



6 May 2011

Senator Helen Kroger  
Chair  
Senate Foreign Affairs, Defence and Trade References Committee  
PO BOX 6100  
Parliament House  
CANBERRA ACT 2600

Dear Senator,

I refer to your letter dated 15 February 2011 seeking submissions to the Foreign Affairs, Defence and Trade References Committee's inquiry into Defence procurement. The Australian National Audit Office (ANAO) welcomes the opportunity to make a contribution to this inquiry and provides the attached submission for the Committee's consideration.

The ANAO's contact officer is Ms Fran Holbert, Executive Director, Performance Audit Services Group. Ms Holbert can be contacted on 02 6203 7691, or email [fran.holbert@anao.gov.au](mailto:fran.holbert@anao.gov.au).

We look forward to further discussing the ANAO's submission with the Committee.

Yours sincerely

Ian McPhee

## Introduction

1. This submission draws on the ANAO's recent work to comment on the inquiry's terms of reference 'a', 'c' and 'd.' Part 'b' of the terms of reference is not addressed as our own work has not directly focused on the timeline proposed for modernisation and procurement.
2. The 2009 Defence White Paper sets out the Government's future plans for Defence and, in particular, its future plans for major Defence capability investments. The Government has also endorsed a Strategic Reform Program within Defence, comprising a comprehensive set of reforms that seek to fundamentally overhaul the Defence enterprise. The aim of this Program is to produce efficiencies and create savings of about \$20 billion that, in turn, will be reinvested into military capability. A 6 May 2011 joint media release by the Minister for Defence and the Minister for Defence Materiel announced additional Strategic Reform Program initiatives and a set of accountability and procurement reforms for Defence.
3. Major defence capital projects provide the Australian Defence Force (ADF) with new or upgraded military capabilities such as armoured vehicles, ships, submarines, aircraft, weapons and communications systems. They are often complex and high risk. Accordingly, it has been long recognised that such projects can be challenging to complete to schedule, within the approved budget and having delivered new or upgraded capability that meets the requirements of the ADF.
4. Each project has three broad phases: capability definition and planning; acquisition and acceptance; and in-service support. The phases are interrelated and are collectively known as the capability life-cycle. Effectively managing the life-cycle usually requires a sustained effort over many years, involving the coordinated and integrated endeavours of several large Defence and private sector organisations. Success depends upon high levels of management skill and technical expertise.
5. Major Defence capital acquisitions can also be significantly more complex than large civil projects, as indicated by the Helmsman Institute report, entitled *A Comparison of Project Complexity between Defence and other Sectors*.<sup>1</sup> The Helmsman Complexity Scale, as pictured below, demonstrates the increased complexity faced by Defence projects relative to other private sector acquisitions<sup>2</sup>.

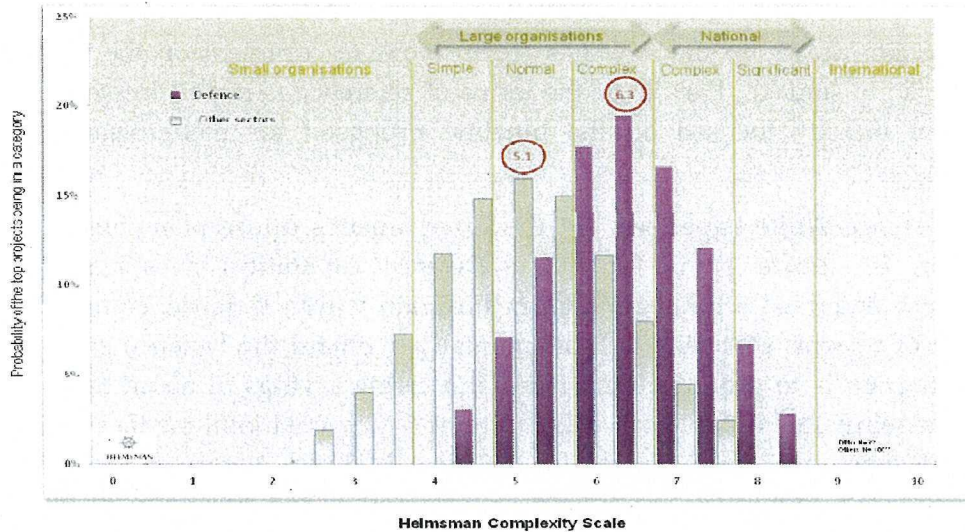
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<sup>1</sup> The Helmsman Institute, 2009. *A Comparison of Project Complexity between Defence and other Sectors*, p.3; see also ANAO Audit Report No. 17 2010–11, *2009–10 Major Projects Report*, pp.83-84.

<sup>2</sup> The Helmsman complexity scale “compares the probability distribution (the likelihood of a project falling in a specific category) between the Defence projects reviewed and similar projects reviewed in other sectors. Project complexity for other organisations is around 5.1 on the Helmsman scale, (or “Normal” for large organisations). The reviewed Defence projects average 6.3, which is the level of the most “Complex” projects normally undertaken by large Australian Organisations.” See The Helmsman Institute, 2009, *A Comparison of Project Complexity between Defence and other Sectors*, p.3



**Figure 1: The Helmsman Complexity Scale**



Source: The Helmsman Institute, 2009. *A Comparison of Project Complexity between Defence and other Sectors*, p.3; see also ANAO Audit Report No. 17 2010–11, *2009-10 Major Projects Report*, pp.83-84

6. International experience shows that adopting a systems engineering approach in concert with program management of a high order offers the greatest likelihood of success for the delivery of complex and large scale projects, including Defence major capital acquisitions.

7. In addition to the delivery challenges inherent to Defence major capital acquisitions, Defence has also faced, and continues to grapple with, major change management challenges in this arena that have had their own impacts on the delivery of capability to the ADF. Recent decades have seen successive, significant changes to acquisition policy within Defence and to the management arrangements for planning, acquiring and accepting military capability. Since 1984, the functions of capability design, system development and logistics support have been progressively transferred from the ADF into other Defence groups and into the private sector. In July 1998, Defence adopted the aim of 'seamless,' 'whole-of-life' capability management that would:

... establish the appropriate underlying processes and systems needed for this, and we will assign capability output managers who are responsible for delivering effective capability. The result will be that our systems meld together all of the elements that go into building an effective defence force - people, equipment, training, acquisition, doctrine, logistics, disposition, facilities and so on.<sup>3</sup>

8. DMO was formed in July 2000 and the acquisition of major capital equipment was decentralised from Canberra to Systems Program Offices around Australia. In 2002, Defence introduced new processes, including a two-pass government approval process for managing the development of capability proposals. In 2004, Defence strengthened this two-pass government approval process and established the Capability Development Group (CDG) to

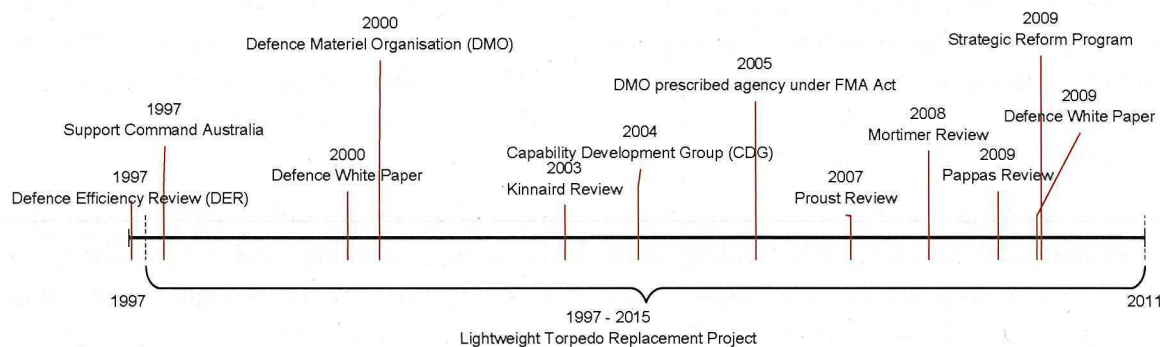
<sup>3</sup> ANAO Audit Report No.13 1999–2000, *Management of Major Equipment Acquisition Projects*, pp.18, 19, 44, 58-65; and Defence Executive: *A Message to all Defence Personnel from the Executive* (internal memorandum), Canberra, 6 July 1998. Department of Defence, *DEFGRAM NO 187/98, Formation of Capability Management Improvement Team*, 6 August 1998, Annex A: Capability Management Improvement Terms of Reference.

manage the development of capability proposals from their entry into the Defence Capability Plan through to final approval by government.

9. Importantly, major defence capital equipment projects are generally long-term ventures that span several such change initiatives. The Lightweight Torpedo Replacement project (Lightweight Torpedo)<sup>4</sup> is an example of a major defence capital acquisition project that has seen many changes to organisational structure and management processes during its life.

10. The Lightweight Torpedo project involves the acquisition of a new weapon and its integration onto multiple ADF platforms originally including aircraft and helicopters as well as ships.<sup>5</sup> As shown in Figure 1, the project began just after the 1997 Defence Efficiency Review, and was managed by the Defence Acquisition Organisation and then by its successor, DMO. The project's management and review arrangements have passed through the formation of Systems Program Offices, and different phases of the project have been subject to different approval processes, with the most recent phases passing through the post-Kinnaird Review strengthened two-pass approval process.

**Figure 2: Major organisational and procurement changes in the Defence Portfolio during the life of the Lightweight Torpedo Replacement Project**



Source: ANAO analysis

11. While it is important that such projects benefit from reforms, it is equally important to be mindful of the impact that successive and significant reforms can have on the complexity of the task of managing these projects. More generally, the full benefit of performance improvements expected from a reform are only likely to be realised in projects that are started after the introduction of the reform and arguably, only once the reform has been fully implemented and consolidated within Defence's practices.

12. The following three sections of the submission contain our specific comments in respect of the inquiry's terms of reference 'a', 'c' and 'd'.

<sup>4</sup> Joint Project 2070 Lightweight Torpedo Project.

<sup>5</sup> Over the life of the Lightweight torpedo project, the number of platforms included in the project's scope has been reduced from five to two (the FFG and the ANZAC Ship).



## Procurement procedures utilised for major Defence capital acquisitions – terms of reference ‘a’

13. Presently the ADF relies on CDG within the Department of Defence, and the DMO to define their requirements for a major capital equipment acquisition, to acquire the equipment and to support it through its life.

14. Effectively managing risk throughout this capability life-cycle, and in particular, through the capability definition and planning, and acquisition and acceptance phases involves:

- establishing and following an appropriate administrative framework of procurement procedures;
- utilising, where possible, lower risk military-off-the-shelf capability solutions;
- having personnel with appropriate skill sets managing the projects;
- providing continuity of management and accountability for the project; and
- forming a sound contract and managing it effectively.

### **Capability definition and planning phase**

15. During the capability definition and planning phase, CDG works with other stakeholders to prepare detailed management plans and acquisition strategies for the capability options to be considered by government during the two-pass approval process. The *Defence Capability Development Handbook 2010 Interim* provides authoritative guidance to CDG staff in carrying out these tasks.

16. A key goal of the two-pass approval process is to provide Defence and the Government with a clear understanding of the risks to cost, schedule and the likelihood of final delivery associated with each capability option being considered. Inadequate execution of the capability definition and planning phase unduly exposes Defence to the possibility of cost increases, capability reduction and schedule slippage.

17. ANAO Audit Report No.48 2008-09 *Planning and Approval of Defence Major Capital Equipment Projects* examined the key capability development documents for a sample for 20 projects that had been through the government approval process. The ANAO concluded that Defence had established an appropriate administrative framework for implementing the process but was not consistently adhering to it. In particular, the ANAO found that, in a number of cases, the description of technical risk for these project proposals did not provide sufficient guidance for decision-makers, or provide confidence that an adequate risk assessment had been conducted.<sup>6</sup>

18. The Super Seasprite and Lightweight Torpedo projects provide examples of where an inadequate description of risk during the capability definition and planning phase of project contributed to problems with delivering the required capability. The ANAO undertook performance audits of both these projects in recognition of the fact that they were intended to deliver significant capabilities that the ADF required but were, at the time the audits were planned, already encountering difficulty in delivering the required capability.

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<sup>6</sup> ANAO Audit Report No.48 2008-09 *Planning and Approval of Defence Major Capital Equipment Projects*, p. 32

19. In the case of the Super Seasprite project, an adequate understanding of the significance of the risks associated with the acquisition was not obtained through the requirement definition process. And, in the case of the Lightweight Torpedo Replacement project, an adequate understanding of the weapon and its development status was not obtained, and the acquisition of the weapon went ahead on the understanding that it was a military-of-the-shelf (MOTS) purchase when it was not.<sup>7</sup> For both projects, capability has not been delivered as planned or has been delayed by more than a decade, with significant associated costs. The Super Seasprite project was cancelled by government in March 2008, during ANAO's audit of the project, while the Lightweight Torpedo project remains on the Minister for Defence Materiel's list of Projects of Concern.

20. Within CDG, capability development officers are responsible for managing capability proposals through the two-pass approval process. ANAO Audit Report No.48 2008-09 *Planning and Approval of Defence Major Capital Equipment Projects* found that these officers had not been adequately trained and lacked appropriate supporting management structures, processes and tools to carry out their role.

21. In the main, CDG officers are military personnel who bring their military experience and expertise to the technical aspects of the proposals but the bulk of their day-to-day work comprised of general project management and administrative tasks. This lack of training and management support particularly hampered their ability to undertake complex cost and schedule estimations for the capability proposals.

### ***Acquisition and acceptance phase***

22. At the end of the capability definition and planning stage, the Government endorses a specific capability solution and approves funding for the project. Responsibility for the project is then passed to the DMO. *The Defence Procurement Policy Manual* (DPPM) is the primary reference document for undertaking the acquisition stage and provides DMO staff and others with up to date mandatory policy and guidance.

23. The ANAO's 2009-10 Major Projects Report found that schedule remains the major challenge for the DMO and industry contractors. The reasons for this schedule slippage vary, but the ANAO found that it primarily reflects the underestimation of both the scope and complexity of work by industry and the DMO. Data collected for complex projects such as Wedgetail and the FFG Upgrade shows that the actual schedule for technical work involving system design and integration is often significantly underestimated when compared to the original planned schedule.

### ***Management considerations in the procurement environment***

#### ***Utilising off-the-shelf solutions***

24. DMO reported in the 2009-10 MPR that the higher the technical challenge of the project, the higher the inherent risk to schedule. There are three main types of acquisition undertaken by the DMO which involve increasing levels of complexity: military-off-the shelf (MOTS); Australianised MOTS; and developmental. MOTS acquisitions provide the ADF with equipment that already exists, is in-service with other customers for an equivalent

<sup>7</sup> Defence acknowledged that, at the outset, the risk involved in integrating the weapon onto multiple platforms was not fully appreciated and that the project achieved second pass approval prematurely. ANAO Audit Report No.37 2009-10, *Lightweight Torpedo Replacement Project*, pp.15,73



purpose and requires no, or minimal change. Australianised MOTS acquisitions provide equipment that is modified to meet particular Australian requirements and developmental acquisitions seek to provide a capability solution for the ADF that does not already exist.

25. Off-the-shelf capability solutions are not always practical or available: changes to an off-the-shelf option may be necessary to ensure compliance with ADF or broader Australian technical regulations; or an off-the-shelf solution may not be available when upgrading an existing platform.

26. Of the 22 projects reported on in the 2009–10 MPR, nine projects showed no variance to schedule. These projects were either MOTs projects and/or were projects in the early stages of the project life-cycle. All developmental and over half of the Australianised MOTS projects have incurred slippage to the schedule approved at Second Pass.

27. The ABRAMS tank project is an example of the DMO effectively reducing acquisition and development risks by procuring US Government MOTS equipment. Furthermore, by not varying the product performance specifications DMO ensured the tank was delivered on time, to budget and to the required quality.

28. The 2009 Defence White Paper states that, to make informed decisions about the appropriate mix of cost, risk and capability, MOTS 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.

#### *Improving project management skills within DMO and Industry*

29. A key challenge for both the DMO and the Australian defence industry is to improve the project management, logistics, procurement and engineering services provided to the Australian Government, within current and future workforce constraints.<sup>8</sup> In recent years, DMO has aimed to professionalise and up-skill its workforce.<sup>9</sup>

30. To assist with professionalising DMO staff, DMO's Directorate of Professionalisation and Staff Development is responsible for the development of certification programs that focus on developing DMO specific competencies and gaining professional qualifications across the Leadership and Executive Management, Logistics, Project Management, Engineering and Procurement streams.

31. Currently, over 1200 DMO staff have either been certified or are enrolled in a certification program with a professional body. In contrast, prior to the start of the initiative, DMO had only 153 staff certified in areas of project management, engineering and accounting<sup>10</sup>.

32. To assist with the up-skilling of participants within the Defence industry, the Skilling Australia's Defence Industry (SADI) program was established by the Australian Government in 2005, with an allocation of \$215 million to fund the program over 10 years.

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<sup>8</sup> ANAO Audit Report No. 17 2010-11, *2009–10 Major Projects Report*, p.64

<sup>9</sup> *ibid*

<sup>10</sup> *ibid*

To date, the SADI program has funded more than 20 000 training places, including about 1900 apprentices<sup>11</sup>.

### *Continuity of management*

33. As well as the successive, significant changes to acquisition policy within Defence, major Defence capital projects are also often subject to a high degree of internal management change due, in part, to the regular rotation of staff throughout Defence service groups. This presents special challenges for procurement areas such as DMO and CDG, where projects often run for over a decade, are costly and highly complex.

34. For the 22 projects included in the 2009-10 Major Projects Report, the Project Manger changed, on average, every two years after second pass approval. This reduces continuity of group and project specific knowledge, and leaves open the possibility of diminished project accountability. DMO has sought to mitigate this through military staffing policies whereby general project management postings have been increased from two years to three years, and sometimes four years<sup>12</sup>.

35. In addition to project managers changing on average biannually, all projects examined in the 2009-10 Major Projects Report experienced numerous contract amendments, altering delivery across cost, schedule and in some cases, capability. Projects such as Collins Submarines Reliability and Sustainability project, has already had several hundred contract change proposals (CCPs) in the ten years to 2010 that it has been running, noting that this project is not expected to reach Final Operating Capability until 2022. The FFG Upgrade project had already seen close to 400 CCPs by the time of ANAO review in 2010. The Next Generation Satellite project, had at the time of ANAO review in mid-2010, 89 programming variations, although it had received second-pass approval only three years earlier, in September 2007. Continual changes in Project Managers, along with at-times frequent and numerous contract changes, set against a background of rapid organisational change to procurement process, practice and organisational structures, has created conditions in which it is difficult to benchmark or measure procurement projects across their long life-spans.

### *Managing contracts*

36. Prime contracts should be enforceable, clearly apportion risk between the parties, indicate rights and responsibilities, set-out the cost and schedule for expected deliverables, and clearly specify the capability to be delivered. Sound management of these contracts requires the balancing of risks, managing resources and relationships between parties to the contract, ethical behaviour and high-quality record keeping.<sup>13</sup>

37. An ANAO performance audit of the High Frequency Communication System Modernisation project found that Defence did not effectively use pre-contract negotiations to adequately address risks at the time of contract signature<sup>14</sup> and entered into the prime

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<sup>11</sup> Minister for Defence Materiel, 09 March 2011 'Training and apprenticeships for Australia's Defence Industry' Press Release MIN41/11

<sup>12</sup> Joint Committee of Public Accounts and Audit 'Financial management and equipment acquisition at the Department of Defence and Defence Materiel Organisation' Official Committee Hansard, 11 May 2006, p.17

<sup>13</sup> ANAO Better Practice Guide, February 2007, 'Developing and Managing Contracts' pp. 6-7

<sup>14</sup> ANAO Audit Report No.34 2006-07, *High Frequency Communication System Modernisation Project*, p. 13



contract on the basis of tender documents that were inadequate for a project of its size.<sup>15</sup> This project continues to experience ongoing delays, capability reductions and is yet to be completed. The ANAO 2009–10 Major Projects Report noted that it is running 10 years over schedule and is yet to deliver an upgraded mobile platform.<sup>16</sup>

38. Defence typically uses prime contracts incorporating critical milestones, provisions for liquidated damages, financial guarantees and other mechanisms to assist management of the contract. For instance, critical milestones are intended to align with important systems engineering stages, such as critical design reviews.<sup>17</sup> Critical milestones, if not achieved, are intended to allow Defence to stop all contract payments until the milestone is achieved. The ANAO's audit of the Super Seasprite project found that although critical milestones were included in the original contract for some design reviews, these protections were not preserved.<sup>18</sup> Some critical milestone payments were made even though the milestones had not been achieved and some critical milestones were removed during contract amendments.<sup>19</sup> These problems contributed to the cancellation of the project in 2008.

39. Difficulties also arise when technical and regulatory requirements of the relevant Service are not included in the contract. In the cases of the Super Seasprite<sup>20</sup> and the FFG Upgrade<sup>21</sup> projects, Defence did not have the commercial leverage to fully incorporate these requirements into the acquisition contract. In the case of the Seasprite, this led to differences between contractual and ADF certification requirements, creating the risk that an aircraft could be delivered that was contractually compliant, yet did not meet ADF certification requirements. These circumstances shifted much of the certification risk to Defence for the project<sup>22</sup>.

40. There is little doubt that the size and complexity of Defence major capital acquisition projects can be at the far end of the spectrum experienced by both public and private organisations within the Commonwealth. Against a background of significant administrative change there is also greater risk to be mitigated, over long periods of time. These risks can be mitigated to some extent by management consideration of lower risk purchasing options, i.e. MOTS over developmental projects. But these are not always available. The risks may also be alleviated by consistent and continued focus on the capability definition and planning phase, but this does not remove the need for ongoing close management attention over the whole life of the project and the need for quality, experienced and well-supported staff and project management over the life of the project.

### Defence accountability reviews – terms of reference ‘c’

41. There have been many accountability reviews in recent years that focus on Defence procurement. Collectively, all emphasised the importance of early mitigation of risks in projects and reducing risk overall within the procurement lifecycle. The ANAO has

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<sup>15</sup> ANAO Audit Report No.34 2006–07, op. cit., p. 38

<sup>16</sup> ANAO Audit Report No. 17 2010–11, op. cit. pp. 295-305.

<sup>17</sup> ANAO Audit Report No.34 2006–07, op. cit., pp. 49-50 and ANAO Audit Report No.41, 2008–09, *The Super Seasprite*, pp. 81-83, 93-97 and 103-107.

<sup>18</sup> *ibid*

<sup>19</sup> *ibid.* p. 18

<sup>20</sup> *ibid* p. 158

<sup>21</sup> ANAO Audit Report No.11 2007–08, *Management of the FFG Capability Upgrade*, p. 40

<sup>22</sup> ANAO Audit Report No.41 2008–09 loc. cit., pp. 17, 26.

considered the implementation of proposals arising from Defence accountability reviews in a number of its performance audits, and will continue to do so in future. The ANAO's audit findings in relation to these reviews have addressed both the issues and challenges identified in the reviews, and progress towards implementing some of the reviews' recommendations.

### ***Defence Procurement Review, August 2003 (Kinnaird Review)***

42. In 2003, the *Defence Procurement Review*, or Kinnaird Review, made findings and recommendations to improve the Defence procurement processes. These included improvements to: communication with government; defining and assessing capability; the management of capability; and the procurement and ongoing support of Defence equipment.<sup>23</sup>

43. In response to the findings of the Kinnaird Review and, in particular, in response to Recommendation 3, Defence strengthened their two-pass approval process for capability proposals. Defence started using this strengthened two-pass process in September 2003.

44. As previously mentioned, in 2009, ANAO's Audit Report No.48 2008–09 *Planning and Approval of Defence Major Capital Equipment Projects* examined whether the strengthened two-pass approval process for major capital equipment projects was being implemented effectively.

45. The audit found that Defence had established an appropriate administrative framework for implementing the strengthened two-pass approval process, including the formation of the CDG to administer the process and the commitment of high-level oversight to the process. But despite this sound administrative framework, the execution of the process for the case study projects considered in the ANAO's audit sample differed at times to the authoritative guidance set out in the then *Defence Capability Development Manual (DCDM)*<sup>24</sup> and the *Cabinet Handbook*.

46. Poor record keeping in CDG meant that, in most cases, the ANAO was unable to determine whether Defence's inability to provide key documents, as required at the time by the DCDM, 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 were consistently followed, or that appropriate alternative procedures were authorised and followed.

### ***JCPAA review***

47. The JCPAA reviewed the findings of the *Planning and Approval of Defence Major Capital Equipment Projects* audit and made a series of recommendations.<sup>25</sup> The recommendations included that Defence, when preparing submissions, develop a procedure

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<sup>23</sup> The Kinnaird Review made ten major recommendations.

<sup>24</sup> At the time of the audit, the applicable guidance was contained in the DCDM but this has been superseded. The current guidance is contained in the *Defence Capability Development Handbook 2010 Interim*

<sup>25</sup> Joint Committee of Public Accounts and Audit, 'JCPAA Report No.417: Review of Auditor-General's Reports tabled between February 2009 and September 2009', June 2010



to ensure that any divergence from the generic guidance provided in the DCDM was authorised at an appropriate level and that the reason for the divergence is recorded.

48. JCPAA also recommended that the *Cabinet Handbook* be amended to accurately reflect the specific risk measurement process developed by Defence. Further, Defence should also ensure all future Cabinet submissions for major capital equipment projects include this risk information as well as a risk-based assessment of the Technology Readiness Level (TRL) and System Readiness Level (SRL) scores for each option.

49. The Government is yet to respond to the recommendations of the JCPAA.

#### ***Defence Procurement and Sustainment Review, September 2008 (Mortimer Review)***

50. The Mortimer Review evaluated the progress made under the Kinnaird reforms. While it found improvements in the capability development process in Defence and the acquisition process in DMO, it concluded that further reform in acquisition and sustainment was necessary.<sup>26</sup>

51. The Kinnaird reforms and subsequent Mortimer Review are directed at delivering the Government's aims of achieving:

- better results for the Australian Defence Force;
- greater transparency and accountability;
- improved efficiency and effectiveness; and
- better value for money within the Defence procurement and sustainment systems.

52. Primarily the reforms are concerned with ensuring the ADF gets the capability that it needs. The key themes of the Mortimer Review include making the DMO more business-like and imposing commercial discipline on Defence procurement and sustainment processes.

53. The Government response to the Mortimer Review indicated that the ANAO will be invited to audit the progress of reform at nine and 18 months post-commencement and report its findings against the agreed plan to make defence procurement more business-like.

#### *Mortimer Review and the ANAO Major Projects Report*

54. The ANAO's annual MPR provides an opportunity for the ANAO to incrementally report on Defence's progress towards implementing some initiatives designed to address the findings and recommendations of the Mortimer Review. Two such governance initiatives are the Gate Review Assurance Board (GRAB) process for major capital acquisition projects, and improved Materiel Acquisition Agreements (MAAs).

#### *The Gate Review Assurance Board*

55. A GRAB comprises of senior DMO line management, relevant people with key skill sets from other parts of DMO, and, if required, an external independent member. A GRAB review enables DMO senior executives to consider the readiness of a project to proceed to

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<sup>26</sup> The Mortimer Review identified five principal areas of concern and made 46 recommendations. Of the 46 recommendations 42 were accepted in full, while three were partially agreed to, and will be partially implemented. The recommendation to make DMO an Executive Agency was not agreed.

the next state before they commit any further resources or enter into any new formal undertakings.

56. GRAB reviews are mandatory at First Pass, Second Pass and contract signature. These reviews, run by DMO, operate alongside the two-pass government approval process managed by CDG.

57. This initiative was introduced during 2009 and is still in its formative stages. It is expected to take a number of years for the results of GRABs to flow through. The ANAO's 2009–10 MPR found that 20 projects had been reviewed by the GRAB, including 5 projects reported on in the MPR.

58. The DMO stated in the ANAO's 2009–10 MPR that:

The GRAB process is a proactive activity that has led to early identification, intervention and resolution of risks and issues across numerous projects in DMO. Given the success of this methodology, the GRAB process will be extended to all major projects.

### *Material Acquisition Agreements*

59. Another initiative implemented by Defence in response to the Mortimer Review are improved MAAs.<sup>27</sup> MAAs are part of a framework of agreements between DMO and Defence which were introduced following the establishment of DMO as a Prescribed Agency<sup>28</sup> in 2005. This framework of agreements outlines the responsibilities and arrangements between the two agencies and provides the basis on which the DMO receives most of its budget. Defence describes an MAA as:

An agreement between Capability Development Group (CDG) and the Defence Materiel Organisation (DMO), which states in concise terms what services and product the DMO (as supplier) will deliver to CDG and when.<sup>29</sup>

60. In past performance audits, the ANAO has identified several instances where projects did not have an MAA in place at the time of second pass approval and one instance where a project appeared on the Minister for Defence Materiel's Projects of Concern list and did not have a finalised MAA.<sup>30</sup> The challenges associated with major equipment acquisitions are increased when the MAA does not include sufficient clarity and detail about the project's intended cost, delivery schedule and capability definitions.

61. In 2009 Defence launched the *Strategic Reform Program: Delivering Force 2009* (SRP), a plan to comprehensively and fundamentally improve the management of Defence to make the organisation more efficient and effective and to reinvest the savings generated from these improvements into military capability. Defence used the findings and recommendations of the Mortimer Review to inform and develop the SRP and, in turn, is using the SRP as the mechanism to implement the reforms recommended by both the Mortimer and Pappas Reviews.

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<sup>27</sup> Department of Defence, 2008, *The Response to the Report of the Defence Procurement and Sustainment Review* (the Mortimer Report), p. 9

<sup>28</sup> DMO is a 'Prescribed Agency' within the meaning of the *Financial Management and Accountability Act 1997* (Cth).

<sup>29</sup> Department of Defence, *Defence Capability Development Manual 2006*, p. 111

<sup>30</sup> ANAO Audit Report No.37 2009–10, *ibid*



62. Defence often responds to the findings and recommendations of these external reports and reviews with significant changes to its organisational structure and processes. Existing processes and frameworks are strengthened, new processes and frameworks are introduced, high level command and oversight is adjusted, organisational charts are rearranged and new committees and review boards are established.

63. While the ANAO encourages all efforts to improve organisational effectiveness, given the frequency of such changes within Defence and the average lifespan of major acquisition projects, several changes to organisational structures and processes can occur over the life-cycle of a single project making it difficult to assess the effectiveness of any single change.

#### *Ministers' 6 May 2011 announcement of further accountability and procurement reforms*

64. As mentioned earlier, in their joint media release of 6 May 2011, the Minister for Defence and the Minister for Defence Materiel announced additional Strategic Reform Program initiatives and the first set of further accountability and procurement reforms for Defence. The Ministers' media release advises that the reforms are intended to enhance Defence management and improve the delivery of the billions of dollars of investment in new capabilities being progressively rolled out under the Force 2030 plan as set out in the 2009 Defence White Paper. In addition, the Ministers' announced their intention to request the Auditor-General to conduct an audit of the implementation of the Mortimer Report in the second half of this year.

### **Public and Parliamentary scrutiny of Defence procurement – terms of reference 'd'**

65. The ANAO has a program of work designed to assist the Parliament in its oversight role of Defence procurement. This comprises annual audits of the financial statements of both Defence and DMO, a number of performance audits each year on a range of relevant topics and the ANAO and the DMO jointly produce an annual Major Projects Report (MPR). It is important to note that the ANAO's performance audit program of Defence generally includes a selection of the higher profile, higher risk and higher expenditure projects as audit topics.<sup>31</sup> The projects included in the MPR represent a broader cross-section of DMO's largest and most significant projects<sup>32</sup>, and both ANAO and DMO seek to highlight trends and experience gained by DMO with major acquisitions.

#### **ANAO Performance Audits**

66. The ANAO has produced a significant body of performance audits in the Defence portfolio that examine procurement. These reports include many that consider particular

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<sup>31</sup> The ANAO's selection of topics for the audit program is developed through a consultative process which takes into account the priorities of the Parliament, as advised by the Joint Committee of Public Accounts and Audit, and the views of Defence and other stakeholders. The final program is determined by the Auditor-General who considers, for each topic:

- the financial materiality or significance;
- the risks it presents to Defence's reputation and ADF capabilities;
- the extent of previous audit coverage on the topic; and
- any potential benefits to be gained or lessons learnt from conducting an audit of it.

<sup>32</sup> The MPR examines a cross section of land, sea, air and joint capabilities, focusing on the largest and most significant projects within the DMO portfolio.

projects and offer analysis, findings and recommendations for Defence and DMO. ANAO performance audits also provide detailed information on the audited topics to enhance parliamentary oversight and give opportunity for public scrutiny.

67. Attached is a full list of recent and relevant performance audits related to Defence procurements (Attachment A).

### **Major Projects Report**

68. In the Foreign Affairs, Defence and Trade References Committee's *Inquiry into materiel acquisition and management in Defence* Report of March 2003, the Committee recommended that the Senate request the Auditor-General produce, on an annual basis, a report on progress in major defence projects, detailing cost, time and technical performance data for each project, including longitudinal analysis of emerging trends.<sup>33</sup>

69. The JCPAA supported this initiative and the development of the MPR also benefited from consultation with, and the strong support of, the JCPAA, particularly their August 2008 JCPAA Report 411, *Progress on equipment acquisition and financial reporting in Defence*.

70. In accordance with the provisions of section 20(1)(c) of the *Auditor-General Act 1997*, the ANAO and the DMO have entered into an agreement to undertake an annual review of DMO's major acquisition projects. The *2009–10 Major Project Report* was the third of these reports and covered 22 of the DMO's major projects. This was an increase of seven projects on the previous year's report and an increase of 13 projects when compared to the first MPR, which was tabled in Parliament in November 2008.

71. The objective of the ANAO's MPR is to provide:

- the Auditor-General's formal review conclusion on the status of projects as reflected in the Project Data Summary Sheets (PDSSs) prepared by DMO;
- ANAO analysis, in particular longitudinal analysis of projects over time; and
- further insights by the DMO on issues highlighted during the year (not included in the scope of the review by the ANAO).

72. The PDSSs are structured around three dimensions of project performance: cost, schedule and progress towards delivering planned capability. The PDSSs have been developed to present greater transparency and public accountability for major Defence equipment acquisition.

73. The ANAO's review of the PDSSs are conducted in accordance with the Australian Standard on Assurance Engagements (ASAE) 3000. These reviews are not as extensive as individual project performance audits conducted by the ANAO, in terms of the nature and scope of project issues covered, and to the extent to which evidence is required by the ANAO. Consequently, the level of assurance provided by the MPR in relation the Major Projects included is less than typically provided by the ANAO's performance audits.

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<sup>33</sup> Foreign Affairs, Defence and Trade References Committee, *Inquiry into materiel acquisition and management in Defence*, March 2003



## **The 2009–10 Major Projects Report**

74. The ANAO's analysis in the 2009–10 MPR indicates that maintaining major projects on schedule is the most significant challenge for the DMO and industry contractors. The ANAO found that the lead or main capability for 13 of the 22 Major Projects covered in 2009–10 MPR report have experienced schedule slippage.

75. The reasons for schedule slippage vary, but primarily reflect the underestimation of both scope and complexity of work by industry and the DMO. PDSS data shows that for more complex projects such as Wedgetail and the FFG upgrade, the schedule for technical work involving system design and integration is often significantly underestimated, especially compared to the original planned schedule.

76. The management of projects' budgeted cost is, to a significant degree, assisted by routine supplementation to deal with both price changes (via price indexation) and foreign exchange movement (via a whole-of-government 'no win, no loss' policy); and the coverage of certain operating costs, such as staffing, from outside projects' budgeted cost. In this context, while projects' budgeted cost requires careful management by the DMO, this dimension of project performance has not been a major issue.<sup>34</sup>None of the Major Projects in this report have exceeded their approved budgeted cost.

77. The agreement between ANAO and DMO excludes from the scope of the ANAO's review the identification of Major Project Risks and Issues and the achievement of future outcomes (i.e. capability expressed as 'Measures of Effectiveness') and future dates relate to events and depend on circumstances that have not yet occurred or may not occur, or have occurred but have not yet been identified. Accordingly, the conclusion of the 2009–10 MPR does not provide any assurance in relation to the following:

- Major Challenges, Major Project Risks, Major Project Issues;
- Measures of Effectiveness; and
- 'Forecasts' of future dates regarding a project's expected achievement of delivery schedules and capability where included in Sections 1, 3, and 4 of each PDSS.

78. The conclusion of the review of the PDSSs was that, except for the non-inclusion of project expenditure history expressed in base date dollars for 19 Major Projects and the prime contract price in base date dollars for four Major Projects, nothing has come to the attention of the ANAO that causes us to believe that the information in the PDSSs, within the scope of our review, has not been prepared in all material aspects, in accordance with the guidelines on completing the PDSSs.

79. The DMO is currently exploring options with the ANAO to address the qualified conclusions of the previous MPRs.

80. Additionally, the ANAO reported in the 2008–09 MPR that the control environment of each examined project differed due to the large range of corporate and project management IT applications being employed by the different project offices. The same

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<sup>34</sup> In the 2009–10 MPR, the DMO is reporting less than one per cent negative variation in the total budgeted cost of the 22 Major Projects. Net variation involves budgeted cost movements between Second Pass Approval to 30 June 2010 that are not due to price indexation, foreign exchange, government approved scope changes and transfers to other areas of Defence. See ANAO Audit Report No. 17 2010-11, loc. cit., at DMO Executive Summary, Table 1.

findings continued to apply across the 22 Major Projects reviewed in the 2009–10 MPR. The ANAO observed inconsistency between the information produced by each of the project's IT systems, such as risk management, financial management and document management systems. This highlighted that there was an issue for the DMO in ensuring reliable and consistent information to properly inform project management and decision making in relation to major projects.

## Conclusion

81. While acknowledging the complexity and risk associated with Defence major procurement projects, ANAO performance audits have revealed difficulties encountered in Defence projects when program management and systems engineering processes are not approached holistically. These findings highlight the importance of disciplined contract management and the importance of successful program management in the procurement process. This is particularly important early in the life of a project, where concerted effort in the planning and definition phase can avoid emerging cost overruns, schedule delays and capability reductions later in the project.

82. The ANAO has considered the proposals arising from Defence accountability reviews in a number of its performance audits, and will continue to do so in future. As mentioned earlier, the Minister for Defence and the Minister for Defence Materiel have announced their intention to request the Auditor-General to conduct an audit of the implementation of the Mortimer Report in the second half of this year. The ANAO's audit findings in relation to past reviews have addressed both the issues and challenges for Defence identified in the reviews, and the progress of Defence towards implementing some of the reviews' recommendations.

83. While changes to procurement processes have been made by Defence, this is an incremental process and progress has been slow. Where circumstances that impact on project performance arise, they should be readily detectable through ongoing performance monitoring mechanisms in place, from both a management and systems engineering perspective. Past performance audits<sup>35</sup> have revealed that strengthening of reporting and monitoring mechanisms in projects could help to better inform decisions made by both Defence and Government.

84. Managing projects in an environment of successive, significant organisational and management reforms can add to the complexity of the task. Given the long length of most Defence major acquisition projects, the full benefit of performance improvements expected from a reform are only likely to be realised in projects that are started following the introduction of the reform and arguably, only once the reform has been fully implemented and consolidated within Defence's practices.

85. As one approach to the improved transparency and accountability in major project acquisition, the ANAO's MPR, which has been developed in conjunction with the DMO, provides some key additional insights for Parliament and the public. Over time the MPR is expected to report on up to 30 projects and provide the opportunity for longitudinal analysis of projects over time. This increased level of reporting and analysis should allow the

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<sup>35</sup> See for example, ANAO Audit Report No.37 2009–10, *ibid*; and ANAO Audit Report No.41 2008–09, *ibid*.



Parliament greater oversight into the procurement process, particularly when read in conjunction with the ANAO's ongoing performance audits in this area.

## Attachment A

### Recent ANAO Performance Audits related to Defence procurement

**ANAO Audit Report No. 17 2010–11**

*2009–10 Major Projects Report*

**ANAO Audit Report No.37 2009–10**

*Lightweight Torpedo Replacement Project*

**ANAO Audit Report No. 13 2009–10**

*2008–09 Major Projects Report*

**ANAO Audit Report No. 48 2008–09**

*Planning and Approval of Defence Major Capital Equipment Projects*

**ANAO Audit Report No. 41 2008–09**

*The Super Seasprite*

**ANAO Audit Report No. 27 2008–09**

*Management of the M113 Armoured Personnel Carrier Upgrade Project*

**ANAO Audit Report No. 23 2008–09**

*Management of the Collins-class Operations Sustainment*

**ANAO Audit Report No. 9, 2008–09**

*2007–08 Major Projects Report*

**ANAO Audit Report No. 11 2007–08**

*Management of the FFG Capability Upgrade*

**ANAO Audit Report No. 1 2007–08**

*Acquisition of the ABRAMS Main Battle Tank*

**ANAO Audit Report No. 34 2006–07**

*High Frequency Communication System Modernisation Project*

**ANAO Audit Report No. 20 2006–07**

*Purchase, Chartering and Modification of the New Fleet Oiler*

**ANAO Audit Report No. 10 2006–07**

*SDSS Get Well Program (SDSS Follow-up)*

**ANAO Audit Report No. 9 2006–07**

*Management of the Acquisition of the Australian Light Armoured Vehicle Capability*

**ANAO Audit Report No. 3 2006–07**

*Management of Army Minor Capital Equipment Procurement Projects*

**ANAO Audit Report No. 36 2005–06**

*Management of the Tiger Armed Reconnaissance Helicopter Project-Air 87*

**ANAO Audit Report No. 24 2005–06**

*Acceptance, Maintenance and Support Management of the JORN System*

**ANAO Audit Report No. 10 2005–06**

*Upgrade of the Orion Maritime Patrol Aircraft Fleet*

**ANAO Audit Report No. 3 2005–06**

*Management of the M113 Armoured Personnel Carrier Upgrade Project*

**ANAO Audit Report No. 45 2004–05**

*Management of Selected Defence System Program Offices*



**ANAO Audit Report No. 29 2004–05**

*The Armidale Class Patrol Boat Project:  
Project Management*

**ANAO Audit Report No. 25 2004–05**

*Army Capability Assurance Processes*

**ANAO Audit Report No. 59 2003–04**

*Defence's Project Bushranger: Acquisition  
of Infantry Mobility Vehicles*

**ANAO Audit Report No. 32 2003–04**

*Wedgetail Airborne Early Warning and  
Control Aircraft: Project Management*