there is insufficient detailed and accurate and detailed information at DCP entry to warrant (or enable) a Gate Review. It is unreasonable to expect a Gate Review to be conducted at DCP entry.' However, if there is insufficient information available to allow a Gate Review to proceed, then this must place in doubt whether the project has been thought through sufficiently to warrant its being entered into the DCP.

5.33 If, on the other hand, the rigour intended by Mortimer were being applied to cost, schedule and risk information for proposals entering the DCP, then it is reasonable to expect there would also be material of substance for Gate Reviews to consider. This would provide government with greater assurance that projects proposed for the DCP were soundly based.

5.34 In September 2013, Defence reported that its Capability Development and Materiel Reform Committee had closed the two Mortimer recommendations (1.2 and 2.4) by outcome at its meeting of 27 August 2013.

DCP approval

5.35 Successive governments have reaffirmed the requirement that the DCP should be brought before Cabinet for consideration. This requirement is documented in Defence's DCDH.[277] Within Defence, CDG is responsible for 'obtaining government approval of the DCP and associated projects.'[278] The last DCP formally presented to and approved by the Government was the 2009–19 DCP, which supported the 2009 White Paper.[279] This was released in a public edition in July 2009, updated twice in 2010 and was further revised in 2011. A new edition was published in July 2012. Defence has also published additional on-line supplements.

5.36 Defence informed the ANAO that, after the 2009–19 DCP, individual project proposals not listed in that DCP have been submitted to government as

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277 'The DCP is prepared by CDG, in consultation with other Defence Services and Groups, and approved by the National Security Committee of Cabinet (NSC). The Defence Capability Investment Committee (DCIC) will endorse the capability proposals and recommend any changes to the DCP before it is provided to Government. Defence capability committees may endorse proposed changes to the DCP, but they are not given effect until they are approved by the Government.' Source: *Defence Capability Development Handbook*, December 2012, p. 8, paragraph 1.5.4.

278 *Defence Capability Development Handbook*, December 2012, p. 13, paragraph 1.6.6.

279 Defence advice to ANAO of 11 January 2013. It also advised that updates to the DCP have been developed each financial year and, other than in 2011—when a comprehensive review of the DCP was undertaken and provided separately to the Minister—the DCP update supports the annual Defence budget considerations.

New Policy Proposals (NPPs).[280] Defence's view is that this should keep government fully informed of the implications of each project proposal.

5.37 Nevertheless, the Agendum paper put to Defence's Capability Development and Materiel Reform Committee in November 2012 (sponsored by the Deputy CEO DMO) shows both of the Mortimer Review recommendations related to strengthening project entry to the DCP[281] as requiring 'further evidence' before a view could be formed that they had achieved the intended outcome.

5.38 It remains unclear whether adequate improvements to the robustness of processes surrounding the entry of projects into the DCP, as recommended by Mortimer, have in fact been achieved, potentially detracting from the effectiveness of the capability development process that follows.

Tailoring the two-pass process to specific projects

5.39 The Mortimer Review also recommended that the two-pass process be tailored to the specific project (Recommendation 2.1). For example, the approval process might be abbreviated with a 'combined pass' approval by government. This opportunity could flow from more robust DCP entry (see paragraph 5.24, above). The review envisaged that, the more detail put into the definition of a project upon DCP entry, the more likely it could be prudently approved in a shortened process:

> Upon entry into the DCP, Government should decide how the project should proceed, on advice from Defence, through the two-pass process. Where uncertainty arises, the standard two-pass approach should be the default.[282]

5.40 The Government agreed, with the qualification that Defence 'will develop appropriate measures to ensure that two-pass process is used for complex and costly procurement tasks and explore options to speed

280 Defence advised (July 2013) that a New Policy Proposal (NPP) is not needed for a capability proposal if the proposal refers to a DCP project listed in the extant government-approved DCP. As per normal two-pass requirements, the DCP project proceeds to the National Security Committee (NSC) of Cabinet for consideration or for Ministerial consideration for projects less than $100 million. If a capability proposal is not listed in the approved DCP and the proposal has the Minister's support, the Minister will sponsor an NPP for Expenditure Review Committee (ERC) consideration. If approved by the ERC, the proposal would then proceed for NSC consideration or for Ministerial consideration for projects less than $100 million.

281 The two recommendations were Recommendation 1.2 (see para. 5.23) and Recommendation 2.4 (see para. 5.25).

282 Mortimer Review, p. 15.

decision-making on less complex procurements.'[283] This has become known as 'tailoring' of the approval process.[284]

Progress of tailored two-pass

5.41 MRIGC records show that the committee assessed in February 2010 that Mortimer Recommendation 2.1 was complete 'by process'. This was on the basis that the process was described in the Interim DCDH.[285]

5.42 In outcome terms, MRIGC records (November 2011) show that:

> CCDG plans to improve quality through the discipline of a standardised process. While tailoring of the process is an option, the move to standardisation will inherently produce less tailoring.

5.43 The implication is that the degree of tailoring of processes can be expected to reduce. This leaves the status of implementation of the Mortimer recommendation unclear. Moreover, these recommendations cannot properly be considered individually but, as indicated by Mortimer, need to be considered together. This is because tailoring of the approval process to a more abbreviated structure (combined pass) by government depends on more rigorous DCP entry being achieved.[286] In July 2013, Defence informed the

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283 Defence, *The Response to the Report of the Defence Procurement and Sustainment Review*, May 2009, p. 20. The implementation plan (version 1, 30 October 2009) for the Capability Development Stream of Defence's Strategic Reform Program allocates responsibility for action on this recommendation to the Director-General Capability Planning within CDG 'for process' and to the Assistant Secretary Investment Analysis Branch within CDG 'for implementation' (Defence, Strategic Reform Program Capability Development Stream Implementation Plan, Version 1.0, 30 October 2009, p. 11).

284 Defence has pointed out (July 2009) that at times, there is a balance point between Defence's understanding of the likely solutions and the risk inherent in projects, and Defence's ability to make this kind of judgment at DCP entry. Sometimes, not enough is known at DCP Entry to be assured that tailoring of the process at this very early stage will not result in losing the ability to present a fully examined set of options at first pass. The risk remains that if tailoring of the process is applied too early, this will drive the solution for the project, and that will result in limitations on the option set that can be examined and presented to government.

285 Reference to tailoring the process appears in the Interim DCDH of March 2010 (paragraph 3.50 forward) and in subsequent editions. This is discussed in a Defence answer to a question on notice by Senator Johnston at Senate Budget Estimates on 28–9 May 2012. That discussion explains the rules set out in the DCDH and the origin of the tailoring in the Mortimer Review. However, it does not comment on Defence progress with the use of the procedure. (Question 253: Defence Procurement Guidelines. See: <http://www.aph.gov.au/Parliamentary_Business/Committees/Senate_Committees?url=fadt_ctte/estimates/bud_1213/def/Department-of-Defence/defencegonsindex.htm> [accessed 17 October 2012].

286 Defence has advised (July 2013) that the level of tailoring may reduce the amount of process. Tailoring necessarily must be applied project by project. For less complex projects this may mean tailoring the process to a Combined Pass approach. For more complex projects, it may mean the introduction of further passes to seek additional guidance from Government.

ANAO that it regarded Recommendation 2.1 on tailoring of the approval process to remain 'open' by outcome.

Providing assurance of the affordability of the DCP

Reviews cast doubt on the affordability of the DCP

5.44 Defence has been aware for some time of a potential shortfall of some billions of dollars in the additional personnel and operating costs for projects in the DCP. In 2008, an interdepartmental review found that Defence's estimates of its operating costs were not accurate, leading to an accumulating shortfall in funding of some billions of dollars over the decade to 2018.[287]

5.45 Similarly, the *2008 Audit of the Defence Budget* (Pappas Review) found limitations in the cost estimate data that underpins the DCP. That Review found deficiencies in Defence's capacity to produce reliable cost estimates for major capabilities including:

- no mandated approach or official guidance on the methodology;
- no consistent business processes in place to guide the collection of cost information from across the organisation; and
- insufficient oversight of cost estimates as they progress.[288]

5.46 The Pappas Review found that, as well as methodological problems, accurate calculations of additional personnel and operating costs for new capabilities are compromised because:

- the full direct operating costs of current capabilities are not well understood; and
- Defence measurement systems cannot readily provide consistent, reliable or complete information on the operating cost of current capabilities.

5.47 The review noted that 'incomplete cost information about current capabilities prevents fact-based estimates of future operating costs'.[289] At the time of the Pappas Review, the consequence of these findings for the many

287 Defence has stated (July 2013) that 'the NPOC [net personnel and operating costs] requirement for the 2013 DCP [*not yet published*] is 'affordable against the DCP's current funding guidance.' NPOC and related issues are discussed in Chapter 7, *Preparing whole-of-life cost estimates*.

288 Pappas Review, April 2009, p. 60.

289 ibid., p. 69.

projects that may already have been approved on the basis of costings generated from deficient cost models was unclear.

Mortimer proposed that Defence CFO assure DCP affordability

5.48 To support the strengthened entry requirements for projects in the DCP, Mortimer proposed that Defence's Chief Finance Officer (CFO) should be responsible for assuring the affordability of the DCP. This should include personnel and operating costs and be achieved through an audit of the estimates in the DCP. Specifically, the Mortimer Review recommended (Recommendation 1.3):

> The Defence Chief Finance Officer should assure the affordability of the Defence Capability Plan, including its impact on future personnel and operating costs, as part of the annual Defence budget considerations. To achieve this, the Defence Chief Finance Officer would audit the cost and schedule estimations within the Defence Capability Plan as developed by Capability Development Group to ensure they are as practical and as accurate as possible.[290]

5.49 The Government agreed to this recommendation, but also indicated the way in which it would carry this out:

> A statement will be developed by CFO and made in each Defence Capability Plan (DCP) jointly signed by the CEO DMO, CCDG and CFO, which agrees that the accumulation of projects (and their future operating costs) are affordable and achievable within forecast budget guidance given by Government. Such a statement would demonstrate that appropriate oversight has been provided to the DCP by all the relevant areas in Defence.[291]

Progress with providing assurance of affordability

5.50 As with other Mortimer recommendations, the MRIGC oversaw progress. It concluded at its February 2010 meeting that the recommendation had been completed, assessed in terms of 'process'.[292] This is taken to mean that a mechanism to provide assurance was now in place. However, the

290 Mortimer Review, pp. 6–7.

291 MRIGC, Progress Report on Implementation of Mortimer Reforms, 12 February 2010, p. 14. A further related commitment was made by the Government in its 2009 Defence White Paper: 'In the year prior to development and release of a White Paper ... an independent audit update will review the affordability of current and proposed expenditure plans, review performance on all reform activities and identify opportunities for further productivity improvements.'

292 MRIGC, loc. cit.

desired outcome was that 'when Defence seeks Government approval of a DCP, it should provide an assurance that the proposed DCP (and its future operating costs) is affordable and achievable within forecast budget guidance given by Government.' As Pappas had pointed out, the inclusion of future operating costs is important in the proper costing of a capability.

5.51 Progress by outcome in November 2011 was reported to MRIGC as 'work underway and progressing' and the current status as 'need to ensure this statement of affordability is included in future DCPs.'[293] Given that work was still considered underway, this reflects a view that the recommendation had not been achieved in respect of any DCP (or update) published to that time.

2011 DCP Review identified deficiencies in cost models

5.52 The DCP Review, completed in December 2011, found the data supporting management of the DCP to have multiple deficiencies. Project cost models suffered from inaccuracies (calculation errors), lack of traceability (insufficient documentation of assumptions), incompleteness (missing cost elements), and lack of currency (cost models not updated). Similar difficulties beset scheduling in the Forward Work Program (which underpins the DCP), with an estimated 80 per cent of schedule changes due to internal factors.[294]

5.53 The DCP Review sought to address, at least at a high level, the problems of the quality, consistency and documentation of cost models. Defence concluded that it had done sufficient work so that the amended cost models were of adequate quality to seek approval of an updated DCP. This, however, relates only to capital costs, and further work was required to address matters the review could not resolve. Two areas it identified as needing more work before the next iteration of the DCP, then due in late 2012, were:

- refinement and assurance of underlying cost models; and
- analysis, understanding and remediation of net personnel and operating cost (NPOC) estimates.[295]

5.54 However, in January 2013, Defence informed the ANAO that it has not undertaken the analysis and remediation of personnel and operating cost

293 MRIGC, Progress Report on Implementation of Mortimer Reforms, 16 November 2011, p. 13.

294 The DCP Review found the remaining 20 per cent could be attributed to external factors such as industry capacity.

295 Net Personnel and Operating costs are discussed in Chapter 7.

estimates because of higher-priority work.[296] Further, Defence informed the ANAO in July 2013 that:

> The process of refining and improving cost estimates is ongoing. It is also an inherent feature of the two pass process. At DCP entry cost estimates are rudimentary, based on open-source material and heavily reliant upon assumptions. At first pass, options are more fully scoped, and some initial industry data supports the costs. At second pass, the estimate is of a high quality based off industry tender data and other high quality sources. The problem the DCP review identified continues today as at various points in time estimates are in one of these three states, with the majority at DCP entry standard. However, the fundamental point being raised by the DCP Review related to the difficulties in estimating NPOC, which relies upon an estimate of [Future Personnel and Operating Costs] which is inherently difficult. This is because of uncertainties about solutions, technology, schedule, support concepts and so on, and the extensive time periods involved. The estimates must often be developed taking into account requirements some 20 to 30 years into the future, and in some cases far beyond that. Hence, assumptions must be made and this inherently brings uncertainty into the estimates as well. While such inherent issues remain, it will remain a difficult task to estimate future NPOC needs.

5.55 Defence also informed the ANAO that, in June 2012, CDG staff reviewed all cost estimates that had been supplied in support of the 2012 DCP update. That review found a substantial number of errors in the supporting cost estimates. For example, in the case of a tranche of 40 projects examined by one reviewer, some $746 million of corrections (including both capital and NPOC) were required.[297] However, there were also errors whose financial consequences could not immediately be quantified in the review. The reviewer also noted that 'there is little supporting evidence behind quite a few of the estimates.' Another reviewer stated, after examining some 22 projects, that cost models for four projects had not been provided and:

> the 'story' told in the capability summary and basis of cost estimate sheets [is], in some cases, incomplete and inconsistent with spend spread then shown in the following options. No references to data source or cost sources [have] been completed, which makes the story difficult to understand or justify.

296 Defence did complete a more limited review of Net Personnel and Operating Cost estimates for projects expected to require NPOC funding in 2012–13. This identified a $9 million shortfall.

297 This is a net upwards correction, meaning additional funds of $746 million would be required.

Assurance of affordability is neither clear nor confident

5.56 The ANAO considered the statements of affordability included in the 2009 public DCP (similar statements appear in later editions):

> The Defence Chief Finance Officer, the [CCDG] and the [CEO DMO] deem that the provisions for the individual projects in this DCP 2009 are appropriate for planning. Discounting for the over-programming mentioned above, the DCP 2009 expenditures expected over the next four years covered by this DCP are judged as affordable within Defence's portfolio allocations.[298]

5.57 It is not likely that these statements provide the level of assurance intended by Recommendation 1.3 of the Mortimer Review:

- First, the choice of the word 'deem' is unusual and undefined, providing no insight as to the nature of any investigation or process leading to the conclusion offered. In particular, the statement makes no reference to any audit, as recommended by the Mortimer Review, nor to any other enquiries or assurance work carried out by Defence to support these statements of affordability made collectively by Defence CFO, CCDG and CEO DMO. The findings of the Pappas Review (see paragraph 5.45) provide additional reasons to address Mortimer's recommendation.
  - CDG has undertaken relevant work in the form of the DCP Review following a direction from the Minister for Defence. This indicates that the then proposed DCP 2013–22 is under-programmed (that is, within the expected funding) over the decade. Nevertheless, some of the information presented in the DCP Review raises uncertainty as to the robustness of the costs (see paragraphs 5.52 – 5.55, above).
- Second, the recommendation clearly stated that the assurance would encompass not only the acquisition cost estimates in the DCP but also the future personnel and operating costs. These costs are usually far greater in the long term than the acquisition costs.
  - The statements in the public DCPs refer to 'provisions for the individual projects in this DCP'. On the face of it, this includes the capital or acquisition costs (which are set out in the public

298 Defence, *2009 Defence Capability Plan*, July 2009, p. 1.

DCP, albeit in cost bands). It is uncertain whether the statements of affordability about 'the DCP expenditures expected over the period covered by this DCP' also encompass expected future personnel and operating costs (which are not set out in the public DCP).

DCP reform announced—July 2012

5.58 On 2 July 2012, the then Minister announced a restructure of the DCP involving splitting the DCP into two distinct documents:

> Based on Defence industry feedback, future public versions of the DCP will contain those priority projects planned for either first or second-pass approval over the four-year Forward Estimates period. The purpose of this reform is to align the DCP with the four-year Forward Estimates period in the Budget and provide greater certainty for industry.
>
> As the public DCP will include only those projects approaching either first pass or second pass in the four-year Forward Estimates period, it will be a much more reliable guide of the Government's priorities for investment in [ADF] capability.
>
> A new document to complement the public DCP, the Defence Capability Guide (DCG), will provide general guidance for industry on projects over the six-year period following the four years of the DCP.
>
> A new public DCP and DCG will be published this quarter. It is proposed that future publications be aligned with the Annual Defence Budget, with subsequent six monthly updates.[299]

5.59 There were shortcomings in the underlying DCP data identified in the 2011 DCP Review and earlier reviews and audits. It is not clear whether or how these have been addressed so as to enable Defence to reform the DCP in the six months to mid-2012 and produce a DCP that is both based on reliable cost estimates and is affordable and realistic.

299 Minister for Defence and Minister for Defence Materiel, Joint Media Release, *Defence Capability Plan Reform*, 2 July 2012, available from: <http://www.minister.defence.gov.au/2012/07/02/minister-for-defence-and-minister-for-defence-materiel-joint-media-release-defence-capability-plan-reform/> [accessed 3 July 2012].

Further progress with Mortimer Recommendation 1.3 on DCP affordability

5.60 Internally, in late November 2012, Defence's Capability Development and Materiel Reform Committee considered progress in the implementation of Mortimer Recommendation 1.3 about DCP affordability (see paragraph 5.48 forward). The Committee assessed that there was insufficient evidence to close this recommendation by outcome. This remained the status in July 2013. The Defence CFO advised the Committee that he would:

> provide evidence to close recommendation 1.3. He advised that it was not practicable to provide an audit function ... [but] he could demonstrate his role in assuring affordability of the DCP to Government.[300]

5.61 Defence informed the ANAO that the Defence CFO assurance of affordability for the DCP and its subsequent updates is provided in submissions to government, addressing the full (classified) DCP, not the public one. However, in the example Defence provided, the relevant statement did not assure affordability; rather, it asserted that the DCP in its current state is unaffordable in the decade. Notwithstanding this, the DCP was assessed as affordable in the forward estimates, subject to a lengthy list of qualifications.

Conclusion—slow progress in strengthening the DCP entry process for projects

5.62 One of the primary purposes of the two-pass system was to give government better and earlier control over Defence capability development and the major projects that emerge from that process. Because of the way in which two-pass approval has been implemented, a third preliminary approval step has been introduced. This step, which was set out in the revised Cabinet rules proposed to and agreed by the then Government in response to the 2003 Kinnaird Review, required government approval of a capability need (and inclusion of a project in the DCP) to occur as a pre-condition to entering the two-pass process.

5.63 Major reviews from the Kinnaird Review forward have consistently emphasised the need for more robust analysis to take place before projects are entered into the DCP, not least because a project attracts authority and momentum when it appears in the DCP, as it has been publicly identified as a

300 Capability Development and Materiel Reform Committee, Outcomes, 27 November 2012.

Defence capability development priority. Entry into the DCP of a project for which limited analysis has been undertaken is attended by risk, which may be increasingly difficult to avoid as a project progresses. Two Mortimer recommendations intended to address this risk were agreed by government. They were a recommendation to strengthen the DCP entry process, and a recommendation for the preparation, before a project's entry into the DCP, of a capability submission addressing the capability required, along with initial data relating to cost, schedule and risk. Reported progress in achieving these reforms has been slow, with Defence advising that its Capability Development and Materiel Reform Committee had closed the two Mortimer recommendations by outcome in August 2013, during the audit.

5.64 In the longer term, personnel and operating costs generally exceed the initial equipment acquisition costs, and it will remain difficult to attain adequate assurance of DCP affordability as envisaged by Mortimer until these can be more reliably estimated and taken into account. Defence's 2011 DCP Review found that the then proposed DCP 2013–22 was under-programmed (that is, it was forecast to require no more than the expected funding) over the decade. However, it also stated that more work was required on personnel and operating costs. This work has not yet been done, and this remains a constraint on the assurance that can be provided by Defence on the affordability of the DCP.

Recommendation No.2

5.65 To improve the rigour of its assessment of capability development proposals before it recommends to the Government that they be included in the Defence Capability Plan, the ANAO recommends that Defence:

(i) review its current processes against the recommendations made by the Kinnaird Review, and the strengthened DCP entry process subsequently recommended by the Mortimer Review and agreed by the Government in 2003 and 2009 respectively;

(ii) undertake sufficient preliminary work on each proposal to inform a rigorous assessment (akin to a Gate Review) of the viability of the capability proposal and the likely reliability of the estimates of cost, schedule and risk; and

(iii) ensure that, subsequent to DCP entry, the scope of projects and estimations of cost, risk, and schedule continue to be reviewed and assessed as the project is further defined and developed for project initiation; and Government approval sought for any changes to the scope of the project, should it be required.

Defence response: *Agreed*.

Part 3: Improving advice to government when seeking approval

To assess Defence's implementation of capability development reforms relating to advice it provides to government when seeking approval for projects, the audit considered a range of recommendations, agreed by government, that were directed at improving that advice:

- *assessing technical risk (Chapter 6);*
- *preparing and advising on whole-of-life cost estimates (Chapter 7);*
- *obtaining external verification of cost estimates (Chapter 8);*
- *including off-the-shelf options in advice to government (Chapter 9); and*
- *CEO DMO providing independent advice to government (Chapter 10).*

6. Assessing technical risk

This chapter is the first of several examining how Defence advises government when putting forward capability development proposals under the two-pass process. It provides an introduction to the subject and addresses the first topic, technical risk.

Recommendations from Kinnaird and Mortimer

6.1 Capability development decisions have long-term consequences for Defence's ability to meet national strategic requirements, the priorities and activities of the Defence organisation, the allocation of public resources through the Commonwealth budget, and investment decisions by industry and other jurisdictions. Those financial resources include both initial capital expenditure and ongoing support and personnel costs.

6.2 Currently, new Defence major capital equipment projects with an estimated cost of over $100 million require the approval of the National Security Committee (NSC) of Cabinet. When seeking government approval for its capability development proposals, Defence must provide clear and accurate advice. This should include comprehensive analyses of technology, cost and schedule risks to support ministers' consideration of those decisions.

Kinnaird Review proposed to strengthen two-pass approval

6.3 As previously mentioned (paragraph 5.3), the Kinnaird Review found that government approval of Defence capability development proposals followed a system of two mandated passes. However, it also found that Defence's implementation of two-pass approval was 'notional': it lacked rigour and discipline. One of the review's central recommendations proposed strengthening the two-pass system:

> Government should mandate, and enforce via revised Cabinet rules, a rigorous two-pass system for new acquisitions with government considerations dependent on comprehensive analyses of technology, cost (prime and whole-of-life) and schedule risks subjected to external verification.[301]

6.4 A prominent feature of the proposed approach was 'mandatory review and external verification.' According to the review, the Defence Science and Technology Organisation and the Department of Finance should be involved

301 Kinnaird Review, Recommendation 3, p. 20.

much earlier in capability development proposals, to provide independent advice on technical risk and costs, respectively. It proposed this be implemented—and enforced—by revised Cabinet rules.

6.5 The Government agreed to this recommendation, and the Department of the Prime Minister and Cabinet (PM&C) amended the *Cabinet Handbook* in March 2004 to include two-pass approval.[302] The Handbook was reissued in July 2009, and this was the edition applicable to the submissions examined in this audit.[303]

Mortimer Review proposed further advice be given to government

6.6 The 2008 Mortimer Review (viewed by Defence as an extension of Kinnaird) added further recommendations affecting advice to government on capability proposals.[304] These recommendations, which government accepted, related to the inclusion of OTS solutions in options put to government and the provision of independent advice by the CEO DMO to government.

Matters considered in current audit

6.7 To assess Defence's implementation of capability development reforms relating to advice it provides to government, the audit considered:

(1) assessment of technical risk (remainder of this chapter);

(2) use of whole-of-life cost estimates (Chapter 7). This discussion includes analysis of Defence's use of NPOC—net personnel and operating costs, a concept often used in capability development submissions;

(3) external verification of cost (Chapter 8). The Kinnaird Review expected this would be done by Finance;

(4) inclusion of OTS options among those put to government (Chapter 9); and

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302 PM&C, *Cabinet Handbook*, Fifth Edition, amended March 2004. The Cabinet Handbook documents the principles, procedures and conventions by which the Cabinet system operates.

303 PM&C, *Cabinet Handbook*, Sixth Edition, amended July 2009. The current version of the *Cabinet Handbook* is the seventh edition, March 2012. The detail concerning Defence capability submissions was set out in an attachment to the Drafter's Guide associated with the Cabinet Handbook. This guide was replaced in June 2013 by the Cabinet Manual.

304 Defence advised the Parliament that: 'The Mortimer recommendations became an extension of [the] Kinnaird Review and as such we do not necessarily distinguish between the two Reviews'. Defence, Senate Foreign Affairs, Defence and Trade References Committee, *Procurement procedures for Defence capital projects*, public hearings, 5 and 7 October [2011], Answers to Questions on Notice, Enclosure 4, 'Updated Information on Mortimer Reforms'.

(5) the provision of independent CEO DMO advice to government (Chapter 10).

6.8 ANAO Audit Report No.48, 2008–09, *Planning and Approval of Major Defence Capital Equipment Projects*, considered many of these issues. It found non-adherence to the *Cabinet Handbook* requirements across the sample of first and second-pass approvals it examined. The most substantial of these concerned the assessment and description of the technical risk, and the presentation of estimated project costs.[305] The following discussion considers progress against relevant findings and recommendations of that audit relating to technical risk.

Progress in assessing technical risk

6.9 The Kinnaird Review sought to increase the assurance given to government 'that adequate scrutiny is undertaken ... by DSTO [Defence Science and Technology Organisation] on technology feasibility, maturity, and overall technical risk' for Defence major capital acquisitions.[306] As a result, the Chief Defence Scientist became responsible for providing independent advice to government on all Defence acquisition decisions.

6.10 Kinnaird's recommendation referred both to *technology risk* and the broader concept of *technical risk*. As DSTO has observed, the concepts—which are different—have been confused in translating the recommendation into *Cabinet Handbook* rules and CDG guidance documents.[307] Therefore, they must be distinguished in the discussion of Defence's progress with the Kinnaird recommendation.

6.11 This chapter considers:

- technology risk, technical risk and the difference between them;
- the purpose of a technical risk assessment (TRA) in capital acquisitions;
- action on technical risk proposed in major reviews;

305 ANAO Performance Audit Report No.48, 2008–09, *Planning and Approval of Defence Major Capital Equipment Projects*, pp. 17–18.

306 Kinnaird Review, p. 17. DSTO is part of the Department of Defence and is the Australian Government's lead agency charged with applying science and technology to protect and defend Australia and its national interests.

307 T Moon, J Smith & S Cook, 'Technology Readiness and Technical Risk Assessment for the Australian Defence Organisation', *Proceedings of the Systems Engineering, Test and Evaluation conference 2005—A Decade of Growth and Beyond*, Brisbane, Australia, 7–9 November 2005.

- previous ANAO report findings;
- Defence's current processes for assessing technical risk;
- the results of the ANAO's analysis of a sample of relevant Cabinet submissions; and
- the usefulness and accuracy of technical risk assessments.

Technical risk and technology risk

6.12 Most military capabilities are complex systems composed of a number of sub-systems and their underlying technologies. These underlying technologies may be at varying levels of maturity, or readiness, and are commonly measured using a nine-point 'Technology Readiness Level' scale (TRLs).

6.13 Technical risk is a much broader concept than technology risk. In capability development projects, technical risk is the likelihood that the system will not reach its capability, cost, or schedule goals as a result of the maturity of the underlying systems or the design, configuration, integration and implementation aspects of the system.[308] For example, there is unlikely to be any technology risk when acquiring a system already in operational use by overseas armed forces. The technology used is likely to be well understood. On the other hand, there could be technical risks relating to the system's operation in the Australian context. These technical risks may include:

- Australia's physical operating environment;
- differences in the ADF's communications and information technology;
- differences in the way the ADF configures and operates the platform;
- differences in the through-life support requirements;
- differences in the other platforms the new system needs to interact with in the ADF; and
- differences in the expected life of the platform in the Australian context.[309]

308 Defence, *Technical Risk Assessment Handbook*, Version 1.1, June 2010, pp. 11–12.

309 Defence, *Technical Risk Assessment: a Practitioner's Guide*, DSTO-GD-0493, February 2007, Executive Summary, p. 2.

How technical risk assessment adds value

6.14 Defence's *Technical Risk Assessment Handbook*[310] states that the purpose of assessing technical risks of major capital equipment is to:

> inform the project and its stakeholders of potential areas of risk so they can be managed and treated appropriately, and to inform Government of the technical risks for each of the options in a project when considering capability decisions.[311]

6.15 Technical risks are a major factor in defence acquisition because, if technical risks are not managed with proper risk identification, analysis and treatment, then the probability of an adverse event increases: simply, there is more chance that something will go wrong. This jeopardises the cost, timeliness and quality of the capability delivered. These risks often flow from the integration of components of a capability. A DSTO review of technical risk assessments certified by the Chief Defence Scientist found that: 'the major value added to the project and senior Defence committees by the DSTO technical risk assessment process is the identification of integration risks and dependencies, particularly across projects.'[312]

Action proposed by the major reviews on technical risk

6.16 The Kinnaird Review suggested that Defence would achieve the recommended scrutiny of 'technology feasibility, maturity, and overall technical risk' by using standardised TRLs.[313] A need to refer to standardised TRLs was then included in the 2004 edition of the *Cabinet Handbook*.[314] However, this dealt only with questions of technology and not the more important, broader technical risk.

6.17 After the Government accepted the Kinnaird recommendations, DSTO became responsible for providing guidance on, and certifying, technical risk

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310 Defence, *Technical Risk Assessment Handbook*, Version 1.1, June 2010.

311 ibid., p. 1.

312 Defence, *Technical Risk Assessment: a Practitioner's Guide*, op. cit.

313 Kinnaird Review, pp. 18–19. Kinnaird's view was that the use of a standardised system of TRLs enables non-technical readers to better understand and compare the risk of particular proposals. However, the review's treatment of these topics may have conflated *technical risk* and *technology risk*.

314 The requirement was the same in the 2009 edition of the *Cabinet Handbook*. Each first-pass submission must include 'an assessment of technical risk'; and each second-pass submission was to include 'an analysis of the technology, cost and schedule risks and drivers (technology risk must be rated using the Technology Readiness Level[s]…'). (PM&C, *Drafter's Guide*, Third Edition, July 2009, p. 51.)

for major acquisition proposals to second-pass approval. DSTO then developed policies and procedures to do this. In 2005, a DSTO paper, developed in response to the Kinnaird Review, set out a framework for assessing technology readiness and technical risk. This explicitly included providing advice on TRLs at the DCP entry stage, as well technical risk assessments (TRAs) at first and second pass.[315] The proposal to provide TRLs at DCP entry has not been implemented by Defence.

6.18 The 2007 DSTO review of its TRAs found some weaknesses in the approach and noted that 'it is clear that many of the TRAs conducted to date have focused on the technology risks and have not included the broader set of technical risks'.

Subsequent findings relating to technical risk

The Pappas Review commented on technical risk, slippage and costs[316]

6.19 Technical risk has continued to be identified as a source of project risk. The *2008 Audit of the Defence Budget* (Pappas Review) identified technical risk as the largest source of post second-pass schedule slippage for post-Kinnaird projects, and also observed that schedule slippage causes cost escalation.[317]

Previous ANAO Audit Report findings, June 2009

6.20 In 2009, the ANAO observed, across a sample of first and second-pass approvals, substantial non-adherence to the Cabinet Handbook. A prominent instance was the assessment and description of technical risk, which was inconsistent and sometimes vague. The description of technical risk often did not reflect an adequate assessment nor provide sufficient guidance for decision-makers.[318] The audit recommended (Recommendation No.3):

> that Defence refine its methodology for assessing and describing technical risk for future acquisitions and ensure that submissions should not proceed

315 Moon, T., Smith, J. and Cook, S.C., op. cit.

316 The Mortimer Review (which was contemporaneous with the Pappas Review) noted that, following Kinnaird, DSTO 'provides technical assessments for all projects' (Annex B4). It did not make any specific recommendations about technical risk, nor did the 20-point Response to the Mortimer Review incorporate any specific actions on this topic.

317 Pappas Review, pp. 51 and 76. Schedule slippage for major projects post second-pass approval is a focus of ANAO Report No.15, 2012–13, *2011–12 Major Projects Report.*

318 ANAO Audit Report No.48, 2008–09, *Planning and Approval of Defence Major Capital Equipment Projects*, pp. 17–18.

> without a clear statement of technical risk, consistent with the agreed methodology as set out in the *Cabinet Handbook*.[319]

JCPAA inquiry into the ANAO report

6.21 The JCPAA held an inquiry into the ANAO report in 2009.[320] During that inquiry, DSTO evidence helped to clarify the relevance of TRLs and their limits in assessing technical risk. DSTO said it thought that having the Cabinet Handbook mandate the use of TRLs in submissions was 'not useful advice'. DSTO was then reviewing its methodology with a view to recommending measures to be used to better describe risk so as to update the handbook.[321]

6.22 The JCPAA recommended that Defence work with PM&C to amend the Cabinet Handbook to accurately reflect the more specific risk measurement process developed by Defence, which should be included in submissions for both first and second-pass assessment. Defence agreed 'in principle'. It advised the JCPAA that it was working with PM&C and would seek amendments to the Cabinet Handbook 'to accurately reflect Defence's more specific risk measurement process.'[322]

6.23 Several years later there has been no progress with this recommendation. No amendments were made for this purpose to the Drafter's Guide for the Cabinet Handbook. The third edition of the Drafter's Guide (July 2009) remained current until June 2013, when it was replaced by the Cabinet Manual. Defence subsequently advised the ANAO (September 2013) that 'The descriptions of Technical Risk Levels and Technical Risk Assessments are no longer covered in the Cabinet Handbook or the Cabinet Manual'.

6.24 The ANAO found that the Cabinet Manual does not incorporate any specific technical risk assessment process in its statement of requirements for Defence capability submissions. In relation to technical risk, it states:

> Within Defence, sign-off is required from appropriate areas to confirm the information provided in submissions is accurate, including costings,

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319 ibid., pp. 116–17.

320 JCPAA, *Report 417: Review of Auditor-General's Reports tabled between February 2009 and September 2009* (tabled 22 June 2010), Chapter 9.

321 Hansard, JCPAA, 28 October 2009, p. PA 5. See: <http://www.aph.gov.au/Parliamentary_Business/Committees/House_of_Representatives_Committees?url=jcpaa/auditgen3_09/hearings.htm> [accessed 10 August 2012].

322 JCPAA Report 417, Government Response, Department of Defence. See <http://www.aph.gov.au/Parliamentary_Business/Committees/House_of_Representatives_Committees?url=jcpaa/auditgen3_09/govresponses.htm> [accessed 21 August 2012].

infrastructure aspects, acquisition strategy, technical risk and the overall risk assessment and mitigation strategies.[323]

Defence's current processes for assessing technical risk

6.25 A DSTO review (in 2010) of Defence technical risk assessment in the requirements phase of the capability development lifecycle identified 'difficulties in ensuring the appropriate and timely exchange of information' among entities involved in capability development, including CDG, DMO, the Capability Managers and DSTO.[324] Subsequently, DSTO and CDG have developed better processes within Defence to address these difficulties.

6.26 This review also identified that 'the first formal identification of project technical risk is at the Capability Development Board, which is too late in the capability development process to put together strategies to deal with the risk'.[325,326] This led to a new process being introduced from March 2010 to identify project technical risk earlier in the requirements phase.

6.27 In March 2011, the Chief Defence Scientist issued a Group Instruction setting out mandatory processes for DSTO staff providing advice on technical risk in the requirements phase of the Capability Development Lifecycle:

> Advice relating to Technical Risk is provided formally via the Technical Risk Indicator (TRI), Technical Risk Assessment (TRA), and Technical Risk Certification (TRC). The TRC is the CDS's [Chief Defence Scientist's] position on technical risk which is included in the DCP project CABSUB/MINSUB; the TRA is used as one of several inputs in arriving at this position. Detailed information on these documents may be found in the Technical Risk Assessment Handbook (TRAH).[327]

6.28 The ANAO's survey of CDG staff found that they generally considered their relationship with DSTO to be important, and the great majority (over 80 per cent) rated that relationship effective or very effective.[328]

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323 PM&C, Cabinet Manual, first edition, June 2013, p. 30.

324 Minute, Assessment of Technical Risk during Capability Development, CDS/OUT/2010/22 and CCDG/OUT/2010/7, March 2010.

325 This committee was renamed the 'Capability Gate Review Board' (CDGRB) in 2011. The role of the board is explained from paragraph 4.17 forward.

326 Minute, Assessment of Technical Risk during Capability Development, CDS/OUT/2010/22 and CCDG/OUT/2010/7, March 2010.

327 Defence, DSTO Group Instruction, *DSTO Support to Defence Capability Plan Projects*, March 2011, p. 2, footnote 2.

328 See Appendix 2.

Results of ANAO analysis of submissions to government

6.29 In this performance audit, the ANAO focused on Defence's assessment and description of the technical risk in major capital proposals submitted to the NSC.[329] The audit examined all capability development submissions to the NSC from July 2009 to June 2011 to assess adherence to Cabinet Handbook requirements and the clarity of advice to government on technical risk in major capital projects. The sample comprised 29 approvals, of which nine were first-pass, 14 were second-pass and six were combined-pass.

6.30 Only one submission specifically referred to TRLs in accordance with the Cabinet Handbook. Given that this is only one, rather limited aspect of a technical risk assessment and likely to be encountered only occasionally, this non-compliance is not necessarily a source of risk to the projects. More pertinent is that all but two cases included a DSTO-assessed Technical Risk Level and certification that the Chief Defence Scientist agreed with the description of technical risk in the submission. Those two exceptions involved urgent approvals obtained by letter from the Prime Minister.[330]

6.31 While Defence has made improvements to the documented policy and procedures for technical risk assessment, there are still opportunities for projects to fail where project managers do not properly understand and manage technical risk assessment. For example, it needs to be borne in mind that a technical risk assessment will relate to a specific option. A case study is that of Project LAND 112 Phase 4, *ASLAV Enhancement*, set out in detail in an earlier performance audit.[331] DSTO undertook a technical risk assessment of the proposed solution at first pass, which rated the risk as low, as that solution was a proven military-off-the-shelf (MOTS) option. However, Defence pursued a different solution at second pass and obtained approval, while still referring to the low technical risk rating received earlier.[332] When DSTO received details of the solution approved at second pass, it subsequently increased the risk

329 The audit sought to identify whether technical risk assessment was consistently being carried out, and did not seek to verify the quality of that risk assessment.

330 The two cases were: JP 154 Phase 1, *Force Protection Electronic Counter Measures* (FP-ECM), approved 29 October 2010; and LAND 116 Phase 3.1, *Additional Bushmasters*, approved 12 May 2011.

331 ANAO Audit Report No.52 2011–12, *Gate Reviews for Defence Capital Acquisition Projects* (Case Study 2, LAND 112 Phase 4, ASLAV Enhancement, p. 125).

332 The Senate Foreign Affairs, Defence and Trade References Committee commented on this point in the final report of its inquiry *Procurement procedures for Defence capital projects*, August 2012, paragraph 10.33.

rating to medium–high. Eventually, the project was terminated when Defence found the overall project risk to be extreme. This may have been avoided if Defence had fully appreciated that the DSTO risk assessment related to a different, more straightforward option and that further enquiries were required when a different solution was to be pursued.

Usefulness and accuracy of technical risk assessment

6.32 The values of the technical risk ratings provided by DSTO are generally 'low', 'medium' or 'high'. Sometimes it selects an intermediate rating, such as 'medium-high'. DSTO has no information on how ministers, as decision-makers, perceive or interpret these ratings, or how meaningful they find them. For example, it may not be clear to the decision-maker whether a rating such as 'medium-high' is an intermediate rating between 'medium' and 'high' or whether it expresses such uncertainty about the technical risk as to preclude confidently allocating either value with confidence.[333]

6.33 Given the confusion that has surrounded technical risk rating in the past and the range of values DSTO now applies to its ratings, the ANAO suggests that it may help ministers if DSTO were to provide an explanation of technical risk analysis and its interpretation in relevant documents.

6.34 DSTO could also establish whether an assessment had been accurate by a review of the capability development project at project closure. That would provide an opportunity to learn from earlier assessments. To review the usefulness and accuracy of the technical risk assessments it provides, DSTO may need to select a sample of projects to follow through to closure. Overall, such a practice would be consistent with DSTO taking greater 'ownership' of the risk assessments it provides.

Conclusion—improved technical risk assessment approach has been implemented

6.35 An area where there has been some improvement since the ANAO's previous audit was tabled in June 2009 relates to the rigour with which Defence approaches the assessment of technical risk during the two-pass process. The 2009 Pappas Review identified technical risk as the largest source

333 It may also be unclear to decision-makers whether the rating reflects the probability of the risk being realised, the scale of the result if it were realised, or both.

of post-second-pass schedule slippage for post-Kinnaird projects, and also observed that schedule slippage causes cost escalation.

6.36 Following a subsequent review by DSTO, a new process was introduced to identify technical risk earlier in the requirements phase of the Capability Development Lifecycle. This results in the development of the Technical Risk Certification for a DCP project, which is the Chief Defence Scientist's position on the technical risk included in the project. The methodology for assessing technical risk and developing the Technical Risk Certification for capability development proposals has matured and is being performed according to a documented process. It has been consistently presented in submissions to government examined by the ANAO, to provide advice on the technical risk level associated with capability options proposed for consideration. In this context, the ANAO considers that Defence has satisfactorily addressed the broad intent of the ANAO's earlier recommendation that Defence refine its methodology for technical risk assessment, and ensure that acquisition submissions do not proceed without a clear statement of technical risk.

6.37 While Defence has put in place an improved approach to assess technical risk and provide that assessment to government, Defence's documented processes are not reflected in the requirements in the Cabinet Manual. There would be benefit in updating the Manual to reflect the practice that has now been in place for several years. Although Defence is not the 'owner' of the Cabinet Manual and cannot directly change it, as the owner of the two-pass approval process, with responsibility for developing and maintaining that process, Defence has a responsibility to follow up the June 2010 recommendation of the Joint Committee of Public Accounts and Audit (JCPAA) and work effectively with the Department of the Prime Minister and Cabinet (PM&C) to pursue amendments to the Manual 'to accurately reflect Defence's more specific risk measurement process'.

6.38 To improve the clarity of advice to government, there would be benefit in Defence providing to decision-makers an explanation of technical risk analysis and its interpretation in relevant documents. There would also be benefit in reviewing a selection of capability development projects at project closure to contribute to Defence's understanding of the usefulness and accuracy of the technical risk assessments it provides to decision-makers.

Recommendation No.3

6.39 To contribute to its understanding of the accuracy of its technical risk assessment process, the ANAO recommends that Defence conduct a review of the technical risk assessment advice it has provided to government for selected capability development projects in the light of subsequent experience in progressing those projects.

Defence response: *Agreed*.

7. Preparing and advising on whole-of-life cost estimates

This chapter examines the basis for including whole-of-life cost estimates in advice to government about capability development projects and proposed materiel acquisitions, and the development of Defence practice in this area.

The importance of advising government on whole-of-life costs

7.1 Value for money is the core principle underpinning Australian Government procurement. The Defence Procurement Policy Manual requires all Defence procurements (including those undertaken by DMO) to comply with Division 1 of the Commonwealth Procurement Rules. These rules, which are given force by the FMA Regulations, state that the price of goods and services is not the sole determining factor in assessing value for money, but that other factors should be considered, including whole-of-life costs.[334] Whole-of-life costing, or 'lifecycle costing', can be defined as:

> a process to determine the sum of all expenses associated with a product or project, including acquisition, installation, operation, maintenance, refurbishment, discarding, and disposal costs.[335]

7.2 Defence major capability decisions have substantial long-term financial consequences for Defence and the Commonwealth budget. Capability development projects incur major costs after initial acquisition, and Defence is developing greater awareness of relevant factors, such as substantially increased cost of mid-life upgrades for longer-term in-service capabilities.[336] Therefore sound advice to government on major capability development

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334 See Defence Procurement Policy Manual (1 July 2011 edition), part 1.2 and paragraph 4.5 of the Commonwealth Procurement Rules. These rules came into effect on 1 July 2012. The previous *Commonwealth Procurement Guidelines*, December 2008, specified a similar requirement, that the principle of achieving value for money in a procurement process 'requires a comparative analysis of all relevant costs and benefits of each proposal throughout the whole procurement cycle (whole-of-life costing)' (p. 10).

335 Standards Australia, Australian/NZ Standard ASNZS 4536:1999, *Life cycle costing—An application guide*, p. 4.

336 The significantly increasing cost of mid-life upgrades for longer-term in-service capability was noted as 'a serious cause for concern' at the Capability Development Advisory Forum, 29 August 2012. The meeting also noted that 'Such is the cost that this may be considered a tipping point for platform/capability replacement without an upgrade.' See: <http://www.defence.gov.au/capability/_home/cdaf_info.asp> [accessed 26 September 2012].

projects should include clearly articulated estimates of whole-of-life costs, to enable decision-makers to compare and make informed decisions about major capability options. These options may have different patterns of expenditure over their lifecycle.

7.3 Developing whole-of-life cost estimates for major capital projects has been a challenge for Defence for decades, with a number of pre-Kinnaird reviews noting the department's struggle to establish the skills, systems and data for this activity.[337] Earlier ANAO performance audit reports show that, until at least 1999, Defence's capability planning and programming process failed 'to look at the whole of capability (support requirements, personnel and training needs and recurrent costs).'[338] A contributing factor is that, before 2000, there was a tendency for Defence to assume that the costs of maintaining and operating new equipment would approximate those of the equipment it was replacing. It subsequently realised that this was not the case (or no longer so).[339]

7.4 This chapter considers:

- policy in place on the costing of major capital projects supporting a focus on whole-of-life costs;
- the proposals put forward in relevant reviews over the decade, identifying how Defence should address whole-of-life costing. Related findings and recommendations have been made frequently in major reviews and in an ANAO audit over the last decade from Kinnaird forward; and
- Defence's progress with implementing whole-of-life costing.

337 See *Defence Efficiency Review*, 1997; ANAO Report No.43, 1997–98, *Life-cycle Costing in the Department of Defence; Report on Defence Governance, Acquisition and Support*, April 2000.

338 ANAO Audit Report No.13, 1999–2000, *Management of Major Equipment Acquisition Projects*, p. 159.

339 See, for example, evidence of the First Assistant Secretary, Business Strategy, to the Senate Foreign Affairs, Defence and Trade Legislation Committee at Estimates hearings on 4 June 2003: 'It is another one of those projects that fits that category that was approved before 2000. The cost assessments at the time were made that it would be principally the same to operate as the [equipment] it replaced. With experience, we have found that is not the case.' (Hansard, p. FAD&T 423). The assumption before 2000, that NPOC costs for replacement capability were effectively zero, was confirmed by the work of the interdepartmental working group on NPOC in 2007.

Policy on whole-of-life costs in major capital projects

7.5 From at least the early 1990s, Defence has had a documented policy for whole-of-life (or lifecycle) costing for major capital acquisitions.[340] The current version of Defence's DCDH cites value for money as one of the key tenets of the capability development process, and explains how whole-of-life costing helps to ensure value for money is obtained in major capital acquisitions. Moreover, whole-of-life costing requires 'a comparative analysis of all relevant costs and benefits of each proposal throughout the CSLC [capability systems lifecycle] (i.e. whole-of-life costing).'[341] Defence has recognised that whole-of-life costing is a subject that warrants considerable attention in costing Defence projects.[342] However, Defence has also stated in the government response to the Mortimer Review that it was difficult to achieve a 'precise understanding of the through-life cost of an item of equipment.'[343]

7.6 A range of policy documents now require the use of whole-of-life costing for Defence major capital acquisitions, including:

- Defence Instruction General, LOG 03–4, *Defence policy on Life Cycle Costing Analysis*, November 2003;
- *Estimates Memorandum 2013/27*, 'Defence Major Capability Costing Requirements', Department of Finance and Deregulation, 23 August 2013; and
- the *Defence Capability Development Handbook*, December 2012.[344]

340 See ANAO Audit Report No.43, 1998–99, *Life-Cycle Costing in the Department of Defence*. At that point, Defence policy on lifecycle costing for major capital equipment was contained in a 1992 Defence Instruction, DI(G) LOG 03-4, which required lifecycle costing to be done at decision points throughout the lifecycle of an equipment or weapon system, including capability development and acquisition.

341 Defence, *Defence Capability Development Handbook*, August 2011, p. 8.

342 An instance is the Defence Cost Estimation Conference in June 2011. A specific example of relevant thinking is the paper presented to the conference by Dr Linda Newnes, on the work at the University of Bath, UK, on cost modelling and through-life availability. This conference was organised by CDG's Cost Analysis Branch.

343 Defence, *The Response to the Report of the Defence Procurement and Sustainment Review*, May 2009, p. 33.

344 The former *Drafter's Guide* to the Cabinet Handbook required 'indicative total acquisition and whole-of-life costs' for first-pass submissions and 'budget estimates of total acquisition and whole-of-life costs' for second-pass submissions. The successor document, the *Cabinet Manual*, does not contain parallel requirements to these but, instead, refers the reader to the estimates memorandum mentioned above.

Reviews and audits on whole-of-life costing

7.7 In 2003, the Kinnaird Review found that Defence historically had tended to underestimate whole-of-life costs:

> Traditionally the focus has been on the capital acquisition costs and short-term logistics associated with bringing equipment into service, and there has often been minimal attention to costs over the entire period that the equipment will be in service.[345]

7.8 The Kinnaird Review concluded that this insufficient focus on whole-of-life costing in Defence had led to the growing logistics shortfall within the ADF. The $3 billion or so then spent each year on maintenance and consumables had proved inadequate.[346] The review emphasised that over two-thirds of the whole-of-life cost of defence platforms or weapons systems are incurred after introduction into service. It concluded that understanding whole-of-life costs 'is a vital component of managing capability and must be considered throughout all phases of the lifecycle of capabilities, from project initiation and feasibility through to retirement of equipment.' The review concluded that Defence needed the capacity to monitor and report on a whole-of-life basis both to manage efficiently and to advise government on the costs of maintaining existing capability.[347]

7.9 The Kinnaird Review also found that Defence's financial systems were not 'configured' to show whole-of-life costs for existing capabilities and, until they could provide full cost attribution of individual capabilities, Defence and government would not have reasonable visibility of the costs of acquiring and sustaining capabilities.[348] It expected transition to such an arrangement would be possible within two to three years.

7.10 In a 2005 policy-costing instruction, CDG explicitly recognised Kinnaird's findings and the imperative to identify each capability project's 'through life

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345 Kinnaird Review, p. 26.

346 ibid., p. 6.

347 This led it to recommend that Capability Managers be made responsible and accountable for effective monitoring and reporting to government (see Chapter 14).

348 Kinnaird Review, p. 27. An inability to attribute costs had been admitted by Defence six years earlier: 'At present, Defence is not able to identify fully the costs of activities and outputs or the resources required to achieve them'. *Performance Information Review*, Joint Report of the Department of Defence and the Department of Finance, July 2007, paragraph 335.

costs'.[349] However, its instruction concerned calculating, estimating and approving Net Personnel and Operating Costs (NPOC) estimates for new or upgraded capability for DCP projects. NPOC is a long-standing concept in Defence.[350] It comprises the estimated cost of operating a new or upgraded ADF capability over its lifetime minus the estimated cost of continuing to operate the capability it replaces over that period.[351]

7.11 NPOC can be calculated only after whole-of-life costs have been estimated. It is derived from the difference between the estimated personnel and operating costs of the proposed option ('future POC') and the costs for the existing capability ('current POC'). The fundamental step remains that of calculating or estimating whole-of-life costs so that NPOC can be derived.

7.12 NPOC and whole-of-life costs give different perspectives and both are valuable to fully appreciate the financial implications of a proposal. NPOC is focused on the additional funding Defence requires to operate the new capability, assuming existing funding for the retiring equipment continues to be available. Whole-of-life costs present the full cost of operating over the life of the capability and are a benchmark for assessing the capability's performance over time. In this way whole-of-life costs are of long-term benefit to management in informing and prioritising decisions on upgrading, replacing and disposing of assets.

Recommendations of subsequent reviews and audits

7.13 By the time of the Mortimer Review in 2008, Defence's performance on whole-of-life costing had not improved.[352] The review then recommended (Recommendation 4.4):

349 Defence, Capability Development Group, Cost Analysis Branch, *Defence Policy for the Development, Programming and Management of Net Personnel and Operating Costs (NPOC) Estimates*, version 1.85, 29 June 2005.

350 Defence advised the ANAO (11 January 2013) that 'the acronym NPOC ... to Defence's knowledge appears to be unique to Australia. Other Defence organisations (such as New Zealand) and other agencies across Australia all cost POC [personnel and operating costs]. However, they do not appear to focus on the net difference [between current and proposed POC].'

351 The instruction states that: 'NPOC costs include, but are not limited to, maintenance support costs, spares provisioning, fuel, explosive ordnance, infrastructure operating costs, and associated personnel costs including training required to operate, manage and support the capability, system or equipment from acceptance into service through to its disposal.'

352 The Mortimer Review (p. 47) found that 'for at least the past decade, Defence has consistently failed to properly plan for the personnel and operating costs of new capability. ... Without adequate personnel and funds for sustainment, new equipment will not deliver the military capability intended.'

> Decisions to either purchase new equipment or maintain existing systems should be based on the through-life cost of each option regardless of whether the funding is from the acquisition or sustainment budgets.[353,354]

7.14 The Mortimer Review also recommended that NPOC estimates be updated annually as part of the budget.[355] These recommendations were agreed in the Government response, which also acknowledged 'NPOC has been a problem area'.[356]

7.15 Consistent with the Mortimer Review findings, the previous audit found that, in a sample of 23 major capital submissions to government, only nine contained estimates of whole-of-life costs.[357] The audit recommended that 'Defence ensure that submissions to the NSC for first or second-pass approval include explicit acquisition and whole-of-life cost estimates, agreed by Finance, as required by the *Cabinet Handbook*.'[358] This recommendation was consistent with the Defence White Paper released in May 2009 in which the Government directed that greater attention be paid in the planning process to the whole-of-life cost dimensions of capability.[359]

7.16 The *2008 Audit of the Defence Budget* (Pappas Review) brought a deeper level of analysis than previous reviews on how Defence was undertaking its cost estimation work. It reported 'substantial problems with the DCP and [NPOC] estimates—the costing methodologies, the governance and oversight of cost estimates, and the capabilities of those performing the work all need improvement'.[360,361]

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353 ibid., p. 50.

354 This recommendation was also 'strongly endorsed' by the 2011 Rizzo Review.

355 Mortimer Review, Recommendation 4.1.

356 Defence, *The Response to the Report of the Defence Procurement and Sustainment Review*, May 2009, p. 32.

357 The sample considered in that audit comprised projects that preceded Defence's implementation of recommendations flowing from either the Mortimer or Pappas reports.

358 ANAO Audit Report No.48, 2008–09, *Planning and Approval of Defence Major Capital Equipment Projects*, Recommendation No.4, p. 119.

359 *Defence White Paper 2009*, p. 110, paragraph 13.18.

360 Pappas Review, April 2009, p. 59. The Pappas Review was contemporaneous with the Government response to the Mortimer Review.

361 A similar view was taken by Rizzo Review in July 2011. In analysing the actual and planned expenditure for each class of ship over the period 2005–06 to 2020–21, it found little evidence that Defence had taken account of whole-of-life costs. Defence had not considered the increasing funding requirements as ships approach end-of-life and 'inexplicably, budget provision continues beyond these dates' (p. 36).

7.17 Pappas found the largest growth area in Defence spending during 2000–01 to 2007–08 was in operating costs, and noted an 'unfunded NPOC liability of ~$6 billion over the Defence Management and Finance Plan (DMFP) period.'[362] Moreover, there was no official guidance or documentation of how NPOC should be calculated 'and the *Defence Cost and Schedule Estimation Methodology Handbook* contains no mention of operating costs.'[363] The Pappas Review recommended a standard method be developed and implemented. The review found that 'accurate NPOC calculations are compromised because the full direct operating costs of current capabilities are not well understood.'[364]

7.18 The Pappas Review also observed that 'while NPOC is "noted" in projects that go to Cabinet for approval ... [NPOC estimates] are not explicitly approved or examined.' It recommended that NPOC estimates be explicitly considered and examined by government during project approval, including at second pass.[365]

Defence's progress with implementing whole-of-life costing

7.19 In examining Defence's progress with implementing whole-of-life costing, the ANAO considered:

- progress with cost attribution;
- progress with the recommendations from the Mortimer and Pappas reviews;
- project costs in a sample of NSC submissions examined by the ANAO; and
- findings of the 2011 DCP Review, which provide further insight into the challenges of costing capability development proposals.

Limited progress with cost attribution

7.20 As noted above, Kinnaird identified Defence's capacity to achieve cost attribution for individual capabilities as a prerequisite to identifying whole-of-life costs. Defence has been working on enhancing cost attribution for a long

362 ibid., p. 68. The DMFP period is ten years.

363 ibid.

364 ibid., p. 69.

365 ibid., p. 70.

time, but progress has essentially stalled, with the department not pursuing information system upgrades required, because of other departmental priorities.

7.21 By way of background, in answer to a Question on Notice in the Parliament in June 2001, Defence stated that it was continuing 'to refine and improve its cost attribution processes'.[366] By 2004, the department was presenting a positive outlook in evidence to a Senate Committee:

> the output cost attribution process which is maintained in Defence's Portfolio Budgeting system (BORIS) was enhanced to improve the costing information presented to Parliament in respect of Defence's outcomes and outputs.[367]

7.22 By 2006, Defence was stating that it had:

> implemented a portfolio-wide budgeting system, BORIS, which contains all the Services and Groups' budgets for an eleven-year period. This system is capable of building budgets at Group level and converting these budgets into an outcomes view through a sophisticated cost attribution model.[368]

7.23 However, in May 2011, Defence advised that its 'financial management system does not support true cost attribution' in relation to certain sorts of costs incurred.[369] Defence further informed the ANAO in January 2013 that:

> Defence has made limited progress on cost attribution for individual capabilities. The current Defence systems cannot support the recording of attributed costs. To implement new financial information systems that would support such an approach could cost in the order of $500m and take seven years to implement. In the current fiscal environment Defence does not consider such investment can be justified for the return that would flow from pursuing this option.[370]

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366 Senate Foreign Affairs, Defence and Trade Legislation Committee, Answers to Questions on Notice, Department of Defence, Budget estimates 2001–02, June 2001, Answer to Question 41.

367 Senate Foreign Affairs, Defence and Trade Legislation Committee, Budget supplementary questions 2004–05, December 2004, Answers by Defence to Questions on Notice.

368 Defence Submission [circa May 2006] to the 2006 Joint Committee of Public Accounts and Audit *Inquiry into financial reporting and equipment acquisition at the Department of Defence and Defence Materiel Organisation*, p. 57.

369 Senate Standing Committee on Foreign Affairs, Defence and Trade, Budget Estimates, 30–31 May 2011, Questions Taken on Notice, Q 58 and Q 59.

370 Defence further informed the ANAO that it had 'engaged [*a company*] in 2011–12 to develop a Finance Systems strategic roadmap to inform Finance Domain Systems health status and reform priorities. This work identified around 200 systems in Defence and recommended 19 initiatives with estimated costs of up to $500m. ... this is not considered justifiable in the current fiscal environment nor offers a sufficient return on investment to warrant further consideration.'

7.24 When asked to reconcile the earlier statements to Parliament discussed above with its limited progress, Defence informed the ANAO in March 2013 that:

> The statements to Parliament were accurate at the time but were, in the main, aspirational and much of the cost attribution originally envisaged did not come to fruition. ANAO will note that Defence moved away from reporting structures that required cost attribution in the 2008–09 Portfolio Budget Statement.
>
> Previously, behind Defence's reported Outputs were attributed costs from various support, or enabling, organisations. Such attribution models are not robust as they rely on subjective and variable estimations with regard to the allocation of cost, are administratively cumbersome, costly to maintain and offer very little real value in the Government context.

7.25 On the face of it, Defence has abandoned its earlier intention to achieve full cost attribution, even though the Kinnaird Review saw this as a prerequisite to establishment of whole-of-life costs. While appreciating Defence has to determine its priorities given the demands on its budget, if Defence is to follow its current policies in costing capability proposals, it still requires a systematic methodology, albeit with considerably greater use of approximation to estimate whole-of-life costs.

Progress in implementing the Mortimer and Pappas recommendations

7.26 Defence's desired outcomes for Mortimer Recommendation 4.4, which requires through-life costs of capability options to be considered, were:

> Regardless of the source of funding, decisions on whether to continue to maintain or purchase new equipment will be based on the full through life costs of the options available.[371]

7.27 In relation to the implementation of Mortimer Recommendation 4.4, the MRIGC was advised in September 2009 that 'CCDG advised that the Key Defence Asset Review process would be used to progress this action.'[372] The committee recorded action to implement this recommendation as 'complete' by process in February 2010. However, the status by outcome remained 'to be assessed' and 'still to be tested' as of December 2011. This remained the case in July 2013.

371 Defence, Progress Report on Implementation of Mortimer Reforms, as at 12 February 2010, p. 29.

372 KDAR is a tool that Defence uses to help Capability Managers to work out whether it is more cost-effective to extend the life of existing assets or to seek their replacement.

7.28 As indicated in paragraph 7.17, the Pappas Review recommended that a standard method of calculating operating costs be developed and implemented. Defence informed the ANAO that it responded to this recommendation with the development of a standardised cost template with a supporting handbook/guide and training, which remain in place. Defence also informed the ANAO in January 2013, in relation to the Pappas recommendation that NPOC be explicitly examined and considered by government, that:

> It has become standard practice that submissions to Government clearly state the estimated [NPOC] costs in first-pass [Cabinet] submissions, and to seek approval for NPOC in second pass submissions. The submission will also identify whole of life cost (although not in the recommendations), and discuss the cost risk associated with the NPOC estimate.

Project costs in NSC submissions

7.29 The status of the 2008–09 ANAO audit recommendation about inclusion of whole-of-life cost estimates in submissions to NSC was recorded as 'Complete' on 19 October 2009 in Defence's Audit Recommendation Management System (ARMS).[373] Therefore, when ANAO reviewed the cost estimates included in the submissions to the NSC for approval (and a small number of submissions to the Prime Minister) during from July 2009 to June 2011, it expected that most would contain whole-of-life cost estimates.[374]

Submissions identified acquisition costs and NPOC

7.30 The audit found that submissions consistently identified the acquisition cost, though the term used to describe this varied. In some cases where first-pass approval was sought, an additional amount was identified to progress the

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373 Associated Defence commentary in the ARMS database read as follows: 'First Assistant Secretary Capability Investment Resources will ensure that capability submissions contain a calculation of the future personnel and operating costs, in the context of explaining the derivation of Net Personnel and Operating Costs. Action is complete, with this requirement now mandated for capability CABSUBS.'

374 Defence provided the ANAO with a list of 53 government approvals in the sample period (first pass, second pass and 'other' approvals), of which six were classified and were not considered further in this audit. The remaining 47 included major capability projects approved by the NSC (24); a New Policy Proposal (NPP) approved by the Expenditure Review Committee and then referred to NSC (one); ministerial approvals by the Defence Minister or the Defence and Finance Ministers (15); approvals by letter through the Prime Minister (four); and approvals for ongoing 'grant'-type programs (three).

The cases examined comprised nine first-pass submissions, 14 second-pass submissions and six 'other' submissions. The 'other' submissions related to (i) a substantial real cost increase for a project that had already received second-pass approval; (ii) an 'interim pre-first pass approval'; (iii) two urgent approvals by letter during the caretaker period for the 2010 Federal election; (iv) a proposal approved through the Expenditure Review Committee of the Cabinet as an NPP; and (v) an approval representing a transfer from the DCP to sustainment

proposal from first pass to second pass.[375] Generally, the submissions also identified the estimated NPOC over the expected life of the equipment.[376] This is consistent with the findings of the previous audit and with the Pappas Review recommendation.

7.31 Only about one-third of submissions separately identified current personnel and operating costs. Similarly, only about a third identified future personnel and operating costs.

Advice on whole-of-life costs in submissions

7.32 In most cases, the audit found that the body of the submission included a table which identified the cost figures associated with the proposal. These were headed 'LCC net' ('Lifecycle costs net') and 'LCC gross' (Lifecycle costs gross'). LCC gross comprised the sum of acquisition costs, NPOC and estimated current personnel and operating costs. Thus LCC gross represents an estimate of the bulk of whole-of-life costs for the project. However, the meaning of 'LCC gross' is not made clear to decision-makers, nor are the whole-of-life costs made clear in submissions.[377]

Importance of understanding NPOC and whole-of-life costs

7.33 The ANAO's examination of Cabinet submissions revealed instances that highlight the importance of distinguishing between the concepts of whole-of-life costs and NPOC, and being clear about the meaning of the concepts when presenting the information to ministers:

- For example, for AIR 5428, Pilot Training System, an estimate of $2028 million was put forward at first pass as the cost at the front of the submission. An estimate for NPOC appears in a table on page 9: a further $2629.7 million. However, a figure of $8319.6 million also appears in the table under 'LCC Gross'. This last figure is the size of the expected Commonwealth investment over the life of the capability—the whole-of-life cost.

375 This amount was sometimes substantial: $50 million was the maximum such value observed, for AIR 5428, *Pilot Training System*. The additional amount was usually—but not always—included in the acquisition cost figure identified in the recommendation to Cabinet.

376 The estimated life of the equipment is provided in almost all submissions but varies widely from proposal to proposal, from seven years to 30 years.

377 The structure and meaning of the costing concepts used by Defence in its Cabinet submissions are explained in Appendix 5.

- Similarly, the LAND 17 Phase 1A submission, Artillery Replacement Project, (at second pass) refers to 'all costs' (acquisition cost) as $493.2 million, with NPOC of $612.2 million. However, LCC gross—the whole-of-life cost—is estimated at $2705 million.

7.34 Whole-of-life costs are an estimate and, projected over the expected life of the equipment, are much less certain than capital costs. However, only by presenting whole-of-life costs to ministers is the expected magnitude of the investment made clear to them in informing these decisions.

Findings of the 2011 DCP Review

7.35 Despite the remedial action taken by Defence in response to the Pappas Review (2008), more recent work has continued to raise doubts about the robustness of the cost estimates underpinning capability development proposals.

7.36 In particular, a further review of NPOC was undertaken as part of CDG's review of the DCP in 2011. The DCP Review found that many project cost models used to estimate the costs for the whole of life of a capability were inaccurate, insufficiently documented and not updated. In consequence, the review determined that few cost models could be relied upon during the 'rebaseline' of the DCP. The review found that further work was required to address issues that could not be resolved as part of the review. Two areas in particular were identified as requiring further work and reconsideration in late 2012:

- refinement and assurance of underlying cost models; and
- analysis, understanding and remediation of NPOC estimates.

Conclusion—capability whole-of-life cost estimation in advice to government could be made clearer

7.37 Defence has had a documented policy for whole-of-life (or lifecycle) costing for major capital acquisitions since at least the early 1990s. When a new or upgraded capability is being considered by government in an acquisition proposal, whole-of-life costs represent the total public investment Defence is seeking over the life of the capability. It is, however, inherently difficult to forecast whole-of-life costs accurately, especially over several decades, and

decision-makers need to accept the uncertainties in making these estimates.[378] Nonetheless, recognising the benefits for informed decision-making, successive reviews (including Kinnaird, Mortimer and Pappas) and audits have stressed the importance of Defence making clear to government its estimates of whole-of-life costs for capability proposals.

7.38 The Kinnaird Review, in particular, concluded that 'understanding the whole-of-life costs associated with particular platforms is a vital component of managing capability and must be considered throughout all phases of the life cycle of capabilities.'[379] Such an understanding underpins Defence's ability to communicate effectively with government on the costs of maintaining existing capability. The Kinnaird Review also concluded that:

> Until Defence financial systems are based on full cost attribution of individual capabilities, Defence and government will not have reasonable visibility of the costs of acquiring and sustaining capabilities. Nor will they be in a sound position to make resourcing decisions on the basis of capability consequences.[380]

7.39 Defence is now not pursuing its earlier intention to achieve full cost attribution of individual capabilities through its financial systems, because of the department's assessment that the cost and complexity of the task outweigh the expected benefits. Nevertheless, this should not inhibit the pursuit of further improvement to support Defence's capacity to make reasonable estimates of whole-of-life costs for individual capabilities to inform decision-making and the achievement of value for money.

7.40 Generally, the Defence submissions to government examined in this audit focused upon acquisition costs and the estimated Net Personnel and Operating Costs (NPOC) of using the capability over its expected life.[381] NPOC is derived from the difference between the estimated personnel and operating costs of the proposed option ('future POC') and the costs for the existing capability ('current POC'). NPOC therefore represents an estimate of the additional funds that Defence calculates it requires. NPOC and whole-of-life costs give different perspectives, and both are valuable to fully appreciate the

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378 Defence has pointed out (July 2013) that, in costing projects, 'rate of effort is not well understood early on, support concepts are not yet defined and inter-relationships between platforms and elements may be unclear' and that these factors contribute to the difficulty in forecasting costs.

379 Kinnaird Review, p. 27.

380 ibid.

381 These findings are consistent with the findings of the previous audit report.

financial implications of a proposal. The clarity of all capability development submissions, and the implications of the decisions sought from ministers, could be improved by:

- the use of consistent terminology in all acquisition submissions; and
- more prominence being given to a clear statement of the estimated whole-of-life costs of options in each submission.

8. Obtaining external verification of cost estimates

This chapter examines Defence's progress with the requirement to have its cost estimates verified independently by the Department of Finance.

Kinnaird Review proposed that Finance verify costs

8.1 Having cost estimates independently reviewed has long been recognised as important to preparing credible estimates. For example, the US Government Accountability Office (GAO) stated in 2009 that the characteristics included in its 1972 report, *Theory and Practice of Cost Estimating for Major Acquisitions*, were still valid and should be found in all sound cost analyses. Those characteristics include:

> Data should be independently verified for accuracy, completeness, and reliability.
>
> Conducting an independent review of an estimate is crucial to establishing confidence in the estimate; the independent reviewer should verify, modify, and correct an estimate to ensure realism, completeness, and consistency.[382]

8.2 The GAO also noted the risk that 'when time is a factor, an independent cost estimate may not be developed, further adding to the risk that the [project's] estimate may be overly optimistic.'[383]

8.3 The Kinnaird Review found that the external evaluation and verification of all capability development proposals is essential: 'Importantly, government needs to be assured that adequate scrutiny is undertaken by Finance, the CFO and DMO on costings.'[384]

8.4 The review noted that, in any submission brought to Cabinet, the proposing agency needed to agree costs with Finance, but found that, in the case of Defence procurement, 'Finance agreement to Cabinet submission costings is generally sought shortly before lodgement, and does not allow sufficient time for any in-depth analysis.'

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382 United States Government Accountability Office, *GAO Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Capital Program Costs*, GAO Applied Research and Methods, GAO-09-3SP, March 2009, p. 6.

383 ibid., p. 13.

384 Kinnaird Review, p. 17.

8.5 The Kinnaird Review concluded that Finance 'should be involved much earlier, and on a continuous basis throughout the two-pass approval process so that they can contribute to effective quality assurance in relation to costings.' The review did not envisage Finance independently developing its own costings, but it did envisage dedicated Finance resources working with Defence:

> In the case of Finance, given the scale of large procurement projects it would be appropriate to have individuals with appropriate skills dedicated to those projects. For others, officers may be responsible for a range of upcoming projects. They would work closely and continuously with Defence and the DMO, participate in key meetings, have ready access to the necessary information and data, as well as a detailed understanding of the cost models produced to estimate whole-of-life project costs.[385]

8.6 The Kinnaird Review's expectations for Finance involvement in verification of Defence costing of acquisition proposals were incorporated into its Recommendation 3, to which the then Government agreed in September 2003. This recommendation was that:

> Government should mandate, and enforce via revised Cabinet rules, a rigorous two-pass system for new acquisitions with government considerations dependent on comprehensive analyses of technology, cost (prime and whole-of-life) and schedule risks subjected to external verification.[386]

Implementing greater involvement by Finance

8.7 In March 2004, it was further agreed by the Government that Defence and Finance would develop working arrangements to ensure that Defence would provide Finance with adequate, timely information that the latter would need to meet its expanded costing responsibilities as part of a thorough approach to verifying Defence's cost estimates.

8.8 In July 2004, the Government was advised of new consultation mechanisms that had been agreed among departments for consideration of Defence capability submissions before those submissions were put to government for approval. It had been agreed that an exchange of letters

385 Kinnaird Review, p. 17. The expectation that Finance would need to dedicate additional resources to the task of agreeing cost estimates with Defence is consistent with the GAO view that production of a full, independent Life-Cycle Cost Estimate 'usually requires a large team, may take many months to accomplish.' GAO, op. cit., p. 34.

386 Kinnaird Review, p. 20.

between Defence and Finance would set out the basis for Finance to engage with Defence in assessing Defence's cost estimates. The exchange of letters was expected, among other things, to:

- set out the objective of the interaction;
- describe the role that Finance would play;
- indicate time limits for Finance's assessment;
- describe the information Defence would provide to Finance; and
- outline Defence's methodology for the preparation of cost estimates.

JCPAA Inquiry in 2006

8.9 When, in 2006, the JCPAA began its *Inquiry into financial management and equipment acquisition at the Department of Defence and Defence Materiel Organisation*, Defence's submission stated that:

> The Department of Finance and Administration has established the Defence Capability Assessment Branch to fulfil this role. The Branch's interaction with Defence has matured and it now works closely with the Capability Development Group and the DMO and [sic] to provide Government with greater confidence in cost information.[387]

8.10 Defence's testimony was that the Department of Finance 'now has an independent costing function that we closely relate with throughout the journey to government approval.'[388] Defence did not mention the question of its timely provision of information to Finance.

Previous ANAO performance audit found little progress

8.11 In June 2009, the previous audit found no agreed documented process to facilitate Finance's early and ongoing engagement in verifying cost estimates for capability development proposals.

8.12 During that audit, enquiries with Defence and Finance revealed markedly different perspectives on the depth and effectiveness of their relationship during capability development. The audit recommended

387 Defence submission [circa May 2006] to the Joint Committee of Public Accounts and Audit *Inquiry into financial reporting and equipment acquisition at the Department of Defence and Defence Materiel Organisation*, p. 92.

388 Hansard, JCPAA, *Inquiry into financial reporting and equipment acquisition at the Department of Defence and Defence Materiel Organisation*, testimony of CCDG, 11 May 2006.

(Recommendation 1) that 'Defence agree with Finance a suitable approach to allow Finance's early and ongoing involvement in the evaluation of capability development proposal costings.'

8.13 Defence agreed to the recommendation, and advised that it already engaged with Finance to allow access to cost data early in the capability development process for every DCP project. It undertook to formalise the process for engagement with Finance (and the departments of the Prime Minister and Cabinet and the Treasury).

Subsequent testimony to the JCPAA

8.14 In October 2009, Defence informed the JCPAA that it had agreed a new process with Finance to ensure the early and ongoing involvement of Finance in the evaluation of capability development proposal cost estimates. Defence stated that the agreement had been reached at a senior level. In response to a further question on whether that agreement was formalised, Defence stated that it would be able to provide evidence that the agreement had been reached on the new process, should the ANAO seek it.[389]

8.15 Subsequently, Finance wrote to the JCPAA advising that 'it confirms that it has agreed an approach with the Department of Defence to allow Finance early and ongoing involvement in the evaluation of capability development proposal costings.'[390]

8.16 In light of the assurance from both Defence and Finance, the Committee said in its report that it was pleased Finance had an agreed approach to allow sufficient scrutiny of capability development proposal costings.[391]

8.17 During the current audit, the ANAO established that Defence, on 27 January 2010, had recorded the status of Recommendation No.1 of the ANAO's 2008–09 report as 'Complete' in Defence's Audit Recommendation Management System (ARMS).

389 Hansard, Joint Committee of Public Accounts and Audit, *Review of Auditor-General's Reports Nos. 32 (2008–09) to 1 (2009–10)*, testimony of CCDG, 28 October 2009.

390 Finance, Submission no. 12 to the JCPAA, JCPAA *Review of Auditor-General's Reports Nos. 32 (2008–09) to 1 (2009–10)*, 1 December 2009.

391 JCPAA, Report 417, *Review of Auditor-General's Reports Nos. 32 (2008–09) to 1 (2009–10)*, p. 120.

Defence and Finance can find no record of an agreement

8.18 In September 2011, Defence informed the ANAO that an agreed position had been established in August 2009 and that this agreed position was circulated in September 2009. However, contrary to the testimony to the JCPAA in 2009 (paragraph 8.14) and the record in ARMS, Defence was unable to provide evidence that agreement had been reached with Finance on capability development proposal cost estimates.

8.19 Also in September 2011, Defence informed the ANAO that, to ensure traceability of this recommendation, Defence had included the ANAO recommendation in the SRP's Capability Development Reform Stream. Defence advised that it had been reviewed and considered as complete by the three-star/Band 3 Capability Development Reform Stream Governance Committee in September 2009. However, Defence was unable to provide evidence of that Committee's consideration of the implementation of this recommendation.

8.20 Finance is also unable to find any record of an agreement. The best interpretation that the ANAO can place on this matter is that, although some form of agreement may have been reached between senior officers in the two departments, no retrievable record was kept or conveyed to others.

Agreement reached following Finance's issue of an estimates memorandum

8.21 On 18 October 2011, Finance issued *Estimates Memorandum 2011/36*, which sets out a process for costing new Defence major capability development projects. For costing first and second-pass capability proposals, this process involves Finance receiving copies of business cases for proposals at specified minimum times before government consideration. It also includes standards to underpin the costing and ensure the proper identification of risk.

8.22 Finance informed the ANAO in mid-2012 that, with the benefit of the Estimates Memorandum (which, in effect, represents government policy), it received submissions from Defence with better notice and greater opportunity to verify Defence costing estimates. That said, from time to time, projects still arose where a decision was required so promptly as to preclude adequate verification.

8.23 In September 2013, Finance advised:

> More recently, Finance has agreed an update of this Estimates Memorandum with Defence which extends the initial guidance to include additional guidance in relation to software development cost and risk. Finance will

continue to work closely with Defence to improve cost estimation processes in preparation for consideration by Ministers of First and Second Pass capability submissions.[392]

8.24 In addition, Defence confirmed that agreement had been reached:

> As of early August 2013, Finance and Defence have concluded a process of consultation in regards to an update to the *Estimates Memorandum 2011/36*. While not all of Defence's recommendations were able to be included in the updated memorandum, the process of consultation has served to strengthen the understanding on the intent of the memorandum between the two departments. Subsequent to this consultation process, Defence is developing implementation guidance for staff on how to apply the principles in the memorandum to the work they undertake.

Conclusion—process established for Finance to verify Defence cost estimates for capability development projects

8.25 Having cost estimates externally reviewed has long been recognised as a basic characteristic of preparing credible estimates. An expectation of the Kinnaird Review was that, as part of the strengthened two-pass approval process to be developed in accordance with the review's recommendation, the Department of Finance (Finance) should be involved much earlier and continuously throughout the two-pass approval process and provide external verification of cost estimates.

8.26 In its March 2004 response to the Kinnaird Review, the Government agreed that Defence and Finance would develop working arrangements to ensure that Defence would provide Finance with adequate, timely information that Finance would need as part of a thorough approach to verifying Defence's cost estimates. However, the previous audit found that no agreed documented approach was in place to facilitate Finance's early and ongoing engagement to verify cost estimates for capability development proposals.

8.27 Testimony provided by Defence in October 2009 to the JCPAA's inquiry into the previous audit advised that agreement had been reached at a senior level between the two agencies on such an approach and that, in any subsequent ANAO audit, Defence would 'be able to provide the evidence that

392 Letter from the Secretary, Department of Finance and Deregulation, 9 September 2013.

agreement had been reached on the new process'.[393] Notwithstanding this assurance to the JCPAA, when asked to do so during this audit, neither Defence nor Finance could find any record setting out such an agreement.

8.28 In October 2011, Finance issued *Estimates Memorandum 2011/36*, which outlines a process for costing new Defence major capability development projects. Finance subsequently informed the ANAO that, as a result, it generally received submissions from Defence with better notice and greater opportunity to verify costing estimates.

8.29 In September 2013, following consultation on an update to the Estimates Memorandum, Finance and Defence indicated that the memorandum had been revised and extended, in support of Defence's development of cost estimates and their verification by Finance.

393 Hansard, Joint Committee of Public Accounts and Audit, 28 October 2009, p. 9.

9. Including off-the-shelf options in advice to government

This chapter considers Defence's progress in implementing Kinnaird's proposal for inclusion of off-the-shelf options among those put to government for capability development projects.

The merits of off-the-shelf acquisition

9.1 The merits of acquiring off-the-shelf (OTS) versus Australian-designed or adapted defence equipment have long been discussed. Support for acquiring OTS equipment stems from a concern that, in the past, unique, local or adapted options have been pursued without taking adequate account of the additional risks to project cost and schedule. On the other hand, acquiring local or adapted versions can confer benefits on local industry, build Australian industrial capacity and may give a technical advantage in the operational use of the capability.

9.2 Over a decade ago, before the Kinnaird Review, Defence's 2002 Capability Systems Life Cycle Management Manual set out the following hierarchy of options for consideration when investing in new defence equipment:

> Options ... should generally be considered and if appropriate, developed in the following order:
>
> > **a.** modifying extant platforms or combat systems which can be a lower risk, quicker and less costly option;
> >
> > **b.** acquiring off-the-shelf (OTS) items, either military off-the-shelf (MOTS) or commercial off-the-shelf (COTS), without modification and accepting the trade-offs necessary if they do not fully meet the requirement;
> >
> > **c.** acquiring and modifying OTS items, either MOTS or COTS, recognising that this can be a high-risk option;
> >
> > **d.** integrating existing systems, military or commercial, which can again be a high-risk option; or
> >
> > **e.** pursuing new designs, which is the highest risk option.[394]

394 Defence, *Capability Systems Life Cycle Management Manual 2002*, Chapter 3, pp. 3–6.

9.3 This analysis shows a clear understanding within Defence at that time of the potential benefits of choosing OTS equipment and the risks of doing otherwise.

9.4 ANAO analysis elsewhere has shown that the misclassification of projects as OTS instead of developmental has contributed to schedule slippage.[395] Other external experts have stated that, although including a genuine OTS option was a recommendation in the Kinnaird review, 'Defence has watered it down to mean either local construction of an off-the-shelf design (as with the Air Warfare Destroyer) or in some cases just a hypothetical off-the-shelf benchmark.'[396] Such observations indicate that Defence's progress with this recommendation merits review.

Analysis of proposals for consideration of off-the-shelf options

9.5 The question of selecting OTS equipment was an explicit part of the Kinnaird Review terms of reference, which asked it to consider:

> the quantum of, and main factors underlying cost overruns and schedule delays, having regard to matters such as ... technical issues and costs associated with acquiring capabilities built to Australian specifications rather than buying 'off-the-shelf' equipment ...

and

> The costs associated with the development and adaptation of defence equipment to Australian specifications (rather than buying 'off-the-shelf' equipment) and possible circumstances under which such development and adaptation may be warranted.[397]

9.6 The terms of reference suggest that a strong view existed within government that OTS equipment was more often cheaper than locally designed or adapted equivalents, and subject to less technical difficulty and schedule delay. For its part, the Kinnaird Review recognised that locally designed or adapted equipment might be expected to suit the Australian environment better and meet more closely Defence's capability needs—particularly where one set of equipment must serve multiple roles—as well as bringing benefits to local

395 ANAO Report No.20, 2011–12, *2010–2011 Major Projects Report*, pp. 62–3.

396 Andrew Davies and Mark Thomson 2011, Submission no. 8 to the Senate Foreign Affairs, Defence and Trade Committee inquiry into Procurement procedures for Defence capital projects [April 2011].

397 Kinnaird Review, p. 51.

industry and the economy. In any particular acquisition, there could be a range of factors that would support the adoption of OTS options and others that would support locally-designed or adapted options.

9.7 Kinnaird did not simply express unequivocal support for OTS acquisition. Rather, his proposal followed this principle:

> It is for the elected government to make these judgments and determine what mix of capability and what trade-offs between new and existing equipment is in the nation's interests. But, for government to remain confident that it is controlling this decision-making process Defence must provide greater clarity in setting out the options available to develop and sustain defence capabilities within a defined budget.[398]

9.8 In other words, the judgment as to how best to weigh the merits and balance interests should be left to government, but Defence should provide the necessary advice to put government in the position to make an informed judgment.

9.9 Thus, under the strengthened two-pass system proposed by the Kinnaird Review, the review's expectation was that 'at least one off-the-shelf option must be included' in each proposal to government at first pass. Moreover, 'Any option that proposed the 'Australianisation' of capability would need to fully outline the rationale and associated costs and risks.'

9.10 Kinnaird expected that where Defence proposes an Australianised or locally-produced option, it would be likely to cost more than a COTS/MOTS option. It could also carry more risks, particularly for any developmental work. Kinnaird intended that Defence show unequivocally in advice to government:

- the estimated additional costs, time and risks of non-COTS/MOTS options; and
- the additional capability and other advantages attracted by those options.

9.11 It would then be for government to weigh these points and to decide which option or options to pursue. This point was not explicitly incorporated in any of the Kinnaird Review's recommendations, but was extensively canvassed in the text and implicitly encompassed by Kinnaird's Recommendation 3.[399]

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398 ibid., p. 4.

399 See paragraph 6.3.

JCPAA Review and incorporation into manuals

9.12 The JCPAA reviewed progress with the Kinnaird recommendations as part of its inquiry *Progress on equipment acquisition and financial reporting in Defence* (Report No.411, August 2008). Defence advised, in its submission to the inquiry:

> The requirement to include an off-the-shelf alternative in any set of options put to Government has been incorporated into the Cabinet Handbook and the Defence Capability Development Manual [DCDM].
>
> Initial business cases and acquisition business cases being presented now include specific advice about the level of military and/or commercial-off-the-shelf being proposed.[400,401]

9.13 The 2006 DCDM clearly stated that government required the option set to include an OTS option or options, where one is available.[402]

The Mortimer Review made a stronger recommendation for OTS

9.14 The Mortimer Review's terms of reference also required it to consider 'the potential advantages and disadvantages of the greater utilisation of [MOTS] and [COTS] purchases.'[403] The review considered the Kinnaird proposal about OTS options but found that progress was mixed:

> The requirement to include an off-the-shelf alternative in any set of options presented to Government has been incorporated into the Cabinet Handbook and the Defence Capability Development Manual. Initial business cases and acquisition business cases being presented to Government include specific advice about the level of military and/or commercial-off-the-shelf content being proposed. However, the full cost of any 'Australianisation' options is not yet being consistently represented in first-pass submissions.[404]

9.15 Mortimer further analysed the matter and found 'experience shows that setting requirements beyond that of off-the-shelf equipment generates

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400 Defence submission [August 2008] to the JCPAA inquiry *Progress on equipment acquisition and financial reporting in Defence*, p. 90.

401 Although the matter of including OTS options was mentioned by CCDG at the public hearing on 11 May 2006, no undertaking was given in testimony about progress with this aspect.

402 Defence, *Defence Capability Development Manual*, 2006, p. 41, paragraph 4.28. The manual also stated that there would not always be OTS options for every project. In these cases, the manual required that Defence justify the lack of an OTS solution by explaining why no available solution could meet the broad capability gap.

403 The Mortimer Review's terms of reference are set out in the review itself at Annex A.

404 Mortimer Review, Annex B5.

disproportionately large increases to the cost, schedule and risk of projects.'[405] It concluded that Defence should increase its use of OTS equipment to reduce project cost and mitigate the risk of schedule delay and cost increases.

9.16 The Mortimer Review then made a recommendation (2.3), which it recognised as stronger than that made by Kinnaird:

> Any decisions to move beyond the requirements of an off-the-shelf solution must be based on a rigorous cost-benefit analysis of the additional capability sought against the cost and risk of doing so. This analysis must be clearly communicated to Government so that it is informed for decision-making purposes.[406]

9.17 The Government agreed to this recommendation and its response also attributed responsibility for action: 'CCDG will ensure that off-the-shelf solutions are considered as an essential early step in any capability development proposal and that cost-benefit analyses of OTS options are considered by government.'[407] This initial Defence response, set out in the Government's 20-point plan of action to the Mortimer recommendation, misapprehended an important aspect of the Kinnaird review and Mortimer's reinforced recommendation, in that it did not address the additional costs and benefits of non-OTS options.[408] However, Defence has more accurately reflected Mortimer's view in the latest edition of its DCDH (December 2012, section 3.3.23, p. 44).

Further reviews strongly supported greater use of MOTS

Pappas Review: 'deep cultural attachment' to non-MOTS options

9.18 Further support for OTS options came from the *2008 Audit of the Defence Budget* (Pappas Review). The Pappas Review examined post-approval cost escalation of developmental, Australianised and MOTS projects. It found the

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405 ibid., p. 17 forward. Mortimer adopted the Australian Strategic Policy Institute's definition of 'off-the-shelf' as meaning equipment that:

a. is already established in-service with the armed force of another country or Australia;
b. is sourced from an established production facility (not just a MOTS design); and
c. has at most minor modifications to deliver interoperability with existing ADF and/or allied assets.

406 ibid., p. 20.

407 Defence, *The Response to the Report of the Defence Procurement and Sustainment Review*, May 2009, p. 22.

408 Point 7 of the response to the Mortimer Review stated that Defence would provide Government with clear information on the costs and benefits of OTS options. The essence of the recommendation was not that an analysis should be done of the costs and benefits of OTS options: rather, the point was that the additional costs be identified for non-OTS options along with the additional expected benefits of such options. The consultant commissioned by Defence to review project approval submissions over the period October – December 2011 also commented on this difference in interpretation.

highest escalation (45 per cent) for developmental projects, followed by Australianised (25 per cent) with least escalation for MOTS (six per cent).[409] While agreeing there would be a compelling case for some developmental/Australianised projects, the review stated that Defence's project portfolio should contain a higher proportion of MOTS. It also noted that 'there appears to be a deep cultural attachment to developmental/Australianised projects.'[410]

9.19 While endorsing Mortimer's recommendation, the Pappas Review, with a view to increasing the transparency for any proposal to 'Australianise' a MOTS option, went on to recommend that:

> Defence should classify any modifications required to an existing platform into four categories: (i) external regulator requirements; (ii) internal technical regulations; (iii) integration requirements; and (iv) capability enhancements. The rationale for, and the cost, benefit and risk of, each type of modification should be specified. This assessment should form part of the first pass and second pass documentation.[411]

9.20 Defence's response to this recommendation was set out in the Defence White Paper 2009: 'Defence will continue to drive down the costs of ownership of military capability. This will include ... where appropriate, a bias towards military and commercial-off-the shelf capabilities.'[412]

Joint Standing Committee on Foreign Affairs, Defence and Trade

9.21 On 29 October 2009, the Joint Standing Committee on Foreign Affairs, Defence and Trade tabled its report on the Defence *Annual Report* 2007–08. This review was conducted in the light of the Kinnaird Review but before Mortimer had reported. It recommended that 'in the absence of a clear strategic case for high-risk first-of-type acquisitions, [MOTS] purchases should be the default option for procurement projects.'[413]

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409 Pappas Review, pp. 78–80. The ANAO has not sought to verify the escalation figures referred to here.

410 Pappas Review, p. 79.

411 ibid., p. 80.

412 Defence, *Defending Australia in the Asia Pacific Century: Force 2030* (Defence White Paper 2009), Canberra, 2009, p. 68. It also noted that 'The Government needs to make informed decisions about the appropriate mix of cost, risk and capability. Consequently, the Government has decided that military-off-the-shelf and commercial-off-the-shelf solutions to Defence's capability requirements will be the benchmark against which a rigorous cost-benefit analysis of the military effects and schedule aspects of all proposals will be undertaken. Such an approach is consistent with the Defence Procurement and Sustainment Review' (p. 127).

413 Joint Standing Committee on Foreign Affairs, Defence and Trade, Review of the Defence Annual Report 2007–08, Canberra, October 2009, p. 3.

9.22 The Government response to the Committee's report, which was tabled in July 2010, agreed 'in principle' to this recommendation. It pointed out that the Defence White Paper 2009 had stated that

> Government has decided that military-off-the-shelf and commercial-off-the-shelf solutions to Defence's capability requirements will be the benchmark against which a rigorous cost-benefit analysis of the military effects and schedule aspects of all proposals will be undertaken. Such an approach is consistent with the [Mortimer] Review.

9.23 The Government response went on to say:

> Defence is fully implementing these requirements.
>
> In summary, where an off-the-shelf option does exist, it will be presented for Government consideration and will be the benchmark against which a rigorous cost benefit analysis of the military effects and schedule aspects of all proposals will be undertaken; and when an off-the-shelf option is judged not to exist, this will be explained in the first-pass submission to Government.[414]

9.24 However, one of Mortimer's criteria for considering a piece of equipment to be OTS was that it is already established in service with any country's armed forces. Defence has weakened this criterion to include 'anticipation' that it will be in military service by the time a second-pass decision is sought.[415]

Other support for OTS

9.25 There has also been comment from respected external sources pressing for greater use of MOTS equipment. As noted earlier (paragraph 3.47), in May 2011, ASPI made four suggestions for improvement in the delivery of defence projects. One of these was:

> *Buy more Military-Off-The-Shelf (MOTS) Equipment*: The clear lesson from recent years is that MOTS equipment from existing production lines can provide the ADF with equipment quickly and at a known cost. As a principle, the development of the ADF should be based on buying MOTS equipment and maintaining strict configuration alignment with parent militaries. Buying equipment by methods other than off-the-shelf should be based on a business

414 Defence, Government Response to the Joint Standing Committee on Foreign Affairs, Defence and Trade Report into the Defence Annual Report 2007–08, July 2010, p. 1.

415 Defence, DCDH, 2012, p. 44.

case that establishes that a bespoke solution is either unavoidable or provides better value for money.[416]

MRIGC management of this initiative

9.26 Defence's Mortimer Review Implementation Governance Committee (MRIGC) took responsibility for implementation of the Mortimer recommendation regarding OTS options (Recommendation 2.3). In February 2010, the MRIGC had updated the status of this recommendation in *process* terms to 'completed' on the basis that the Interim DCDH had, since November 2009, described the process to put forward an OTS option. MRIGC papers show that, in outcome terms, the status remained 'Still to be tested'.

9.27 Until March 2010, responsibility for progressing the OTS recommendation had fallen also to another committee, the Capability Development Stream Governance Committee.[417] However, because the MRIGC had closed the matter at its February meeting, the other committee also closed its action on the matter at its 24 March 2010 meeting.

9.28 In a media release on 6 May 2011, ministers identified 'benchmarking all acquisition proposals against off-the-shelf options where available' as one of the Kinnaird/Mortimer reforms which had not yet been fully implemented and whose implementation would now be accelerated.[418]

9.29 After this announcement, the Mortimer Reforms Coordination Team (MRCT) advised the MRIGC (for which it was the primary support team) that it had begun to develop an accelerated implementation plan. The MRCT told the next meeting of the MRIGC (September 2011) that, in light of the ministers' concerns, 'a plan has been established to examine the current practice for consideration of OTS options in capability submissions with the intent to report in time for the December 2011 meeting.' Defence had engaged a consultant to review project submissions over the recent past to determine whether they followed the requirements of the OTS recommendation. At this point, the status of Recommendation 2.3 as reported to MRIGC remained 'closed' by process but 'open' by outcome.

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416 Australian Strategic Policy Institute (ASPI), *Cost of Defence, ASPI Defence Budget Brief 2011–12*, May 2011, p. 114.

417 Management of the SRP and its subsidiary streams is discussed in Chapter 2.

418 Minister for Defence and Minister for Defence Materiel, *Strategic Reform Program*, media release, 6 May 2011.

Progress became more confused in late 2011

9.30 In November 2011, ministers' offices sought advice on the status of Defence reforms. This was done informally, by circulating a draft document to which Defence was to attach comments or propose amendments.[419] Through those comments, Defence advised the ministers' offices that implementation of this recommendation was still 'Underway—Analysis of the project approval submissions completed since mid-2011 is nearing completion.'[420] However, on 28 November 2011, ministers put out a media release, *Progress of Implementation of Key Defence Reforms*, which reported the status of this reform as 'Implemented—All future projects seeking second pass that are not off-the-shelf will include a rigorous cost-benefit analysis against an off-the-shelf option.' It is not clear where this wording had come from. It could be taken as reflecting Defence's assessment of the status by process but not by outcome.

9.31 At the subsequent meeting of the MRIGC (9 December 2011), the report being prepared by the consultant (see paragraph 9.29) had not yet been considered. The MRCT proposed that the Committee agree that 'Recommendation 2.3 (off-the-shelf benchmarking) outcomes have not yet been completed.' Nevertheless, the MRIGC concluded that, in the light of the Ministers' 28 November 2011 media release, it could now agree to the closure of Mortimer Recommendation 2.3 by outcome and did so. The MRIGC minutes show the committee took the view that the 'customer' for the submissions had, through the November 2011 media release, demonstrated he was satisfied with the results and, therefore, it need take no further action.

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419 Defence (CDG) advised the ANAO on 19 January 2012 that there had been no formal advice to the Defence Minister on Mortimer Recommendation 2.3.

420 This advice was supported by an attachment showing more detail, which, for this item, read:

'REFORM: Cost-benefit analysis of projects that are not off-the-shelf

STATUS: Underway. See details below:

Key things that have been done:

- An independent analysis of the content of project approval submissions to determine the quality of off-the-shelf cost benefit analysis has just been completed and is being considered.

Key things to be done to complete implementation:

- Agree actions to address any issues raised in the independent analysis.
- Implement agreed actions to change the content of submissions if required.

Expected timeframe for completion:

- Mid 2012.'

Consultant's report showed limited progress

9.32 The consultant's report on progress with Mortimer Recommendation 2.3 was completed on 15 November 2011. The report notes that the original recommendation and the Government response were 'nuanced differently': that is, the former sought identification of costs and benefits of non-OTS options but the latter promised costs and benefits of OTS options would be presented to government (see paragraph 9.17).

9.33 To assess the implementation of Recommendation 2.3, the consultant analysed 13 submissions in which Defence had sought government approval to progress a project in the period October–December 2011.[421] That period was selected because of advice from CDG that full implementation of the recommendation would occur after September 2011.

9.34 The report found that, of the 13, eight were OTS acquisitions. However, determining that they were OTS was 'a judgement call' in a few cases. Of the remaining five, three involved acquisition of OTS systems for incorporation into an Australian system.

Submissions recommending OTS

9.35 The report found that, of the eight submissions recommending an OTS option, none included a prominent discussion of that fact. Four included some mention of the fact in the body of the submission and four did not. The report observed that 'Simply including in the body of the submission a headed paragraph on OTS would be a start' in increasing the prominence and clarity of the OTS discussion without substantial additional work.

Submissions not recommending OTS

9.36 For the five submissions that did not recommend an OTS option, only one went so far as to identify an OTS option. None of the five submissions included prominent discussion of OTS, though all included some discussion in the body of the submission. All provided clear explanations of the deviation from OTS and some justification. None included a rigorous cost-benefit analysis of the deviations, as recommended by the Mortimer Review (see paragraph 9.16). The report observed that:

421 Not all the submissions had been formally approved by the Secretary and CDF or submitted to government, but all had reached the stage of being sent to the Secretary/CDF for clearance.

> Providing the rigorous cost-benefit analysis alluded to by Mortimer would require additional information to be included in submissions that recommended deviations from OTS ...
>
> However, the undertaking in the Defence response (essentially to provide clear information on the costs and benefits of OTS options for all procurements) could conceivably be presented in other formats while still ensuring that Government is provided with the requisite information.[422]

9.37 On the basis of this analysis, Defence has some way to go to implement either Mortimer Recommendation 2.3 or its additional undertakings in response to the recommendation. When asked about the action it was taking in the light of the consultant's report, Defence informed the ANAO in January 2013 that the consultant had, in his preparation of his report, 'liaised with senior Defence staff who were looking at how to incorporate further information.' Defence went on to advise that 'No further action was required by the Mortimer Review Coordination Team as it follows the decisions of the MRIGC. The MRIGC at its 9 December 2011 meeting decided to close Mortimer Recommendation 2.3.'

9.38 One of the sample of capability development projects whose documentation was examined by the ANAO as part of the audit was a project to which NSC gave combined first and second-pass approval in February 2010. This was done on the basis of a submission to government which had identified the project as MOTS.

9.39 The project subsequently ran into difficulties and, in June 2013, Defence identified that the offer originally solicited from the United States Government (which was the basis of all subsequent project development) was not for MOTS standard materiel. This was not recognised by Defence and, as a consequence, risk management of the acquisition was of a lesser order than ultimately necessary and, predictably, the project grew in complexity.

422 *Defence's Implementation of the Response to Mortimer Recommendation 2.3*, November 2011, p. 9.

Conclusion—routine inclusion of adequate advice on off-the-shelf options in submissions to government yet to be achieved for all projects

9.40 The merits of acquiring off-the-shelf (OTS) versus Australian-designed or adapted defence equipment have long been discussed, and examination of this issue formed an explicit part of the Kinnaird Review's terms of reference. Under the strengthened two-pass system proposed by Kinnaird, the review's expectation was that 'at least one off-the-shelf option must be included in each proposal to government at first pass. Moreover, any option that proposed the 'Australianisation' of a capability would need to fully outline the rationale and associated costs and risks.' The intention was to provide government with capacity to weigh the relevant costs, benefits and risks and decide which option or options to pursue.[423]

9.41 The Mortimer Review's terms of reference also required it to consider 'the potential advantages and disadvantages of greater utilisation of [MOTS] and [COTS] purchases'. The Mortimer Review found limited progress with the Kinnaird proposal about OTS options. Mortimer further found: 'experience shows that setting requirements beyond that of off-the-shelf equipment generates disproportionately large increases to the cost, schedule and risk of projects.'[424] Mortimer concluded that Defence should increase its use of OTS equipment to reduce project cost and mitigate the risk of schedule delay and cost increases. The Mortimer Review then made a recommendation (2.3) which it recognised as being stronger than that made by Kinnaird:

> Any decisions to move beyond the requirements of an off-the-shelf solution must be based on a rigorous cost-benefit analysis of the additional capability sought against the cost and risk of doing so. This analysis must be clearly communicated to government so that it is informed for decision-making purposes.[425]

9.42 With no benchmark from the early 2000s for comparison, it is difficult to assess the progress Defence has made over the decade in implementing the 2003 Kinnaird and stronger 2008 Mortimer recommendations relating to including OTS equipment acquisition options in proposals to government. In

423 Kinnaird Review, pp. 16–20. This was one of the primary considerations leading to Kinnaird's Recommendation 3, which is set out in paragraph 6.3 of this audit.

424 Mortimer Review, p. 17.

425 ibid., p. 20.

February 2010, Defence's Mortimer Review Implementation Governance Committee (MRIGC) assessed that implementation of Recommendation 2.3 was complete in 'process' terms, because the DCDH had, since November 2009, described the process to put forward an OTS option. However, the MRIGC papers show that, in 'outcome' terms, the status at that point remained 'still to be tested.'

9.43 Subsequently, in a media release on 6 May 2011, ministers identified 'benchmarking all acquisition proposals against off-the-shelf options where available' as one of the Kinnaird/Mortimer reforms which had not yet been fully implemented and whose implementation should be accelerated.[426] Later in 2011 Defence engaged a consultant to review a sample of submissions to assess progress against Mortimer's specific (and stronger) recommendation (2.3). The results of that review, completed on 15 November 2011, are equivocal, and show that Defence has more progress to make to institutionalise the arrangements recommended by Kinnaird and Mortimer and agreed by government.

9.44 On 28 November 2011, ministers issued a media release that reported the status of this reform as 'Implemented—all future projects seeking second-pass approval that are not off-the-shelf will include a rigorous cost-benefit analysis against an off-the-shelf option.' Subsequently, Defence recorded Mortimer Recommendation 2.3 as implemented by 'outcome' as well as by 'process'.

9.45 Nevertheless, if the desired effect of this reform is to be delivered, in terms of better advice to inform capability decisions by government, Defence will need to improve on previous performance and ensure routine compliance with the requirement for all projects seeking approval of a capability option that is not OTS to include in the submission to government a rigorous cost-benefit analysis against an OTS option.

426 Minister for Defence and Minister for Defence Materiel, *Strategic Reform Program*, media release, 6 May 2011.

10. CEO DMO providing independent advice to government

This chapter examines Defence's implementation of the Kinnaird recommendation that the CEO DMO provide independent advice to government on capability development proposals.

Origin of the proposal for CEO DMO independent advice

10.1 The Kinnaird Review envisaged independent advice flowing to government from the CEO DMO, who would 'report to government on detailed issues including tendering and contractual matters related to acquiring and supporting equipment.'[427] However, this was in the context of DMO becoming an executive agency within the Defence portfolio, a Kinnaird recommendation not agreed by government.

10.2 Mortimer also proposed that DMO become an executive agency (Recommendation 5.1) and Recommendation 2.10 of the review was:

> The Chief Executive Officer of DMO should provide independent advice to Government on the cost, schedule, risk and commercial aspects of all major capital equipment acquisitions, and be a permanently invited adviser to Government committees considering defence procurement.[428]

10.3 There are two distinct elements to this recommendation of the Mortimer Review: first, that the CEO DMO should give independent advice and, second, that the CEO DMO become a permanent adviser to relevant government committees.

Government response

10.4 The Government did not agree to the proposal to make DMO an executive agency, separate from the Department of Defence. However, it agreed that CEO DMO 'must be in a position to provide advice to Government on the cost, schedule, risk and commercial aspects of all major capital equipment acquisitions.' The terms of that agreement were circumspect on the independence of the advice that CEO DMO would give. The Government

427 Kinnaird Review, p. 25.

428 Mortimer Review, p. 27.

response to the Mortimer Review pointed out that many parts of the Defence organisation bring professional expertise to bear on procurement, and 'these views must be properly reflected in [Defence] cabinet submissions.'[429]

10.5 Having decided not to accept the proposal to make DMO an independent agency, the Government also stated it would be inappropriate for DMO to make coordination comments on Defence Cabinet submissions because, in procurement, DMO is intimately involved in preparing these submissions.[430]

10.6 In practice, this means that although CEO DMO's views should be taken into account when preparing Defence acquisition submissions, those views would be reflected in the submissions and not supplied as independent advice in the manner of coordination comments. The Government response to the Mortimer Review went on:

> The Deputy Secretary for Strategy, Coordination and Governance will discuss with PM&C a distinctive way to present the advice provided by DMO in the body of cabinet submissions to reinforce the provision of independent advice.[431]

10.7 On the issue of the CEO DMO's presence at 'Government committees considering defence procurement', the Government response stated that agreement would be sought for his attendance at all NSC meetings considering capability acquisition decisions:

> We will ensure that DMO presents its independent advice on cost, schedule and risk of equipment acquisition in NSC submissions and presents an acquisition strategy within the submission. CEO DMO will advise on cost, risk, schedule and acquisition strategy for major capability submissions.[432]

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429 Defence, *The Response to the Report of the Defence Procurement and Sustainment Review*, May 2009, p. 25.

430 Generally, Cabinet receives the views of APS agencies (other than the sponsoring department) as coordination comments, included as part of a final submission. These are clearly perceived as independent: 'Coordination comments are the impartial advice of Australian Public Service agencies to the Cabinet as a whole. They are not cleared by ministers or ministerial advisers. Any variation to these arrangements would compromise the independence of coordination comments'. Source: Department of the Prime Minister and Cabinet, *Cabinet Handbook*, 7th edition, paragraph 48.

431 Defence, *The Response to the Report of the Defence Procurement and Sustainment Review*, May 2009, p. 25.

432 ibid.

Implementation

10.8 The MRIGC coordinated implementation of Mortimer Review Recommendation 2.10 and the associated action plan. Progress of these items was reported regularly to the committee, from its first meeting in June 2009 to its last in December 2011.

10.9 From June 2009, activity on this reform was directed towards the CEO DMO attending relevant NSC meetings so as to advise on capability development proposals before NSC. However, it was resolved that relevant officials would be co-opted to NSC on a case-by-case basis with the agreement of the Special Minister of State on each occasion.

10.10 By February 2010, and following consideration by the Cabinet Secretary, Defence had drafted new Cabinet submission templates designed to provide the CEO DMO with a mechanism to give written independent advice to government. The MRIGC was also advised that, before each NSC meeting, approval is sought for the CEO DMO to attend relevant items on the agenda but that the administrative process could be improved. It was also advised that permanently invited status for CEO DMO had not yet been achieved but that action was still underway to establish permanent co-option to NSC.

Agreement on a form of advice

10.11 By June 2010, the Mortimer Reforms Coordination Team (MRCT) advised the MRIGC that the Minister for Defence Personnel, Materiel and Science had agreed that the CEO DMO would provide advice in minute form directly to the Ministers for Defence and Defence Personnel, Materiel and Science for each major capital equipment acquisition project. The Minister's directive made it clear that he wished to ensure that the CEO DMO had a mandate to provide independent advice, not just a mechanism. The MRIGC therefore decided (11 June 2010) that action to implement this item was complete.

10.12 The Defence SRP Stream report for the Mortimer (Procurement and Sustainment) stream for July 2010 stated:

> CEO DMO's capacity to provide Government with independent advice has been strengthened. From June 2010, CEO DMO's advice is being provided to the Ministers for Defence and Defence Materiel and Science at the same time but in a separate document to the capital equipment submission. This new

arrangement will be in place for appropriate DMO projects being considered by Government.[433]

10.13 In August 2010, the MRIGC was advised that, while CEO DMO's independent advice had been drafted for four capability submissions, only one had been presented to government.[434] DMO subsequently informed the ANAO that this advice process was 'clunky' and required 'a degree of administrative coordination to make sure documents came together at appropriate times.'

10.14 Also in August 2010, the MRIGC was advised:

> Feedback from the Secretary emphasised the need for brevity and consistency in information between CEO DMO's independent advice and the submission. However, he also noted that the advice on industry implications were particularly insightful. The feedback has now been incorporated into DMO's business process.[435]

10.15 The concern for consistency between the CEO DMO's advice and the departmental submission reflects the potential for tension that is inherent in seeking 'independent' advice from one part of the Defence organisation while also expecting that Defence provides an integrated 'One Defence' view.[436]

The system stopped working after a change of ministers

10.16 Subsequently, in December 2010, MRIGC was advised that, since the appointment of a new minister, provision of independent advice for capability submissions had stopped. DMO staff had interpreted a requirement to reduce the number of submissions to ministers for 'Noting' as a requirement to provide independent advice only on an exceptions basis. The CEO DMO had reportedly 'moved to correct this' but, in the meantime, the MRIGC reverted the Mortimer Review Recommendation 2.10 to 'work underway and on target' status.

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433 Defence, Strategic Reform Program Stream Report, July 2010.

434 At the December 2010 MRIGC, in response to a query about the nature of the CEO DMO independent advice to the Minister, the committee was advised that the advice does not focus on capability but is intended to broaden the Minister's understanding of commercial aspects. This could include the capacity of industry to undertake the activity, its past performance and the underpinning commercial risks.

435 Defence, MRIGC, minutes of meeting, No.06/2010, 27 August 2010.

436 The term 'One Defence' view appears in the DCDH, August 2011. It is not present in earlier editions.

Ministerial initiative reinvigorated regular CEO DMO advice

10.17 In late January 2011, the Minister for Defence received independent advice on Project SEA 1148, Phase 4A, ANZAC Tactical Electronic Support Capability Improvements from the CEO DMO. He annotated it as follows:

> (1) Noted.
>
> (2) Helpful advice
>
> (3) Is there any reason why this advice could not be incorporated into Departmental Submission which comes to me re First Pass? As Attachment? CEO DMO and Secretary please consider and advise.

10.18 The Secretary and CEO DMO advised the minister that they agreed that the independent advice could be incorporated into departmental submissions as an attachment. They noted that the CEO DMO's submission would be provided in full to ensure that the independence of the advice was maintained. The minister approved the proposed format on 6 March 2011 and, thereafter, Defence and DMO have adopted this arrangement. This was reaffirmed by the CEO DMO in a public hearing before a Senate Committee.[437]

10.19 In May 2011, MRIGC was advised that a ministerial submission had been submitted and agreed to finalise the process for provision of independent advice. Again, the Mortimer Review Recommendation 2.10 was assessed as 'complete'. By September 2011, MRIGC was told that a format for this advice had been agreed by the Minister for Defence and this information was now routinely provided. Defence has provided the ANAO with examples of the advice provided for proposals submitted between June and December 2012.

10.20 The question of how the CEO DMO can provide that advice was directly addressed by the Secretary in evidence to a Senate Committee in June 2012:

> I would like to address ... the extent to which DMO can provide independent advice. The need for independent advice from the DMO was a central tenet of both Kinnaird and Mortimer reviews. The CEO DMO does just that; he provides independent advice on cost, schedule and risk of equipment acquisition to me, to the CDF and to the minister and ministers. He provides that advice on all projects progressing through the approval process and he provides the advice to support defence to deliver the best advice possible to

437 Evidence of CEO DMO, Senate Foreign Affairs, Defence and Trade References Committee, *Procurement procedures for Defence capital projects*, public hearing, 7 October 2011.

government in support of equipment acquisition decisions. The DMO does not provide advice on the capability that should be acquired. That is strictly advice that should come from defence itself, and it currently does. So while the DMO is a prescribed agency under the FMA Act, it remains an integral and an integrated part of the Department of Defence.[438]

Conclusion—since 2011 a mechanism has been in place for the CEO DMO to provide independent advice to government as envisaged by Kinnaird

10.21 The Kinnaird Review envisaged independent advice flowing to government from the CEO DMO, who would 'report to government on detailed issues including tendering and contractual matters related to acquiring and supporting equipment.'[439] However, this was in the context of DMO becoming a separate executive agency within the Defence portfolio, a Kinnaird recommendation not agreed by government.

10.22 The Mortimer Review also proposed that DMO become an executive agency, and recommended that the Chief Executive Officer of DMO should provide independent advice to Government on the cost, schedule, risk and commercial aspects of all major capital equipment acquisitions.[440]

10.23 The Government did not agree to the proposal to make DMO an executive agency, separate from the Department of Defence. However, it agreed that the CEO DMO 'must be in a position to provide advice to Government on the cost, schedule, risk and commercial aspects of all major capital equipment acquisitions.'

10.24 The Minister reaffirmed in 2011 the original view put by Mortimer in 2008, that the view of the CEO DMO is valued as an independent opinion that ministers wish to hear in the context of considering capability development submissions. It took two years and an explicit ministerial request in 2011 for this recommendation finally to be implemented.

438 Hansard, Senate Foreign Affairs, Defence and Trade References Committee, *Procurement procedures for Defence capital projects*, public hearing, 13 June 2012, p. 22.

439 Kinnaird Review, p. 25.

440 Mortimer Review, p. 27.

Part 4: Improving accountability and advice during project implementation

The introduction of the two-pass approval arrangements for capability development projects has been accompanied by a range of measures to improve accountability for capability development and materiel acquisition outcomes, including related advice to government during project implementation. Some of these measures have been specifically proposed in major reviews and others proposed or developed in response to the new arrangements. Therefore, to assess Defence's progress with initiatives seeking to improve accountability and advice, the audit considered:

- *the introduction by Defence of Joint Project Directives by the Secretary of the Department of Defence and the Chief of the Defence Force (Chapter 11);*
- *the preparation of Materiel Acquisition Agreements between Defence and DMO and their reconciliation against authorising decisions (Chapter 12);*
- *how Defence closes capability development projects (Chapter 13); and*
- *work towards the implementation of Capability Manager reporting (Chapter 14).*

11. Introducing Joint Project Directives

This chapter examines the introduction of Joint Project Directives, issued by the Secretary of the Department of Defence and the Chief of the Defence Force to help ensure that capability development projects observe government requirements.

Joint Project Directives and improved accountability

11.1 Joint Project Directives (JPDs) are instruments introduced by Defence to enhance accountability in capability development by making it clear what is to be done and who is to do it. Materiel Acquisition Agreements (MAAs), which are related documents, have existed for some years. More specifically:

- A JPD is a document, signed jointly by the Secretary of Defence and the Chief of the Defence Force (CDF), which states the terms of government approval of a capability development project. JPDs were initiated for approvals from March 2010. In essence, a JPD re-states the formal approval decision and assigns responsibility for all inputs to the approved capability by the various Defence groups, including DMO.
- MAAs are formal internal agreements which state concisely those products and services to be delivered by DMO as a supplier to Defence. Although MAAs have been in use for about eight years, their structure was revised after the inception of JPDs and, since then, MAAs have been expected to reflect the relevant JPD, because they address DMO's role in bringing the capability into effect.

11.2 The introduction of JPDs is examined in this chapter, and the preparation of MAAs is considered in Chapter 12.

11.3 Together, these documents identify the scope and limits of acquisition projects and who is responsible for the major components of the work. Therefore, JPDs and MAAs are intended to aid sound governance and accountability in Defence acquisition projects.[441]

441 The key role of these two documents in Defence's current acquisition arrangements has been set out in the Senate Foreign Affairs, Defence and Trade References Committee *Preliminary report: Procurement procedures for Defence Procurement procedures for Defence*, December 2011, p. 67, paragraph 6.9.

Defence views JPDs as important documents

11.4 The importance Defence attaches to JPDs is reflected, for example, in its response to a recommendation from the JCPAA. In June 2010, the Committee recommended that DMO provide a brief report on steps taken to ensure DMO staff inform decision-makers of project scope changes. Defence reported that 'the primary controls are exercised through the Project Directive and [MAA].'[442]

11.5 JPDs, in particular, have also been recognised by ministers as a way of enhancing project management accountability and 'to ensure acquisitions progress according to Government direction.'[443] Defence has encouraged ministers in this view. For example, in June 2011, Defence advised the Minister for Defence that, in 2003, it had, without authorisation, changed the project scope of LAND 40 Phase 1, Direct Fire Guided Weapons. It told the minister that it had introduced measures following the Kinnaird and Mortimer reviews to strengthen project governance: 'such as SEC/CDF Directives [JPDs] and Gate Reviews', to lessen the likelihood of future unauthorised scope changes. The minister responded:

> Please confirm that this would not be able to occur today given the suite of reforms since 2002: i.e. that an unauthorised change would be effected by Defence leadership less than 12 months after Government approval and without reference to Government and then first reported to Government over 8 years later.[444]

11.6 Defence's introduction of JPDs and revision of MAAs then featured strongly in the response it provided to the minister, assuring him a recurrence of unauthorised changes was unlikely. Also, it advised him that DMO was examining 'approvals for all existing projects approved before the introduction of [JPDs] to ensure alignment with [MAAs].'[445] This is DMO's 'Acquisition Baseline Review', considered later in Chapter 12.

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442 Defence, Government Response to JCPAA Report 417, *Review of Auditor-General's Reports tabled between February 2009 and September 2009*, [p. 1].

443 Minister for Defence and Minister for Defence Materiel, media release, *Defence Capability Plan Reform*, 2 July 2012.

444 Government project approval in December 2002 had specifically excluded certain items from purchase. However, in September 2003, CDG, with others, proposed to the VCDF that these items be brought back into the project, which VCDF approved (October 2003). The last equipment was delivered in August 2009. Defence reported this to the Minister in 2011, when the matter came to light in closing the project.

445 General Manager Systems, DMO, minute to the Minister for Defence, 11 August 2011.

11.7 In examining the introduction of JPDs, the audit considered:

- first, why JPDs were introduced and how they are supposed to work;
- second, Defence's performance in putting JPDs in place;
- third, why it took Defence a long time to begin issuing JPDs; and
- finally, the implications for the future usefulness of JPDs.

Origin and purpose of Joint Project Directives

11.8 Defence defines a JPD as:

> A project-specific directive issued by the Secretary, Department of Defence and the Chief of the Defence Force to the nominated CM [Capability Manager], assigning overall responsibility, authority and accountability for realisation of the capability system to an in-service state.[446]

11.9 Their stated purpose is to provide clear accountability, noting that Defence holds the capability manager ultimately responsible for ensuring an integrated view of capability delivery across Defence, including DMO.

JPDs proposed as part of the response to Mortimer

11.10 In its 2010 *Incoming Government Brief*, Defence stated that 'One of the Mortimer reforms is the inclusion of Project Directives.'[447] The inception of JPDs has frequently been attributed in this way to the Mortimer Review whereas, in fact, that review does not mention JPDs. JPDs were first proposed in the government response to the Mortimer Review, prepared by Defence.[448] The 20-point plan forming the first part of that response states:

> To assist in developing greater clarity in the capability planning process a Project Directive, based on the project approval decisions made by Government, will be issued immediately following Government approval at Second Pass. A draft Directive will be included in the submission to Government. The Project

446 Defence, *Defence Capability Development Handbook*, December 2012, p. 123. JPDs are 'joint' in that they are issued under the authority of both the Secretary of Defence and the Chief of the Defence Force, as joint heads of the Defence Organisation.

447 Senate Standing Committee on Foreign Affairs, Defence and Trade, Budget Supplementary Estimates 2010–11, Answers to Questions on Notice, attachment to Defence question W01. See also Additional Estimates Hearing, 23 February 2011, Questions Taken on Notice, answer to question no.W21, 'Handling of Cabinet Documents' where Defence describes the introduction of the JPD as 'one of the significant elements of project governance reform being pursued as part of the implementation of the 2008 Mortimer Review'.

448 Defence, *The Response to the Report of the Defence Procurement and Sustainment Review*, 2 May 2009.

> Directive will provide the top level direction from the [CDF] to the Capability Manager to introduce the full operational level capability into service by the date agreed upon by Government. It will articulate the respective roles of the Defence Groups, the Services and DMO ...[449]

11.11 After the government's formal decision itself to approve a project, the project directive was to be authoritative among Defence project documents:

> Defence, with the assistance of the DMO, and drawing on the Capability Managers' expertise, will draft project directives, promulgating the Cabinet and Ministerial approvals. These will inform the development of all relevant capability and project management documents and plans—with the directive being the authoritative document. [450]

11.12 Two important aspects are that Defence intended to issue the JPD *immediately* after government approval and that the JPD should then be the basis of all relevant project documentation.

11.13 An important aspect of the purpose of JPDs was highlighted in Defence's response to a parliamentary question in early 2011: 'The intent of a Project Directive is to provide an appropriately declassified means of promulgating Cabinet and Ministerial approvals.' Thus, according to Defence:

> Project Directives will enhance both the guidance available to, and the accountability of, project managers without compromising the provisions stipulated in the Cabinet Handbook.[451]

11.14 In essence, JPDs represent a way for Defence to have a document other than a government decision itself, state the essence of the decision, and be able to distribute it within the department without risk of breaching rules for handling cabinet decisions. [452] The JPD can be provided to responsible departmental staff more readily than a cabinet decision, which is inherently sensitive, and of which photocopies or facsimiles may not be taken. This also diminishes the risk of Defence losing track of the terms of the original decision, particularly in cases where the approval decision was made by a previous government and so the department does not have ready access to the relevant Cabinet documents.

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449 ibid., p. 8.

450 ibid.

451 Senate Standing Committee on Foreign Affairs, Defence and Trade, Additional Estimates Hearing, 23 February 2011, Questions Taken on Notice, answer to Question W21.

452 This purpose for JPDs is emphasised by the CEO DMO in his testimony to the Senate Foreign Affairs, Defence and Trade References Committee, 7 October 2011.

Issuing Joint Project Directives: analysis of timeliness

11.15 The audit considered government approvals for Defence projects between March 2010 and June 2011, of which Defence identified 29 cases. Upon examination, four approvals were not of a character that attracts a JPD (for example, the approval did not, in several cases, relate to a major capital acquisition). A further five projects, in the ANAO's view, could have warranted a JPD but, for various reasons, Defence stated that they did not. JPDs were developed for the remaining 20 projects.

Defence took two years to start issuing JPDs

11.16 ANAO analysis for these 20 projects showed that the first five JPDs were signed on 20 May 2011, two years after the response to the Mortimer Review had announced Defence's intention to have JPDs. Further:

- the mean elapsed time between a government project approval and signing the respective JPD was 210 days (about seven months);
- the greatest elapsed time between approval and the JPD was 387 days (twelve and a half months); and
- the least time was 51 days.

Production of MAAs generally occurred before JPDs

11.17 JPDs are intended to be authoritative documents, issued immediately after government approval, which then enable any other necessary project documents, including, for example, MAAs, to be based on a reliable source.

11.18 The ANAO examined the MAA for each project for which it identified JPDs in the sample above. It found 18 projects with both a JPD and an MAA. Only one fitted the expected chronological pattern: that is, the MAA had been signed after the JPD. This had taken 12 days. In all other cases, the JPD had been signed after—usually well after—the MAA. For these, the mean delay was 148 days, or just under five months.[453]

11.19 Defence provided a JPD and MAA status report of 28 August 2012, which provided data on more recent activity. This report shows that, of the

453 The quickest was where the JPD was signed only four days after the MAA, and the slowest took 357 days (ANAO analysis).

33 projects approved between September 2011 and August 2012 for which Defence had determined that both a JPD and MAA were needed:

- four projects had neither a JPD nor an MAA;
- 26 had both, but the JPD was signed after the MAA; and
- three had both, but the JPD had been signed first.

11.20 Based on Defence reports regarding the execution of JPDs as at 18 December 2012, 19 JPDs are listed by Defence as overdue for signature. These varied in age from 120 days to 455 days after project approval.

11.21 Pressure for MAAs to attract greater priority than the JPD (which Defence describes as the 'superior document') may arise because an MAA is required in order for Defence to fund DMO to progress the acquisition. There is nothing to stop an MAA from being agreed where no JPD exists. However, the risks of producing an MAA first are that care must be taken to ensure it is consistent with the government project approval decision and the terms of the (eventual) JPD and, moreover, that the project commences in accordance with the original government approval decision. Where an MAA is developed first, there is a risk that pressure will develop to ensure the JPD, when drafted, accords with the MAA rather than the original government decision where there is any perceived difference, even if that is inadvertent. Defence informed the ANAO in January 2013 that CDG has placed responsibility for both MAAs and JPDs in the same directorate to ensure alignment.[454]

Why the implementation of JPDs took several years

11.22 The audit traced Defence's work to implement JPDs to analyse why it took as long as it did.

11.23 The May 2009 response to the Mortimer Review made a three-star Implementation Steering Group responsible for JPDs. This was to be chaired jointly by CCDG and CEO DMO, reporting to the Secretary/CDF on 'progress of the implementation program against agreed timelines and deliverables to Government.'[455] No timelines appear in the May 2009 response.

454 A December 2012 CDG report records DMO refusal to sign the MAA for a project until the corresponding JPD was in place (LAND 19 Phase 7A—Counter-Rocket, Artillery and Mortar/Missile), suggesting recognition of good practice in DMO.

455 This role was taken by the MRIGC.

11.24 The Mortimer Review itself, completed in September 2008, did not foreshadow the creation of JPDs. The commitment Defence made in the May 2009 response to introduce them must, therefore, have taken some preparatory consideration. However, Defence was not able to provide evidence of any preliminary work. Only after the MRIGC had been formed, in June 2009, was a draft format for JPDs prepared by DMO and forwarded to CDG for consideration.[456]

JPD implementation was under the Strategic Reform Program

11.25 At the same time as the Government response to the Mortimer Review was published, Defence also began its broader Strategic Reform Program—Delivering Force 2030 (SRP).[457] Defence subsequently included implementation of the response to the Mortimer Review as part of the 'Procurement and Sustainment Stream' of the SRP. The implementation plan (September 2009) for this SRP stream identifies CCDG as the lead authority on JPD implementation.

11.26 The plan gives no specific timetable for introducing JPDs, though it does show an intention within Defence to complete this SRP stream by the end of 2010. It includes the following as performance measures: 'Project Directives issued immediately following Government approval at 2nd pass.'

Initial implementation delays

11.27 CCDG advised the MRIGC meeting of 24 September 2009 that progress of the JPD initiative had been delayed 'due to concerns over the process.' It was identified as one of several 'key areas of concern'. At the following meeting (27 November 2009), the Chair stated that the Secretary was not satisfied with the pace of Mortimer implementation. The Secretary had provided timeframes for certain actions to be completed and directed that any Cabinet submission under development from 1 January 2010 must include a [draft] one-page Project Directive. In practice, this meant projects seeking approval from March 2010 would have a JPD.

456 Defence has not documented why DMO took the initiative on this matter.

457 For an outline of the SRP, see paragraph 2.22 forward.

Further formal decision in January 2010 to implement JPDs

11.28 Defence took a further formal decision at a Defence Committee meeting in January 2010 to implement JPDs from March 2010. The Secretary and CDF endorsed the introduction of JPDs for major capital equipment projects. The minutes of the subsequent MRIGC meeting show:

> At the 21 Jan 10 meeting of the DC, it was agreed that Project Directives will be implemented for first or second pass major capital projects from 1 Mar 10. Therefore, the Committee agreed that 20 Point Plan No.4 [*to introduce JPDs*] is completed.[458]

11.29 Subsequent MRIGC status reports through most of 2010 on this item show its status as 'completed'.

Further delay followed throughout 2010

11.30 Despite the Secretary's concerns in late 2009 about the pace of implementation and his directive for the preparation of JPDs, further delay followed. A year later, the MRIGC was briefed that the first JPDs had been drafted in March 2010 and incorporated into capability submissions from mid-2010. But, 'unfortunately, no Directives have yet been provided to the Secretary or CDF for internal distribution.' Thus, the Secretary and CDF had signed no JPDs and, hence, had issued none.

11.31 The Mortimer Reforms Coordination Team (MRCT, who supported the MRIGC) recommended immediate action: 'that the status of 20 Point Plan No 4 be adjusted from 'completed' to 'Orange – work underway but behind schedule'.[459] The Committee agreed, 'noting that a number of [JPDs] would need to be signed before the status could be considered "completed".'

11.32 Several months later (25 February 2011), the Secretary and CDF met to discuss content changes to JPDs. MRIGC records show that new draft JPDs were being developed as at 29 March 2011 for submission to the Secretary and CDF. DMO's Materiel Audit and Risk Management Committee (MARC) was

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458 Consistent with this, the CDG Process for Development and Execution of CDF/Secretary Joint Directives states that 'CDF/Sec Joint Directives are required for all DCP projects seeking First, Intermediate, Combined or Second Pass Project Approval from 1 March 2010 onwards.' This is in contrast to the original element of the 20-point plan, which envisaged JPDs being produced only upon government making a second pass decision.

459 MRIGC, 17 December 2010, Agenda Item 2, Mortimer Reforms Progress Report.

advised on 6 April 2011 as a matter of concern that 'no project directives had yet been signed off by the Secretary and CDF'.[460]

Ministerial action invigorated Joint Project Directives

11.33 By 6 May 2011, no JPDs had yet been signed. On that day, the Minister for Defence and the Minister for Defence Materiel announced a series of project management accountability reforms. In their joint media release, they stated:

> Defence will now accelerate the implementation of all outstanding agreed recommendations made by Mortimer as a matter of priority. This includes:
>
> - project directives issued by the Secretary of the Department of Defence and the Chief of the Defence Force to ensure Defence acquisitions progress according to Government direction ...[461]

11.34 This again prompted action by the MRIGC. At its May 2011 meeting, the committee was advised that, as the media release had directed Defence to accelerate implementation of all outstanding Mortimer recommendations, 'the MRCT had begun work on developing an accelerated implementation plan.'

11.35 In the event, the first five JPDs were signed on 20 May 2011. However, because JPDs had been expected to be in place for all acquisition approval decisions made from March 2010, as directed by the Secretary, there was now a substantial backlog.

JPDs were being issued more regularly by late 2011

11.36 In August 2011, Defence advised the Senate Foreign Affairs, Defence and Trade References Committee that it had implemented processes to support the introduction of JPDs and only an 'ongoing' task was incomplete: 'From July 2011, Sec/CDF to issue further Project Directives as they are prepared, with a target for sign-off within 30 days of Government approval.'[462]

11.37 In September 2011, MRIGC was advised that 'implementation of Mortimer Recommendations more broadly was 'not progressing at the pace the Committee originally agreed'. As Defence had intended to complete

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460 Minutes, Materiel Audit & Risk Management Committee, 6 April 2011, item 11.

461 Minister for Defence and the Minister for Defence Materiel, media release, *Strategic Reform Program*, 6 May 2011.

462 Senate Foreign Affairs, Defence and Trade References Committee, inquiry into *Procurement procedures for Defence capital projects*, submission from Defence, (item 13 in 'Additional information received').

implementation over January–December 2010, they were 'currently at least ten months behind ...' Nevertheless, they were now making progress with the JPD backlog:

> Project Directives are now being issued and the backlog is being cleared with only one Project Directive outstanding. Accordingly, it is recommended that the status could, as a minimum be changed from 2 – "Work Underway but Behind Schedule" to 1 – "Work Underway and on target". The aim now is to measure that Project Directives are business as usual. If all new project approvals between July and December 2011 have Project Directives released within one month of approval, this item will be recommended for closure.

11.38 The Minister for Defence Materiel sought an update by 1 October 2011 on how many JPDs had been issued and the timetable for the remainder. On 28 November 2011, ministers announced that JPDs had been implemented for all projects approved since March 2010.[463] Shortly after, at its December 2011 meeting, MRIGC once again changed the status of the initiative and agreed to close the action 'by outcome' and not just 'by process'.

11.39 By January 2012, a report on the SRP Capability Development stream stated that achievements for CDG included:

> *Joint Project Directives:* The backlog of JPDs required for approvals since March 2010 has been cleared, except for Land 116 Phase 3.1, which is being finalised for signature. The process is now embedded as business as usual with an aim of executing project directives within 30 days of Government Project Approval.

11.40 Similarly, the answer provided in February 2012 to a parliamentary question identified JPDs as an initiative that was now in place.[464]

Backlogs redeveloped in 2012

11.41 In September 2012, CCDG advised his staff that one of the issues being addressed by a new committee (which had assumed the functions of the MRIGC), the Capability Development and Materiel Reform Committee, was the timely signature of JPDs and MAAs following second-pass approval. There was, once more, a backlog, particularly of JPDs.[465] One JPD signed in late

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463 Minister for Defence and Minister for Defence Materiel, media release, *Progress of Implementation of Key Defence Reforms*, 28 November 2011.

464 Senate Hansard, 9 February 2012, (Answer to Question No.1444).

465 In contrast, the Defence Annual Report 2011–12 reported on the Mortimer Review (p. 98) by making particular reference to JPDs being issued by the Secretary and the CDF. Defence assessed its performance status as 'Achieved: all targets for 2011–12 were met or exceeded.' It did not state what these targets were.

November 2012 (AIR 5349 Phase 3—*Growler Airborne Electronic Attack Capability*) had taken 108 days to execute, and the MAA was already in place.

11.42 In January 2013, Defence informed the ANAO that:

> The challenge during the JPD implementation was the strict page limits for Cabinet submissions. The main body of the document cannot be more than 15 pages in length (however, only five pages are allowed for the Supporting Analysis) and no more than 50 pages of attachments are permitted. Looking at a selection of recent draft JPDs considered by Defence committees, the average page length is 16 pages (shortest one was nine pages and the longest was 25 pages). In the world of Cabinet submission development, every word counts and so does every page. This became the heart of the implementation issue for JPDs.

11.43 While recognising the inherent challenge of complying with strict page limits in the Cabinet context, particularly for complex submissions, the ANAO notes that the Defence Secretary's 2009 directive had requested the preparation of a one-page JPD for inclusion in all Cabinet Submissions, suggesting that a reasonable balance can be struck.[466]

Reaffirmation of the essential purpose of JPDs

11.44 Although the implementation of JPDs has been delayed, there has been continued reaffirmation at senior levels of their purpose and importance. For example, the CEO DMO stated in February 2011:

> The Project Directives are probably one of the biggest things we'll be doing in 2011. And you might say "So what?" Well, what project directives are about is delivering exactly what the Government approved ... What we're going to do is flesh this out through the project directive system so that everybody understands exactly what was approved, exactly what was going to be delivered, and when the gap becomes to a certain extent [sic] we go to Government and talk to Government about how we're going to do this better.[467]

11.45 The CCDG advised a Senate committee in October 2011 that 'there is a very rigorous process now in terms of the joint project directive that the CDF and secretary sign off to all the group heads in Defence—that they identify the

466 Defence has informed the ANAO (July 2013) that 'projects approved by government in 2013 have had their JPDs signed on average 31.5 working days after approval.'

467 CEO DMO, 'Equipping and Sustaining the ADF', transcript of an address to the 8th Annual Australian Defence Magazine Congress, 16 February 2011.

exact work that they must do, what they are responsible for.'[468] The CEO DMO supported this view, stating to the same committee: 'Where we are now, after the Mortimer review, is that the project directive, which is the enunciation of what governments agreed, is now formalised.'[469]

11.46 Further, the JPD initiative has been represented as a strong point within Defence's capability development arrangements. As discussed in Chapter 4, a consultant undertook a maturity assessment of portfolio, program and project management processes within CDG in July and August 2011 and counted the following as a strength:

> Joint Secretary and Chief of Defence Force (CDF) Project Directives defining a project baseline that reflects the Government's Project Approval and assigning responsibilities to those involved are currently being implemented.[470]

11.47 In May 2012, the Minister for Defence wrote to other senior ministers about a number of major projects that had suffered delays and, in some cases, unauthorised scope changes by Defence. On each occasion, he mentioned that:

> The Minister for Defence Materiel and I have introduced a number of reforms within Defence that should result in the earlier identification of projects which have exceeded agreed project performance thresholds in order to facilitate more timely advice to Government. These include the advent of [JPDs].

11.48 Finally, in July 2013, Defence re-visited a major acquisition project to address concerns raised by the then Minister for Defence. Among other matters, Defence observed that:

> For more than a year, DMO and CDG personnel pursued diverging courses of action; operating without an authoritative statement of NSC's approval [*in February 2010*] or internal controls to ensure that the scope of the acquisitions were effectively managed. It was not until February 2012 that the divergence was detected by the Department of Finance and Deregulation and the Department of Prime Minister and Cabinet, demonstrating the degree of failure of Defence's own controls.

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468 Hansard, Senate Foreign Affairs, Defence and Trade References Committee, inquiry into *Procurement procedures for Defence capital equipment projects*, 7 October 2011, p. 8.

469 ibid., p. 16.

470 CDG, 'P3M3 Assessment Findings', Version 1.0, August 2011, p. 19. The report identified strengths, weaknesses and opportunities for improvement from various perspectives. Recognition of JPDs as a strength occurred in the assessment of the maturity of CDG project management capability from an organisational governance perspective.

11.49 The Minister subsequently wrote to the Prime Minister about this matter, noting that 'delays in detecting and remedying deficiencies in this project would likely have been averted if Defence had compiled a definitive record of Government's decision in a timely fashion from the original documents provided to Government, together with the record of the Government's decision.'[471] A JPD would have fulfilled this function.

Conclusion—introduction of Joint Project Directives slower than expected, and individual JPDs taking longer to conclude than envisaged

11.50 Defence defines Joint Project Directives (JPDs) as:

> A project-specific directive issued by the Secretary, Department of Defence and the Chief of the Defence Force to the nominated [Capability Manager], assigning overall responsibility, authority and accountability for realisation of the capability system to an in-service state.[472]

11.51 The objective and potential benefits of introducing JPDs for each of Defence's major capability development proposals are clear. A written, practical statement setting out the relevant components of the decision the Government has authorised, and the contribution required of each part of the organisation in order to deliver the approved capability, should help each Defence Group remain on track and promote their respective accountabilities, in terms of scope, schedule and cost. It can also provide a sound basis for seeking a change where contingencies arise. Ministers have accepted that introducing JPDs has been a substantial reform. They have regularly and publicly reported on progress with their introduction, and represented JPDs as inhibiting any tendency for Defence to vary authorising decisions.

11.52 Despite continuing strong expectations from ministers and senior levels of the organisation, Defence has not introduced JPDs in the way that was expected. Contrary to the intention expressed in the 20-point government response to the Mortimer Review:

- JPDs have not been issued immediately after government approval; and

471 The Minister's letter is dated 15 August 2013.

472 Defence, *Defence Capability Development Handbook*, December 2012, p. 123. JPDs are 'joint' in that they are issued under the authority of both the Secretary of the Department of Defence and the Chief of the Defence Force, as joint heads of the Defence Organisation.

- JPDs cannot have been the basis of all other project documentation, because, generally, corresponding MAAs have been signed first.

11.53 Defence took over two years to begin to produce the first JPDs, notwithstanding that a prime function of a JPD is to clearly express, in a working form, the essence of a government decision and assign responsibilities to Defence Groups. This delay occurred even though JPDs were a Defence initiative in response to the Mortimer Review. The senior committee responsible for implementing JPDs regarded the task as 'completed' in early 2010, as soon as Defence decided on processes but had not, at that time, produced a single JPD. Only after ministerial intervention in May 2011 did Defence finalise any JPDs.

11.54 JPDs are intended to reflect government decisions. If JPDs are to be an effective instrument assigning responsibility and accountability for all the elements of a capability development project, they need to be put in place promptly. However, with one exception, Defence had finalised MAAs without a signed JPD, notwithstanding the intention that JPDs should inform MAAs. This practice suggests that, at a working level, Defence did not perceive JPD production as essential, or a prerequisite, to the progress of a capability development project. In this circumstance, where JPDs are regularly finalised after the MAAs they are intended to inform, care will be required to ensure that JPDs properly reflect the relevant government decision, and that MAAs are appropriately aligned with the relevant JPD.

12. Preparing and reconciling against Materiel Acquisition Agreements

This chapter considers Materiel Acquisition Agreements between Defence and DMO, and the time taken to put them in place. It also reviews the DMO Acquisition Baseline Review, in which DMO sought to reconcile the requirements in MAAs with original authorising decisions.

Materiel Acquisition Agreements and accountability

12.1 Materiel Acquisition Agreements (MAAs), like Joint Project Directives (JPDs), are prominent at the start of a project, because of their function in defining scope and responsibility and, ultimately, providing a mechanism of accountability. A fundamental question is whether an MAA is consistent with the original government decision, particularly for those MAAs signed before the inception of JPDs. Therefore, this chapter considers:

- the origins of MAAs, and Defence's record in establishing revised MAAs in the current format; and
- DMO research to verify whether MAAs are consistent with authorising decisions. This is the Acquisition Baseline Review (referred to earlier in paragraph 11.6).

Origins and development of Materiel Acquisition Agreements

12.2 Defence has employed MAAs over a longer time than JPDs and they have become an established practice. In about 2000, Defence had envisaged agreements of this sort as 'customer–supplier agreements' but did not implement such agreements for several years.[473] In mid-2004, CDG was formed to provide better integration of capability definition and assessment. A year later, CDG reported to a parliamentary committee that it was 'now developing materiel acquisition agreements with [DMO] for each project.'[474]

473 ANAO Audit Report No.57, 2010–11, *Acceptance into Service of Navy Capability*, paragraph 2.46, p. 79.

474 Committee Hansard, Joint Standing Committee on Foreign Affairs, Defence and Trade, *Review of the Defence Annual Report 2003–04*, 11 March 2005, p. 2.

MAAs as a 'contract' between DMO and Defence

12.3 When asked directly by a parliamentary committee as to the contents of an MAA, the then CCDG stated, in 2005, that 'in general terms, it is a "contract" between DMO and my organisation essentially defining what we are trying to deliver in a project ...'[475] He went on:

> They were only introduced late last year [2004]. As my group evolved and developed and DMO changed the way it was doing business, we saw that we needed to get a bit more formality in the relationship and an understanding of what we were asking from each other so as to have—particularly when DMO goes to a prescribed agency [1 July 2005]—a clear understanding of what the relationship in the projects would be. So we started working on those last year. About 65 per cent or so are completed now. The aim is to have all the projects with an acquisition agreement by 1 July this year [2005].[476]

12.4 In early 2006, the then CEO DMO explained MAAs as stating 'what you have to produce, when you have to produce it by and how much they are prepared to pay for it, and that makes us accountable to get on and produce it in that way.'[477]

12.5 MAAs have continued since that time, but came under review in 2008 during the Mortimer Review.

Mortimer made recommendations to strengthen MAAs

12.6 Mortimer identified the MAA as an instrument that not only set out responsibilities in materiel acquisition but also ensured—under the rules as he envisaged them—that government would have a clearer and more current understanding of what Defence was acquiring, and when.[478] Mortimer made three recommendations about MAAs:

- first, that Defence develop a draft MAA at DCP entry, detailing the responsibilities and expectations of the stakeholders. This should then be refined throughout the process as more information is gathered (Recommendation 2.5, lead assigned to CCDG);

475 ibid., p. 7.

476 ibid., p. 8.

477 Committee Hansard, Joint Standing Committee on Foreign Affairs, Defence and Trade, *Review of the Defence Annual Report 2004–05*, 3 March 2006, p. 4.

478 See the discussion at p. 22 forward in the Mortimer Review.

- second, that Capability Managers sign MAAs 'to provide a firm baseline for the delivery of equipment' (Recommendation 3.1, lead assigned to CCDG);
- third, that DMO be held to account for delivering equipment and services as set out in the MAAs (Recommendation 3.14, lead assigned to Deputy Secretary, Strategy).[479]

12.7 The Government agreed to these recommendations. It fell to the MRIGC to oversee implementation action.

New format for MAAs agreed in January 2010

12.8 In January 2010, the Secretary and CDF agreed to a revised, standard structure and content for future MAAs. MAAs were to include greater detail on project deliverables, materiel release milestones and associated criteria.[480] MAAs would be signed not only by CCDG and CEO DMO but also by Capability Managers. Defence's internal announcement of this change noted that:

> The revised format and content will be used for all new MAAs from 01 February 2010. Current MAAs will be migrated progressively to the new format and content as their required reviews take place. Projects scheduled to close by end 2011 are exempted from this latter requirement.[481]

12.9 The MRIGC recorded this item as 'completed' at its 26 February 2010 meeting. Any pre-existing MAAs were to 'migrate to the revised MAA template at the first opportunity at which they are amended'.

On average, it has taken three months to agree an MAA

12.10 Once government has given approval for a project, an MAA needs to be put in place so that acquisition can proceed effectively. Setting aside the question of whether a JPD was completed first, the ANAO sought to identify:

- the time Defence took to sign new MAAs in the revised form required from 1 February 2010. The sample included projects from that date to

479 Defence action on Mortimer Recommendation 3.14 is considered in more detail in the discussion of Capability Manager Reporting in Chapter 14.

480 This includes the then new concepts of Initial Materiel Release (IMR) and Final Materiel Release (FMR) milestones. IMR and FMR are designed to clearly define the points in time at which DMO satisfies its responsibility for the acquisition of the materiel element of capability. The Capability Manager is then responsible for combining this materiel element of capability with the other Fundamental Inputs to Capability (FIC).

481 Defence, Information Defgram No.50/2010, 4 February 2010.

30 June 2011. The time measured was the elapsed period from the date of the authorising government decision to that of the respective MAA;

- the time Defence considered to be reasonable to sign MAAs; and
- whether Defence is monitoring the time it takes.

12.11 Analysis of the sample of projects examined by the ANAO for the purpose of this audit revealed that the time that elapsed between government approval and signing the MAA was variable. The longest time in the sample was 328 days (for LAND 121 Phase 4, Overlander). The shortest was only one day (for AIR 5416 Phase 4B.2, C-130J Large Aircraft Infrared Counter-measures (Long Lead Items)). The mean time, for all observed projects (excluding those deemed exempt or for which no MAA is required), was 87 days, or just under three months.

Defence's expectations of the time it should take to sign an MAA

12.12 Defence had set no target for the time taken to sign MAAs for the period before August 2011. However, Defence set the following targets for revising older MAAs to the new format:

> In order to formally establish the IMR [Initial Materiel Release] and FMR [Final Materiel Release] milestones, all DMO projects are required to transition to a new [MAA] for joint signature by [CCDG], [CEO DMO] and the relevant Capability Manager by December 2011. All 28 DMO projects involved in the 2010–11 [Major Projects Review] Program were required to have their MAAs signed before 30 June 2011.[482]

12.13 CDG issued an instruction in August 2011 which specified that 'A new or amended MAA is to be processed and executed within 30 days of any new or revised Government Approval.'[483] However, DMO reported in November 2011 that transition of MAAs for existing projects into the new format was taking a minimum of four months. The target was amended in a revised instruction issued by CDG on 8 March 2012, which extended the timeframe for execution to 45 days.

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482 Joint Committee of Public Accounts and Audit, Question on Notice—Defence Materiel Organisation, Major Projects Report, Supplementary Submission No.3.1 (Answer to Question from Senator Bishop, 28 February 2011). Received by the Committee on 20 September 2011.

483 Capability Development Group, Group Instructions, Operations, *Materiel Acquisition Agreements for Major Capital Equipment Projects*, 31 August 2011, paragraph 10.

12.14 DMO states, on an intranet page, that:

> The finalised MAA ***must*** be signed and executed by [the Directorate of Agency Agreements] within 45 working days after approval by Government. Project funding cannot be transferred (except in limited circumstances) until the MAA is executed [*Emphasis in original*].

Monitoring the time taken to sign

12.15 Since March 2010, Defence has been systematically monitoring the time it takes to sign new MAAs. The time taken has been highly variable, with some MAAs having been signed almost immediately, and others taking up to 15 months. Given that, over the period examined (February 2010 to June 2011) MAAs were being prepared without a JPD being in place first, it is not clear whether, once proper practice is observed (with JPDs preceding MAAs), this will expedite or delay the signing of future MAAs.

12.16 As of July 2013, implementation of Mortimer Recommendation 2.5—requiring Defence to develop a draft MAA at DCP entry, detailing the responsibilities and expectations of the stakeholders, remains 'open' by outcome.

Acquisition Baseline Review: checking Materiel Acquisition Agreements against authorising decisions

12.17 In December 2010, DMO began a review of certain Defence acquisition projects under DMO management to work out if there was any substantial difference between the equipment that was being delivered and the respective government approval: this was the Acquisition Baseline Review.[484] The specific scope of the review was to determine whether there was any variation from the schedule, scope and cost agreed by the original approval authority that had not been notified to government. The projects under review were those managed by the (then) DMO General Manager Systems (GMS). DMO began the review following a query from the Minister for Defence Materiel. In essence, this review compared the current MAA with the formal approval for the same project.

484 The original approval for these projects could have been a specific government decision, a government decision in the context of a budget (that is, in Defence's portfolio budget submission for a particular year), a two-minister approval (Minister for Defence and Minister for Finance) or a single-minister decision (Minister for Defence).

12.18 A year later, in August 2011, DMO advised the Minister for Defence that it was examining approvals 'for all existing projects approved before the introduction of Project Directives to ensure alignment with [MAAs].'[485] It described the review to the minister thus:

> The Chief Audit Executive (CAE) of DMO is conducting a thorough review [of] project approval history. This involves obtaining original project approval records and comparing those with extant Materiel Acquisition Agreements and project office records to identify any inconsistencies. Where inconsistencies are identified, they are being drawn to your attention.[486]

The research was onerous and took fifteen months

12.19 DMO provided an interim report to the Minister for Defence in December 2011, by which time it had reviewed 76 post second-pass projects (which it then thought comprised some 80 per cent of DMO projects eligible for review).[487] The report showed that schedule was the element most commonly found to vary against the original approval: that is, schedule slippage was the most likely change from expectations. DMO promised a final report by the end of February 2012.

12.20 Ultimately, the review took DMO about 15 months. It provided a final report to the Defence Capability and Investment Committee in May 2012. DMO's report explained that many projects had been going for a long time, and some had begun in the 1990s. This made the research onerous, as DMO had to refer to Cabinet papers and other documents from across each project's life. Most were not held in Defence, so it had sought an authoritative record from PM&C, which had added to the time taken by the review.[488]

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485 This undertaking is made in a minute to the Minister for Defence, *Unauthorised Change of Scope for Land 40 Phase 1 Direct Fire Guided Weapons*, 11 August 2011.

486 DMO, General Manager Systems, Minute to Minister for Defence, 11 November 2012.

487 DMO, Minute to Minister for Defence, *Acquisition and Baseline Review Preliminary Outcomes*, 16 December 2011.

488 This is understandable, as Cabinet documents held in a department are returned to the Cabinet Office at the time of a general election, and those relating to the deliberations of a previous government are thereafter available to that department only in limited circumstances. DMO advised that, where no original Cabinet documents could be located, DMO worked from drafts and made the assumption that the draft broadly reflected what ended up in the final submission to government and that is what government ultimately approved. The DMO Materiel Audit and Risk Management Committee (MARC) had noted earlier in 2011 a 'consistent inability to locate key project documentation.' (MARC, minutes, 6 April 2011, item 12.)

The review's scope was more limited than Defence had advised ministers

12.21 The review found that, as of 17 April 2012, DMO was managing 186 major projects. However, most of these were not included in the review, which considered only the 88 under the control of the DMO General Manager Systems (GMS). The projects not included were 14 classified projects; 26 pre-second-pass projects; 23 projects managed by DMO's Programs Group; and 35 projects managed 'within the Joint Project Directive process.' The review also did not include any closed projects.[489]

12.22 There is an obvious tension between the scope of the review as executed and the undertaking to the Minister that DMO was examining approvals for *all* existing projects (paragraph 12.18, above). The review scope could have been more comprehensive:

- *classified projects* by their nature would require special handling and separate reporting, but it is not immediately apparent that they are not as vulnerable to the same contingencies as unclassified projects of corresponding size and complexity;
- *pre-second-pass projects* are also vulnerable to unauthorised changes in scope after first pass. For example, as explained in an ANAO audit, the point of failure in the LAND 112 Phase 4—ASLAV enhancement project was when Defence decided, without authority, to pursue a different option from that approved by government at first pass;[490]
- *projects managed by DMO Programs Group* are not, by being part of a major program, obviously so different in character from those managed by DMO Systems Group that they should not also be examined; and
- *projects managed within the JPD process* may also require review because, as shown earlier, even in these cases MAAs have often been written before the corresponding JPD. Therefore, the presence now of a JPD provides only limited assurance that the MAA properly reflects the authorising decision.

489 DMO has advised (July 2013) that 'The decision was made not to include DMO's Programs Group in the review as all Programs by their nature and focus are subjected to an enhanced internal management overview and all are included in the annual Major Projects Report.' The ANAO takes this to mean that DMO believed that the work being undertaken by its Programs Group was already receiving greater scrutiny than projects run by its Systems Group and, hence, there was a lesser risk that Programs Group work was progressing outside the scope of authorising decisions.

490 ANAO Audit Report No.52, 2011–12, *Gate Reviews for Defence Capital Acquisition Projects*, pp. 125–30.

12.23 Defence has acknowledged in advice to the ANAO of July 2013 that 'in hindsight, the review scope could have been more comprehensive'. In the event, the Defence Capability and Investment Committee (DCIC), upon considering the report of the Acquisition Baseline Review at its meeting of 16 May 2012, agreed that CEO DMO would review all other DMO projects, providing an update to DCIC by 23 August 2012.[491] Defence later advised that further work had been carried out as a desk-top review, providing a lower level of assurance than provided by the Acquisition Baseline Review. This approach had been taken because the 'due diligence' team (which had done the Acquisition Baseline Review) had been disbanded to support normal MAA work.[492] Also, in DMO's view, its work received considerable scrutiny through the annual Major Projects Report process undertaken with the ANAO.

Findings of the Acquisition Baseline Review

12.24 The review found that DMO was managing the 88 projects examined within the current approved budget. The review identified that, since 2005, Defence had sought and obtained agreement from government to meet real cost increases (not due to changes in scope) for four of the projects.[493] The review reported that its highest risk had been that the review team could not find, despite best endeavours, original or subsequent approval documentation for many projects. For the 88 projects within its scope:

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491 The DCIC also agreed that the Chief Operating Officer would undertake a project approval baseline review for projects led by the Chief Information Officer Group and those led by Defence Support Group [now Defence Support and Reform Group], with progress to be reported as part of the DCIC's quarterly Early Indicators and Warnings reviews. As of October 2012, work was in progress in defining variation criteria to help identify when a project would need to return to government for further consideration. There was no progress with the actual reviews for CIOG and DSG reported at that point (DCIC Outstanding Actions List, October 2012).

492 Defence informed the ANAO (8 July 2013) that, if DMO had undertaken further work on the Acquisition Baseline Review, this would have been detrimental to its work on MAA closures.

493 The projects were:

- AIR 5077 Phase 3, Airborne Early Warning and Control Aircraft, due to price indexation variations beyond the supplementation provided by Government ($298.1m);
- AIR 5276 Phase 3, AP-3C Advance Flight Simulator, to correct critical performance deficiencies ($4.3m);
- LAND 125 Phase 3, Soldier Enhancement, to enable completion of first and second-pass activities ($0.2m); and
- AIR 9000 Phase 8, Future Naval Aviation Combat System, to ensure full funding to cover contractor costs in support of the MAA deliverables ($0.04m).

Defence further advised that all project budgets are updated, where applicable, for variations in budgeted exchange rates, scope variations and transfers, and, in the past, they were updated for price indexation.

- it found original, agreed, schedule and scope parameters for 32 projects (36 per cent);
- 24 (or 27 per cent) were approved by government in the annual Budget process. This meant that only very broad or no schedule or scope parameters were provided at the point of approval; and
- it found no original government approval for the remaining 32 (36 per cent). This search included searches by PM&C.

12.25 The review concluded (in April 2012) that 'while there has been variation in schedule and/or scope in some projects over time, only fifteen (15) projects reviewed show variation against the known agreed parameters that have not been agreed or advised to Government.'[494]

12.26 The review stated that, as a result of its work, Ministerial submissions were being prepared or had been submitted to advise the Government of the variations from the original approvals for these 15 projects. Defence's subsequent written advice to the Minister about the Acquisition Baseline Review stated that 17 of the 88 projects reviewed had varied from agreed schedule parameters, including two whose scope had also varied.[495] However, that advice did not:

- explain that, in 32 cases, Defence could not locate parameters against which to check or that another 24 were approved in, at best, broad terms which prohibited such checking; or
- explain that the projects it had reviewed were only a subset of the total portfolio of major projects DMO has under management.

12.27 Thus omissions in the ministerial advice mean that it could not have conveyed to the minister a full or adequate assessment of the scale of the issue. Given the finding above that DMO could locate agreed parameters for only 32 projects, then the result that 17 have varied suggests that some unauthorised change had occurred in over half of the DMO projects for which government approval of a clear, specified scope and schedule could be found.

494 The ANAO's review of the paper provided to DCIC identified that the Acquisition Baseline Review had also identified one project which had varied by both schedule and scope.

495 Defence, Ministerial Submission MA12-004247, 9 September 2012. Defence had further refined its findings by this time.

12.28 The then Defence Secretary expressed his concern about Defence's propensity to depart from government decisions in a minute to all Defence Group Heads and Service Chiefs (10 August 2012):

> I am concerned at the Department's continuing failure to meet MINDEF's expectations that we pay due regard to "original authority" (Government's original decision and direction on projects). On what are now countless occasions, MINDEF has noted on cab-subs our failure to acknowledge original government decisions and provide for him to go back in writing to the original decision authority ...
>
> This is an unacceptable position to be in. We must comply with the very reasonable and proper requirement that in any proposed change, we acknowledge the original and binding Government decision ...
>
> I will be holding authors of submissions personally responsible for the contents of submissions. We cannot continue in this way and I look to you for direct intervention.

Projects whose scope had varied

12.29 Two projects were identified by the Acquisition Baseline Review where scope, as well as schedule, had varied from the authorising decision. These were JP 2057 Phase 2, Overhead Non-imaging Infra-red Access; and Land 144 Phase 1, Countermine Capability. Of particular note, the second case involved acquisition of additional units.

12.30 The ANAO also noted another instance of acquisition of more items than specifically approved by the Government. In this case, Defence had sought approval for five major items in a major capability upgrade but, after approval, had proceeded to acquire six. Specifically, Defence has without authorisation acquired an additional item over the number approved by the then Government. The project in question was being managed by DMO's Programs Group and was, therefore, outside the scope of DMO's Acquisition Baseline Review.

12.31 Defence subsequently determined that:

> [*The*] purchase of an additional [*item of equipment*] was due to project staff diligently executing an Acquisition Business Case (attached to the Submission to NSC) that specified one unit more than was set out on the face of the Submission to NSC.

12.32 The Minister subsequently wrote to the Prime Minister nominating this as 'a case study for any additional reforms necessary to address systematic deficiencies in procurement and capability projects' (See Table 12.1).

Projects not yet closed came to attention in the DMO review

12.33 A further notable matter came to DMO management attention during the Acquisition Baseline Review. It discovered a number of projects that had been languishing, substantially complete but not formally closed, for some years. This has led to an increased focus in DMO on project closure. This topic is explored in Chapter 13.

Minister's advice to colleagues

12.34 Subsequent to the Acquisition Baseline Review, the then Minister for Defence wrote to senior colleagues, advising of changes in scope for a number of projects. Five such cases are listed in Table 12.1 (below).

12.35 In each case except the first, the Minister said that he had 'asked the Secretary of the Department of Defence to advise on the personal and institutional accountability issues arising from this matter.' That advice was provided by the Secretary on 9 September 2012.

12.36 This was followed in August 2013 by further letters of a similar character, which are also included in the table.

Table 12.1: Advice of project delays and changes of scope for certain projects

Date	Project	Approval date	Minister's comments
2 May 2012	Joint Project 126 Phase 2 (Joint Theatre Distribution System)	July 2007 (Second pass)	'Project Closure will be delayed by 16 months to December 2012 ... 'Defence has been aware of this delay since as early as November 2007 but did not advise Government of the schedule impact.'
24 May 2012	Land 134 Phase 1 (Combat Training Centre)	2001	'When first approved, this project was planned to deliver its full capability in 2007 ... No advice on the progress of this project has been brought to Government attention since it was approved over 10 years ago.' 'I have been advised by Defence in May, that the full scope of the project will not be delivered before late-2014, a delay of over 70 months, almost six years. Completion ... has slipped ... as a result of the introduction of the Abrams tank when the project had already undertaken significant work to deliver a capability for the Leopard tank.'
24 May 2012	Joint Project 2059 Phase 2 (Bulk Distribution Capability)	1999–00 (Variation in July 2007)	'I have been advised this month by Defence, almost 5 years after [the 2007 variation], of significant delays ... JP 2059 Phase 2 was scheduled to close in 2011 and final equipment delivery is now expected ... in December 2014 with project closure in 2015.'
24 May 2012	Land 144 Phase 1 (Countermine Capability)	October 2007	'There has not been any advice to Government since [October 2007]. I have now been advised by Defence this month that the Project is delayed by 30 months. As well, an unauthorised change of project scope occurred in that additional quantities ... were purchased without Government authority being requested and without Government being informed.'
29 May 2012	Joint Project 2059 Phase 3 (Water Purification and Desalination Capability)	July 2001	'In October 2006 ... Defence ... advised the Minister of a 33 month schedule delay ... This was the last advice to Government until April this year, some five and a half years ...' 'Defence have been aware of [an] additional 14 month delay since as early as November 2010, but again did not advise Government.'
9 Aug. 2013	[*A Joint project*]	February 2004	'The first advice to Government on the state of the Project was more than seven years later in October 2011 ... I recommend ... [the] project be closed.'
14 Aug. 2013	Joint Project 2099 Phase 1 (Identity Management)	April 2006	'Government was advised of the failed tender process in June 2011, more than five years after First Pass approval.'

Date	Project	Approval date	Minister's comments
14 Aug. 2013	[*A Sea project*]	April 2006	'[*Defence*] found deficiencies with governance, project record keeping and a reluctance to provide timely advice to Government on a complex and challenging project ... It was not until September 2012, almost four years after the issue of project costs was first advised to senior officers within Defence, ... that the Minister for Defence was provided with a project update and a request to consider a Real Cost Increase ... In addition, Defence has without authorisation acquired an additional [*item of equipment*]. I recommend that this project ... be a case study for any additional reforms necessary to address systematic deficiencies in procurement and capability Projects.'
15 Aug. 2013	[*An Air project*]	February 2010	'I write to advise you of failures in project management, project accountability and in providing timely advice to Government ... I recommend that this project ... be a case study for any additional reforms necessary to address the systematic deficiencies in procurement and capability Projects.'

Source: Letters from the Minister for Defence to senior colleagues.

12.37 A prominent theme in all of these cases is Defence's not advising government in a timely way of difficulties arising in major projects, sometimes allowing years to pass before providing that advice. The most significant example is one of the recent cases, a Sea project, where Defence identified:

> critical issues that are systemic throughout the Defence capability development process. Specifically, poor governance, poor record management and a reluctance to provide timely advice to Government, on a complex and challenging project are the root causes of problems with [*this project*].

Defence has been uncertain about advising ministers

12.38 The Acquisition Baseline Review concluded that it had highlighted a level of uncertainty concerning ministerial advice about schedule, scope and cost problems.[496] Moreover:

> The feedback received from the [then Minister for Defence] implies a view that variations from agreed parameters must be reconsidered by the [original approving authority]. However, anecdotal evidence suggests that previous

496 This conclusion was also advised to the Government in the Defence Annual Plan (DAP) Quarterly Report for the third quarter 2011–12, 21 May 2012.

> Ministers did not hold that view and there was more flexibility to vary schedule, scope and/or cost internally.[497]

12.39 This conclusion, though self-declared as based only on anecdote, suggests that systems for project control and accountability may have been looser in previous times. A different approach in the past may go some way to explaining both the lack of specificity in a high proportion of Defence acquisition projects and the proportion that have varied scope or timing without notifying ministers.[498]

12.40 The review showed that DMO had no internal control to ensure the original approval decisions, JPDs and MAAs were aligned. It stated that internal control was 'now being implemented'.[499]

12.41 One option to simplify the current arrangement would be to make the MAA a schedule to the JPD. However, Defence has stated to the ANAO that a disadvantage of this approach might be that the MAA could be unduly delayed:

> On rare occasions when an MAA is needed urgently to meet a tight procurement window (and senior officers agree this is sensible), the opportunity might be lost if the MAA is delayed to conform with the traditionally longer JPD timeframe. (Note a JPD involves more Defence Groups in its review than the three involved in an MAA, and it must be reviewed and signed through higher levels).[500]

12.42 It is not clear from the Acquisition Baseline Review that systematic controls are now in place over the scope, schedule and cost of projects for which DMO could find no original approval, or whose approval specified only broad parameters. In some cases, an MAA may exist that can be used to hold DMO to account through, for example, triggering Defence's 'Early Indicator and Warning' mechanism for major acquisition projects. But an MAA expresses only an internal agreement among senior Defence managers: this, presumably, could be varied by further, internal Defence agreement whereas it

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497 Defence, Defence Capability and Investment Committee, Sponsor's Paper, DMO General Manager Systems, *Acquisition Review and Baseline Outcomes*, 26 April 2012, paragraph 16.

498 Defence agreed that, in the pre-Kinnaird era, major capital equipment submissions presented to government 'were generally only a paragraph or so in an omnibus submission and all costs were what we would call pre-1st Pass quality' (CCDG, 'Cost Estimation—Its Importance to Future Capability', address to the Defence Cost Estimation Conference, October 2012).

499 Defence subsequently advised that an internal control to ensure that each MAA is aligned to a JPD has been in place since May 2011 (Defence advice of 18 January 2013).

500 Defence advice to the ANAO, 29 January 2013.

is apparent that ministers wish to be apprised of all substantial changes affecting major acquisitions.

12.43 Ministers have announced that the Government has directed that Defence implement a new regime of reporting on variations to original project approvals. Defence informed the ANAO in January 2013 that reporting on variations was being considered in light of the Minister's agreement, on 5 November 2012, to 'revised reporting [of] project variation thresholds', with expected implementation in 2012–13. Subsequently, the Defence White Paper 2013 stated:

> A further important initiative announced by the Minister for Defence in February 2013 was the implementation of a new regime of reporting on variations to original project approvals. This will improve accountability and transparency in project delivery by requiring Defence to seek agreement from the original decision-maker (for instance the Minister for Defence or the National Security Committee of Cabinet) to make changes beyond pre-agreed thresholds for a project's cost, scope and schedule. These thresholds will be set on a project by project basis dependent on a number of factors including criticality and risk.[501]

12.44 Defence stated (July 2013) that it was 'in the process of defining how pre-agreed thresholds will be determined for each project and included in project approvals for comment by the central agencies before consideration by the Government.'

501 Defence, *Defence White Paper 2013*, Canberra, p. 95.

Conclusion—further work is required to improve accountability

12.45 In seeking to improve accountability and ensure clarity of purpose across a large organisation, Defence has developed an elaborate system of documents. However, the practical implementation of that system has introduced a risk of misalignment, and substantial effort is required to ensure consistency of these documents with the original project approvals.

12.46 DMO undertook an Acquisition Baseline Review project between December 2010 and mid-2012 to verify that MAAs were consistent with project authorisation decisions. This was a worthwhile project that revealed a number of occasions where Defence had not advised government in a timely way of difficulties arising in major projects. More recent evidence also shows a lack of timely advice to government about difficulties affecting several individual major projects, including lengthy delays in advising the Minister. These delays extended for several years in some cases. In two cases, the Minister stated[502] that the projects illustrated the adverse effects of poor project management and the importance of full and ongoing implementation of reforms introduced by the then Government:

> These reforms include increased personal and institutional accountability in the delivery of major acquisition projects, earlier identification of projects which have exceeded agreed project performance thresholds, more timely advice to Government, and the need to obtain approval from the initial decision-maker for changes to the Project's scope, schedule or cost.

12.47 The new and recently-announced regime of reporting on variations from original project approvals should help improve accountability, as would a reconciliation of the equipment ultimately delivered against the authorising decision or decisions.

502 Correspondence from Defence Minister Smith to Prime Minister Rudd, dated 14 and 15 August 2013.

13. Closing projects

This chapter considers how Defence closes capability development projects and, in particular, DMO's work to close a large number of projects which had been substantially complete but remained formally open.

Closing the loop: achieving project closure

13.1 Sound governance should also extend through the project life to project closure and acquittal. When a project is closed, it is useful and important to review what has been delivered and achieved against what was originally envisaged or approved. This provides accountability and, potentially, insight into the contingencies that can arise and which may need to be taken into account when planning future projects. This has been suggested in the past for capability development projects. For example, a parliamentary committee suggested in 2005 that Defence should review what had been delivered against what had been specified in the relevant MAA.[503] (MAAs were, at the time, a recent initiative.)

13.2 Generally, the completion of any project presents an opportunity to provide a completion report on the project to the decision-maker, including the results, time and costs of the project in comparison to the approved business case. Acquittal in this way is widely perceived as 'closing the loop' and is accepted as good management practice.[504] The ANAO examined the extent to which this practice has been adopted by Defence for major capability acquisition projects. The ANAO's analysis also considers the development of a procedure for business case closure across the capability lifecycle, and Defence's progress with implementing it.

13.3 During the fieldwork for the audit, the ANAO established that, in practice, acquisition projects can sometimes remain open well after they have delivered the major part or even all of the required materiel, and that DMO had been working to address this problem. In this context, the ANAO examined DMO's project to close acquisition projects that have been near

503 Joint Standing Committee on Foreign Affairs, Defence and Trade, Defence Subcommittee, *Review of Defence Annual Report 2003–04*, 11 March 2005, p. 9. Note that this is different from the analysis conducted by DMO and referred to in the previous chapter, which reconciles the original authorisation (where available) with the specification in the MAA.

504 See, for example, ANAO, *Planning and Approving Projects–an Executive Perspective*, Better Practice Guide, June 2010, p. 97.

completion for some time, in effect, closing the respective MAA. DMO defines MAA closure thus:

> A milestone that marks the cessation of DMO activities in support of an approved capital acquisition project. Defence subsequently manages and effects the Project Acquisition Business Case Closure which marks the completion of all Department of Defence activity against the approved capital acquisition project.[505]

Development of a business case closure procedure

13.4 In a discussion of follow-up action to an earlier ANAO performance audit about test and evaluation, Defence advised a Senate committee in 2003:

> We have also recommended that a business case closure procedure be carried out, whereby the capability is measured against the original business case. That would then identify whether the fielded capability has met all the requirements. That is what is being proposed ... I am looking to within the next six months to achieve that.[506]

13.5 The testimony also mentioned that work was underway to align Defence test and evaluation policy with its *Capability Systems Life Cycle Management Guide*.[507] The Committee stated it was pleased to hear this and quoted this evidence in its subsequent report to Parliament.[508]

13.6 As promised, Defence adopted a requirement for a business case closure report in the Guide, the next edition of which became the *Defence Capability Development Manual 2005* (DCDM 2005), giving it inherently greater authority. The manual explains the rationale for business case closure, but does not ascribe responsibility:

> Business case closure reconciles the business case for acquiring the capability against the capability outcomes following Operational Acceptance/Release of the final operational capability, thereby closing the capability development loop ... This closure provides visibility to Defence of the level of capability

505 ANAO Report No.20, 2011–12, *DMO 2010–11 Major Projects Report*, p. 129.

506 Committee Hansard, Senate Foreign Affairs, Defence and Trade References Committee, Defence Materiel Inquiry, 7 February 2003, p. 358.

507 That Guide (2002) had included only a rather general injunction to review a project at its conclusion (paragraph 4.70). Project Evaluation: 'Every [Major Capital Investment] project should be subject to an independent and rigorous evaluation either when it is completed or in its final stages. ... The nature and causes of major variations from the capability, cost timings endorsed at the time of Second Pass (Project) Approval must be examined and lessons learned carefully documented.'

508 Senate Foreign Affairs, Defence and Trade References Committee, *Report on the inquiry into materiel acquisition and management in Defence*, March 2003, p. 102.

> achieved against the level of capability funded, thereby providing an indication to government of the project's return on capital expenditure.[509]

13.7 There has been ongoing parliamentary interest in reconciliation of Defence acquisition project results with the original intentions. When, in 2005, Defence was introducing MAAs, it was asked:

> Have we walked through the process to see how these documents have shaped up with the end product? That is, have we at the finality of a project looked back to see whether what was envisaged in the acquisition agreement—what you asked for assistance for—has been lived up to or whether it has changed? Are we benchmarking whether those acquisition agreements are assisting in the process?[510]

13.8 On that occasion, CCDG advised the Committee that it was still too early in the process to reconcile what was delivered against MAAs, as the final product was still to be seen.

13.9 CDG subsequently revised its manual and published the DCDM 2006, which explicitly stated that 'following operational release of the final operational capability and Project Closure, CDG must close the Business Case.'[511] By the time a non-interim edition of the DCDH was produced (August 2011), responsibility had been re-assigned to the Capability Manager: 'After [operational release], the [Capability Manager] is responsible for closing the business case approved by Government and documenting any changes between what was approved and what was delivered (and the reasons for the variations).'[512]

Business case closure generally not carried out

13.10 The ANAO sought advice from CDG as to its actual practice in carrying out business case closure, and whether it could provide copies of the Business Case Closure Reports it expects its project staff to produce. CDG advised that it could locate about four such reports, which indicates that the practice is not routinely followed.

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509 Defence, Defence Capability Development Manual, 2005, p. 57.

510 Committee Hansard, Joint Standing Committee on Foreign Affairs, Defence and Trade, Defence Subcommittee, *Review of Defence annual report 2003–04*, p. FADT 9, 11 March 2005.

511 *Defence Capability Development Manual 2006*, Section 6-5, Business Case Closure, p. 74. Business case closure is also subsequently specifically referred to in various Defence instructions such as DI(G) OPS–2 *Capability Acceptance into Operational Service*, 18 February 2008.

512 DCDH 2011, p. 85. This remains the case in the December 2012 edition of the DCDH.

Terminated projects

13.11 Responding to a question about the capability development projects (including project 'phases') that have been terminated, cancelled or suspended having expensed at least $10 million, Defence advised the ANAO in January 2013 as follows:

> There is no known formal mechanism by which a public account of expenditure is provided when a project is terminated pre-second pass. In most circumstances the Minister will issue a formal press release notifying that a project has been terminated.

13.12 Defence also provided the list of cancelled projects that is reproduced in Table 13.1. Three of the projects listed in the table (marked thus: †) were post-second-pass.

Table 13.1: Projects cancelled, each with expenditure greater than $10 million

Project	Year of Termination	Amount expended
LAND 146 Phase 2, Combat Identification (Defence advises this project was cancelled to produce budget savings.)	2012	Defence unable to provide figures.
LAND 17 Phase 1C, Self-Propelled Howitzer (Defence advises this phase was cancelled to produce budget savings. The project was changed to procure Lightweight Towed Howitzer instead of Self Propelled Howitzer, therefore not technically closed, but significant funds were consumed investigating Self Propelled Howitzer.)	2012	Defence unable to provide figures.
†*Land 112 Phase 4 ASLAV Enhancement* (Cost, schedule and technical risk resulted in a decision to cancel the project.)	2011	$25 million
†*JP 2048 Phase 1A, Landing Craft Mechanised* (Identified craft were the wrong dimensions to fit either current LPAs ['Landing Platforms Amphibious'—landing ships] or future 'landing helicopter dock' (LHD), and hulls were susceptible to infrastructure fatigue at sea state five. In February 2011, Minister for Defence Materiel announced cancellation of phase, citing that 'they were unsuitable … [and] not fit for alternative ADF use'.)	2011	$45 million (Unclear whether this is actual expenditure or budget figure)

Project	Year of Termination	Amount expended
†*SEA 1411, Super Seasprite Helicopter* (A range of issues led to the decision to cancel this project including the emergence of technical issues in a range of areas, difficulties in defining requirements and poor contract management practices.)	2008	$1401 million
SEA 1432 Phase 3, Acoustic Mine Imaging System (Approved by Government in 2000 to define the requirements for the Acoustic Mine Imaging System (AMI) to be fitted to the Huon Class Minehunter Coastal (MHC). The project imaging included specifying a system design and the development and test of an operational prototype. Due to the production phase (Phase 3) being removed from the 2003 DCP, the Project Management Board recommended project termination and DGMD [Director-General, Maritime Development], as project sponsor, terminated the project in 2005. Business Case Closure was signed on 5 June 2008.)	2005	$15 million
Land 139 Phase 2, Enhanced Bridging Capability (Removed from the DCP as not considered a priority when compared to new projects such as Land 907 Phase 1.)	2003	Defence unable to provide figures.

Source: ANAO, based on Defence documents and information provided.

Tracking DCP projects through to project closure

13.13 As noted in an earlier ANAO performance audit, Defence has long sought to put in place seamless management of ADF capability from requirements definition through to withdrawal from service.[513] One of the challenges to overcome is the natural tendency for each Defence Group (such as CDG, DMO, the three Services and Defence Support Group) to focus largely on its own responsibilities.

13.14 Given that business case closure for capability development projects generally has not been carried out, the question arises of how CDG tracks major acquisition projects, particularly once they have appeared in the DCP. This might include major project milestones, project status, expenditure, schedule and the changes and updates to each of these.

13.15 CDG informed the ANAO early in audit fieldwork that it did not have one document/system that can easily provide advice on the status of all DCP projects. CDG was:

513 ANAO Audit Report No.57, 2010–11, *Acceptance into Service of Navy Capability*, p. 19 forward.

looking at how CDG might bring this sort of information together in a simple, accessible form for projects up to second pass—it is currently contained in a number of spreadsheets that are applicable to individual DCPs.

13.16 DMO has its Monthly Reporting System, which performs the relevant function once a project has achieved second-pass approval and comes under DMO management. However, there was no Defence-wide means of tracking capability development projects from conception to completion, nor was there an efficient means of doing this before the project passes to DMO.

13.17 Shortcomings in Defence's project monitoring have been further highlighted by a range of similar questions on notice directed to the Minister for Defence Materiel in November 2012 about milestone dates and reasons for any delay for a range of Defence capability development projects.[514] The answer provided to each question was that 'the information you are seeking would require considerable research into historical Defence Capability Plans and project approval/management documents, and as such, is considered an unjustified diversion of resources.' This raises the question as to how senior management in Defence maintains awareness of the status of capability development projects.

13.18 During the previous audit, the ANAO was advised that a CDG computer system called 'TARDIS' would fulfil the project monitoring function. TARDIS was in development over the period 2004–08 at a reported cost of $3.32 million. However, Defence informed the ANAO during this audit that this system turned out to be 'complex to learn, and difficult to get information into and out of and to develop reports.' It had consequently fallen into disuse. Defence informed the ANAO that the name 'TARDIS' was no longer being used and parts of the system were being replaced, in particular, by a system called the 'Capability Development Management and Reporting Tool' (CDMRT).

13.19 Defence stated (in January 2013) that the introduction of this tool 'has reduced the reporting overhead across CDG, increased visibility of project status and provided standardisation of project data.' However, it does not appear to have helped Defence to answer parliamentary questions about

514 These questions sought similar data across a range of projects: (a) the date of the first date for first pass approval; (b) the date of the first estimated date, time period, for second pass approval; (c) the date of first pass approval; (d) the date of second pass approval; (e) the estimated acquisition cost when first proposed to Government; (f) the current estimated acquisition cost; (g) the date of estimated initial operational capability when first proposed to Government; (h) the current date of estimated initial operational capability; and (i) the reason(s) for the delay in this project, if applicable. See Senate Hansard, 25 February 2013, pp. 844–65, questions 2570 – 2605.

project status. Furthermore, insofar as such a tool is directed at serving only CDG project management, it will fall short of providing the whole-of-Defence view that will be needed to give a proper understanding of project progress.

The DMO Project Closures Project

13.20 Project closure has been an enduring problem in DMO. Experienced DMO officers have put the view that projects have often remained open for many years after they have delivered the relevant capability. That is, a project stays 'on the books' at DMO even after the equipment has been delivered and accepted and the project is, for practical purposes, complete.

13.21 A central element in project closure is MAA closure. This is because projects end when the requirements in the MAA have been satisfied as shown by the execution of an MAA Certificate of Closure. Following the decision to revise the structure of MAAs (see paragraph 12.8 above), it became apparent that existing projects needed revised MAAs. This brought project closure into focus, as DMO management realised closing a project was sometimes a better and more practical course than agreeing to a new MAA.

13.22 The ANAO sought to analyse the problem of 'unclosed' projects and the action DMO had taken, including:

- the risks of having projects continue after effective completion;
- why projects are not closed promptly;
- when DMO identified the problem as warranting attention, and how it estimated the scale of the problem;
- the action DMO has taken; and
- the outcomes of the work.

Risks of unclosed projects

13.23 There are several risks in having projects remain open after they have been effectively completed, including:

- reporting to management and government on the capital acquisition program will be inaccurate if it includes such projects. This is because it will tend to overstate the level of activity. DMO will also incur unnecessary administrative effort formally reporting on these projects and maintaining the financial accounts;

- capital may remain idle, incurring a cost through forgoing, for example, the opportunity to realise other benefits through reallocation to priority items;
- the scope of the project may tend to 'creep' and consume funds in the project account. That is, while the project remains open, opportunities may arise for managers to add to the scope by increments, acquiring related items that are not clearly encompassed by the project approval; and
- even without identifiable scope creep, managers may expend funds on items generally associated with the project but of marginal necessity or priority, or better purchased in the context of sustainment, such as additional spare parts or consumables.

13.24 An aspect of these last two points is that any strictly unnecessary expenditure may be difficult to detect after the event. This is less likely if there was, at the outset, an approved and unambiguous specification. However, as noted earlier (paragraph 12.24) a DMO review found two-thirds of current major acquisitions examined in that review had, at best, only a broad initial specification. This magnifies this risk.

Why projects are not closed promptly

13.25 In 2009, DMO's Major Program Control Branch prepared an analysis of the problem of project closures facing DMO.[515] It identified the following as among the reasons for the failure to close projects:

- *tail end activities*—sometimes, low-value but legitimate project work could continue for years after the main acquisition had been finished;[516]
- *failure to 'transition' the project into service*—the equipment acquired had not been transferred into sustainment but was still being supported directly from the project office that had managed the acquisition; and

515 DMO. Major Program Control Branch, 'Gate MAA Closure Board: DGMPC—Opening Statement', circa 28 September 2009.

516 An instance of prolonged 'tail-end' activities is Foreign Military Sales (FMS). DMO advised that the 'other party' can take up to a year to finalise and invoice. However, the relevant edition of the *DMO Project Management Manual* (29 August 2009 edition, Interim, p. 38) indicates that this need not inhibit project closure: 'The closure of a Foreign Military Sales (FMS) Case can take a number of years. However, if a supply complete FMS Case with funds remaining against it is awaiting Case closure by the US, it need not delay project financial completion.' More recently, a solution has been devised to create an 'omnibus FMS' where required FMS funds can be transferred pending closure (DMO advice of 15 February 2012).

- *lack of key staff*—experienced senior project staff (who are needed to effect closure efficiently) may have been moved to important or urgent projects. There is a greater risk of this towards the end of a project.[517]

13.26 DMO has also identified additional impediments to MAA closure, including the onerous process involved, which, at that point, required 18 signatures.[518]

Identifying the unclosed projects problem and its scale

13.27 The then CEO DMO identified the problem of projects remaining open after effective completion in July 2009, when he requested a 'consolidated list of the relevant information' on projects that had been identified as candidates for closure.[519] Various DMO estimates showed it could expect to close about 50 major projects, and recover substantial residual funds, in the order of $400 million to $800 million, held against projects.

13.28 The initial suggestion made to the (then) General Manager Systems (GMS)[520] by his Chief-of-Staff was that:

> [Projects] should be given a clear message to show good reason why they should not be closed ... First executive step might be to freeze [financial] accounts if no reason not to close is forthcoming.

13.29 The GMS then wrote to all DMO division and branch heads, attaching the list of projects with no planned expenditure in the current financial year, asking that every possible effort be made to close them, and seeking a rationale in writing by the end of the month [August 2009] if a project was not to be closed in 2009–10. However, reluctance was reported within DMO to close

517 This problem is recognised in the *DMO Project Management Manual*, which states (p. 38): 'Project closure activities should commence once [Initial Materiel Release] has been achieved and progressively completed as the remaining requirements of the MAA are satisfied. Problems will almost certainly be encountered if project closure is left until the Materiel System has been released to the [Capability Manager] or the MAA has been closed, as the majority of the project team may have been reassigned and the corporate memory may have been lost.'

518 Two other impediments were (i) transferring funds to sustainment—an impediment arises because approvals and extra work are required to amend or establish a Materiel Sustainment Agreement as well as MAA closure documentation; and (ii) project interdependencies—in some cases, projects may not be able to be closed because of interdependent ongoing projects (DMO advice of 15 February 2012).

519 In August 2009, DMO's Major Program Control Branch reported that it was taking over 'project closure reviews', which had become the 'next pressing issue'. The issue was perceived as pressing because of a 'tight DCP financial environment' (DMO, Major Program Control Report, fortnight ending 21 August 2009, p. 3).

520 During the audit, DMO restructured its systems-related acquisition and sustainment under two General Managers: General Manager Land and Maritime, and General Manager Joint, Systems and Air.

projects without a transfer of any remaining funds to the sustainment budgets of the same projects, as contrasted with returning those funds to the Defence budget generally or to the DCP.

13.30 In late September 2009, the CEO sought an update. When advised that the response to the (former) GMS's request had been 'poor', he expressed his dissatisfaction, describing the response as 'tiresome'. He asked that the (then acting) GMS email each division head 'insisting that the relevant projects be closed by end December or give a personally prepared reason why not.'

Action commenced in late 2009

13.31 In early October 2009, DMO made a renewed attempt to identify candidates for closure, again focusing on those with no planned expenditure. The relevant records in DMO's Monthly Reporting System (MRS) revealed some candidate projects had been scheduled for closure 'as far back as 2006', again showing that projects could take years to close.

13.32 GMS's staff then sought updated information on project closure status across DMO, offering help to close projects. These efforts were reinforced by a message from the CEO to all DMO executives emphasising his concern that action be prompt:

> I am REALLY WORRIED about the lack of action on this subject that was initiated through GMS mid-year.
>
> I expect urgent compliance.

13.33 Thus it was made very clear to DMO senior managers in October 2009 that the then CEO placed a high priority on closing projects that were effectively complete but formally remained open. However, based upon subsequent events, the move to close projects failed to gain traction.

Design of a more efficient closure process

13.34 At a DMO Division Heads' meeting in late November 2009, a senior DMO officer was 'tasked to remove as much of the bureaucracy from the [project closure] process as possible' and to 'try to design a quicker, less frustrating process'. The officer noted 'the "administration" associated with project closures [caused] the majority of delay.'

13.35 In December 2009, work had begun on a standard operating procedure for project closure. Comments by those involved show that, in their view, the failure of previous attempts at project closure was attributable to:

- staff officers in each organisation having to draft briefing material for their line managers; and
- the loss of one or more of the many separate documents seeking internal clearances. Because the process was a serial one, each loss held up the entire process and added to the delay in closure.

13.36 The DMO plan at that point (December 2009) was to have a new project closure policy in place for the new financial year (2010–11). However, DMO did not allocate resources to this until late 2010/early 2011.[521] In January 2011, DMO issued a 27-page instruction on project closure, *Defence Materiel Standard Procedure, Materiel Acquisition Agreement Closure*.

Further action initiated in 2011 because of the need for revised MAAs

13.37 Project closure received renewed impetus later in 2011, with the need to review MAAs to include the Capability Manager as a signatory. DMO had identified about 57 major projects as being ready for closure rather than requiring transition to new MAAs. DMO's intention had been to close them by December 2011, but it had extended the deadline to June 2012 in some cases. This was because the relevant project team had moved on, and substantial work was needed to settle finances and roll out assets. As a result, as of February 2012, closure was still underway on some 30 of the 57 projects.

13.38 During the audit, DMO was revising its MAA closure instruction, with a view to further simplifying the process. The revised process was expected to reduce the time and effort required to close an MAA.[522]

Outcomes of the project closures initiative

13.39 There have been two major outcomes that the ANAO is aware of from DMO's action to close MAAs. The first is a reduction in the number of its nominally current acquisition projects: this declined from 240 in late 2011 to 'over 180 major capital equipment projects' in 2013.[523] The second is that funds

521 DMO advised the ANAO (July 2013) that it was unable to allocate resources to this task, as it had given higher priority to transferring MAAs onto a revised template.

522 In January 2013, Defence provided the following statistics on project closures in recent calendar years: 2009—18 majors and 0 minors (total 18); 2010—23 majors and 0 minors (total 23); 2011—17 majors and 2 minors (total 19); and 2012—21 majors and 29 minors (total 50).

523 In October 2011, at a Senate Committee inquiry, the CEO DMO stated: 'We run between 230 and 240 capital projects—that is, projects of more than $20 million ...'. Senate, Foreign Affairs, Defence and Trade References Committee, *Procurement procedures for Defence capital projects*, Committee Hansard, 7 October 2011, p. 5.

have been identified that are no longer required for those projects that have been closed.

13.40 DMO informed the ANAO in February 2013 that MAA closures had resulted in the return of funds to the DCP or to sustainment. It had also reduced resources involved in managing projects that are essentially complete. However, DMO stated that it is difficult to calculate those savings and has not provided an estimate.[524]

13.41 Funds released from MAA closures are substantial. DMO advice shows that 26 major project MAAs were closed between April 2011 and January 2012, releasing unused funds of $706.8 million. One project (Project AIR 5376 Phase 3 Stage 2, Hornet Structural Refurbishment Program) contributed a large proportion (85 per cent) of the funds. Even without this, the funds returned are still substantial, amounting to $110 million.

13.42 There is clearly the potential for substantial major project funds to be found among projects due for closure. In some projects, the difference between the funds allocated and the actual amount expended may be relatively small. However, the aggregate surplus across projects can be substantial, and it would aid transparency if it were to be made clear when amounts become available in this way and the purposes to which they are reallocated. These purposes might include, for example, reallocation with ministerial (or other appropriate) approval to other DCP projects, other reallocation within the Defence annual budget, or return to the Commonwealth Budget.

Conclusion—need for better arrangements to track capability development projects over their lifecycle and close completed projects

13.43 CDG did not generally follow its own procedure to formally close capability development projects over the period between 2006 and 2011, when it had the responsibility to do so.[525, 526] Given that business case closure has not

524 Defence (DMO) also informed the ANAO (18 January 2013): 'It is not practical to provide a simple and definitive number of "how many staff have been freed" because of the evolutionary nature of the project life cycle and the way that subsequent sustainment activities develop along with and beyond the project life cycle.'

525 CDG informed the ANAO that it was only able to locate about four business case closure reports, and that the practice was rarely followed.

generally been carried out, it is not clear how CDG tracks capability development projects, particularly once they have been included in the DCP. During the audit, Defence informed the ANAO that CDG had developed and fielded a 'Capability Development Management and Reporting Tool' (CDMRT) to track a project from its DCP entry through to second-pass approval.[527]

13.44 Certain reforms undertaken by Defence in recent years show that the organisation recognises that capability development projects require active coordination and project management throughout their life and across the whole of Defence. However, there is no whole-of-Defence system that provides a means of easily tracking and reporting on the status of all capability development projects from conception to completion. As noted in an earlier ANAO performance audit, Defence has long sought to put in place seamless management of ADF capability from requirements definition through to withdrawal from service.[528] One of the challenges to overcome is the natural tendency for each Defence Group (such as CDG, DMO, the three Services and Defence Support Group) to focus largely on its own responsibilities. However, these challenges remain to be addressed if a whole-of-Defence view is to be achieved throughout each project's lifecycle.

13.45 Acquisition project closure has also been an enduring problem in DMO. Experienced DMO officers have put the view that projects have often remained open for many years after delivery of the relevant capability. In July 2009, the then CEO DMO identified this issue as a concern, and various estimates showed that DMO could expect to close about 50 major projects and recover residual funds held against projects in the order of $400 million to $800 million. Despite the CEO DMO's concern, and personal instructions for action in 2009, attempts to address this issue failed to gain traction until renewed impetus was provided in 2011 by the requirement to transition all open projects to a new MAA that included the Capability Manager as a signatory. DMO identified

526 Under the more recent versions of these procedures, responsibility for project closure has been re-assigned to Capability Managers, though it is not clear whether any resources accompanied that reassignment, or whether the function will be carried out more rigorously in future. Ideally, Capability Managers will acquit capability development projects promptly and fully, with reconciliation against the original JPD (or authorising decision where no JPD exists).

527 Earlier, CDG had advised the ANAO that it was 'looking at how CDG might bring this sort of information together in a simple, accessible form for projects up to second pass – it is currently contained in a number of spreadsheets that are applicable to individual DCPs.'

528 ANAO Audit Report No.57, 2010–11, *Acceptance into Service of Navy Capability*, p. 19 forward.

57 major projects as being ready for closure rather than requiring transition to new MAAs. DMO's intention had been to close them by December 2011, but the deadline was extended in some cases.

Recommendation No.4

13.46 To improve the transparency of its management of acquisition projects, the ANAO recommends that DMO supplement the acquisition project information on its website with acquisition project schedule data for all key milestones from contract signature to Materiel Acquisition Agreement closure, together with any approved variations and summary reasons for those variations.

Defence response: *Partially agreed.*

Defence highlights that to meet the intent of this recommendation as proposed by ANAO, release of additional schedule data and MAA key milestones would be reliant upon Defence Security Authority (DSA) determination of the content to be released as unclassified information to the general public.

There is a concern that the availability of collective information online may produce a picture of our future capability.

There is also a risk of disclosing Commercial-In-Confidence information.

Defence agrees in principle to this recommendation however, the content to be made available will be determined by DSA.

Recommendation No.5

13.47 To improve accountability for the management of its major projects, the ANAO recommends that Defence, through its Capability Managers, report each year all major projects closed during the year, including a reconciliation of the capability delivered against the most recent approval decision.

Defence response: *Agreed.*

Recommendation No.6

13.48 To progress Defence's longstanding objective of seamless management of ADF capability throughout its lifecycle, the ANAO recommends that Defence consider the costs and benefits of introducing a system to allow Capability Managers to track and report on the progress of capability development projects from DCP entry through to project closure, with reports available, as required, to all Groups across Defence.

Defence response: *Agreed*.

14. Capability Manager reporting

This chapter considers the Kinnaird Review recommendation that Capability Managers be given responsibility for reporting on the development of Defence capability, and progress with implementation.

Origins of the proposal

14.1 The Kinnaird Review stated that 'Defence, and ultimately government, must be confident that they receive an accurate and comprehensive report on all aspects of capability development at each stage in the capability cycle.' To this end, the review: (i) proposed the creation of a head of capability definition and assessment (which led to the creation of CCDG); and (ii) recommended that Capability Managers (the most prominent of whom are the Service Chiefs) be accountable for monitoring and reporting to government for the whole of a defence capability:

> **Recommendation 4:** Following second-pass approval, the capability managers should have the authority and responsibility to report, and be accountable for reporting, on the development of defence capability. To undertake this role they should have access to all information necessary to enable them to fully inform government on all aspects of capability.[529]

14.2 The intention was that this responsibility should be assumed from the point where government approves a capability option at second pass, and carried through to when that capability is retired from service.

14.3 The then Government accepted this recommendation in September 2003. The review recognised it would take two or three years for Defence's financial systems to incorporate important data such as whole-of-life costs into capability decisions and allow Capability Managers to report as envisaged.[530]

Implementation of Capability Manager reporting

JCPAA 'concerned' about progress in 2008

14.4 In 2008, Defence's submission to the JCPAA inquiry *Progress on equipment acquisition and financial reporting in Defence* stated: 'Processes to

529 Kinnaird Review, Recommendation 4, p. 29.

530 ibid., pp. 27–9.

implement [Recommendation 4] are in place but the outcomes are still to be fully demonstrated.'[531] The Committee found 'Progress on the implementation of Recommendation 4 of the Kinnaird Review remains deficient and should be attended to as a matter of priority.'[532] It recommended that Defence address these findings and update it at a public hearing 12 months after it tabled its report (8 August 2008).

14.5 Defence agreed and there was a further hearing on 19 August 2009. However, progress with this recommendation was not addressed then, nor has Defence provided any other update on this matter to the JCPAA.

Mortimer Review recommendations

14.6 At about that time, the Mortimer Review was concluding. Noting the JCPAA's finding, it proposed extending Capability Managers' responsibilities. It explained that, given the Capability Managers were accountable for routine and comprehensive reporting during acquisition, and they co-ordinated in-service capability, it would make sense that they also co-ordinate the capability during acquisition.

14.7 Mortimer concluded that, to ensure all inputs were taken into account in capability development, Defence should adopt a model along these lines and preserve Capability Managers' authority and accountability. It recommended that Capability Managers 'report regularly to Government on the status of the capability development initiatives for which they are accountable' (Recommendation 3.4). The Government agreed, but added that 'Capability Managers should report to Government through the Secretary and CDF'.[533]

Progress remains slow

14.8 Progressing Recommendation 3.4, like the other Mortimer Review recommendations, fell to the MRIGC from its inception in June 2009 (though progress was also considered by the Capability Development Stream of the SRP, which also met from June 2009). Some two years later, an internal report to MRIGC categorised progress as 'Work underway and on target'. This report,

531 Defence submission, JCPAA inquiry *Progress on equipment acquisition and financial reporting in Defence*, May 2006, pp. 84–5.

532 ibid., p. xvii.

533 Defence, *The Response to the Report of the Defence Procurement and Sustainment Review*, May 2009, p. 27.

in September 2011, assessed 'process', not achievement or outcome. More specifically it stated that:

> A new framework to cover the Capability Manager (CM) roles and responsibilities across the capability lifecycle, including specific recommendations on CM reporting was agreed by DC [Defence Committee] on 6 September 2010.
>
> Establishment of a working group has begun to scope the detail of the reporting regime.[534]

14.9 That report did not disclose how the new framework advanced the recommendation. The report assessed the current status in terms of outcomes as 'Still to be tested'. This is because Capability Managers had not actually produced reports and thus, there was nothing yet to be assessed.

14.10 At its September 2011 meeting, MRIGC agreed that 'Army will take the lead for Mortimer recommendation 3.4 for both process and outcome.' At the following meeting, held in December 2011, it was agreed that VCDF Group, with Head, Joint Capability Co-ordination (HJCC) as lead, was to progress the Capability Manager reporting framework, including resolving outstanding TOR [Terms of Reference] issues, with the intent to report to the 19 March 2012 DC [Defence Committee].[535]

14.11 In the event, VCDF Group proposed an Enterprise Reporting Framework for capability reporting, which was considered and agreed at the 30 April 2012 meeting of the Secretary and CDF Advisory Committee (SCAC). Defence informed the ANAO in August 2012 that, in summary:

> The Enterprise Reporting Framework is the initial step for Capability Manager reporting and will provide the basis for follow on work including the detailed review and rationalisation of capability reporting to meet the intent of Kinnaird, Mortimer and Black recommendations.
>
> We are yet to see any progress on implementing the recommendation since the 30 April [2012] SCAC. This is one of the nine Mortimer recommendations still open by process and at this stage will be reported at the inaugural Capability Development and Materiel Reform Committee (which replaces the MRIGC)

534 Defence, MRIGC, 'Status Summary of Mortimer Reforms', status at 7 September 2011, p. 23.

535 The ANAO notes that the *Interim Defence Capability Development Handbook* describes the 'Capability Manager Reporting Regime' (Annex E-3, p. 167). However, the specification limits the scope in certain ways and it is not clear that this meets the expectations of the Kinnaird and Mortimer recommendations. Further, it is not evidence that Capability Managers are reporting as expected.

> under the new SRP governance arrangements. The date for this meeting is yet to be settled but will likely occur this month.

14.12 In response to the ANAO's query in December 2012 as to the current status of the Mortimer Recommendation 3.4, Defence advised that, on 16 July 2012, the Secretary and CDF Advisory Committee (SCAC) had agreed that 'Quarterly Sign-Off reports would be the initial reporting mechanism to Government' in the context of the proposed Enterprise Reporting Framework.' In contrast, the records of the Capability Development and Materiel Reform Committee (CDMRC) for 27 November 2012 show that 'Capability Manager reporting has been considered in terms of an Enterprise Reporting Framework but to date the process for this has not been finalised.'

14.13 Moreover, the CDMRC meeting was also advised:

> There are two elements to Recommendation 3.4, both flow from the Kinnaird Review of 2003 and reinforced by Mortimer:
>
> **a.** reporting on acquisition project progress, and
>
> **b.** reporting on the capability status of the force-in-being.
>
> As reported to the [MRIGC] of 9 December 2011, reporting on the capability status of the force-in-being has not been developed. This includes the Quarterly Accountability Reporting included in the joint May 2011 announcement by the Minister for Defence and Minister for Defence Materiel which required reporting from mid-2011. As at 8 November 2012, only one QAR (now Quarterly Sign-Off Report) had been provided to the Minister.

14.14 The Committee agreed to change the status of the recommendation to 'Work underway but requires management intervention' and noted that responsibility for resolving the issue lay with VCDF Group. In other words, there was no substantial evidence of progress, and management intervention was now required.

Another committee was also monitoring this recommendation

14.15 The audit ascertained that another committee in Defence, the Capability Development Reform Stream Governance Committee (CDRSGC), was also seeking to monitor the progress of the recommendation on Capability Manager

reporting.[536] However, the recommendation had been renumbered under the work breakdown structure of this particular stream of the SRP and was described as 'CD 1.1.2.1 Capability Managers should report regularly on the status of capability development initiatives for which they are accountable.' (The wording reflects the Mortimer recommendation.)

14.16 Anomalously, the briefing pack for the meeting of the CDRSGC of 26 June 2012 recommended that this initiative be closed on the grounds that a 'Capability Manager reporting regime has been put in place.' The Committee agreed. That committee and the MRIGC were then replaced by the CDMRC. Although there were some members in common across these various committees, the ANAO has seen no evidence of awareness that this same issue had arisen in different contexts and been disposed of in inconsistent ways.

14.17 In July 2013, Defence informed the ANAO that Recommendation 3.4 remained 'open' both by process and by outcome. It also stated that:

> Over the last six to 12 months there has been significant improvement in the Capability Manager's ability to positively monitor, control and coordinate the integration of [Fundamental Inputs to Capability (FIC)] in accordance with the project's JPD. This improvement has allowed the Capability Managers to keep the Government updated. In addition, the three Services and VCDF Group actively participate in a VCDF lead working group to further refine the current system of Capability Manager reporting implemented as the VCDF Group Enterprise Reporting Framework—specifically the Assessment of Future Capability (AFC) and Quarterly Sign-Off Reports (QSR). Development of these reports will further improve Defence reporting to the Government on significant capability issues in response to Mortimer Recommendation 3.2.[537]

14.18 In September 2013, Defence further advised that Recommendation 3.4 had been 'closed by process' (but not outcome) at a meeting of its CDMRC on 27 August 2013. However, there is no evidence of the envisaged reports having yet been produced.

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536 This committee had not met since August 2010 and, according to an internal weekly report within CDG, had 'lost momentum' (Capability & Plans Branch Weekly Report, Week Ending 1 April 2011). However, a directive from the Chief Operating Officer in May 2012 reinvigorated the committee as part of the introduction of a new SRP governance structure, which required a review of the existing status of initiatives and a handover to new committees.

537 Mortimer Recommendation 3.2 was that, 'as a fundamental principle, oversight and coordination of all elements necessary for the introduction of a capability should be exercised by the relevant Capability Manager.' Implementation of this particular recommendation has not been included in this audit.

Conclusion—Capability Manager reporting to government recommended by Kinnaird not in place nearly 10 years later

14.19 The Kinnaird Review first recommended in August 2003 that Capability Managers should have the authority and responsibility to report to government on the development of defence capability at all stages of the capability cycle. This would help to ensure that Defence, and ultimately, government, could be confident that they receive an accurate and comprehensive report on all aspects of capability development at each stage in that cycle. Recommendation 4 of the Kinnaird Review also stated that, to undertake this role, Capability Managers should have access to all information necessary to enable them to fully inform government on all aspects of capability.

14.20 Five years later (August 2008), Defence agreed with the JCPAA finding that progress on this recommendation remained deficient and should be attended to as a matter of priority. That was about the time Mortimer reported and added further weight to the proposal. Several years later still, Defence is still 'at the initial step' of Capability Manager reporting. Action so far has taken nearly ten years since Kinnaird, but has not resulted in the envisaged reporting taking place.

Part 5: Reporting on progress with reform

To ensure that the implementation of reform measures is proceeding adequately, it is important that accurate, up-to-date reporting on implementation takes place. The ANAO therefore examined reporting by Defence to the Senate Foreign Affairs, Defence and Trade References Committee, which held an inquiry into Procurement procedures for Defence capital projects, *and which made its final report in 2012. The ANAO also examined reports, originating in DMO, which have been presented in a variety of contexts as a basis for claims regarding project schedule performance.*

15. Reporting on progress with reform

This chapter examines Defence's reporting to Parliament on its progress with the implementation of reforms, focusing particularly on Kinnaird and Mortimer. It also considers reports originating in DMO, which have been presented in a variety of contexts as a basis for claims regarding project schedule performance.

Reporting by Defence has been limited

15.1 A natural concomitant to any program of reform is reporting on the progress and outcomes of that reform. In some cases, major reviews have also assessed progress of work flowing from earlier reviews where that is relevant to their own terms-of-reference. For example, the Mortimer Review did this for the Kinnaird Review's recommendations.[538] Overall, however, there is little reporting by Defence on reform progress relevant to major acquisitions, beyond testimony and submissions to parliamentary committees.[539]

15.2 The audit examined the detailed reports on progress with the Kinnaird and Mortimer reforms, provided by Defence to the Senate Foreign Affairs, Defence and Trade References Committee during the Committee's inquiry into *Procurement procedures for Defence capital projects*. These reports by Defence were published in the Committee's Preliminary Report in December 2011. The ANAO's examination of Defence's reports on progress was done in light of the findings of the earlier JCPAA consideration of the Defence reform agenda in 2008.

15.3 In addition, the audit considered Defence's specific claims about its project schedule performance, including that there has been a reduction in slippage in post-Kinnaird projects as compared with pre-Kinnaird projects.

JCPAA 2008 consideration of the reform agenda

15.4 The JCPAA made it clear in its August 2008 report *Progress on equipment acquisition and financial reporting in Defence* that it considered that, to that point, Defence had paid insufficient attention to developing techniques to measure

538 Mortimer Review, Annex B.

539 Progress with the Mortimer (and Kinnaird) reforms is given one paragraph in the Defence Annual Report 2011–12 (p. 98) with a status indicator of 'All targets for 2011–12 met or exceeded'. There is no statement as to what those targets were.

the status of the reform agenda.[540] It was referring specifically to the reforms flowing from the Kinnaird Review.

15.5 In the same report, the JCPAA also quoted Mr David Mortimer AO (then leading the review that bears his name):

> Mr Mortimer makes an important distinction between two key outcomes associated with the implementation of the Kinnaird Review recommendations. The first outcome is the extent to which each of the ten recommendations have, in whole or in part, been implemented structurally or organisationally across Defence. The second outcome is relevant to whether the ultimate aim of the Review ... has been realised.[541]

15.6 This distinction, between taking action to implement reforms, and judging the effect of those same reforms, is important in any assessment of the efficacy of the reform process. The same point recurs in the following analysis, which concerns Defence's reporting on the same broad matters to the Senate Committee inquiry *Procurement procedures for Defence capital projects*.

Advice supplied by Defence to a Senate committee

15.7 In its first submission to the Senate Foreign Affairs, Defence and Trade References Committee inquiry in 2011, Defence emphasised the number of reviews of Defence procurement there had been over recent decades.[542] In July 2011, the Committee wrote to Defence seeking a schedule of progress implementing the recommendations, in particular, those flowing from the work of Kinnaird, Mortimer and Pappas.[543]

15.8 In its response to that request, Defence stated that Mortimer had 'built on' Kinnaird and that, subsequently, 'the Mortimer recommendations became an extension of [the] Kinnaird Review and as such we do not necessarily distinguish between the two Reviews.' It went on to state:

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540 Joint Committee of Public Accounts and Audit, *Progress on equipment acquisition and financial reporting in Defence*, Report 411, August 2008, p. xiii.

541 ibid. p. 97.

542 Defence submission (Submission 21) to Senate Foreign Affairs, Defence and Trade References Committee inquiry, *Procurement procedures for Defence capital projects*, p. 8.

543 Senate Foreign Affairs, Defence and Trade References Committee, *Procurement procedures for Defence capital projects*, Preliminary Report, 15 December 2011, p. 25.

> By May 2011, Defence had fully implemented 29 of the 45 agreed (or partially agreed) [Mortimer] recommendations. A further 12 were on track but four had fallen behind schedule to varying degrees.[544]

15.9 Defence also stated that the Government had announced on 6 May 2011 that the department would accelerate implementation of all outstanding agreed Mortimer recommendations as a matter of priority.

15.10 The Senate Committee later stated that it had been disappointed with the information provided. It had written again to Defence, seeking a more informative response. The Committee had found that the information did not always convey a clear picture of achievements and:

> while the term 'fully implemented' was appropriate to describe some of the Mortimer recommendations, for others the term simply raised more questions. The committee explained that it would prefer a more informative response from Defence suggesting that a brief comment be added to each recommendation 'to put beyond doubt what is meant by fully implemented'.[545]

Defence provided a more detailed response

15.11 On 4 October 2011, Defence provided a further, more detailed response. That response explained how the Strategic Reform Program (SRP) substantially encompassed Defence reforms. Implementation of the Mortimer Review recommendations formed one stream of the SRP. It also informed the Senate Committee that an SES Band 3/three-star departmental committee was overseeing that stream and the latter had (at that point) last met on 18 May 2011.[546] (This committee was the Mortimer Review Implementation Governance Committee or MRIGC.)

15.12 The Defence advice continued:

> As of that date, 32 process recommendations had been fully implemented and a further two had been transferred to another Strategic Reform Program

544 Senate Foreign Affairs, Defence and Trade References Committee, Inquiry into Procurement procedures for Defence capital projects, *Department of Defence—Additional information dated 9 August 2011*, Enclosure 4, [p. 22].

545 Senate Foreign Affairs, Defence and Trade References Committee, *Procurement procedures for Defence capital projects*, Preliminary Report, 15 December 2011, p. 25, paragraphs 3.31–3.32.

546 In fact, the oversight committee had, by that time, met again, on 20 September 2011.

Stream. Eleven recommendations remain on track for implementation by 2012.[547]

15.13 Defence's response also included a table, being 'a list of Mortimer recommendations that are closed by process'. (An excerpt is at Figure 15.1.) The response does not explain what is meant by 'closed by process'. The full table shows each item as 'completed'.[548] It includes a brief commentary by Defence against each item.

Figure 15.1: Excerpt from Defence information provided to Senate

Mortimer recommendations closed by process

	Current Process Status	Commentary
1.1 Linking Strategy to Capability	Completed	The 'strategy-led' measures of Strengthening the Capability Development Process are in place. These measures include the establishment of Five Yearly *White Paper* cycle (supported by annual *Defence Planning Guidance*), the establishment of the Force Structure Development Directorate, institutionalisation of the Force Structure Review process and the publication of *The Strategic Framework* that outlines the post White Paper approach to implementing a 'strategy-led' approach within Defence. This is now part of business as usual.
1.3 Assure Government of affordability of Defence Capability Plan (DCP)	Completed	A statement on DCP affordability was included in the Defence Capability Plan 2009.
1.4 Replace explicit cost bands in public DCP	Completed	An independent review was undertaken by the Australian Strategic Policy Institute (ASPI) on the availability of Defence capability planning information to industry. The public DCP content was amended to reflect the Government's response to the ASPI review.
2.1 Tailor two-pass process according to the specific project	Completed	The internal processes on tailoring of the two-pass process are described in the Interim Defence Capability Development handbook (DCDH).
2.2 Establish subordinate subcommittee to NSC	Completed	In its response to Mortimer, the Government proposed an alternative approach to reducing the NSC workload by increasing approval thresholds. New thresholds for project approvals have been implemented.
2.3 Support Off the Shelf (OTS) consideration with cost-benefit	Completed	The requirement to include OTS options for all procurements and associated enabling processes are described in the Interim DCDH.

Source: Senate Foreign Affairs, Defence and Trade References Committee, Inquiry into Procurement procedures for Defence capital projects, Department of Defence—Additional information dated 4 October 2011, p. [3]

547 Senate Foreign Affairs, Defence and Trade References Committee, Inquiry into Procurement procedures for Defence capital projects, Department of Defence—Additional information dated 4 October 2011, p. [3]. Defence's advice to the Senate Committee referred to 'process recommendations'. In fact, there are no recommendations in the Mortimer Review referred to as 'process recommendations'. Rather, the method Defence has adopted to assess progress in implementing recommendations is to assess both 'by process' and 'by outcome'. It used the former measure when responding to the Committee.

548 With the exception of two which are listed as 'Transfer management to Logistics stream'.

15.14 The Senate Committee, however, was 'not convinced that Defence's account of the progress made in implementing its reform program has the coherence and foresight [needed] to achieve lasting success.' It reproduced Defence's table of progress in its Preliminary Report.[549]

Defence had supplied only limited information

15.15 The ANAO examined the records of the MRIGC. It found that this internal Defence committee has received, at each meeting, an updated report on implementation of the Mortimer reforms, entitled *Status Summary of Mortimer Reforms*. The report received by the MRIGC dated 6 April 2011 is relevant, as this would contain the information most directly comparable with the information which Defence provided to the Senate Committee on 4 October 2011. The audit then compared the information available in reports provided to the MRIGC with that provided by Defence to the Senate Committee. Figure 15.2 is a copy of a section of the report provided to the MRIGC corresponding to the information in Figure 15.1, which was the information Defence provided to the Senate Committee. (The subsidiary table shows the various statuses that Defence attributed to each recommendation, and associated colour coding.)

549 Senate Foreign Affairs, Defence and Trade References Committee, *Procurement procedures for Defence capital projects*, Preliminary Report, 15 December 2011, pp. 25–6.

Figure 15.2: Excerpt from Defence report to its Mortimer Review Implementation Governance Committee, April 2011

PART 2: MORTIMER REVIEW RECOMMENDATIONS					
RECOMMENDATION		COMMITMENT	LEAD	PROCESS	OUTCOMES
				COMPLETED	1
1.1	**Linking Strategy to Capability** *(Cross reference 20 Point Plan No.8 and 9)* Defence should prepare an annual submission detailing current and future capability gaps and the priority for their remediation for Government consideration and approval. This submission would be prepared by the Capability Development Group.	**AGREED** Defence will implement a strategic planning process that institutionalises the links between strategic guidance, force structure, capability priorities and funding that have been developed during the White Paper process. The classified Defence Planning Guidance will provide Government-endorsed direction on strategy, force structure and investment priorities on an annual basis. Strategic Policy Division (SPD) will lead the strategic planning process, supported by CDG. The Defence Capability Strategy and the Defence Capability Plan will also be central elements of this new system and overseen by the Government.	**DEPSEC S**	**Current status** The 'strategy-led' measures of Strength-ening the Capability Development Process are in place. These measures includes the establishment of Five Yearly *White Paper* cycle (supported by annual *Defence Planning Guidance*), the establish-ment of the Force Structure Development Directorate, institutional-isation of the Force Structure Review process and the publication of *The Strategic Framework* that outlines the post WP approach to implementing a 'strategy-led' approach within Defence. DEPSEC S responsibilities in this area are now part of 'normal' business. With the release of the Strategy Framework 2010, the status of this item was changed to "COMPLETED" at the Aug 10 Governance Committee meeting.	**Desired outcomes** Government endorses direction on strategy, force structure and investment priorities on an annual basis. Linkages between strategic guidance, force development and capability decisions are strengthened resulting in force structure and capability options being developed based on Government agreed strategy. **Current status** The White Paper (WP) 2009 was approved and released by Government in May 09. It provides the linkage between strategic guidance and force development. *The Strategic Framework* that outlines the post WP approach to imple-menting a 'strategy-led' approach within Defence has been released.

STATUS CODES	
TBA	To Be Assessed—Insufficient information available now
C	Complete
1	Work underway and on target
2	Work underway but behind schedule
3	Deadline under threat and high risk

PART 2: MORTIMER REVIEW RECOMMENDATIONS					
RECOMMENDATION		COMMITMENT	LEAD	PROCESS	OUTCOMES
				1	To Be Assessed
1.2	**Increased rigour for project entry to the DCP** *(Cross reference 20 Point Plan No.8)* Defence should increase the rigour with which projects are assessed for entry into the Defence Capability Plan. The Capability Development Group should develop the relevant information for a project's entry into the Defence Capability Plan and it should focus on achieving more disciplined cost, schedule and risk information for a project's entry. The information provided to Government should allow an informed decision on a project's suitability for entering the Defence Capability Plan.	**AGREED** More rigour must be applied to cost, schedule and risk information relating to proposals entering the DCP. Defence will improve early scoping of cost, schedule and risk information on projects to be included in the DCP. Part of this process will be early and sustained engagement with industry. To improve accuracy of the Commonwealth budget estimates, Defence will revise project cost estimates as better information becomes available and, at the least, once a project enters the forward estimates period. The CDG will lead this task, supported by the DMO and other Groups where appropriate. Defence will establish an internal tiger team to address how to improve performance in this area, with initial results to be reported to Government by the end of the second quarter 2009. The process will require closer and earlier engagement of DMO and the Department of Finance and Deregulation, including establishing better quality cost estimations.	**CCDG**	**Current status** The Defence Cost Analysis Branch (CDG) has been restructured to better implement and support the reforms required by the 2009 White Paper Capability Development and Preparedness, Personal Operating Costs Reform Streams. A dedicated costing cell has been established in the DMO. The cell reports to General Manager Commercial. CCDG has endorsed the tiger team report and a MINSUB is being drafted.	**Desired outcomes** Ensure that sufficient information (cost, schedule and risk estimates) is provided to Government to allow it to determine whether a project enters the DCP. If there is sufficient information this should be provided to allow the Government to agree to tailor the approval process if the project is less complex or supporting information is mature. **Current status** Still to be tested.

PART 2: MORTIMER REVIEW RECOMMENDATIONS					
RECOMMENDATION		COMMITMENT	LEAD	PROCESS	OUTCOMES
				COMPLETED	1
1.3	**Assure Government of affordability of DCP** *(Cross reference 20 Point Plan No.3)* The Defence Chief Finance Officer should assure the affordability of the Defence Capability Plan, including its impact on future personnel and operating costs, as part of the annual Defence budget considerations. To achieve this, the Defence Chief Finance Officer would audit the cost and schedule estimations within the Defence Capability Plan as developed by Capability Development Group to ensure they are as practical and as accurate as possible.	**AGREED** A statement will be developed by CFO and made in each Defence Capability Plan (DCP) jointly signed by the CEO DMO, CCDG and CFO, which agrees that the accumulation of projects (and their future operating costs) are affordable and achievable within forecast budget guidance given by Govern-ment. Such a statement would demonstrate that appropriate oversight has been provided to the DCP by all the relevant areas in Defence. This statement would also need to outline potential sources of change to capability costs. CFO, CEO DMO and CCDG will develop a statement on DCP affordability to be incorporated into the next public DCP in 2009. The lead for this will be with CFO Defence, in consultation with CFO DMO.	**CFO DEFENCE [in consultation with] CFO DMO**	**Current status** A statement on DCP affordability was included in the Defence Capability Plan 2009.	**Desired outcomes** When Defence seeks Government approval of a DCP, it should provide an assurance that the proposed DCP (and its future operating costs) is affordable and achievable within forecast budget guidance given by Government. Government is satisfied that appropriate oversight has been provided to the DCP by all the relevant areas in Defence. **Current status** Need to ensure this statement of affordability is included in future DCPs.
				COMPLETED	1
1.4	**Replace explicit cost bands in public DCP** *(Cross reference 20 Point Plan No.6)* The public Defence Capability Plan should contain sufficient information on project scope and timing to enable industry to develop strategic business plans, and the explicit cost bands presently disclosed should be replaced by a measure relative to the DMO Acquisition Category framework.	**AGREED** CEO DMO and CCDG will work on applying the DMO Acquisition Category framework (ACAT) method-ology to the next public version of the DCP 2009. Defence notes that there will always be a tension between the need for transparency to assist business to plan for projects and the need for Defence to maintain a capacity to achieve good contract outcome for the Commonwealth. Defence will consult with defence industry to help identify the best way to provide infor-mation on projects without undermining the Common-wealth's capacity to pursue value for money.	**CEO DMO**	**Current status** An independent review was undertaken by the Australian Strategic Policy Institute (ASPI) on the availability of Defence capability planning information to industry. The report was provided to the Ministers in Dec 09. In Jun 10, the Minister released the Government's response. The Government agreed to the ASPI recommendation to increase the level of information on projected costs by increasing the number of cost bands for projects.	**Desired outcomes** The information in the public Defence Capability Plan is sufficient to meet industry long-term planning needs but protects the Commonwealth's commercial interests. **Current status** Future DCPs will provide information across ten years and provides Acquisition Category scores with guidance on expected expenditure range.

PART 2: MORTIMER REVIEW RECOMMENDATIONS					
RECOMMENDATION		COMMITMENT	LEAD	PROCESS	OUTCOMES
				COMPLETED	To Be Assessed
2.1	**Tailor two-pass process according to the specific project** Government approval of major Defence projects should occur through a tailored application of the two-pass process. For simple acquisitions where project definition is complete, Government may decide that Defence Capability Plan entry satisfies first pass requirements. If the complexity or cost of a project is high or project definition is uncertain, a minimum of two passes should be employed.	**AGREED** Defence will develop appropriate measures to ensure that the Two-Pass process is used for complex and costly procurement tasks and explore options to speed decision-making on less complex procurements.	**CCDG**	**Current status** The internal processes leading to a Government decision on tailoring of the two-pass process is described in the Interim DCDH.	**Desired outcomes** Individual projects proceed through the approval process appropriate to the specific project taking into consideration of cost, complexity, resource demands and quality of information available to Government. **Current status** Still to be tested.
				COMPLETED	1
2.2	**Establish subordinate subcommittee to NSC** [*agreed in part*] To expedite the capability development process and allow the National Security Committee to focus on major issues, a subordinate subcommittee should be created to handle minor and less complex defence acquisition matters.	**AGREED IN PART** Defence agrees with the intent to reduce the heavy work-load of the National Security Committee (NSC) of Cabinet. An alternative approach is for Secretaries Committee of National Security (SCNS) to advise Ministers where there is departmental agreement on less complex procurement proposals. Where there is departmental agreement these items could proceed to NSC for agreement without discussion unless Minister's specifically raise issues for consideration. Alternatively, less complex procurement matters could be agreed by out-of-session correspondence between Ministers. Either approach will streamline the NSC workload. Options to streamline current processes will need to be discussed with the Department of Prime Minister and Cabinet. Following Government agreement, the Minister for Defence's threshold for approving projects will be lifted from $8 million to $20 million. Two Minister approval will be lifted to between $20 million and $100 million and either Minister could request that the National Security Committee consider a project if necessary. The National Security Committee threshold for projects would be raised to $100 million.	**DEPSECS**	**Current status** The approach approved by Government is that submissions for first and second-pass approval might be approved by the Cabinet Secretary as not requiring discussion. Circulation of those submissions would be limited to NSC ministers and any additional ministers agreed by the Cabinet Secretary. This new policy was detailed in the latest revised PM&C Drafter's Guide (3rd Edition Jul 09) on *Preparation of Cabinet Submissions and Memoranda*. Government has also agreed to changes to the project approval thresholds.	**Desired outcomes** Improve the efficiency of the capability development process by ensuring that the appropriate authority is provided for any project based on the complexity and cost of the project under consideration. The status of this item was changed to "work underway and on target" at the Aug 10 Governance Committee meeting. **Current status** Anecdotal evidence indicates that the timeframes for achieving lower level approval are not shortening the process.

PART 2: MORTIMER REVIEW RECOMMENDATIONS					
RECOMMENDATION		COMMITMENT	LEAD	PROCESS	OUTCOMES
				COMPLETED	To Be Assessed
2.3	**Support OTS consideration with cost-benefit analysis for each project** *(Cross reference 20 Point Plan No.7)* Any decisions to move beyond the requirements of an off-the-shelf solution must be based on a rigorous cost-benefit analysis of the additional capability sought against the cost and risk of doing so. This analysis must be clearly communicated to Government so that it is informed for decision-making purposes.	**AGREED** There is wide agreement that reducing cost and risk for major Defence equipment acquisitions involves procuring equipment that is as "off-the-shelf" as possible from existing production lines. This should be an important first step in any decision to acquire a defence capability. CCDG will ensure that off-the-shelf (OTS) solutions are considered as an essential early step in any capability development proposal and that cost-benefit analysis of OTS options are considered by government.	**CCDG**	**Current status** The requirement to include OTS options for all procurements and associated enabling processes are described in the Interim DCDH. The Interim DCDH states where an OTS option exists for Defence's capability requirements, it will be presented for Government consideration and will be the benchmark against which a rigorous cost-benefit analysis of the military effects and schedule aspects of the other options will be undertaken; and when an off-the-shelf option is judged not to exist, this will be explained in the submission to Government.	**Desired outcomes** Government is provided with sufficient information to understand the capability benefits of options that move beyond an OTS solution, and the financial and other impacts of doing so. **Current status** Still to be tested.

Source: Defence, *Status Summary of Mortimer Reforms*, Status at 6 April 2011 (report prepared for Mortimer Review Implementation Governance Committee meeting of 18 May 2011).

15.16 When comparing the table of progress provided to the Senate with Defence's internal reporting document provided to the MRIGC, three matters are noteworthy:

- First, the information provided to the Senate committee is a subset of the information in the MRIGC's report and has obviously been compiled from it. The layout is similar and the wording in the 'Commentary' section of the report to the Senate Committee is an edited version of the wording in the 'Process' column of the MRIGC report.
  - It was appropriate and efficient of Defence to base the report to the Senate Committee on the reports provided to the MRIGC. That would have been the authoritative, convenient and best source. Defence's reference to MRIGC in its response to the Committee also implies that this was its approach.

- Second, certain information provided to the MRIGC was not included in the report to the Senate Committee. This includes the column 'Commitment', identifying the senior officer in Defence with the 'lead' for implementing the recommendation (in effect, identifying the accountable officer). Moreover, Defence omitted the column headed 'Outcomes' and all the information it contains.
- Third, the status of implementation in the 'Process' column is, as might be expected, more advanced than that in the 'Outcomes section'.
  - By process, the 6 April 2011 full MRIGC report shows 30 actions as complete, twelve as 'work underway and on target', two as 'work underway but behind schedule' and one as 'deadline under threat and high risk.'
  - By outcome, none was recorded as complete, eight were 'work underway and on target', one each were 'work underway but behind schedule' and 'deadline under threat and high risk'. The great majority were listed as 'To be assessed'. Thus, in terms of outcomes, the status of most Mortimer recommendations was effectively untested and, at that point, unknown.

Analysis of Defence's response to the Senate Committee

15.17 Defence's August 2011 response to the Senate Committee (see paragraph 15.8), in which it said that it had 'fully implemented' 29 Mortimer recommendations, provided limited information and had the potential to give an impression of greater progress than had actually been achieved. Better and more accurate advice would have stated explicitly that Defence had a process in place (or had decided upon a process) for the implementation of 29 Mortimer recommendations, and would have advised the Committee that Defence was also monitoring outcomes.

15.18 Internally, Defence does not regard progress by process as a satisfactory measure. Rather, it looks to the progress by outcomes as an indicator of achievement. This is evidenced by reports to the Defence Audit and Risk Committee for this stream of the SRP, 'Mortimer (Procurement and Sustainment)', one of which states:

> Implementation of the processes against the individual recommendations does not assure the intent of the Mortimer reforms is achieved. The key mitigation

> strategy has been to establish an agreed set of measures against which progress on outcome achievements are being monitored and success judged.[550]

15.19 The MRIGC was advised at its final meeting (December 2011) that 'Nine recommendations by process, and 28 recommendations by outcome, remain open as at 25 November 2011.' A candid assessment like this may have been of more assistance to the Senate committee. It is also notable that at the previous MRIGC meeting—which took place on 20 September 2011, before Defence supplied the information in Figure 15.1 to the Senate Committee—the MRIGC was advised that, if full implementation were the agreed end state, then all Mortimer recommendations would be considered behind schedule. These internal findings in September and December 2011 contrast with the Defence view provided to the Senate Committee in August 2011 that most recommendations were 'fully implemented'.

15.20 By May 2012 the SRP Mortimer Stream Report stated:

> The key risk to the success of the reforms remains the capacity and commitment of Defence personnel to implement the reforms. There is a perception by some senior Defence officials that the Mortimer reforms have been largely implemented but the current status is that nine (9) recommendations by process and 26 recommendations by outcome remain open.[551]

15.21 The concern that arises from this assessment is that, although there is value, as pointed out by both the JCPAA and Mortimer, in distinguishing between putting a process in place and achieving the intended outcome (see paragraph 15.5 above), a focus on process may assume excessive importance, displace attention from the intended goal, and create an exaggerated sense of progress among senior staff.

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550 Defence, *Strategic Reform Program Stream Report*, provided to Defence Audit and Risk Committee for its meeting of 17 July 2012. A similar sentiment was expressed in the 2011 report of the Materiel Audit and Risk Committee (MARC) to the CEO DMO (dated 30 October 2011). This is significant, as the MARC also stated in that report that its 'main interest during the year was on whether the overall desired outcomes of the Mortimer Review [were] being achieved.'

551 Defence, *Strategic Reform Program Stream Report*, May 2012. This report was signed by the Deputy CEO, DMO. In July 2013, Defence informed the ANAO that three recommendations remained open by process and 22 by outcome.

15.22 Two other matters came to the ANAO's attention when it compared the information Defence provided to the Senate Committee with that available to the MRIGC:

- first, the reports to the MRIGC also contain additional tables of information. In particular, they contain reports on implementation progress of Defence's 20-point plan for implementation of the Mortimer Review. This is an additional set of actions separate from implementing the Mortimer Review recommendations themselves. The Government Response to the Mortimer Review comprised both the 20-point action plan and specific responses to each Mortimer recommendation. Thus, for example, the commitment to introduce JPDs (see Chapter 11 of this report) was first articulated in the 20-point plan (as item 4), though Mortimer had made no specific recommendation. Therefore, to track progress of the commitments flowing from the response to the Mortimer Review—including important reforms like the introduction of JPDs—the MRIGC required and received a report that encompassed both the 20-point plan and the Mortimer recommendations. Defence provided no information on the 20-point plan to the Senate Committee, but did not explain why; and
- second, the front cover of the MRIGC report is annotated 'Note: The 20 Point Plan is Defence's commitment to implementing agreed recommendations of the Mortimer Review and is the authoritative source.'

15.23 The ANAO enquired of Defence about its decision to omit the progress-by-outcomes information and progress with the 20-point plan from the advice to the Senate Committee. Defence advised:

> Defence does not have any evidence that a conscious decision was made to 'omit' as postulated in the [ANAO question]. Rather, it is likely that a decision was made regarding the provision of information that would be considered to be of most benefit to the Senate Committee.[552]

15.24 In responding to various items in the Senate Committee's Preliminary Report, Defence subsequently provided the Committee with a further submission. However, it did not respond further on progress of Mortimer Review implementation. When invited by the ANAO to explain why it had not

552 Defence advice of 18 January 2013.

provided an update that would go some way towards satisfying the Senate Committee's request, when it had status reports to hand containing an assessment of progress by outcome, Defence advised:

> Defence responded appropriately to the Senate Committee's requests for information and provided information, as requested, to assist the Committee to deliver the final report.[553]

Defence's implementation of audit recommendations

15.25 The ANAO recently undertook a performance audit with an objective of assessing the effectiveness of Defence's monitoring of the implementation of ANAO and internal audit recommendations (ANAO Audit Report No.25, 2012–13, *Defence's Implementation of Audit Recommendations*). This involved an examination of Defence's system and procedures for monitoring and reporting on the implementation of audit recommendations, including the roles of Defence's internal audit function, the Defence audit committee and the use of Defence's Audit Recommendation Management System database. The audit also examined a sample of ANAO and internal audit recommendations—reported as being complete by Defence—to assess the extent to which these recommendations had been implemented by Defence.

15.26 The audit identified weaknesses in Defence's system of following-up on slow implementation, escalating to senior management where there are continuing difficulties, and achieving closure on the implementation of recommendations within specified timeframes. The timeliness of implementation is a significant problem, and half of the 28 ANAO recommendations examined in the audit (all of which were reported by Defence as implemented) were assessed as not being adequately implemented. These outcomes indicate that monitoring and reporting are a necessary but not sufficient condition for achieving the timely and adequate implementation of audit recommendations.

15.27 The ANAO considers that there would be benefit in Defence implementing systems to centrally monitor progress over time and report on the implementation of review recommendations/reforms, consistent with Defence's approach to the monitoring and reporting of the implementation of audit recommendations. Defence informed the ANAO that the weaknesses of its system for the implementation of audit recommendations, discussed in

553 ibid.

ANAO Audit Report No.25, 2012–13, are being addressed through improved reporting and escalation of continuing implementation difficulties, to senior management. Defence went on to state that similar measures to those taken to improve the system for monitoring and reporting on audit recommendations should also be considered in any centralised system for the implementation of review recommendations.[554] This could include those related to the reform of capability development.

Project schedule performance

Claims of reduced schedule slippage

15.28 Defence advised a Senate Committee, in response to a Question on Notice at a public hearing on 5 October 2011, that:

> DMO can demonstrate that schedule performance has improved over the past 10 years. The schedule performance of 150 open and closed projects with commencement dates from 1992 to 2011 has been assessed. The information indicates a steady improvement of schedule performance from the year 2000 with the average level of schedule slippage decreasing from over 50% to around 30% by 2007. Data for subsequent years (2008 to 2011 inclusive) support the trend of continuing improvement but the data is not conclusive because these projects are still in their early stages.[555]

15.29 However, as shown in Chapter 12, DMO does not have sufficiently detailed long-term records of schedule performance across projects. For example, when DMO did its Acquisition Baseline Review, it found original schedule and scope parameters for only 36 per cent of the projects it reviewed (see paragraph 12.24). Moreover, given the state of project closure in DMO, discussed in Chapter 13, with the effective completion of many projects occurring long before the project was formally closed, great care is needed in selecting an appropriate date at which to measure slippage.

554 ibid, p.14. Defence has provided evidence (July 2013) that, in March 2013, it introduced a standing agenda item, Outstanding Audit Recommendations, for the monthly Defence Committee (DC) meetings. During this standing agenda item, the DC considers the status of outstanding audit recommendations, taking particular note of longstanding, high-priority overdue audit recommendations, through the provision of advice provided by the Chief Audit Executive. This advice also forms part of Defence's monthly reporting on Outstanding Audit Recommendations to the Minister.

555 Senate Foreign Affairs, Defence and Trade References Committee, Inquiry into Procurement procedures for Defence capital projects, Answers to Questions on Notice: Department of Defence—Public hearings dated 5 and 7 October 2011, [Part 2], Answer to Q6, ANAO report.

15.30 In September 2013, Defence stated that schedule analysis benefits come with the introduction of MAAs following the Kinnaird reforms:

> MAAs have given the DMO a formal baseline against which to monitor the schedule performance of projects approved in the post-Kinnaird era (ie post 1 July 2005). DMO is now tracking Forecast /Actual dates for MAA completion within the Project Master Schedules of these projects.

Expenditure pattern used as a measure of progress

15.31 When assessing schedule performance, DMO used a surrogate measure for the end-date of each project. The measure it selected was the 'year in which 95 per cent of the forecast budget is scheduled to be expended'.[556] (For two-thirds of the projects being considered, this was either the then current year or a future year, in some cases, out to 2019).[557]

15.32 This approach has risks. First, the scheduled budget could change because of contingencies arising during a project, and may not always do so in a way that corresponds to other objective measures of project progress. Related to this is the observation made in an earlier performance audit that progress payments are unlikely in any case to reflect project achievement:

> The strategy adopted by DMO increasingly over the last decade is to no longer implement the earned value progress payment strategy recommended by the [JCPAA] in 1986 ... The result is the loss of a comprehensive progress measurement and payment incentive system, based on work package milestones and other objective measures of achievement, which is an important feature of an earned value system.[558]

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556 It is notable that when the Australian Strategic Policy Institute (ASPI) sought to assess project slippage in Defence, it lamented the lack of any 'actual data', something 'not available in the public domain.' (It may not have been aware of the paucity of project schedule data held within Defence.) As a result, it, too, resorted to estimating schedule slippage by reference to expenditure patterns, though using a different approach from Defence. See ASPI, *The Cost of Defence: ASPI Defence Budget Brief 2011–12*, p. 113.

557 The information provided by the Review and Analysis Team was based on DMO data on the spend spread of projects in the DMO's budget management system (CEPLAN). In the spreadsheet provided to the ANAO, 33 projects were shown with a '95 per cent of forecast budget scheduled to be expended' in the years up to and including 2010. The remaining 74 projects had their '95 per cent date' assessed as lying at some point over the years 2011 to 2019.

558 ANAO Report No.57, 2010–11, *Acceptance into Service of Navy Capability*, p. 34. See:<http://www.anao.gov.au/~/media/Uploads/Audit%20Reports/2010%2011/201011%20Audit%20Report%20No%2057.pdf> [accessed 3 September 2012].

15.33 Also, where Defence elects, during a project, to make early payments—as it does from time to time—the payment schedule may again no longer reflect the state of progress of the project itself.

15.34 Finally, Defence sometimes 're-baselines' projects during their course where, for example, a major scope change is approved. In such cases it may be yet more difficult to discern the relevant costs and dates to judge progress accurately.

15.35 Defence's advice to the Senate Committee warned that the data used to develop the response to the Question on Notice (see paragraph 15.28) included projects that had started only recently. This meant that there had not yet been the opportunity for contingencies to arise and for the project to suffer any consequential delay. The advice also cautioned against attributing any change in performance to any one cause, though by dividing projects into 'pre-Kinnaird' and 'post-Kinnaird' categories, DMO implicitly invited causal attribution.

15.36 Defence had earlier provided this information to the Minister for Defence (April 2011). It entitled its advice 'Summary of Outcomes from the Kinnaird and Mortimer Reviews' and advised him that there was sufficient information on post-Kinnaird projects to demonstrate improvement in capital delivery. In particular, it reported that, 'in relation to schedule, the data demonstrates a 20–25 per cent improvement in post-Kinnaird projects.' It did not explain that it had no schedule information from which it could derive such estimates, nor that it had calculated the figures it offered from estimates of expenditure. Similarly, it did not advise the Senate Committee of these factors.

15.37 Defence documentation shows that, internally, Defence was aware that it could not 'prove conclusively that any particular factors have caused the improvement' that it had perceived in this data. Moreover, it was considered 'too early to collect sufficient data to unambiguously demonstrate improvement since the Mortimer Review.'[559]

Benchmarking study on DMO schedule performance

15.38 Defence informed the ANAO that, in June 2012, DMO engaged a private-sector consultant to analyse DMO project schedule data. Defence stated that the report shows that 'DMO is performing well and that reforms previously

559 Defence, aide-mémoire, 'Summary of Outcomes from the Kinnaird and Mortimer Reviews', 27 April 2011.

implemented are now enhancing the way we do business.'[560] However, this report is not about project slippage but about comparing the time taken by DMO to complete projects with the time taken by comparable projects in industry.[561,562]

15.39 Defence stated about this project that:

- the consultant holds data on about 14 000 projects from more than 200 companies, primarily in the processing and extractive industries;
- the consultant focuses solely on benchmarking capital projects and conducting research into the drivers of project performance; and
- DMO gave [the consultant] data for a representative sample of 133 major projects.

15.40 This and similar statements on the DMO website could be taken as implying that 'research into the drivers of project performance' was part of this project. This is not correct. The report makes clear in its preface that the review the consultant conducted did not include evaluating drivers of performance; rather, 'the evaluation was conducted by comparing schedules.'[563]

15.41 The consultant was not required to explain the causes or underlying reasons for any changes he observed in how long it took DMO to deliver projects over the period considered. However, without analysis of underlying causes to explain differences in schedule performance, there is no basis for DMO to attribute any perceived improvement to a specific cause, such as

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560 Defence advice of 29 January 2013, 'Improvements in Defence's Capability Development Processes and Project Outcomes'. The ANAO found that DMO reported in similar terms on its website. See *DMO Performance*, 7 December 2012, now available in the Internet Archive at <http://web.archive.org/web/20130126175627/http://www.defence.gov.au/dmo/Newsitems/7dec12_DMO_Performance.cfm> [accessed 27 September 2013].

561 In examining this work, it is important to understand the difference between *project slippage* and *project duration*. DMO advised (July 2013) that, upon commencing the schedule benchmarking activity, it had planned to benchmark slippage of its projects against industry projects. As slippage data for each Major Project Report project was readily available from the 2010–11 report, this was deemed to be a reliable sample. However, during early discussions, the consultant advised that the most appropriate benchmarking methodology was to compare DMO and industry project durations (as opposed to slippage), the reason being that schedule slippage can be affected by optimism (or other factors) in the original schedule estimate. This could mean that two separate organisations may deliver the same project in the same timeframe, but report differing slippages if the baselines differ.

562 DMO also drew on the report in testimony to the JCPAA in the Committee's review of the 2011–12 DMO Major Projects Report (Committee Hansard, 13 March 2013, pp. 4–6). See also JCPAA Report 436, *Review of the 2011–12 Defence Materiel Organisation Major Projects Report*, May 2013, pp. 19–20.

563 Defence, consultancy report, 'Defence Materiel Organisation Major Project Schedule Benchmarking: Comparing Defence Project Performance with Commercial Industry', September 2012, p. ii.

changes in management practice or other reforms. Nevertheless, the consultant noted that:

> Other key drivers of schedule performance are the level of team integration and project definition prior to project approval. Assessment of these drivers requires face-to-face meetings with the individual project teams, which was outside the scope of this review.

15.42 This observation highlights the important point that a sound assessment of Defence project performance in this area would go beyond DMO and involve at least CDG (which has responsibility for project definition) and, possibly, others with responsibility for bringing together the fundamental inputs to capability.

15.43 The consultant finished the report in September 2012. (The primary results of the analysis are at Appendix 4.) The consultant's report made the following positive findings:

- Recent DMO projects had schedule durations that are comparable to those of commercial industry.
- There was a statistically significant improvement in the schedule benchmarks following implementation of the 2003 Defence Procurement Review (Kinnaird Review).
- DMO projects are more difficult than the average industrial project.
- Few of the DMO completed projects had over-run their cost budgets.
- The establishment of DMO as a central, project-office-based organisation is consistent with best practice.

15.44 The report itself contains a range of additional findings, including that DMO's project information management systems do not readily provide the data required to support good project management practices.

15.45 On analysing the report, the ANAO concluded that it gives limited assurance as to DMO's schedule performance, for the following reasons:

- The statistical test performed to support the claim of improvement between pre and post-Kinnaird projects was neither explained nor provided.
- Although DMO provided the consultant with data on 133 projects (drawn from a list of 450) as a representative sample for comparison,

there is no indication of how this sample was drawn and, further, there is no evidence that most of this data was analysed for the report.

- For the analysis evident in the report, DMO provided data from a much smaller sample of only 25 projects, 16 of which were 'pre-Kinnaird' and nine 'post-Kinnaird'. The basis for selection (according to the report) is that these were projects for which the relevant schedule data was available. DMO subsequently advised (July 2013) that they were selected in a 'considered selection process.'[564] As they were selected by DMO and are neither a census nor a sample selected at random, there are risks in assuming that they are representative or that they can validly be used to form a view about DMO projects or DMO project management more generally.[565]
- The consultant states that, for the projects that were ongoing at the time of the analysis, he used projected dates in the benchmarking. DMO has subsequently advised that two of the 25 projects were ongoing at the time, and projected dates were relied upon in these cases. Using projected dates to analyse schedule introduces uncertainty to the findings.
- Further, DMO staff confirmed to the ANAO that they had not seen nor gained any independent assurance about the veracity of the data with which DMO's data was being compared. This is the data privately held by the consultant for other, non-DMO projects. This means that the results in the report cannot be independently verified.

15.46 The consultant could find no factor other than being pre or post-Kinnaird that correlated with the apparent decrease in project time between these two groups of projects, as measured by an index derived from the project

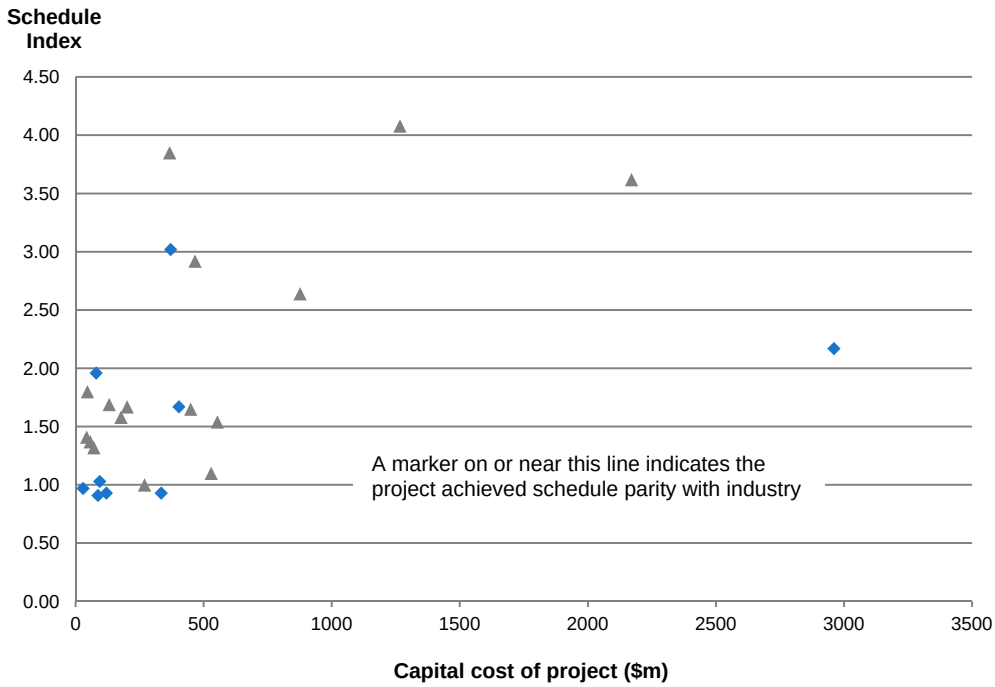
564 DMO also advised in September 2013 that the selection included projects from each domain (Land, Sea, Air, Joint); a mixture of COTS/MOTS, Australianised and developmental projects; both pre and post-Kinnaird projects; and five Projects of Concern that constituted 20 per cent of the sample.

565 There is no indication in the report of the methods used to draw the sample. However, the ANAO examined the contract under which the work was done. It shows that the original intention was to analyse the 28 major projects in the 2010–11 Major Projects Report (MPR). Only 11 of these were among the projects actually analysed. DMO advised that it found a number of the 2010–11 MPR project sample would have relied on forecast dates. With the exception of a project comprising a phase of the Amphibious Watercraft acquisition, these projects were not used, as their inclusion would have added to the uncertainty cited above. A number of other MPR projects could not be used because they were not comparable to projects in the consultant's industry database. For example, the Next Generation Satellite project could not be benchmarked against a 'like' industry project. This project was therefore replaced by a project whose scope was to purchase satellite ground stations, which could be benchmarked.

data. That index (called a 'schedule index') for each project represents how long the selected project took DMO, as compared with the average time taken by industry to complete a comparable project. (Thus, for example, a schedule index of 1.5 means that DMO took 50 per cent longer than industry). Even though no simple or linear relationship is discernible in the data the consultant compiled for these 25 projects, the data indicates that DMO projects generally take longer than comparable industry projects and that this seems more likely with the most expensive projects (Figure 15.3).

Figure 15.3: Schedule performance of 25 DMO projects by capital cost

Each marker represents one project in DMO's analysis. Vertical axis represents proportionately how much time the DMO project took relative to comparable projects in industry.
Pre-Kinnaird projects are shown by grey markers and post-Kinnaird by blue markers.



Source: ANAO analysis derived from Defence consultancy report (see data at Appendix 4).

15.47 This data shows a pattern which can be described thus:

- All projects with a schedule index greater than two (that is, which took DMO more than twice as long to complete as comparable industry projects) had a capital cost of over $350 million.

- Most lower-capital cost projects had a schedule performance that cluster in an area extending from just less than that of industry to twice that of industry.

15.48 Given the caveats about the selection of projects for analysis set out above, this apparent relationship should also be treated with caution.

15.49 If further work were to confirm the conclusion that post-Kinnaird projects are more likely than pre-Kinnaird projects to have a schedule close to that of industry, then care will need to be taken in explaining that. There may be benefit in analysing the drivers of performance rather than simply observing the timing points. Care is also needed in identifying the underlying factors, which may not be independent. For example, any improved performance post-Kinnaird might turn out ultimately to be attributable to a larger proportion of MOTS projects or a decrease in highly innovative/developmental ones (having a greater proportion of MOTS projects could be an outcome from Kinnaird's recommendations). If this were the case, then the improvement could be due to different choices being made in project definition and the two-pass process, rather than any change in acquisition management by DMO. Again, this emphasises the benefit of end-to-end analysis of Defence capability development and materiel acquisition projects.

Conclusion—need for centralised monitoring and reporting on progress with reform, and a focus on goals and outcomes rather than process

15.50 There is a clear need for Defence, both internally and when reporting externally on the reform process, to focus on goals and substantive outcomes rather than on process. In this context, the internal report on the Strategic Reform Program Mortimer Stream, provided to Defence senior management in May 2012, stated:

> The key risk to the success of the reforms remains the capacity and commitment of Defence personnel to implement the reforms. There is a perception by some senior Defence officials that the Mortimer reforms have been largely implemented, but the current [statistics are] that nine (9) recommendations by process and 26 recommendations by outcome remain open.[566]

566 Defence advised that, in July 2013, three recommendations remained open by process and 22 recommendations remain open by outcome.

15.51 The issue arising from this assessment is that, while there is value (as pointed out by both the JCPAA and Mortimer) in distinguishing between putting a process in place and achieving the intended outcome, a focus on process may assume excessive importance, displace attention from the intended goal, and create an exaggerated sense of progress among senior management. Specific examples identified by this audit include the introduction of Joint Project Directives (Chapter 11) and the inclusion of OTS equipment options in proposals put to government (Chapter 9). In a similar vein, ANAO Audit Report No.25 2012–13, *Defence's Implementation of Audit Recommendations*, observed that internal processes such as monitoring and reporting are a necessary but not sufficient condition for achieving timely and adequate implementation of recommendations.[567]

15.52 While Defence's system for implementing audit recommendations exhibits many positive elements, such as having a clear process for assigning responsibility, and systematic monitoring and reporting on progress by Defence internal audit, there is no similar centralised long-term mechanism for managing the implementation of the recommendations of the various high-profile reviews of Defence. Further, Defence's current approach has been to report to ministers and senior managers on the implementation of reform recommendations against 'process'—whether action is underway—as well as outcome—whether the reform objective is being achieved. This approach to reporting can create an impression of momentum and achievement that may not always be warranted if the establishment of process is emphasised more than the delivery of outcomes.

15.53 The ANAO considers that there would be benefit in Defence implementing systems to centrally monitor progress over time and report on the implementation of review recommendations/reforms, consistent with Defence's approach to the monitoring and reporting of the implementation of audit recommendations, including those related to the reform of capability development.

567 ANAO Audit Report No.25 2012–13, *Defence's Implementation of Audit Recommendations*, p. 14.

Recommendation No.7

15.54 To improve reporting and accountability for the achievement of expected outcomes from major reviews, the ANAO recommends that Defence implement systems to centrally monitor progress over time on the implementation of recommendations/reforms stemming from these reviews.

Defence response: *Agreed*.

Ian McPhee

Auditor-General

Canberra ACT

30 October 2013

Appendices

Appendix 1: Agency responses to the audit

Australian Government

Department of Defence

Mr Dennis Richardson
Secretary

General David Hurley, AC, DSC
Chief of the Defence Force

SEC/OUT/2013/244
CDF/OUT/2013/1214

Mr Ian McPhee PSM
Auditor-General for Australia
Australian National Audit Office
GPO Box 707
CANBERRA ACT 2600

Dear ~~Mr McPhee~~ Ian

Proposed Audit Report: ***Capability Development Reform in Defence***

Thank you for the opportunity to review and provide comment on the subject report, provided to Defence on 16 August 2013. The Defence response is contained at **Annexes A and B** to this letter.

Defence faces many challenges when dealing with the complexity of Capability Development. Defence acknowledges the considerable efforts expended by the ANAO in conducting this audit since its commencement in August 2011. Defence is pleased the report acknowledges the improvements evidenced since Performance Audit Report No 48 2008-09 – *Planning and Approval of Defence Major Capital Equipment Projects*. However, Defence considers this audit has not adequately captured the full extent of the significant and demonstrable improvements in project outcomes achieved by Defence since 2009. For more detailed comments please refer to Annex B which contains our formal agency response for inclusion in the audit report.

Please find attached the three requests for information at Annex A.

Should you have any queries, please do not hesitate to contact Mr Geoffrey Brown, Chief Audit Executive, on 02 6266 4210.

Yours sincerely

Dennis Richardson
Secretary

D.J. HURLEY, AC, DSC
General
Chief of the Defence Force

9 SEP 2013

Annexes:

A. Defence Comments, Editorials and Response to Information Requests
B. Summary of the Agency Response
C. Defence Response to Audit Recommendations

For Information:

Chief of Navy
Chief of Army
Chief of Air Force
DEPSEC Strategy
Chief Capability Development Group
Chief Finance Officer
Chief Defence Scientist
Chief Audit Executive
Chief Executive Officer Defence Materiel Organisation

Australian Government

Department of Finance and Deregulation

David Tune PSM
Secretary

Our Ref: SEC0009208

Mr Ian McPhee PSM
Auditor-General
Australian National Audit Office
GPO Box 707
Canberra ACT 2600

Dear Mr McPhee

Thank you for your letter of 16 August 2013 which provides the Department of Finance and Deregulation (Finance) with an opportunity to provide comments relating to the proposed audit report on *Capability Development Reform in Defence*. Our comments are restricted to the extract of the report that has been provided to Finance covering chapters seven and eight, pursuant to Sub-section 19(3) of the Auditor General Act 1997.

Finance supports in principle the continuing development of the Department of Defence (Defence) processes and systems which develop whole-of-life cost estimates. These estimates are the basis for advice to government relating to capability development projects and proposed materiel acquisitions. Finance notes that the accurate estimation of future operating costs for capabilities which are developmental in nature are difficult to define at Second Pass. Notwithstanding this, Finance considers that the assumptions made by Defence when calculating future operating cost estimates for proposed capability should be provided to government to assist Ministers when they consider the whole-of-life cost implications of capability projects. These assumptions should extend to any ambiguity associated with the estimation of attribution costs for existing capability.

In 2011, Finance developed and issued an Estimates Memorandum which provides guidance in relation to the quality of cost and risk estimates required for First and Second Pass consideration by Ministers. More recently, Finance has agreed an update of this Estimates Memorandum with Defence which extends the initial guidance to include additional guidance in relation to software development cost and risk estimation.

Finance will continue to work closely with Defence to improve cost estimation processes in preparation for consideration by Ministers of First and Second Pass capability submissions.

Yours sincerely

David Tune
9 September 2013

Appendix 2: Capability Development Group Survey

As part of the performance audit, the ANAO conducted an anonymous survey of CDG staff. The survey was directed at Capability Systems Division, a major component of CDG, where the relevant staff are located organisationally. All staff were included (that is, it was a census, not a sample survey). The survey was conducted online by an external professional survey organisation. A pilot was conducted with a small group in advance of the main survey, to test the instrument. The response rate was over 80 per cent (127 respondents).

The results of the survey are below. The survey also included some questions inviting free-text answers, and the responses to these questions have been drawn upon in the body of the audit report. These answers have not been included here, as there is a risk that their content could identify individual respondents.

A. About you

Please select which Service you belong to

	Per cent
Army	29.9
Navy	27.6
Air Force	33.1
APS (Civilian)	9.4

What is your rank/level?

	Per cent
Commissioned officer	90.6
EL 1–2 or equivalent	7.1
APS 5–6 or equivalent	0.8
APS 1–4 or equivalent	1.6

What is your role within CDG?

	Per cent
Project Manager	58.3
Deputy Director	26.0
Other	19.7

How long have you been in the Australian Defence Force/Department of Defence in total?

	Per cent
Less than 1 year	1.6
1 year to less than 5 years	4.8
5 years to less than 10 years	5.6
10 years to less than 15 years	6.3
15 years to less than 20 years	27.0
20 years or more	54.8

How much time have you spent working within CDG in total?

	Per cent
Less than 1 year	32.8
1 year to less than 5 years	59.0
5 years to less than 10 years	8.2

What period of time do you foresee that you will remain within CDG?

	Per cent
Less than 6 months	11.0
6 months to less than 12 months	31.5
1 year to less than 2 years	27.6
2 years to less than 3 years	22.0
3 years or more	7.9

B. Qualifications and training

Please select which of the following courses/training you have completed within Defence that are relevant to your role in CDG?

	Per cent
CTMC	28.3
CAMPUS Course – Introduction to Capability Development	71.7
CDG Induction Training	86.6
Cost Estimation	74.0
Operational Concept Document	46.5
Function and Performance Specification	37.0
Test Concept Document	26.8
Foreign Military Sales	22.0
Fundamental Inputs to Capability	26.8
Materiel Acquisition Agreements	33.9
Industry Engagement and Business Acumen	11.8
DSTO Support to Capability	15.0
Joint Project Directives	12.6
Project Initiation	16.5
Options Review Committee	26.8
Capability Gate Review Board	17.3
Capability Gate Review Board Documents	12.6
Managing Projects in the Requirements Phase	14.2
Other courses run by Defence	22.8

What is your highest completed qualification?

	Per cent
Vocational qualifications, Year 12 or below	12.7
Tertiary qualifications	87.3

Other than Defence-run courses in project management, have you completed any other project management course(s) and/or training?

	Per cent
Yes	45.6
No	54.4

C. About your project(s)

Are you currently working on only one project or more than one project at the same time?

	Per cent
One project	30.2
More than one project	69.8

If you are a member of the Australian Defence Force, are any of the projects for which you are responsible in a different service from your background?

	Per cent
Yes (in a different service or across more than one ADF Service)	47.0
No	53.0

Are you, or have you been, a Project Manager within CDG in the past 12 months?

	Per cent
Yes	66.1
No	33.9

How would you rate your level of skill and work/practical experience in managing projects prior to managing your first project in a CDG Project Manager role?

		Per cent
No skill/experience at all	1	20.5
	2	9.6
	3	14.5
	4	9.6
	5	8.4
	6	10.8
	7	12.0
	8	9.6
	9	2.4
Very experienced/ highly skilled	10	2.4

How would you have rated your level of skill and work/practical experience in managing a project of this level/complexity prior to when you commenced working on it?

		Per cent
No skill/experience at all	1	13.8
	2	15.0
	3	18.8
	4	7.5
	5	15.0
	6	7.5
	7	8.8
	8	5.0
	9	7.5
Very experienced/ highly skilled	10	1.3

Having regard to your response at [the preceding question], how would you now rate your level of skill and work/practical experience in managing a project of this level/complexity?

		Per cent
No skill/experience at all	1	–
	2	3.8
	3	3.8
	4	11.4
	5	12.7
	6	15.2
	7	19.0
	8	15.2
	9	13.9
Very experienced/ highly skilled	10	5.1

D. The CDG Project Manager role

This section focuses on how you personally view your role as a CDG Project Manager.

Please indicate your level of agreement with the following statements about your role as a CDG Project Manager:

... This role provides opportunities to gain useful experience in an important area of Defence work.

	Per cent
Strongly disagree	1.2
Disagree	2.4
Neither agree nor disagree	8.3
Agree	36.9
Strongly agree	51.2
Not sure/not applicable	–

... This role provides potential long-term career opportunities.

	Per cent
Strongly disagree	3.6
Disagree	13.1
Neither agree nor disagree	15.5
Agree	39.3
Strongly agree	27.4
Not sure/not applicable	1.2

... The experience of this role has been rewarding and provided me with a sense of achievement.

	Per cent
Strongly disagree	13.1
Disagree	14.3
Neither agree nor disagree	20.2
Agree	28.6
Strongly agree	22.6
Not sure/not applicable	1.2

... I only commenced this role as it is necessary for my career development (i.e. it was expected of me).

	Per cent
Strongly disagree	25.0
Disagree	38.1
Neither agree nor disagree	20.2
Agree	8.3
Strongly agree	4.8
Not sure/not applicable	3.6

... The work in this role is not of central interest to me and I shall welcome the opportunity to undertake other work when it arises.

	Per cent
Strongly disagree	29.8
Disagree	26.2
Neither agree nor disagree	21.4
Agree	11.9
Strongly agree	10.7
Not sure/not applicable	–

... Would you recommend a term as a CDG Project Manager to others who have not yet served in this role?

	Per cent
Yes – fully	26.2
Yes, but with reservations	63.1
No	10.7

Breakdown of time spent on each of the following activities in role as a CDG Project Manager over the last 12 months.

	Per cent
Writing capability development documentation	37.0
Liaison with acquisition agency personnel	34.6
Liaison with the 'customer' (capability manager/service)	22.2
Contributing information to executive decision-making	18.5
Other	12.3
Cost analysis/estimation	6.2
Participating in review meetings	3.7
Liaison with industry	1.2
Risk analysis	1.2

Please rank the following outcomes in undertaking the role of a CDG Project Manager in general that you consider to be (1) most important to (5) least important.

... Securing government approval and funding for the project.

		Per cent
Most important	1	39.8
	2	14.5
	3	12.0
	4	15.7
Least important	5	18.1

... Ensuring the project proceeds in a timely way.

		Per cent
Most important	1	6.0
	2	21.7
	3	27.7
	4	27.7
Least important	5	16.9

... Ensuring that the capability is delivered as cost-effectively as possible.

		Per cent
Most important	1	6.0
	2	9.6
	3	21.7
	4	20.5
Least important	5	42.2

... Ensuring that technical and other risks are identified and addressed.

		Per cent
Most important	1	9.6
	2	22.9
	3	22.9
	4	25.3
Least important	5	19.3

... Ensuring the capability requirements are accurately defined and documented

		Per cent
Most important	1	38.6
	2	31.3
	3	15.7
	4	10.8
Least important	5	3.6

Most important outcome in undertaking the role of a CDG Project Manager.

	Per cent[568]
Securing government approval and funding for the project	39.8
Ensuring the capability requirements are accurately defined and documented	38.6
Ensuring that technical and other risks are identified and addressed	9.6
Ensuring the project proceeds in a timely way	6.0
Ensuring that the capability is delivered as cost-effectively as possible	6.0

E. Capacity to undertake the CDG Project Manager role

This section focuses on the current CDG Project Manager role and ways that it may be improved.

Please rate each of the following skills/ experience bases in terms of their importance in enabling CDG Project Managers in general to perform the work that is expected of them.

... Project management

		Per cent
Not important at all	1	–
	2	4.0
	3	2.4
	4	1.6
	5	1.6
	6	7.3
	7	16.9
	8	17.7
	9	18.5
Very important	10	29.8

568 Percentage of respondents who ranked each statement as '1', 'most important'.

... Contract management

		Per cent
Not important at all	1	5.6
	2	7.3
	3	12.1
	4	15.3
	5	18.5
	6	10.5
	7	16.9
	8	9.7
	9	1.6
Very important	10	2.4

... Cost estimation/budgeting

		Per cent
Not important at all	1	0.8
	2	0.8
	3	2.4
	4	4.8
	5	4.0
	6	11.2
	7	20.8
	8	24.8
	9	15.2
Very important	10	15.2

... Business case development

		Per cent
Not important at all	1	0.8
	2	–
	3	0.8
	4	–
	5	4.8
	6	8.1
	7	16.1
	8	23.4
	9	23.4
Very important	10	22.6

... Risk analysis/management

		Per cent
Not important at all	1	0.8
	2	–
	3	0.8
	4	4.0
	5	8.9
	6	13.7
	7	20.2
	8	21.8
	9	16.1
Very important	10	13.7

... Specialist technical expertise/knowledge of an operational nature relevant to the project

		Per cent
Not important at all	1	–
	2	0.8
	3	1.6
	4	1.6
	5	5.6
	6	8.9
	7	15.3
	8	28.2
	9	16.9
Very important	10	21.0

... Systems engineering expertise/knowledge relevant to the development of Capability Definition Documents

		Per cent
Not important at all	1	1.6
	2	0.8
	3	2.4
	4	7.3
	5	5.6
	6	11.3
	7	21.8
	8	27.4
	9	11.3
Very Important	10	10.5

... Presentation (For example, to committees, to boards, and in meetings)

		Per cent
Not important at all	1	–
	2	–
	3	–
	4	2.4
	5	2.4
	6	9.7
	7	21.0
	8	29.0
	9	20.2
Very Important	10	15.3

... Report-writing

		Per cent
Not important at all	1	–
	2	0.8
	3	1.6
	4	0.8
	5	5.6
	6	9.7
	7	22.6
	8	29.8
	9	17.7
Very Important	10	11.3

... General commercial experience and business acumen

		Per cent
Not important at all	1	4.0
	2	3.2
	3	8.1
	4	11.3
	5	15.3
	6	19.4
	7	15.3
	8	16.1
	9	4.0
Very important	10	3.2

... Prior service/experience using related capability/materiel

		Per cent
Not important at all	1	–
	2	3.3
	3	2.4
	4	1.6
	5	10.6
	6	6.5
	7	22.0
	8	26.0
	9	13.0
Very important	10	14.6

Please rate how well you feel the following functions are performed within CDG for your specific project(s):

... Project management

		Per cent
Not well at all	1	2.4
	2	2.4
	3	6.5
	4	7.3
	5	16.3
	6	19.5
	7	23.6
	8	14.6
	9	4.9
Very well	10	2.4

... Contract management

		Per cent
Not well at all	1	5.8
	2	2.5
	3	5.8
	4	14.2
	5	27.5
	6	15.0
	7	15.8
	8	9.2
	9	3.3
Very well	10	0.8

... Cost estimation/budgeting

		Per cent
Not well at all	1	4.1
	2	6.5
	3	10.6
	4	10.6
	5	22.8
	6	17.9
	7	13.8
	8	8.1
	9	4.9
Very well	10	0.8

... Business case development

		Per cent
Not well at all	1	0.8
	2	2.4
	3	3.3
	4	7.3
	5	14.6
	6	21.1
	7	19.5
	8	22.0
	9	5.7
Very well	10	3.3

... Risk analysis/management

		Per cent
Not well at all	1	4.1
	2	3.3
	3	6.5
	4	13.0
	5	16.3
	6	23.6
	7	14.6
	8	13.0
	9	4.1
Very well	10	1.6

Specialist technical expertise/knowledge of an operational nature relevant to the project

		Per cent
Not well at all	1	3.3
	2	0.8
	3	6.5
	4	4.1
	5	6.5
	6	11.4
	7	14.6
	8	26.0
	9	14.6
Very well	10	12.2

... Systems engineering expertise/knowledge relevant to the development of Capability Definition Documents

		Per cent
Not well at all	1	3.3
	2	3.3
	3	8.1
	4	16.3
	5	18.7
	6	13.8
	7	15.4
	8	13.8
	9	3.3
Very well	10	4.1

... Presentation (For example, to committees, to boards, and in meetings)

		Per cent
Not well at all	1	0.8
	2	–
	3	3.3
	4	3.3
	5	7.4
	6	9.0
	7	23.0
	8	27.0
	9	16.4
Very Well	10	9.8

... Report-writing

		Per cent
Not well at all	1	1.6
	2	0.8
	3	4.1
	4	2.5
	5	11.5
	6	18.9
	7	20.5
	8	21.3
	9	14.8
Very well	10	4.1

... General commercial experience and business acumen

		Per cent
Not well at all	1	3.3
	2	8.2
	3	9.8
	4	13.1
	5	21.3
	6	14.8
	7	12.3
	8	10.7
	9	5.7
Very well	10	0.8

... Prior service/experience using related capability/material

		Per cent
Not well at all	1	2.4
	2	4.9
	3	6.5
	4	3.3
	5	9.8
	6	7.3
	7	13.8
	8	25.2
	9	19.5
Very well	10	7.3

Please rate the importance of each of the following factors in improving the performance of CDG Project Managers:

... Longer-term placement of Project Managers

		Per cent
Not important at all	1	3.3
	2	4.9
	3	1.6
	4	2.5
	5	9.0
	6	9.8
	7	13.1
	8	31.1
	9	12.3
Very important	10	12.3

... Improved decision-making/leadership by senior staff in Defence

		Per cent
Not important at all	1	–
	2	0.8
	3	1.6
	4	0.8
	5	2.5
	6	4.9
	7	9.8
	8	18.0
	9	25.4
Very important	10	36.1

... Broader range of training mediums (e.g. webinars)

		Per cent
Not important at all	1	4.9
	2	6.6
	3	10.7
	4	4.9
	5	18.9
	6	13.9
	7	19.7
	8	11.5
	9	4.1
Very important	10	4.9

... Improved quality of training content

		Per cent
Not important at all	1	0.8
	2	4.1
	3	3.3
	4	2.5
	5	10.7
	6	11.5
	7	20.5
	8	18.9
	9	16.4
Very important	10	11.5

... Better access to training

		Per cent
Not important at all	1	0.8
	2	4.1
	3	5.0
	4	5.8
	5	15.7
	6	15.7
	7	15.7
	8	16.5
	9	9.9
Very important	10	10.7

... Better access to specialist advice

		Per cent
Not important at all	1	–
	2	0.8
	3	0.8
	4	0.8
	5	5.7
	6	9.8
	7	12.3
	8	25.4
	9	14.8
Very important	10	29.5

Thinking about any reforms to defence policies, procedures and processes in the past 12 months, how would you rate the overall impact these changes have had on your team's ability to achieve its goals in general?

		Per cent
Large negative effect	1	4.9
	2	10.7
	3	11.5
	4	18.0
	5	24.6
	6	15.6
	7	9.8
	8	3.3
	9	0.8
Large positive effect	10	0.8

Overall, how well do you feel you are supported by CDG to achieve success in your project(s)?

		Per cent
Not supported at all	1	2.4
	2	3.2
	3	11.3
	4	13.7
	5	15.3
	6	14.5
	7	18.5
	8	12.1
	9	4.0
Very well supported	10	4.8

Overall, how well do you feel you are supported by the wider capability development community within Defence to achieve success in your project(s)?

		Per cent
Not supported at all	1	2.4
	2	11.3
	3	19.4
	4	15.3
	5	16.1
	6	14.5
	7	10.5
	8	5.6
	9	4.0
Very well supported	10	0.8

F. Defence Materiel Organisation Gate Reviews

We would like to ask you some questions about the Defence Materiel Organisation (DMO) Gate Reviews that have been taking place at various stages for capability development projects over the last several years. In particular, we are interested in your views about the benefits and costs of DMO Gate Reviews.

Have you worked on a project that has been subject to a DMO Gate Review?

	Per cent
Yes	68.0
No	32.0

Have you attended a DMO Gate Review?

	Per cent
Yes	40.7
No	59.3

Which cycle(s) of a DMO Gate Review have you attended? (Multiple Response)

	Per cent
Pre-first pass	70.5
First to second pass	50.8
Post second pass	42.6

In your opinion, did the DMO Gate Review(s) identify any new issues that you believe may have otherwise not come to attention, either at all or in a timely fashion?

	Per cent
Yes	37.7
No	62.3

Have the issues identified by the DMO Gate Review(s) been or are being actively addressed?

	Per cent
Yes	22.0
No response provided	78.0

Please indicate your level of agreement with the following statements about the effect the DMO Gate Review process has on capability development projects in general:

... Primarily, the DMO Gate Review simply delays progress of the project.

	Per cent
Strongly disagree	6.2
Disagree	25.9
Neither agree nor disagree	27.2
Agree	21.0
Strongly agree	16.0
Not sure/not applicable	3.7

... Preparation for the DMO Gate Review required me/my team to do a substantial amount of additional work.

	Per cent
Strongly disagree	2.4
Disagree	28.0
Neither agree nor disagree	22.0
Agree	24.4
Strongly agree	17.1
Not sure/not applicable	6.1

... Issues that have previously been reported through other means are now being recognised and are receiving attention.

	Per cent
Strongly disagree	12.2
Disagree	20.7
Neither agree nor disagree	26.8
Agree	29.3
Strongly agree	3.7
Not sure/not applicable	7.3

... Overall, the DMO Gate Review process helped to share an understanding of my project amongst stakeholders.

	Per cent
Strongly disagree	12.2
Disagree	30.5
Neither agree nor disagree	19.5
Agree	29.3
Strongly agree	3.7
Not sure/not applicable	4.9

... Overall, the capability development project benefited from the DMO Gate Review process.

	Per cent
Strongly disagree	13.4
Disagree	30.5
Neither agree nor disagree	28.0
Agree	20.7
Strongly agree	1.2
Not sure/not applicable	6.1

G. Relationships with major stakeholders

This section focuses on the involvement of major stakeholders (outside CDG) in your project, dependency of your project(s) on these other areas of support and the state of those relationships.

Please rate the importance of the following stakeholders in terms of their importance to the success of the capability development proposals you are responsible for:

... Joint Logistics Command

		Per cent
Not important at all	1	7.5
	2	9.2
	3	17.5
	4	11.7
	5	16.7
	6	12.5
	7	6.7
	8	5.8
	9	5.0
Very important	10	7.5

... Defence Science and Technology Organisation (DSTO)

		Per cent
Not important at all	1	–
	2	1.7
	3	5.8
	4	2.5
	5	13.2
	6	11.6
	7	16.5
	8	17.4
	9	14.9
Very important	10	16.5

... Defence Materiel Organisation (DMO)

		Per cent
Not important at all	1	–
	2	–
	3	0.8
	4	–
	5	3.3
	6	2.5
	7	9.1
	8	11.6
	9	19.0
Very important	10	53.7

... Capability Manager/Project sponsor

		Per cent
Not important at all	1	–
	2	0.8
	3	–
	4	–
	5	–
	6	0.8
	7	5.8
	8	12.5
	9	21.7
Very important	10	58.3

... Department of Finance and Deregulation

		Per cent
Not important at all	1	2.5
	2	5.0
	3	9.1
	4	3.3
	5	15.7
	6	5.8
	7	14.9
	8	18.2
	9	9.1
Very important	10	16.5

Please rate the effectiveness of your project team's relationship with each of the following stakeholders:

... Joint Logistics Command

	Per cent
Very ineffective	–
Ineffective	5.0
Neither effective nor ineffective	33.9
Effective	31.4
Very effective	3.3
Not sure/not applicable	26.4

Defence Science and Technology Organisation (DSTO)

	Per cent
Very ineffective	–
Ineffective	5.0
Neither effective nor ineffective	12.6
Effective	42.9
Very effective	37.8
Not sure/not applicable	1.7

... Defence Materiel Organisation (DMO)

	Per cent
Very ineffective	–
Ineffective	10.1
Neither effective nor ineffective	12.6
Effective	43.7
Very effective	33.6
Not sure/not applicable	–

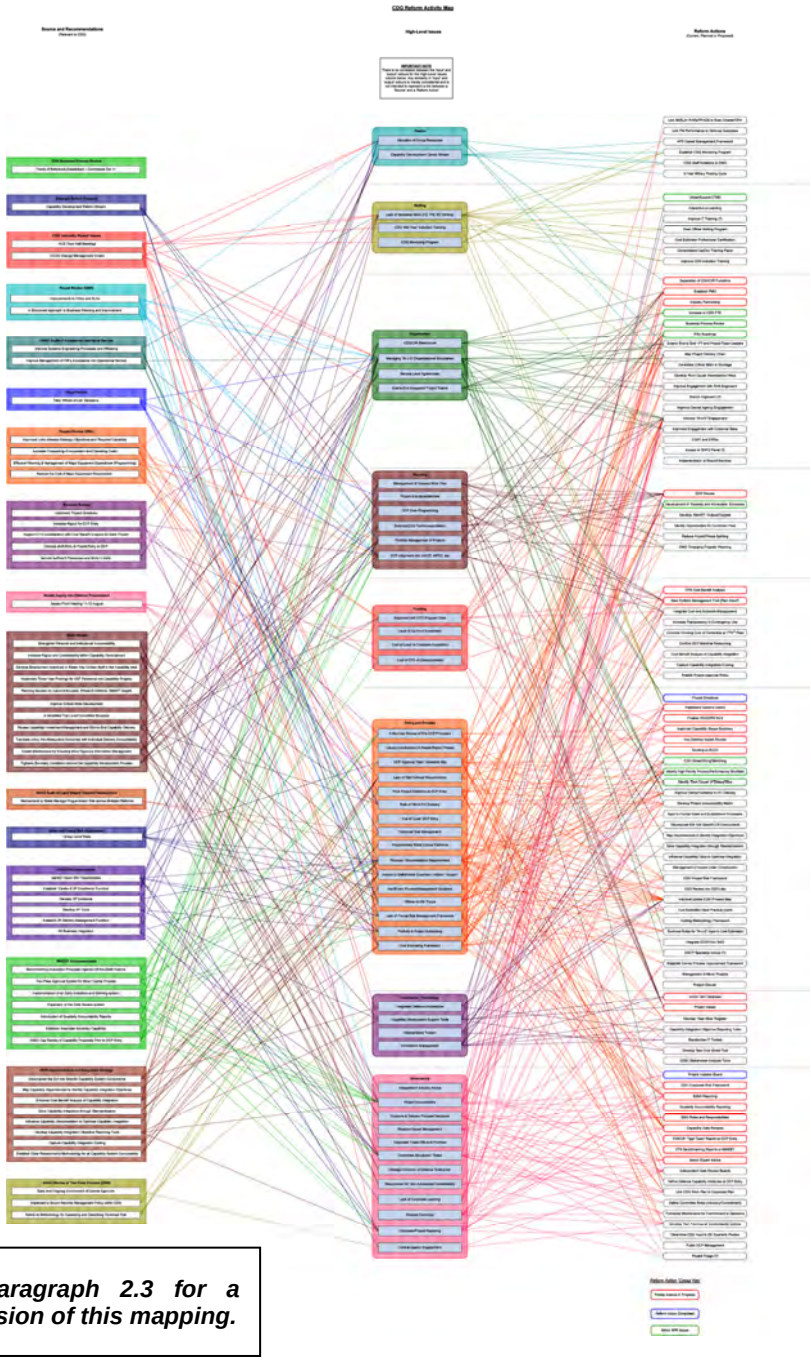
... Capability Manager/Project sponsor

	Per cent
Very ineffective	0.8
Ineffective	1.7
Neither effective nor ineffective	9.1
Effective	33.9
Very effective	52.9
Not sure/not applicable	1.7

... Department of Finance and Deregulation

	Per cent
Very ineffective	2.5
Ineffective	11.7
Neither effective nor ineffective	35.8
Effective	16.7
Very effective	1.7
Not sure/not applicable	31.7

Appendix 3: Defence mapping of recommendations from major reviews



See paragraph 2.3 for a discussion of this mapping.

Appendix 4: Comparison of sample projects from benchmarking study

See paragraphs 15.38–15.49 for discussion of this study.

ID No	Project Number and Name	Description	Capital cost ($m)[A]	Project Type[B]	ACAT[C]	Post Kinnaird[D]	CS–IMR (Years)[E]	Comparison Project[F]	Industry Bench-mark Schedule[G]	Schedule Index[H]
1	AIR 5333 (Vigilaire)	Aerospace surveillance and battle management	131	Highly innovative	1	No	6.48	Innovative IT	3.83	1.69
16	AIR 5376 Phase 1 (Hornet Upgrade)	Electronic system upgrade	201	MOTS		No	4.04	DCS System	2.42	1.67
18	SEA 1229 Phase 2/3 (Active Missile Decoy)	Hover rocket decoy	177	MOTS	4	No	4.48	Equipment purchase	2.83	1.58
40	SEA 1390 Ph 2.1 (FFG Upgrade)	Adding new systems and integrating together	1266	Developmental	2	No	11.22	FPSO revamp	2.75	4.08
48	LAND 116 Phase 3 (Procure IMV)	Acquire 807 land vehicles; initial project included development of vehicles and build production line	876	Developmental	3	No	5.50	Mining vehicles	2.08	2.64
49	AIR 5077 Phase 3 (Airborne Early Warning and Control)	Development of phased array radar and installation on aircraft	2170	Highly innovative	1	No	9.36	Innovative IT	2.58	3.62
53	SEA 1401 Phase 3 (Upgrade Hydrographic System)	Upgrade survey systems in survey motor launches	46	MOTS	3	No	2.25	DCS System	1.25	1.80

ID No	Project Number and Name	Description	Capital cost ($m)[A]	Project Type[B]	ACAT[C]	Post Kinnaird[D]	CS–IMR (Years)[E]	Comparison Project[F]	Industry Bench-mark Schedule[G]	Schedule Index[H]
70	LAND 134 Phase 1 (Combat Training Centre)	Combat training centre - simulator	71	MOTS	3	No	3.84	Simulator	2.92	1.32
75	JP 2072 Phase 1 (Battlespace communication system)	Holistic battlespace communication system; definition phase only	269	Adapt off shelf	1	No	1.50	Innovative IT	1.5	1.00
80	SEA 1429 Phase 2 (Heavyweight torpedo system)	Acquire heavyweight torpedo system to replace Mk 48.	466	MOTS	3	No	5.11	Machine Procurement	1.75	2.92
81	SEA 1444 Phase 1 (Armidale Class Patrol Boats)	14 boats built to commercial standards	367	Adapt off shelf	3	No	6.42	FPSO or Offshore mining vessels	1.67	3.85
86	SEA 1348 Phase 3C (Mine and obstacle avoidance software)	Install off shelf sonar system as part of ANZAC upgrade	57	Innova-tive	3	No	2.73	Innovative DCS	2.00	1.37
89	SEA 1448 Phase 2A (ANZAC ASMD)	Upgrade combat management system; prove on one vessel and fit to seven others	449	Innova-tive	2	No	6.32	Innovative DCS	3.83	1.65
91	LAND 907 Phase 1 (Main Battle Tank Replacement)	Purchase 59 tanks out of production run of 4000	529	MOTS	3	No	2.30	Mining vehicles	2.08	1.10

ID No	Project Number and Name	Description	Capital cost ($m)[A]	Project Type[B]	ACAT[C]	Post Kinnaird[D]	CS–IMR (Years)[E]	Comparison Project[F]	Industry Bench-mark Schedule[G]	Schedule Index[H]
95	SEA 1390 Phase 4B (SM-1 Missile Replacement)	Acquire SM-2 missiles and integrate into four FFGs	553	MOTS	3	No	3.20	Machine Procurement	2.08	1.54
96	SEA 1442 Phase 3 (Maritime Communication s)	Provides Battlespace Communication system to 15 fleet vessels	43	Highly innova-tive	2	No	4.57	Innovative IT	3.25	1.41
103	AIR 5418 Phase 1 (Stand-off weapon)	Acquisition of missile system for F/A-18	371	MOTS	2	Yes	5.29	Machine Procurement	1.75	3.02
115	JP 2097 Phase 1A (Special operations vehicles)	Specialist patrol vehicles **Rapid Project**	80	MOTS	3	Yes	4.07	Mining vehicles	2.08	1.96
118	LAND 58 Phase 3 (An/ TPQ Weapon Radar)	Purchase specialist radar and simulator **Rapid Project**	29	MOTS	3	Yes	2.02	DCS system	2.08	0.97
120	SEA 1448 Phase 2B (Anti Ship Missile Defence)	Upgrade ASMD of ANZAC Frigates using phased array radar	403	Innova-tive	1	Yes	4.03	Innovative DCS	2.42	1.67
121	JP 2048 Phase 4A (Landing Helicopter Dock)	Two multi role vessels	2960	Adapt off shelf	1	Yes	6.50	FPSO or Off-shore mining vessels	3.00	2.17

ID No	Project Number and Name	Description	Capital cost ($m)[A]	Project Type[B]	ACAT[C]	Post Kinnaird[D]	CS–IMR (Years)[E]	Comparison Project[F]	Industry Bench-mark Schedule[G]	Schedule Index[H]
134	JP 2089 Phase 2A (Tactical Information Exchange Domain)	Procurement of systems and linking together	94	Adapt off shelf	3	Yes	2.57	Innovative IT	2.50	1.03
135	LAND 125 Phase 3A (Soldier Enhancement)	Battle management and man-portable communication systems **Rapid Project**	120	MOTS	3	Yes	1.25	DCS system	1.35	0.93
142	JP 2008 Phase 3F (ADF SATCOM Enhancement)	Purchase of satellite ground station	87	MOTS	3	Yes	2.28	Information managemen t	2.50	0.91
144	LAND 75 Phase 3.4 (Battle Management System)	Vehicle mounted management system	334	MOTS	2	Yes	2.10	DCS system	2.25	0.93

Source: Defence, consultancy report, *Defence Materiel Organisation Major Project Schedule Benchmarking: Comparing Defence Project Performance with Commercial Industry*, September 2012.

Notes:

A. Capital cost component of the project in 2011 in Australian dollars.

B. Classification related to the level of innovation used on the project.

C. ACAT is a DMO complexity measure that ranges from ACAT 1 for strategically important, high-cost projects with extensive project management complexity and high level of technical difficulty to ACAT 4, which applies to projects with low strategic importance and technical difficulty.

D. Indicates whether the project received second-pass approval after 1 July 2005.

E. CS–IMR indicates the project schedule in years from the time of contract signature (CS) to initial materiel release (IMR). IMR is the first date that equipment is to be delivered to or accepted by Defence.

F. The sample of industry projects that the DMO project was benchmarked against.

G. Average schedule in years for the industry sample of projects.

H. CS–IMR schedule (years) divided by the industry benchmark (years) for each project. A schedule index higher than 1.0 indicates that the number of years between contract signature (CS) and initial materiel release (IMR) is greater for the Defence project than for the industry equivalent projects.

Appendix 5: Defence costing terminology

(Paragraph 7.32 refers)

Explanation of Defence costing terminology used in submissions to

The ANAO's review of Defence major acquisition submissions found that those submissions always refer prominently to the acquisition cost of the proposed purchase. This will include the purchase price of the equipment for the project—an amount likely to be readily identifiable, readily understood and likely to be payable at the commencement of the lifecycle of that equipment.

However, the submissions are not consistent in terminology used to refer to acquisition cost (which includes capital costs and other costs of bringing the capability into initial service). Sometimes other terms are used which, by the context, refer to the same concept: these are terms such as 'total acquisition funding' and 'total expenditure'.

In addition to capital costs for equipment purchase and other acquisition costs, Defence also needs funds for personnel and operating costs to use and maintain the equipment over its operating life: 'POC'—Personnel and Operating Costs'. Defence submissions seek funding for 'NPOC'—Net Personnel and Operating Costs. This is the additional funding beyond that which Defence already allocates from its current funds for operating the existing capability. These funds are 'net' of (or additional to) current personnel and operating costs. NPOC is important because it represents the 'new' money—in addition to capital costs—Defence is seeking as part of a major acquisition.

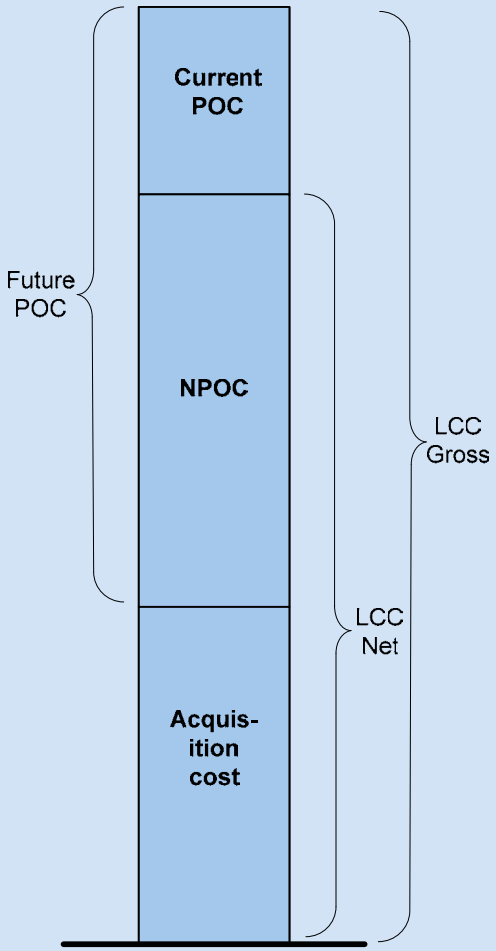
The sum of the acquisition cost plus the NPOC is usually referred to in Defence submissions as 'LCC net', or 'Lifecycle Costs, net'.

The total personnel and operating cost (sometimes referred to as 'Future POC') for the new equipment is the sum of the NPOC (the 'new money') and the current POC—the amount already allocated from Defence's annual appropriation to the corresponding current equipment, if any.

The total funding to be invested in the acquisition and operation of the new equipment is, therefore, the acquisition cost plus the future POC. This is usually referred to in Defence acquisition submissions as 'LCC gross' (Lifecycle Costs gross, where 'gross' signifies the inclusion of 'existing' funding, the current POC).

LCC gross also represents an approximation to whole-of-life costs for the equipment.

NPOC and the structure of cost concepts in Defence submissions to government



This diagram is intended to aid understanding of the terms normally used to refer to important funding amounts in Defence capability submissions, particularly the term 'NPOC'.

Each submission includes ***the acquisition cost*** for new equipment as a primary focus. Whole-of-life costs (referred to as 'Lifecycle Costs Gross' or ***LCC Gross***) comprise acquisition costs plus estimated personnel and operating costs over the life of the equipment (***Future POC***), including disposal costs.

In turn, Future POC comprises ***Current POC***—funds available to operate the current capability—and ***NPOC***. NPOC represents the estimated additional funding required to operate the new or upgraded capability over and above current funding.

Thus the 'new' money Defence is seeking comprises capital cost plus NPOC and is referred to as 'Lifecycle Costs Net' or ***LCC Net***.

Note: The heights of the individual components for 'Acquisition cost', 'NPOC' and 'Current POC' are arbitrary and for illustrative purposes only.

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