



2008–09

48 Planning and Approval of Defence Major Capital Equipment Projects

Department of Defence

UNDER EMBARGO
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Introduction

1. The management of major capital equipment projects¹ in Defence is a complex and challenging activity. Defence's performance in this area has been the subject of a number of reports by the Joint Committee of Public Accounts and Audit (JCPAA), the Senate Committee on Foreign Affairs, Defence and Trade, and the ANAO. Over the years, ANAO performance audits into acquisition projects have also identified significant weaknesses in project planning - including risk identification and management, as well as project costing issues - resulting in projects experiencing cost overruns, scope changes and delayed implementation.

2. It was in response to concerns about the procurement process for major Defence acquisitions that the then Government announced, in December 2002, the appointment of a review team, chaired by Mr Malcolm Kinnaird AO, to examine and report on issues associated with major capital acquisitions in Defence. The review team's report, the *Defence Procurement Review* (DPR),² was published in August 2003. The report made ten major recommendations and a number of additional points for consideration.

3. Recommendation No.3 of the DPR was aimed at strengthening the then existing two-pass approval process for Defence's major capital equipment acquisitions. The 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.

4. Following the then Government's broad acceptance of the recommendations of the Defence Procurement Review in September 2003, Defence commenced implementing a strengthened two-pass process to support the planning and approval of major capital equipment projects.

5. During the period this audit was undertaken, the Government commissioned the Defence Procurement and Sustainment Review,³ also known as the Mortimer Review. The Review report provided to the Government in September 2008 made 46 recommendations aimed at addressing the five principal areas of concern identified by the Review: inadequate project management resources in the Capability Development Group; the inefficiency of the process leading to Government approvals for new projects; shortages in DMO personnel; delays due to

¹ Defence defines a major capital equipment project as any project involving expenditure of \$20 million or more, or of less than \$20 million with strategic significance or with individual items of \$1 million or more.

² This is also known as the Kinnaird Review.

³ The then Parliamentary Secretary for Defence Procurement announced on 7 May 2008 that Mr David Mortimer AO would chair this review.

inadequate industry capacity and difficulties in the introduction of equipment into full service.

6. Late in the course of this audit, the Government's response to the Review was released on 2 May 2009, the same day as the *Defence White Paper 2009* was released. Defence agreed to 42 recommendations, agreed in part to a further three recommendations⁴ and did not agree⁵ to one recommendation. Together with providing detailed responses to the review's recommendations, the Government's response to the Mortimer review⁶ also sets out the key elements of the reform program for the capability development areas in Defence, for the DMO, and for enhancing the DMO-Defence relationship as a whole.

Audit objective and scope

7. The objective of this audit was to assess whether the strengthened two-pass approval process for major capital equipment projects is being implemented effectively.

8. The audit's scope included an examination of key capability development documentation prepared for a sample of 20 projects⁷ drawn from the 84⁸ that had received first pass, second pass or both first and second pass approval since the introduction of the strengthened two pass approval process. The audit scope also included a review, against the requirements of the *Cabinet Handbook*,⁹ of the submissions to Government seeking first and/or second pass approval for these 20 projects. The ANAO's sample included many of the highest value projects, balanced across the various environments (land, sea, air and joint projects) and reflected the diversity of types of major capital equipment acquisitions undertaken by Defence.

Conclusion

9. Defence has established an appropriate administrative framework for implementing the strengthened two-pass approval process, including high-level oversight, and established the Capability Development Group (CDG) to administer the system.¹⁰ Defence has also issued a Defence Capability Development Manual

⁴ Defence agreed in part to Recommendations 2.2, 4.7 and 5.4 of the Mortimer report.

⁵ Defence did not agree to Recommendation 5.1 of the Review report which recommended that the DMO should be established as an Executive Agency under the *Public Service Act 1999*.

⁶ *The Response to the Report of the Defence Procurement and Sustainment Review*, 2 May 2009.

⁷ Listed at Table 4.1 and described at Appendix 3.

⁸ As at 27 May 2008.

⁹ The *Cabinet Handbook* lays down the principles and conventions by which the Cabinet system operates, and the procedures designed to ensure that the Cabinet process fulfils its central purposes. It also contains the rules applying to submissions and memoranda related to defence procurement. These rules are closely aligned to the DPR's recommendations in respect of a strengthened two-pass approval system.

¹⁰ During the capability development process, CDG carries overall responsibility for the coordination of the preparation of first and second pass proposals. However, for many projects, some capability

(DCDM),¹¹ that describes the strengthened two-pass approval process and provides 'authoritative guidance to CDG staff in carrying out the Group's core tasks of developing investment proposals (including options) for new Defence capabilities for consideration by Government and managing the Major Capital Equipment program'.¹²

10. The DCDM is complemented by a number of more detailed process documents and tools, in particular the Process Map that is intended to guide projects through required approval gates¹³. Collectively, the DCDM and its supporting documents and tools provide a sound framework to deliver more effective administrative outcomes over the original two-pass approval process, provided the framework is adhered to and underpinned by adequate and appropriate resourcing, support and training for CDG staff.

11. Despite establishment of a sound administrative framework to implement the strengthened two-pass approval process, the execution of the capability development processes for the case study projects in the ANAO's audit sample at times differed to the authoritative guidance set out in the DCDM and the *Cabinet Handbook*. Poor record-keeping in CDG meant that, in most cases, the ANAO was unable to determine whether Defence's inability to provide key documents, which the DCDM indicated should be prepared during the first and/or second pass approval process, was a consequence of poor records management practices or because the documents had not been prepared. Consequently, Defence was unable to demonstrate, through the provision of access to key project documents, that the procedures outlined in the DCDM and the Process Map were consistently followed

development work is carried out by DMO under a Memorandum of Arrangement between CDG and DMO. DMO provides specialist engineering, project management and industry expertise that is required in developing capability development documents such as the overall project plan, the acquisition strategy and costing estimates. According to the 2006 *Defence Capability Development Manual* (DCDM) DMO is one of the stakeholders that 'should, as a matter of course, be consulted, and invited to participate in an Integrated Project Team in either a full- or part-time, or advisory, capacity'.

¹¹ The *Defence Capability Development Manual* replaced the *Capability Systems Life Cycle Management Manual* (2002). Version 1.0 of the DCDM was issued in 2005; Version 2.0 of the DCDM was issued in 2006 and was the latest version at the time this audit was conducted.

¹² Under the System of Defence Instructions, the system of policy and procedural instruments which regulates the administration of Defence, compliance with the directions in Defence Manuals is 'mandatory and enforceable'. Defence Manuals are distinguished from other manuals within Defence by their authorisation or endorsement. Defence Manuals are either signed by the Secretary of Defence and the Chief of the Defence Force (CDF), or are endorsed through a Defence Instruction General DI(G) signed by the Secretary and the CDF. Neither version of the DCDM issued thus far is signed by the Secretary or CDF nor are they endorsed by a DI(G), they are signed by the Chief, Capability Development Group. The DCDM is therefore not a Defence Manual in the sense that compliance with it is mandatory and enforceable. Nevertheless, the DCDM is 'authoritative guidance'.

¹³ The Process Map is intended to provide 'detailed guidance and templates' to CDG staff on capability development to 'enable the key capability products (and supporting products) to be developed, suitably endorsed and then navigated through the required approval gates at all levels'.

in the relevant case study projects,¹⁴ or that appropriate alternative procedures were authorised and followed.

12. Defence advised that the capability development system has evolved since the 2006 DCDM was promulgated, and that the intent of the Kinnaird reforms has been upheld, even though there has not necessarily been strict adherence to the DCDM. Defence further advised that deviations from the process outlined in the DCDM are the result of this evolution, rather than departures from the process, and that the DCDM was developed by Defence to provide generic guidance to desk officers, but in practice the process is tailored for each project.

13. Nevertheless, where a tailored approach is to be adopted on a project by project basis, it is still important to ensure that key elements required to produce sound proposals to government at first and second pass are clearly identified and executed and that the rationale for, and the elements of, the approach to be applied in a particular project are clearly authorised at an appropriate level. It was not evident that Defence consistently applied this level of discipline in relation to the approaches taken to developing the first and/or second pass approval submissions to Government for the projects in the ANAO's audit sample.

14. Defence is currently preparing a revised DCDM in the context of the *Defence White Paper 2009* and the capability development process reforms outlined in the Government's response to the Mortimer review. The ANAO considers that Defence should ensure that the revised DCDM clearly identifies for CDG staff the key elements that are required to produce robust proposals to Government at first and second pass, and provides guidance on the process to be followed to obtain authorisation for the particular approach to be pursued in the context of an individual project.

15. The ANAO reviewed the 23 submissions, which had been provided to the National Security Committee of Cabinet (NSC) in relation to the 20 projects¹⁵ in our

¹⁴ Paragraphs 52 and 53 explain that two of the projects in the ANAO's audit sample of 20 case study projects were excluded from the strengthened two-pass approval process, as outlined in the DCDM, at the direction of the then Government. Another became an 'accelerated' acquisition, at the direction of the then Government. A further four projects were developed during the transition period during which the then Government agreed that submissions could be presented with less rigorous requirements. An eighth project, Sea 4000 Phase 3 — Air Warfare Destroyers, was treated differently by Defence because of its complexity, duration and materiality. Defence advised ANAO that the DCDM did not contemplate in detail the kind of approach that Defence and the then Government considered was required for this project. Defence's explanation of the approach to obtaining Government approval of the phases of the SEA 4000 project is explained in Chapter 4, commencing at paragraph 4.58.

¹⁵ The ANAO found that 15 of the 20 sample projects followed the documented path for NSC approval. Defence was not required to develop Cabinet submissions for two of the case study projects. The Super Hornet acquisition project, AIR5349 Phase 1, was approved as a New Policy Proposal in the 2007–08 Budget (see paragraph 4.18) with the then Government making this decision outside the two-pass approval process. In accordance with the *Cabinet Handbook*, the second project, Aviation

audit sample,¹⁶ against the *Cabinet Handbook* requirements for submissions seeking first and/or second pass approval and noted a significant level of non-adherence, across the sample, to a number of *Cabinet Handbook* requirements. The most significant of these are to do with the assessment and description of technical risk,¹⁷ and the presentation of costs,¹⁸ associated with acquiring a new capability.

16. The DPR Report emphasised the importance of the early and continuous involvement of Finance throughout the two-pass process to provide Government with an independent evaluation of capability development proposal costings. Additionally, the DPR Report stated that 'ideally, Defence should provide [to Government] well developed business cases for the proposed investments, based on sound costings models, for validation by Finance'.¹⁹

17. In March 2004, Defence advised the then Government that appropriate working arrangements would be developed by Defence and Finance to ensure Finance received the information required to review cost risks associated with capability development proposals. However, Defence has not implemented, nor set out, appropriate processes and procedures for the early and ongoing engagement of Finance in the development of cost estimates for capability development proposals.

18. The absence of agreed processes and procedures, and of guidance for desk officers and their managers on the approach to be taken in this regard, means that Government may not be consistently provided with the level of independent evaluation of capability development proposal costings envisaged by the DPR. In practice, this has meant that of the 23 submissions to Government reviewed by the

Fire Trucks - JP2095 Phase 1, was not required to be submitted to the NSC for consideration because its value was below \$50 million. This project received combined first and second-pass approval through an exchange of letters between the Ministers for Defence and Finance.

The remaining three sample projects received second pass approval following the introduction of the strengthened two-pass approval process, but not as the result of a second pass submission to the NSC. JP2080 Phase 2B.2 - ROMAN Upgrade received first pass approval from the NSC, and subsequently received second pass approval by the relevant Ministers, because its value was below \$50 million. JP2008 Phase 4 - Military Satellite Capability received first pass approval by the NSC, and subsequently received second pass approval by the then Prime Minister. AIR 8000 Phase 3 - C-17s received combined first and second-pass approval from the NSC in March 2006 despite having been submitted by Defence for first pass approval only.

¹⁶ At the time of the audit, of the 15 sample projects that had followed the documented path for NSC approval, six had received first pass approval only and had not yet received second pass approval when the sample was selected; three had received second pass approval only; and six had received both first and second pass approval.

¹⁷ See paragraphs 65 to 67 for a discussion of the issues related to the assessments of technical risk included in submissions in the ANAO's audit sample.

¹⁸ See paragraphs 68 to 70 for a discussion of the issues related to the presentation of costs included in submissions in the ANAO's audit sample.

¹⁹ *Defence Procurement Review*, p 17.

ANAO in this audit, four went to Government containing cost estimates that Finance did not agree to.²⁰

19. In this regard, the ANAO notes that the Government's response to the Mortimer Review indicates that one of the actions by which reforms to the Capability Development process will achieve the provision to Government of more reliable information on which to base judgements and a more efficient and effective capability process will be through ensuring early consultation with Finance on options, cost estimates and project risks.²¹ The ANAO has recommended that Defence agree with Finance a suitable approach to allow Finance's early and ongoing involvement in the evaluation of capability development proposal costings.

20. A central theme of the Kinnaird and Mortimer Reviews has been the importance of Defence minimising, to the extent possible, the risks attached to major capital equipment acquisition projects by adopting a strengthened two-pass approach to government approval of the capability solution to address an identified capability gap and adopting more rigorous procedures to give greater confidence in budget and delivery estimates for major capability development proposals. Defence put in place a sound administrative framework following the 2003 Kinnaird Review but has not applied sufficient discipline through its governance arrangements to give assurance that the key elements of the framework are consistently applied in the development of capability development proposals. This increases the risk that the benefits, particularly in terms of reduced risks, sought through the reforms flowing from the Kinnaird and Mortimer reviews may not be realised to the extent expected.

21. Given the importance of effective planning and scoping to the successful delivery of capability, further attention to a range of issues is required to provide government with assurance that the body of information provided to inform its decisions on major defence acquisitions meets the standards previously set, and expected, by government. These issues include the need to:

- revise the administrative framework, particularly the DCDM, such that:
 - clear guidance is provided as to the key elements that are required to produce sound proposals to government at first and second pass; and
 - the requirement for authorisation at an appropriate level for the rationale for, and the elements of, the approach to be applied in a particular project is mandated and that such authorisation is recorded;

²⁰ Paragraph 8.14 of the *Cabinet Handbook* states that 'each first and second pass submission or memorandum requires agreement with Finance on the detailed acquisition and operating costings and financial risk assessment'.

²¹ *The Response to the Report of the Defence Procurement and Sustainment Review*, pp. 9-10.

- substantially improve CDG's recordkeeping policies and performance to ensure that key material supporting first and second pass submissions is appropriately stored and accessible. Sound document management is particularly important in the context of Defence major capital equipment projects given the sometimes long time-lines associated with both the capability development phase and also the acquisition phase;
- agree with Finance a suitable approach to allow Finance's early and ongoing involvement in the evaluation of capability development proposal costings;
- adequately resource, train and support CDG desk officers; and
- ensure adherence to the requirements of the *Cabinet Handbook*, particularly in relation to preparation and provision of costings and the assessment and description of technical risk in submissions.

Key findings

The strengthened two-pass approval system (Chapter 2)

22. The 2003 DPR found that Government had often been asked to sign off on acquisition proposals at a point where there had not been sufficient analysis within Defence to give confidence that financially and technically robust decisions were being made. The DPR stated that 'too often, poorly defined and inaccurately costed projects had been put to Government and passed to the DMO to acquire.'²² The DPR therefore identified the need for a single point of accountability to provide better integration of the capability definition and assessment process and to ensure that it maintains a joint warfare focus.

23. The 2003 DPR also noted that, at the time, the process of capability definition and assessment in Defence notionally followed a two-pass system. However, the DPR found that, as it was then practised, the system lacked rigour and discipline and was not based on mandatory endorsement of key decisions by relevant stakeholders, nor was external scrutiny applied to significant aspects of proposals being forwarded to Government.

24. These findings led to Recommendations 2 and 3 of the DPR. Recommendation 2 was that a three star officer, military or civilian, should be responsible and accountable for managing capability definition and assessment.²³ As noted in paragraph 3, Recommendation No.3 of the DPR was aimed at

strengthening the then existing two-pass approval process for Defence's major capital equipment acquisitions.²⁴

25. In response to the DPR, in December 2003, Defence appointed a three star ADF officer as Chief of Capability Development Group (CCDG), with responsibility and accountability for Defence's capability development process. The Capability Development Group (CDG) was then established in February 2004 with the responsibility of managing the process for developing capability development proposals from their entry into the Defence Capability Plan through to final approval by government.

26. In March 2004, the then Government agreed to transitional approval arrangements for projects with a year of decision of 2003–04 or 2004–05. Because of this decision, some projects were specifically exempted from the requirement for first pass approval by the NSC. The NSC also agreed that proposals with a year of decision of 2003–04 or 2004–05 could be submitted for approval despite not meeting all requirements of the new process, provided the level of information was 'sufficiently robust.' Defence did not formulate any specific instructions, guidelines or advice to desk officers in CDG on the process to be followed in preparing capability development proposals for these projects. Due to uncertainty within CDG about the transition status of some projects, the ANAO received conflicting advice from different areas within CDG on the transition status of certain projects within the audit sample.

²² *Defence Procurement Review*, pp. iv – v.

²³ Recommendation No.2 of the DPR went on to say that 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.

²⁴ Recommendation No.3 of the DPR 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'.

27. The ANAO found that high-level processes associated with the establishment of CDG²⁵ were essentially sound. It also considers that, collectively, the processes outlined in the 2006 DCDM and Process Map to operationalise the strengthened two-pass approval process provide a sound framework to deliver more effective administrative outcomes over the original two-pass approval process provided the framework is adhered to and underpinned by adequate and appropriate resourcing, support and training for CDG staff.

Independent review of costings

28. CDG's Orientation Booklet describes the role of the CIR Division as to:

- provide independent advice to the DCIC and DCC on capability priorities, resources and balances, in particular relating to the Major Capital Investment Program; and
- advise on the adequacy, alignment, costing and risks associated with individual new Major Capital Equipment proposals and key Major Capital Facilities proposals.

29. However, the ANAO found that the governance arrangements under which CIR Division operates are not conducive to the provision of independent analysis and review of costings, or to the provision of independent advice to the committees considering whether, and in what form, to progress capability proposals. Rather than providing an independent viewpoint, CIR Division staff are accountable to CCDG—as are the desk officers who prepare the proposals and costings, and the directors who manage them. Similarly, CCDG is Chair of the DCC and a member of the

²⁵ In October 2003, Defence established the DPR Implementation Team, supported by a DPR Stakeholder Group and a DPR Steering Group to implement the recommendations made in the DPR. The DPR Steering Group—chaired by the Secretary of the Department of Defence and including senior Defence Department, ADF and DMO representatives—had ultimate authority for DPR implementation.

In addition, In January 2004, the then Government formed the Defence Procurement Advisory Board and made it responsible for:

- governance and oversight of the implementation;
- reporting its progress to the National Security Committee of Cabinet (NSC); and
- providing strategic direction to the Chief Executive Officer (CEO) of DMO.

The Board comprised three private sector representatives and senior members of the Defence Force, the Department of Defence, the Department of the Treasury and the then Department of Finance and Administration (Finance). It first met in March 2004 and met several times each year until its most recent meeting in February 2008. The Mortimer Review recommended that the Board continue with an increased focus on providing advice to the CEO of DMO. Defence advised the ANAO that the Government has agreed with the intent of the recommendation and intends to subsume the functions of the DPAB, as described in the response to the Mortimer Review, within a proposed Strategic Reform Advisory Board, which would draw its membership from both the public and private sectors.

DCIC, yet the advice provided by CIR Division to these committees is considered by Defence to be independent.

30. Defence advised the ANAO in response to the proposed audit report that it considered that the arrangements it has in place for CIR Division mean that the actual location of the division is not relevant.²⁶ The ANAO recognises the steps taken by Defence seeking to maximise the independence of the advice provided by CIR Division. However, there are limits to the degree of independence that can be achieved while CIR Division and the staff preparing capability proposals and costings are responsible to the same line manager.

31. The ANAO notes that, going forward, reforms outlined in the *Defence White Paper 2009* and the Government's response to the Mortimer Review will change how costings are developed. Defence advised the ANAO in June 2009 that:

CCDG will remain the coordinating authority for the development of submissions to Government; the Defence Materiel Organisation (DMO), supported by Defence Groups and Services, is responsible and accountable for developing military equipment costs and schedule estimates, risk analysis, and developing and implementing an acquisition strategy. In alignment with the revised approach, CEO DMO will also be required to attend all NSC meetings if capability acquisition decisions are being sought.

Finance's involvement

32. The 2003 DPR identified that:

Finance agreement to Cabinet submission costings is generally sought shortly before lodgement, and does not allow sufficient time for any in-depth analysis of capability, strategic, technical, legal or commercial issues associated with the costs and risks of major capital investments or other procurements.²⁷

33. The DPR Report emphasised the importance of the early and continuous involvement of Finance throughout the two-pass process to provide government with an independent evaluation of capability development proposal costings. Additionally, the DPR Report stated that 'ideally, Defence should provide [to

²⁶ Defence advised in June 2009 that:

[The First Assistant Secretary of CIR Division] FASCIR has direct accountability and direct access to the Secretary and CDF. Even though the line manager is CCDG, agendum papers submitted to the DCC are drafted within CIR Division and authorised for release by FASCIR. CCDG is not involved in the development of these agendum papers, so independence of advice and issued raises at DCC and DCIC is maintained. The DCC and DCIC agendum papers are supported by independent analysis undertaken by both branches of CIR Division. Further, FASCIR attends both the DCC and DCIC and is able to provide his opinion and advice directly at these forums.

²⁷ Department of Prime Minister and Cabinet 2003, *Defence Procurement Review*, p.17.

government] well developed business cases for the proposed investments, based on sound costings models, for validation by Finance'.²⁸

34. In March 2004, Defence advised the then Government that appropriate working arrangements would be developed by Defence and Finance to ensure Finance received the information required to review cost risks associated with capability development proposals.

35. Defence advised the ANAO that it considers that this element of the DPR reforms has been implemented in terms of both process and outcome. However, no agreed, documented processes and procedures exist to facilitate Finance's early and ongoing engagement in the development of cost estimates for capability development proposals.

36. Finance is a permanently invited member²⁹ of the DCC and therefore has some engagement at this stage in the process of developing two-pass submissions through access to Defence papers and information presented to DCC members. Finance informed ANAO of its view that recent practice in Defence has seen the DCIC take the place of the DCC in considering the larger and more risky capital capability equipment proposals. Finance is not a member of the DCIC.³⁰ Finance informed the ANAO that it does not receive the relevant information early in the process, and often only receives a first look at the costing information and risks 30 days or less out from a submission being put to the NSC. Additionally, Finance informed the ANAO that the information provided at this point is often limited and of questionable quality. Finance further advised that:

the information provided is often very detailed, but as subsequent events have shown, failed to identify correctly the areas of major risk and potential financial impacts. For some projects, Finance has no advance information from Defence, or engagement at a working level prior to the formal consideration process by Ministers.

37. Finance informed the ANAO that these issues limit Finance's ability to be involved and to provide adequate external verification of proposals early on in the capability development process.

²⁸ *ibid.*

²⁹ Permanent members are expected to attend or be represented at every meeting. Permanently invited members are expected to attend only for relevant items. Reference: Defence Capability Committee Governance Principles.

³⁰ The ANAO had sought Defence's advice during the audit as to the number of projects in recent years that had been considered by the DCIC rather than the DCC. In June 2009, Defence advised the ANAO as follows:

Since 2006 only three projects have been considered by the DCIC that were not also considered by the DCC. All other projects since 2006 have gone through the DCC, of which [the Branch Manager of the Defence Capability Assessment Branch at Finance] is a permanent member. These three projects were the AWD [SEA 4000 Phase 3 - Air Warfare Destroyer (AWD) build phase], LHD [JP 2048 Phase 4A/4B - Amphibious Ships] and NACC [AIR 6000 - New Air Combat Capability] projects, which given their size and complexity, were considered by the more senior committee.

38. Defence has a different perspective on how effectively its engagement with Finance is operating during the capability development process. Defence informed the ANAO that:

...suggestions that Finance and CDG are not closely linked in the early stages of Capability Development are inconsistent with CDG processes. Finance are engaged on large and complex projects to the Defence Capability Committee (DCC) much earlier than the 30 days or less mentioned in the ANAO report. The report also mentions that what Finance receives is often limited and of questionable quality. Again this is not consistent with the recognised and demonstrable level of Capability Investment and Resources (CIR) Division's engagement with [Finance].

39. It is important for Finance and Defence to develop a common understanding on the appropriate approach to engagement between the two agencies during the capability development process if the aims of the Government's procurement reforms are to be achieved. Currently, Defence and Finance have different perspectives on how effectively this relationship is currently working.

40. The Government continues to place significant emphasis on the need for Finance to be appropriately engaged in the capability development process. The Government's May 2009 response to the Mortimer Review advises that reforms to the Capability Development process will provide government with more reliable information on which to base judgements and a more efficient and effective capability development process.³¹ One of the initiatives outlined for achieving this outcome is 'ensuring early consultation with Finance on options, cost estimates and project risks'.³² Also as part of the Government's response to the Mortimer Review,³³ Defence intends to create opportunities to improve and align cost estimation techniques and training in cost estimation between Defence, the DMO and Finance in order to improve the level of common understanding and reduce conflicts due to the employment of different methodologies.³⁴

41. Currently, the absence of agreed processes and procedures, and of guidance for desk officers and their managers on the approach to be taken in engaging with Finance, means that government may not be consistently provided with the level of independent evaluation of capability development proposal costings envisaged by the DPR. Paragraph 8.14 of the *Cabinet Handbook* states that: 'each first and second pass submission or memorandum requires agreement with Finance on the detailed acquisition and operating costings and financial risk assessment.' Yet of the 23 submissions to government reviewed by the ANAO in this audit, four went to government containing cost estimates that Finance had been unable to agree to.

³¹ *The Response to the Report of the Defence Procurement and Sustainment Review*, p. 9.

³² *ibid.*, p. 10.

³³ In particular, Recommendation 2.9.

³⁴ *ibid.*, p. 24.

CDG desk officers and their support (Chapter 3)

42. One of the key principles underlying the DPR reforms was that 'skilled project managers, backed by accurate and reliable systems, are an essential prerequisite for being able to deliver projects on schedule and within budget'.³⁵

43. The majority of CDG desk officers, who are the project managers within the CDG, are military personnel. They are responsible for various aspects of the capability development process including the preparation of the relevant capability development documents,³⁶ and the provision of technical advice based on their military experience.

44. In a 'lessons learnt' review conducted by Defence in March 2007, and focus groups conducted by the ANAO in mid 2008, desk officers identified similar issues affecting their capacity to carry out their role. These included: high staff turnover; lack of timely and relevant training; lack of appropriate skills in certain areas, particularly cost estimation; and inadequacy of supporting information management systems.

45. Defence major capital equipment projects can be long term, complex and often high-risk. The same applies to the development phase of these projects that is carried out by CDG. High turnover and inadequate support for staff in such an environment adds to the risk profile of a capability development proposal and increases the importance of having robust and accurate tools and systems to support the capability development process.

46. The ANAO identified a number of aspects of the management of CDG desk officers, their role and their support that need improvement. These include, in addition to a need to address issues such as high turnover, records management support, training (particularly in relation to cost estimation), process support tools, and the level of complexity associated with project costing for first pass approval.

47. During fieldwork, the ANAO was informed that the CDG cost estimation templates are complex, difficult and excessively time-consuming to use, and that the level of support and assistance provided is inadequate. It is not clear that this level of complexity is necessary or appropriate, particularly for first pass costings. The ANAO suggests that Defence, in consultation with Finance, review the appropriateness of the CDG costing templates, particularly in the context of first pass costing activities.

³⁵ Department of Prime Minister and Cabinet 2003, *Defence Procurement Review*, p. 48.

³⁶ Capability development documents specified in the DCDM and Process Map include the Operational Concept Document (OCD), Business Case (includes costing templates), Functional Performance Specification (FPS), Test Concept Document (TCD), Project Management Plan and the Acquisition Strategy. These are described further in Chapter 4.

48. The military desk officers are posted to CDG in order to utilise their military experience and expertise. However, the majority of their day-to-day employment comprises general project management and administration, rather than developing and exercising specialist skills in capability needs and requirements analysis. The ANAO observed that no training needs analysis has been conducted for desk officers, and that timeliness and relevance of training are a matter of concern to them.

49. At the time of the audit, CDG was reviewing its staffing levels, structure and skills sets. The ANAO considers that there would be benefit in Defence extending this review work to encompass:

- a formal analysis of the training needs of desk officers, and developing strategies to ensure that adequate, relevant and timely training and support is provided;
- consideration of strategies for maximising the value gained from the specialist knowledge brought to CDG by military desk officers; and
- how best to ensure that staff with the appropriate skills and tools are undertaking the complex cost estimation work required to develop capability development proposals to the standards required at first and second pass approval by Government.

50. The Mortimer Review recommended³⁷ that CDG should be adequately resourced in terms of workforce numbers and skills to develop capability proposals and incorporate specialist advice from the DMO and the Defence Science and Technology Organisation (DSTO). The Government's response to the Mortimer Review in responding to this recommendation stated the following:

Appropriate training remains a critical factor in ensuring that the CDG workforce is able to undertake high-quality capability development projects. We acknowledge a continuing need to deepen expertise in cost and schedule estimation and project management. Since the 2003 Defence Procurement Review Defence has invested substantial effort in developing training programs for CDG and DMO staff. CCDG and CEO DMO will continue to explore how to deepen our capabilities to improve this training.³⁸

Requirements phase project documentation (Chapter 4)

51. Capability development proposals generally pass through two Government decision points: first pass and second pass approval. To support these decision

³⁷ Recommendation 2.8 of the Review.

³⁸ *The Response to the Report of the Defence Procurement and Sustainment Review*, p. 24.

points, Defence has identified³⁹ additional decision points and documentation requirements in the capability development process.

52. However, from time to time, Government has made decisions to expedite its consideration of certain Defence major capital equipment acquisition projects. Two of the projects in the ANAO's sample of 20 case study projects were excluded from the strengthened two-pass approval process, as outlined in the DCDM, at the direction of the then Government.⁴⁰ Another became an 'accelerated' acquisition at the direction of the then Government.⁴¹

53. A further four⁴² projects were developed during the transition period during which the then Government agreed that submissions could be presented with less rigorous requirements, as to the level of information provided, than under the full strengthened two-pass approval system, provided the level of information was, in the then Government's words, 'sufficiently robust'.

54. An eighth project, Sea 4000 Phase 3—Air Warfare Destroyers, was treated differently by Defence because of its complexity, duration and materiality. Defence advised ANAO that the DCDM did not contemplate the kind of approach that Defence and the then Government considered was required for this project, involving more frequent engagement between Defence and the then Government.⁴³

55. For the twelve remaining case study projects in the ANAO's audit sample, Defence was unable to demonstrate, through the provision of access to key project documents, that the procedures outlined in the DCDM and the Process Map have

³⁹ In the DCDM, Process Map and associated process documents and tools.

⁴⁰ AIR 5349 Phase 1 – Super Hornets (see paragraph 4.18) and AIR 8000 Phase 3 – Heavy Airlift – the C17 acquisition (see paragraph 4.23).

⁴¹ JP 2008 Phase 4 – Military Satellites Capability. Defence advised the ANAO that: 'as the result of an 'unsolicited approach ... by the U.S. Government to the Australian Government': JP 2008 Ph 4 became an accelerated acquisition that underwent a combined First and Second Pass approval in an extremely short time frame (approximately 6 months). All elements of the capability development process were streamlined and it was acknowledged that not all traditional documentation would be developed. The acquisition process was via sole source to the US Government through a Memorandum of Understanding. The planning was managed through an Integrated Project Team. The risk associated with adopting this approach was offset by the engagement of experienced staff to lead the project and the active involvement of stakeholders in the decision making from the time the opportunity arose to "buy-in" to the WGS [wideband global satellite] program.'

See section commencing at paragraph 4.23.

⁴² JP 126 Phase 2, Joint Theatre Distribution System; JP2080 Phase 2B.2, ROMAN Upgrade (also subject to a 'short form' second pass process); LAND 121 Phase 3, Field Vehicles and Trailers; and LAND 125 Phase 2B.

⁴³ Sea 4000 Phase 3 received first pass approval from the NSC in May 2005, and second pass approval in June 2007, at an estimated cost of \$6.6 billion. Overall, the approved phases of SEA 4000 have a budget of almost \$8 billion and will see three AWDs be built and delivered to the Navy. Defence's explanation of the approach to obtaining Government approval of the phases of the SEA 4000 is outlined in Chapter 4 at paragraph 4.58.

been consistently followed, or that alternative procedures were appropriately authorised, managed and documented.

56. CDG could not provide the ANAO with final versions of around half of the key project documents requested on the basis of the ANAO's analysis of the key elements set out in the DCDM. For some of these documents, CDG was able to provide electronic versions that were either marked as draft or contained unaccepted changes but was not able to provide the final approved document. Examples of the key documents sought by the ANAO for the case study projects included the Capability Proposal First Pass (CPFP) and the Capability Proposal Second Pass (CPSP). The DCDM provides for the development of these overarching documents. However, CDG was unable to provide the CPFP for five of the twelve projects⁴⁴ in the ANAO's audit sample submitted for first pass approval or the CPSP for four of the eleven projects⁴⁵ submitted for second pass approval.

57. Other key documentation sought by the ANAO included that relating to formation and operation of Integrated Project Teams for each of the projects. The DCDM outlines that Integrated Project Teams:

are specific to each capability development project and provide guidance and technical expertise from key stakeholders in the process and/or outcomes of the capability development proposal. IPTs are usually formed at the very early stages of the project, and their importance cannot be overstated. Properly formed and managed, they provide a base for undertaking the capability development process in a thorough and systematic way, particularly the consideration of [fundamental inputs to capability (FIC)] issues, and for engaging in a meaningful and timely way with all capability development stakeholders. As in the case with lead up to First Pass approval, the project IPT is a key mechanism through which [Capability Systems Division] staff coordinate activities leading up to Second Pass consideration by Government.⁴⁶

58. Notwithstanding the importance attached by the DCDM to IPTs, CDG could not provide satisfactory documentary evidence that IPTs had been formed and operated for 6 of the 12 projects in the ANAO's audit sample that were submitted for first pass approval or for 6 of the 11 projects submitted for second pass approval.

59. The ANAO experienced considerable difficulty in obtaining key capability development documents. The process to establish, as far as possible, that all available records relating to the projects in the ANAO's audit sample had been provided by CDG was lengthy, taking more than ten months. This was because

⁴⁴ Does not include the AWD project or those projects excluded from the strengthened two-pass approval process at the direction of the then Government (see footnote 14).

⁴⁵ Does not include the AWD project or those projects excluded from the strengthened two-pass approval process at the direction of the then Government (see footnote 14). In addition, one project was submitted to Government for first pass approval but received combined first and second pass approval. Accordingly, the CPSP was not required to be developed.

⁴⁶ DCDM Chapter 3, Overview of the Requirements Phase, pp. 31-32 and 60.

CDG's recordkeeping is inadequate, particularly with respect to key decisions and processes central to the strengthened two-pass approval process. In most cases, the ANAO was unable to determine whether Defence's inability to provide requested documents was a consequence of poor records management practices or because the documents had not been prepared. Defence does not have an adequate audit trail of key decisions and requirements in relation to the capability development process.

60. Rather than consistently following the clearly defined process outlined in the DCDM and Process Map, Defence advised the ANAO that it considers that the system is required to be flexible, and that it 'has used tailored products and processes rather than adhere to particular suites of documents for the sake of conformity'. In this context, as noted in paragraph 12, Defence advised that the system has evolved since the 2006 DCDM was promulgated, and that the intent of the Kinnaid reforms has been upheld, even though there has not necessarily been strict adherence to the DCDM. Defence further advised that deviations from the process outlined in the DCDM are the result of this evolution, rather than departures from the process, and that the DCDM was developed by Defence to provide generic guidance to desk officers, but in practice the process is tailored for each project.

61. The ANAO notes that the DPR stated that 'a strong mandatory two-pass system should provide a precise and understandable process for the procurement of defence capabilities, which would ensure that Government would be presented with robust proposals'.⁴⁷ Adopting a tailored approach, on a project by project basis, to the development of proposals to Government for first and/or second pass approval is not inconsistent with this goal but the approach to be taken to individual projects should be authorised at an appropriate level, and the authorisation recorded, to maintain the integrity of the capability development phase of procurement. In addition, as outlined in paragraph 13, it is still important to ensure that key elements required to produce sound proposals to Government at first and second pass are clearly identified and executed. Defence did not consistently apply this level of discipline in relation to the approaches taken to developing the first and/or second pass approval submissions to Government for the projects in the ANAO's audit sample.

62. Accordingly, the ANAO considers that Defence should ensure that the revised DCDM that the department is currently preparing clearly identifies for CDG staff the key elements that are required to produce robust proposals to Government at first and second pass, and provides guidance on the process to be followed to obtain authorisation for the particular approach to be pursued in the context of an individual project.

Submissions to Government (Chapter 5)

63. The *Cabinet Handbook* articulates the principles and conventions by which the Cabinet system operates, and the procedures designed to ensure that the Cabinet process fulfils its central purposes. It also sets out the requirements applying to submissions and memoranda related to defence procurement. These rules are closely aligned to the DPR's recommendations in respect of a strengthened two-pass approval system.

64. The ANAO reviewed the 23 submissions, which had been provided to the NSC in relation to the projects in our sample, against the *Cabinet Handbook* requirements for submissions seeking first and/or second pass approval and noted a significant level of non-adherence, across the sample, to a number of *Cabinet Handbook* requirements. The most significant of these are to do with the assessment and description of technical risk, and the presentation of costs, associated with acquiring a new capability.

65. The ANAO observed that, in a number of cases, the description of technical risk did not provide sufficient guidance for decision-makers or provide confidence that an adequate assessment of risk had been conducted. For example, one first pass submission examined stated that, for one element, risk was 'relatively low' and that there was 'some risk' in respect of integration issues. Another submission, for a high-profile, expensive acquisition, stated that risks in respect of integration issues 'will need to be assessed and addressed in the acquisition phase'. Another submission presented a 'preliminary risk assessment'.

66. The *Cabinet Handbook* includes the requirement that, for second pass submission, each Acquisition Business is to include 'an analysis of the technology, cost and schedule risks and drivers (technology risk must be rated using 'Technology Readiness Level' (TRL) methodology)'. TRLs are assessed on a nine-point scale in ascending order of technical maturity.⁴⁸ On that scale, a score of '4' indicates 'component and or basic sub-system technology valid in laboratory environment', while '8' indicates 'system technology qualified through test and demonstration'. Nevertheless, only one of the second pass submissions in the ANAO's sample adhered to the Handbook requirements. Of the remaining nine submissions: one used 'System Readiness Levels' – which Defence has not been able to explain to ANAO; one used TRLs for two options but not for the recommended option; and the remaining submissions in the sample used technical risk ratings such as 'low', 'high', 'medium' and 'medium-high'.

67. The ANAO recognises that the assignment of technical risk is not straightforward. Nevertheless, as recognised in the DPR, it is vital that government

⁴⁷ Department of the Prime Minister and Cabinet 2003, *Defence Procurement Review 2003*, p. 12.

⁴⁸ See p.19 of the DPR.

be provided with consistent and accurate advice on technical risk to the extent possible under the particular circumstances.

68. The DPR states:⁴⁹

When taking decisions on capability options at first and second pass the whole-of-life costs must be presented to and understood by government. These not only comprise the cost of the prime equipment, but also infrastructure, equipment operating costs, through-life-support, and the resources required to manage acquisition.

69. The *Cabinet Handbook* reflects the DPR's recommendations on this. At first pass, submissions are required to include 'the indicative total acquisition and whole-of-life costs' for each option being explored. At second pass, each Acquisition Business Case is required to include 'the budget estimates of total acquisition and whole-of-life-costs'. However, only five of the fifteen first pass submissions⁵⁰ in the ANAO's sample provided an estimate of whole-of-life costs and only four out of the ten second pass submissions.⁵¹ The majority of the submissions to Government in the ANAO's sample contained net personnel and operating costs (NPOC)⁵² estimates instead of estimated whole-of-life costs.

70. NPOC estimates are an important component of the costings for major capital equipment projects. They reflect the anticipated change in operating costs associated with replacing a capability (where applicable) or, alternatively, reflect an update of the estimate contained in the Defence Capability Plan for the operating cost of a new capability. They do not, however, provide the transparent, understandable whole-of-life cost information required for informed decision making. The importance of whole-of-life cost estimates has now been re-inforced by the *Defence White Paper 2009* which states:

⁴⁹ Department of Prime Minister and Cabinet 2003, *Defence Procurement Review 2003*, p. 18.

⁵⁰ All but one of the first pass submissions in the sample provided indicative total acquisition costs. That submission also did not provide indicative whole-of-life costs. Of the remaining nine first pass submissions in the sample that did not adhere to this requirement: one provided an estimate of annual operating costs: seven provided estimates of Net Personnel and Operating Costs (NPOC); and another provided estimates that appear to be NPOC but which were variously described in the submission as 'estimated net operating costs', 'net through-life Personnel and Operating estimates' and '[estimated] annual net operating costs'.

⁵¹ All ten of the second pass submissions in the ANAO's sample did include the budget estimates of the total acquisition costs. The four second pass submissions that included budget estimates of the whole-of-life-costs provided comprehensive, transparent whole-of-life-costs. Of the six submissions that did not provide whole-of-life cost estimates: one provided no estimate of operating costs at all; one provided an estimate of annual operating costs; and four expressed operating costs in terms of Net Personnel and Operating Cost (NPOC).

⁵² The DCDM 2006, p. 111 defines NPOC as '...the difference between future and current mature operating costs associated with a capability, facility, system or specific item of equipment. It reflects the net difference between the cost estimates to operate a new, upgraded or replacement capability offset by the [Defence Management and Financial Plan funding] available to operate the current capability'.

The Government has also directed that greater attention be paid in the planning process to the whole-of-life cost dimensions of capability. This will be critical in providing Government with increased levels of confidence with respect to cost, schedule and technical risk when it considers major Defence projects. This will also assist in minimising scope variations in major acquisitions, and help drive down cost pressures.⁵³

Summary of agency responses

Department of Defence

71. Defence acknowledges the findings noted in this audit report, which assessed Defence's performance in the implementation of the strengthened Two-Pass process, as recommended in the 2003 Defence Procurement Review ('Kinnaird' Review), and agrees to each of the four recommendations made within the report. The report notes that Defence has made significant progress in implementing the changes, as recommended by Kinnaird, but further improvement is needed.

72. Defence has already begun addressing the issues highlighted in the audit report through the Defence Strategic Reform Program, and reforms to the capability development process outlined in the Government's response to the Mortimer Review.

Department of Finance and Deregulation

73. Finance agrees with the recommendations made in the proposed report, and welcomes the opportunity to work with the Department of Defence to agree a suitable approach to capability development evaluation that engages Finance staff early in the process.

⁵³ *Defence White Paper 2009*, paragraph 13.18.

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