The Auditor-General

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Performance Audit

Management of Major Equipment Acquisition Projects

Department of Defence

Australian National Audit Office

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Australian National
Audit Office

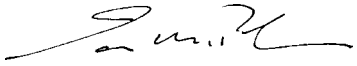
Canberra ACT
11 October 1999

Dear Madam President
Dear Mr Speaker

The Australian National Audit Office has undertaken a performance audit in the Department of Defence in accordance with the authority contained in the *Auditor-General Act 1997.* I present this report of this audit, and the accompanying brochure, to the Parliament. The report is titled *Management of Major Equipment Acquisition Projects.*

Following its tabling in Parliament, the report will be placed on the Australian National Audit Office's Homepage —http://www.anao.gov.au.

Yours sincerely



Ian McPhee
Acting Auditor-General

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

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Abbreviations*

ADF	Australian Defence Force
ADHQ	Australian Defence Headquarters
ANAO	Australian National Audit Office
APEX	Acquisition Program Executive—DAO
APS	Australian Public Service
ASP 97	*Australia's Strategic Policy* 1997
BMS	Business Management System
BPR	Business Process Re-engineering
CA	Chief of Army
CAF	Chief of Air Force
CAR	Capability Assessment Report
CDF	Chief of the Defence Force
CEO	Chief Executive Officer
CF	Capability Forum
CLAE	Cash Limited Administrative Expenses
CMIT	Capability Management Improvement Team
CN	Chief of Navy
COMSPTAS	Commander Support Australia
DAO	Defence Acquisition Organisation
DAOMAN	DAO Manual
DAPEC	Defence Audit and Program Evaluation Committee
DARB	Defence Acquisition Review Board—DAO
DCC	Defence Capability Committee
Defence	Department of Defence
DEFMIS	Defence Financial Management Information System
DepSec S&I	Deputy Secretary Strategy and Intelligence
DER	Defence Efficiency Review (report March 1997)
DMC	Defence Management Committee (now the Defence Executive)

DOF	Department of Finance
DOFA	Department of Finance and Administration
DPMC	Defence Program Management Committee (now the Defence Executive)
DRP	Defence Reform Program (announced April 1997)
DSSB	Defence Source Selection Board
EAS	Equipment Acquisition Strategy
FEG	Force Element Group
FMA Act	*Financial Management and Accountability Act 1997*
FMIP	Financial Management Improvement Program
FYDP	Five Year Defence Program
HQADF	Headquarters Australian Defence Force (now known as Australian Defence Headquarters)
HR PSC	Human Resource Policy and Support Centre—DAO
IAT	Integrated Acquisition Team
ILS	Integrated Logistic Support
IPT	Integrated Project Team
JCPAA	Joint Parliamentary Committee of Public Accounts and Audit
JSCFADT	Joint Standing Committee on Foreign Affairs, Defence and Trade
KPI	Key Performance Indicator
LEAP	Logistics Enterprise Architecture Project
MAB—MIAC	Management Advisory Board and Management Improvement Advisory Committee
MCE	Major Capital Equipment
MIS	Management Information System
PBS	Portfolio Budget Statements
PIR	Performance Information Review
PMAP	Project Management and Acquisition Plan—DAO
PMB	Program Management and Budgeting
PM&C	Department of Prime Minister and Cabinet

PMS	Project Management Support
PPBS	Planning—Programming and Budgeting System
PR&E	Performance Reporting and Evaluation—DAO
PRINCE2	Projects in Controlled Environments version 2
ProMIS	Project Reporting and Monitoring System—DAO
PQP	Project Quality Plan
QMS	Quality Management System
ROMAN	Resource Output Management Accounting Network
SCA	Support Command Australia
SDR	Strategic Defence Review—UK Ministry of Defence
SOR	Statement of Requirement
SPI	Smart Procurement Initiative—UK Ministry of Defence
SPMM	Standard Project Management Method
US DoD	United States of America Department of Defense
VCDF	Vice Chief of the Defence Force

*See also Glossary of Terms at back of this report.

Summary and Recommendations

Summary

1. The Defence organisation comprises the Department of Defence and the Australian Defence Force (ADF), which in turn consists of the three Services (Navy, Army and Air Force). Major Defence equipment acquisitions result from proposals approved by the Government regarding the military capability that Defence needs to achieve its mission: *to prevent or defeat the use of armed force against our country or its interests.* Defence's prime business during peacetime is developing and maintaining capability. The large amounts spent by Defence on acquiring weapons and the risks inherent in the acquisition process require well-developed acquisition management principles applied by suitably skilled and experienced personnel.

2. Total Defence expenditure in 1997–98 amounted to $10.9 billion, of which $2.4 billion was spent on major equipment acquisition projects. Defence currently manages over 200 major acquisition projects with a total estimated cost of some $43 billion of which $26 billion will have been spent to June 1999. Of the balance of $17 billion, Defence plans to spend $2.8 billion in 1999–2000.

3. The Defence acquisitions process involves several of Defence's 12 functional Groups. Seven of these, including the Defence Acquisition Organisation (DAO) and Support Command Australia (SCA), are Enabling Groups that provide products and services to Defence's 22 identified 'Outputs'. Australian Defence Headquarters (ADHQ) develops new capability proposals such as new weapon systems and platforms for Government approval. Once the proposals are approved, DAO manages the acquisition of the new capabilities. When acquired, the new capabilities are operated by the three Services during trials and evaluations and after their acceptance into service. SCA provides logistics policy and in-service logistics support for all new and existing weapon systems and equipment platforms.

4. The efficiency and effectiveness of Defence capital equipment acquisition depend upon sound requirement definitions and sound costings and timetables, as well as skilful management of the acquisition projects. Defence has some 1770 personnel and over 350 contracted-in professional service providers managing capital equipment acquisition projects. The projects range in size from the $6.1 billion ANZAC Ship project to the $21 million army specialised surveillance vehicle project. They vary greatly in complexity: from the technologically advanced $1 billion JORN project to basic commercially-available off-the-shelf equipment.

Outcomes and outputs framework

5. The complexity of modern public-sector management requires an overarching management framework that enables managers to focus on the issues which contribute most to organisational success. The audit adopted the resource management perspective provided by the Government's new accrual-based outcomes and outputs budgeting framework. This management framework will seek to reinforce a more business-like management of Commonwealth resources by funding agencies on the basis of agreed prices for outputs. The term 'outputs', as used in this audit, generally refers to the weapon systems and platforms acquired for and maintained by the ADF.

6. Defence is developing a capability management framework, which seeks to achieve 'seamless management' of its capabilities from their initial concepts through acquisition and deployment to their disposal at the end of their useful life. Of Defence's 22 outputs, 16 involve force element groups that depend on major acquisitions of weapons and other military equipment.

Audit objective and scope

7. The audit arose largely from concerns expressed by the Parliamentary Joint Committee of Public Accounts and Audit (JCPAA) during its reviews of the audit reports on the $1 billion JORN project and the $5 billion New Submarine Project. Those audit reports had commented on the need for Defence to improve its risk management of the projects, take firm and prompt action with the contractors to resolve contractor performance and quality issues and to pay only for achieved progress. The audit objective was to assess Defence's arrangements for higher-level management of major equipment acquisition projects. The principal aim was to formulate practical recommendations that would both enhance Defence's management of major acquisition projects and provide a degree of assurance about its ongoing apparent capacity to do so efficiently and effectively.

8. The audit scope adopted a wide perspective of Defence's management of acquisition projects. The audit scope embraced aspects of Defence's corporate governance framework, outputs/outcomes budgeting and financial management, performance monitoring and reporting, business process improvement and personnel management. The audit drew on a range of ANAO audits and other reviews in order to focus on performance management trends that have emerged in Defence over the last decade.

Overall conclusion

9. Management of acquisition projects in Defence is a complex task that relies on sound planning, programming, budgeting and implementation activities within at least four functional groups—ADHQ, DAO, the relevant Service and SCA. The size and nature of the acquisition activity have no comparison in the Southern Hemisphere. As such, to maintain an effective acquisition activity, Defence in effect seeks to be a leader in the development of its acquisition management activities.

10. Overall management of acquisition projects has, however, experienced systemic problems arising from a traditional top-down management of Defence's various functional groups without effective lateral communication and other processes by which capability outcomes can be managed better. Defence groups have often had a limited perspective on decisions that may affect other Defence groups further along the capability management continuum. For example, tasks such as maintaining a balanced view of capital expenditure and recurrent costing are often hampered by inadequate life-cycle cost estimates. As well, views about the practicability and / or clarity of acquisition objectives are not always shared by those concerned. Consequently, Defence and the ANAO see scope for improving Defence's arrangements for higher-level management of major acquisition projects and the efficiency and effectiveness of the acquisition function.

11. Defence has relied on committees to try to achieve suitable coherence and integration between the functional groups that contribute to capability management. However, given the increased numbers of functional groups (now 12) and the increasing complexity of capability management tasks, reliance on committees needs to be balanced against the advantages that could accrue from strong lateral management processes underpinned by modern business management practice, including a supportive information infrastructure.

12. Management information systems and performance monitoring systems that view capability management as a continuum across several functional groups have not yet been sufficiently developed to support sound decision-making. Consequently, Defence has still to implement key performance indicators and benchmarks covering all aspects of capability management. Defence is seeking to improve its capability management processes so that it may better manage capability planning, programming and budgeting, acquisitions and in-service support. However, given the absence of appropriate output management systems and agreed key performance indicators, any objective measurement of process improvements over time may be some years off.

13. Despite the large investment in capital equipment acquisitions over recent decades, Defence has not yet established the career structures it requires to be reasonably self-reliant in developing suitably experienced professional project managers who know and understand the Defence environment including capability outcomes. DAO remains reliant to a large extent on ADF officers posted-in from the Services as project managers and on increasing numbers of contracted-in professional service providers.

14. The Defence Executive's initiative of 'seamless management' of Defence capability combined with the Government's accrual-based budgeting outcomes and outputs framework should, if properly implemented, enhance the focus on performance and accountability by providing a more effective basis for stronger project management of major acquisitions. However, much will still depend upon Defence's capacity to further develop and maintain a corps of skilled, knowledgeable and experienced acquisition professionals within DAO and in other parts of the Defence capability management continuum.

15. The effective management of major acquisition projects is a business critical function for the department and warrants the ongoing involvement of the Defence Executive to progress, and build on, the initiatives for improvement currently under way.

16. This audit report makes six recommendations that aim to reinforce changes now under way in Defence. The recommendations propose that Defence:

- reconsider the benefits of allocating budgets for Defence's capability outputs to the relevant Output Managers, who, in turn, would fund the functional Groups through purchaser-provider agreements, when internal financial and costing systems permit such an approach;
- seek approval for cost-effective annual budget carryovers to support project managers in adopting a more commercial approach and paying contractors for achieved value for money, thereby reducing any incentive for managers to expend funds for the purpose of utilising annual budget allocations;
- provide for project managers to produce regular reports in a format that gives an objective overview of progress on major acquisition projects for review by senior managers; provide Output Managers with authority, in accordance with agreed protocols, to intervene in project management when appropriate and to implement contingency measures in response to adverse variations from approved schedule, cost or quality; and provide exception reports to senior executives to

allow consideration of contingency plans where progress has not proceeded according to requirements;

- reinforce and support initiatives to develop a standard project management method across all functional Groups involved in major equipment acquisition;
- align equipment acquisition project team focus with customer needs by making Project Boards accountable to the Output Manager responsible for delivering the output; and
- maintain an up-to-date DAO personnel workforce plan, in consultation with Output Managers, that integrates better current workforce initiatives and manages workforce demographics to increase the availability of experienced project managers.

Key findings

17. The Defence Executive aims *'to meld together all of the elements that go into building an effective defence force: people, equipment, training, acquisition, doctrine, logistic, disposition, facilities and so on.'* This 'seamless management' of whole-of-life capability will require new processes and systems that assign clear responsibility to Output Managers for delivering effective capability. The 'seamless management' concept should, if properly implemented, significantly improve the management of acquisition projects through better planning, programming and budgeting, as well as ensuring greater coherence and integration between all the Defence groups that contribute to Defence capabilities as a means of improving Defence's effectiveness.

18. Until recently, Defence's capability planning and programming process did not look at the whole of capability (that is, support requirements, personnel and training needs and recurrent costs). Consequently, not all personnel and operating costs associated with new capability were factored into the Defence budget, and Defence allowed the three Services to bid for supplementary funds under the Net Personnel and Operating Cost (NPOC) process. Since 1995–96 NPOC bids have risen at about $75 million per year, representing some three per cent of the average annual capital equipment investment over the last decade. Total NPOC is expected to be comparable to the total Defence Reform Program (DRP) savings by the end of the next decade.

19. It is likely that NPOC will continue to rise with the costs associated with maintaining, enhancing or replacing aging high-cost weapon platforms such as Navy's DDG destroyers and FFG frigates and Air Force's F–111 and F/A–18 aircraft.

Corporate governance

20. Defence capability relies on planning, programming, budgeting and implementation activities within at least four functional groups—ADHQ, DAO, the relevant Service and SCA. The Defence Executive has a critical role in coordinating and overseeing this capability management continuum. In addition, the Executive has to ensure that integration across Defence's functional groups does occur and that no functional group puts its own more immediate interests before the long-term interests of the capability management continuum as a whole.

21. Defence's traditional focus on its functional groups required extensive use of committees to try to integrate the various capability

management processes. This led to a general lack of clearly defined lines of authority, responsibility and accountability across the functional groups. The Defence Efficiency Review Secretariat found this approach often resulted in flawed decisions, unnecessary delay, an undue focus on process, and an over-emphasis on achieving consensus.

22. Within the corporate governance framework the Defence audit committee will make a greater contribution to Defence's corporate governance when it begins the practice of reviewing audit reports, advising the chief executive on matters of concern raised in them and perhaps even indicating appropriate remedial action.

Capability management

23. Defence's capability management framework issues underscore the importance of the Defence Executive's 'seamless management' concept, which has significance for Defence's major equipment acquisitions. Defence did not effectively implement program management and budgeting in the 1990s and, as a consequence, its programs and information systems were not structured in relation to the Force Element Groups; that is, the users of major military equipment. Prompted by the Government's initiatives in Commonwealth agencies, Defence has a new external focus on outputs and their relationship to identified outcomes but the advantages to flow from this may not be realised without a stronger focus on their management.

24. Defence is implementing 'seamless management' of whole-of-life capability via a number of business process initiatives that apply across its 12 functional Groups. These should effectively link ADHQ, DAO and SCA with the three Services and focus on increased efficiency, effectiveness, transparency and necessary consultation, particularly in relation to major equipment acquisitions. However, much remains to be done to improve the analytical processes involved in capability planning, programming and budgeting. Defence identified these as issues of importance nearly 30 years ago, and they now form part of the new outputs/outcomes budgetary arrangements.

Output budgeting

25. Defence's 12 functional groups are the primary basis for internal budget allocations and management in seeking to produce defence capability, the key deliverable to government. Rather than placing the budgets with the Output Managers responsible for military capabilities, Defence has allocated budgets for management by the Group Budget-holders.

26. In line with Output Managers' responsibility and accountability for delivering effective capability, and in accord with the Defence Executive's 'seamless management' initiative, budgets could be allocated to the relevant Output Managers so that they could 'purchase' the services they need from the functional groups through purchaser-provider agreements. This should encourage a more disciplined approach to achieving value for money both in terms of acquisitions and Defence outputs. Although Defence has reservations about changing to a purchaser-provider model, the costs and benefits of such a change should be reconsidered in the longer term when internal systems permit such an approach. This model encourages greater accountability, efficiency and effectiveness through a virtual contractual arrangement which imposes greater management discipline in a more contestable environment.

Financial management

27. Defence's financial management information system has to provide a range of data and functions suitable for outputs management. Defence's $44 million Project ROMAN is to replace the present inadequate systems for the outputs management task. Defence recognised the need for an effective system as early as 1992. The ANAO considers that the new system should contain a project management system with the functionality and performance information required to enable Output Managers to manage the tasks for which they are responsible and accountable. This requires the system to contain all the data necessary to manage costs and required timing and quality, codified in key performance indicator form, on which a project will be reported and evaluated before acceptance into service.

28. Defence has not yet developed the systems required to measure systematically the actual cost of its outputs and their relationship to outcomes, nor has it implemented policies and procedures which allow full attribution of inter-group costs. This leads to difficulties in identifying fully the financial and other resources used to perform activities and achieve specific outputs. This is inadequate for the outcomes and outputs framework, which requires fully-developed, cost-conscious management techniques that seek to improve the cost efficiency and effectiveness of agreed outcomes and outputs.

29. This and past audits indicate that Defence's cash-based accounting emphasised the achievement of each year's budgeted expenditure estimates. This presents capital equipment budgeting problems at times when earned value on projects has not been achieved because of progress delays. It follows that Defence requires flexible funds carryover

arrangements under both external and internal budgeting arrangements to enable cost-effective re-programming of its capital equipment budget program. This would allow project managers to properly link progress payments to commensurate earned value. Given the changes to department funding and decentralised banking introduced under the Government's financial management reforms, it would be timely for Defence to review current practices to encourage a more commercial focus on contract management and outcomes.

Acquisition performance monitoring and reporting

30. In 1997, a joint performance information review (PIR) by Defence and the then Department of Finance (DOF) found major shortcomings in Defence's performance monitoring and reporting process. In response to the PIR, Defence plans to implement a new performance management framework. The information system needed to manage the capability management framework systematically is now being developed but its full implementation may be some years off.

31. DAO uses quantitative measures such as target dates, milestones and funds expended for most of its principal project management activities. The organisation is developing benchmarks, key performance indicators (KPIs) and performance targets to monitor its project management performance. These would identify projects that are not progressing according to plan. The draft KPIs are reasonably well-developed and could be used to report progress of major acquisition projects to the Defence Executive. However, DAO has not collected the KPI data required to report on all of its projects.

32. The capability management framework will require not only KPIs specific to Defence Groups, but also a general set of KPIs that cover the full planning, programming, budgeting and implementation continuum from a Defence capability perspective.

33. There would be considerable advantage for Defence if project managers produced regular reports on actual progress against objective criteria on major projects. A system of uniform reporting is needed to show clearly which projects are exceeding approved schedule or cost or not meeting required quality. This would assist senior managers, who have a wider perspective than the project managers, in assessing the value added by the project managers and in deciding when to intervene and when to implement contingency measures in response to variations from planned progress.

Business process improvement

34. DAO's business process re-engineering (BPR) project is developing a standard project management method (SPMM) capable of providing a project management framework that covers all project phases from project first conception, through the capital equipment acquisition, to equipment operational service, and including logistic support and final disposal. DAO's evaluation of proposed re-engineered processes indicates that, if properly implemented across the capability management continuum, the SPMM offers the clear potential to improve acquisition project outcomes; improve corporate governance generally; and provide some of the basic information required by the outputs management framework.

35. DAO, Australian Defence Headquarters and Support Command Australia are now strengthening their business process interconnections through three business process re-engineering projects based to varying degrees on SPMM. There is a need to ensure that cross-functional elements of DAO proposed SPMM are effectively merged to minimise any adverse effects of the organisational boundaries between the three main areas.

36. Defence is seeking to improve the quality of decision information by ensuring that stakeholders provide input to capability development proposals and to take proper account of that input. To facilitate this arrangement, the Defence Executive decided that Integrated Project Teams (IPTs) be trialed in the pre-approval stage of some major projects. DAO has proposed integrated acquisition teams (IATs) as a means of shortening the acquisition cycle time. However, at the time of the audit DAO had not completed an IAT trial.

Personnel management

37. JCPAA reviews and ANAO's previous audits have drawn attention to the lack of project management career streams within the military and the high turnover of project managers within the life of a project leading to a loss of such skills and experience as were available. DAO's 70—30 per cent mix of civilians and military personnel respectively makes the development of a professional project management career structure within DAO very challenging and increases management risks. This is because the Services post military personnel to senior positions in DAO projects for approximately three-year periods, thus increasing risks of skill gaps on long-lived projects typical of Defence acquisitions. The Defence Efficiency Review recommended that Defence reduce its military staffing in DAO from about 30 per cent to about 10 per cent.

38. A DAO survey shows that many officers posted as project managers have little or no prior project management experience. DAO often benefits from the specialist advice that military personnel involved in project management can provide on systems engineering, systems operational requirements and integrated logistics support. However, not all personnel involved in project management have had extensive experience of this kind.

39. DAO has implemented project manager training programs including post-graduate assistance and graduate recruiting programs, and is now proposing to standardise its project management procedures as part of its business process re-engineering initiatives. The latter may help overcome some of the identified problems. Defence records indicate similar staff turnover and career structure problems in the acquisition planning phase upstream from DAO as well as the in-service support phase downstream from DAO in the capability management continuum.

40. To assist in protecting Commonwealth interests and achieving satisfactory outcomes on acquisition projects, Defence should progress the implementation of the JCPAA's recommendations on improving project management by building a corps of skilled and experienced acquisition professionals. A practical way of endeavouring to achieve this would be to maintain DAO's personnel strategic plan, in consultation with Output Managers responsible for capability outputs, as a plan that brings together current personnel and workforce initiatives and manages workforce demographics to increase the availability and continuity of experienced project managers. The plan should be revised as necessary to take account of any changed work practices from initiatives such as business process re-engineering.

Response to audit report

41. There was considerable consultation between Defence and the ANAO on the recommendations in the proposed report of the audit. Defence agreed to the recommendations, with some qualifications, and commented that the final outcome was worth the effort of the officials in both agencies.

Recommendations

Set out below are the ANAO's recommendations with report paragraph references and an indication of the Defence response. The ANAO considers that Defence should give particular priority to Recommendations Nos 2, 3 and 6. Priority recommendations are indicated with an asterisk.

Recommendation No.1 Para. 4.19

The ANAO recommends that, when internal financial and costing systems permit, Defence reconsider the benefits of allocating capability output budgets to the relevant Output Managers, who, in turn, would fund the functional Groups through purchaser-provider agreements designed to achieve capability outputs.

Defence response: Agreed, with qualifications.

***Recommendation No.2 Para. 5.36**

The ANAO recommends that Defence seek Ministerial approval, in consultation with the Department of Finance and Administration, for annual capital equipment acquisition budget carryovers at levels commensurate with sensible re-programming of capital equipment acquisition activities and Commonwealth budget imperatives in order to assist cost-effective acquisition, with project managers only making progress payments to contractors in accordance with earned value.

Defence response: Agreed, with qualification.

***Recommendation No.3 Para. 6.63**

The ANAO recommends that, to promote efficient and effective management of acquisition projects and achievement of capability outputs, Output Managers:

(a) receive regular reports (until a suitable electronically-based executive management information system can be developed) on each major equipment acquisition project relevant to their responsibilities in a format that includes details of, for example, actual contractor progress against scheduled progress (earned value); contract milestones achieved against milestones due; any expected difficulties in meeting imminent milestones; quality assurance issues that have arisen; and actual expenditure against scheduled expenditure;

(b) have authority to intervene in project management in accordance with agreed protocols and to implement contingency measures in response to adverse variations from scheduled progress, cost and quality; and

(c) provide, for consideration by Defence senior management, reports on major equipment acquisition projects disclosing any adverse variations from approved tolerance limits on scheduled progress, cost and quality, together with advice of any action considered necessary in the circumstances.

Defence response: (a) Agreed.

(b) Agreed, with qualification.

(c) Agreed, with qualification.

Recommendation No.4 Para. 7.47

The ANAO recommends that, to minimise any adverse effect of Group boundaries on the capability acquisition process across Groups, Defence apply the Defence Acquisition Organisation's proposed standard project management method to all Groups involved with capital equipment acquisitions.

Defence response: Agreed.

Recommendation No.5 Para. 7.51

The ANAO recommends that, to better align equipment acquisition project team focus with customer needs, Defence consider making Project Boards accountable to the Output Manager responsible for delivering the relevant output.

Defence response: Agreed, with qualification.

***Recommendation No.6 Para. 8.46**

The ANAO recommends that DAO, in consultation with Output Managers responsible for capability outputs, maintain its personnel strategic plan as a workforce plan that brings together its current personnel and workforce initiatives and manages workforce demographics to increase the availability and continuity of experienced project managers, and revise the plan as necessary to take account of any changed work practices and economies from initiatives such as business process re-engineering.

Defence response: Agreed.

Audit Findings and Conclusions

1. Introduction

This chapter provides an overview of the roles and responsibilities of the Defence groups that contribute to Defence capability development and focuses particularly on the Defence Acquisition Organisation. It also sets out the audit's objectives and scope.

Defence mission and management structure

1.1. The Defence organisation comprises the Department of Defence and the Australian Defence Force (ADF), which in turn consists of the three Services (Navy, Army and Air Force). Major Defence equipment acquisitions result from proposals approved by the Government regarding the military capability that Defence needs to achieve its mission: *to prevent or defeat the use of armed force against our country or its interests.*[1] Defence's prime business during peacetime is developing and maintaining capability. The large amounts spent by Defence on acquiring weapons and the risks inherent in the acquisition process require well-developed acquisition management by experienced specialist acquisition staff.

1.2. The Department of Defence is a complex organisation, which, under new organisational arrangements, comprises 12 functional Groups delivering 22 'Outputs' (see Tables 1 and 2 in the Annex to this chapter).[2] Defence funds each of its functional Groups via budget allocations that take account of input needs and holds six Output Managers responsible for delivering the 22 Defence outputs. Seven of the 12 functional Groups are Enabling Groups which do not deliver products and services externally but deliver agreed services and support to Defence outputs, to the Defence organisation as a whole and to other Enabling Groups. The remaining five Groups—the Australian Defence Headquarters (ADHQ), Navy, Army, Air Force and Intelligence—comprise the various elements of combat capability. Their outputs are the key products Defence provides to Government.

1.3. The 12 Group Managers are responsible for 'vertical' management of their Groups. The six Output Managers are responsible for lateral management of 22 outputs across Defence. Tables 1 and 2 show that the three Service Chiefs are both Group Managers and Output Managers.

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1 Department of Defence, *Portfolio Budget Statements 1999–2000,* p.2.

2 With the introduction of Program Management and Budgeting in 1990, Defence reorganised from a five program structure to an eight program (functional group) structure. The Defence Reform Program in July 1997 created a 14 group structure and this was reduced to 12 groups in July 1999. See; *Defence Report 1988–89*, p.ix; *Defence Annual Report 1997–1998*, pp.38–39; and Department of Defence, *Reform of Defence Headquarters Staff*, DEFGRAM No. 221/99, 20 August 1999, p.2.

1.4. Functional interdependence between the Defence Groups raises the need for efficient and effective inter-group business processes that ensure group interactions remain coherent, integrated and focused on developing and sustaining Defence capability. Defence has traditionally relied on vertically-oriented hierarchical command and management structures in its functional groups and aligned its business processes with the work priorities within its groups. Defence referred to each of its functional groups as 'programs' and internally allocated to each 'program' a budget to cover operating costs and the products and services provided to other programs. This practice resulted in inefficient inter-group coherence and integration, and a reduced focus on developing and sustaining Defence capability.

1.5. The Defence Executive's initiative of 'seamless management' of Defence capability combined with the Government's Accrual-based Outcomes and Outputs Framework should, if properly implemented, improve inter-group cohesion and integration and reinforce a focus on Defence outputs. It should better align accountability for Output Management performance with responsibility for what is expected from each functional group. Defence is also improving its business processes in key areas of its capability development continuum.

1.6. However, Defence has decided to continue to allocate budgets to each functional group rather than to the Defence Outputs. This arrangement introduces diffused authority over the financial resources needed to develop and sustain each Defence Output. Output Managers do not have direct financial control over the different service providers in the capability management continuum but are accountable for outputs that are affected by resource decisions they do not influence. This lessens the opportunity or incentive for Output Managers to manage their outputs more effectively or efficiently from the financial perspective. This issue is addressed in Chapter 4.

1.7. Any review of a significant activity such as management of major equipment acquisition projects has to take place within the context of Defence's capability planning, programming and budgeting system (PPBS). The discussion at Appendix 1 provides a useful context for the remainder of the report and will also aid understanding of the main issues involved.

Management of acquisition projects

1.8. Total Defence expenditure for 1997–98 amounted to $10.9 billion, of which $2.4 billion was for major capital equipment acquisitions;

$123 million for minor capital equipment; and $1.8 billion for maintenance and stores.[3] Of the $2.5 billion spent on major and minor capital equipment, $1.3 billion was spent overseas.[4]

1.9. Defence currently manages over 200 major acquisition projects with a total estimated cost of some $43 billion of which $26 billion will have been spent on progress payments to June 1999. Of the balance of $17 billion, Defence plans to spend $2.8 billion in 1999–2000.[5]

1.10. Defence's major capital equipment projects arise from complex and evolving planning, programming and budgeting interactions between various Defence organisations as shown in Figures 1 and 2. The Defence Executive provides policy and strategic planning guidance and resource allocations to Defence's 12 Groups in accordance with the Government's key Defence strategy guidance document *Australia's Strategic Policy* (ASP 97),[6] and other statements of defence policy.

1.11. Defence Headquarters' Capability Analysis and Options Staff and Management and Reporting Division,[7] with assistance from the Services and other Defence Groups, identify present military and other defence capabilities, their limitations and the extent to which these capabilities should be developed or varied. They are responsible for developing and programming of new capability projects from initial concepts through to project approval, which includes managing the list of unapproved projects—called the Pink Book. The Defence Capability Committee (DCC) and the Capability Forum (CF) determine capability solutions with assistance from Defence Acquisition Organisation (DAO) and the Services and Support Command Australia (SCA).

1.12. The Defence Source Selection Board (DSSB), chaired by DAO, recommends Defence's preferred suppliers to the delegate (the Minister for Defence, Deputy Secretary Acquisition or the systems acquisition Division Head). When the project is approved for implementation, it is transferred from the Pink Book to the approved project list—the White Book—which DAO manages.

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3 Department of Defence, *Defence Annual Report 1997–98*, pp.28, 253. The figure for minor capital equipment was derived by subtracting DAO's total expenditure on major capital equipment from Defence's total expenditure on capital equipment. Throughout this report the ANAO has relied on figures published in *Defence Annual Report 1997–98,* in Defence's *Portfolio Budget Statements 1999–2000,* and in other Defence records.

4 Department of Defence, *Defence Annual Report 1997–1998*, p.148.

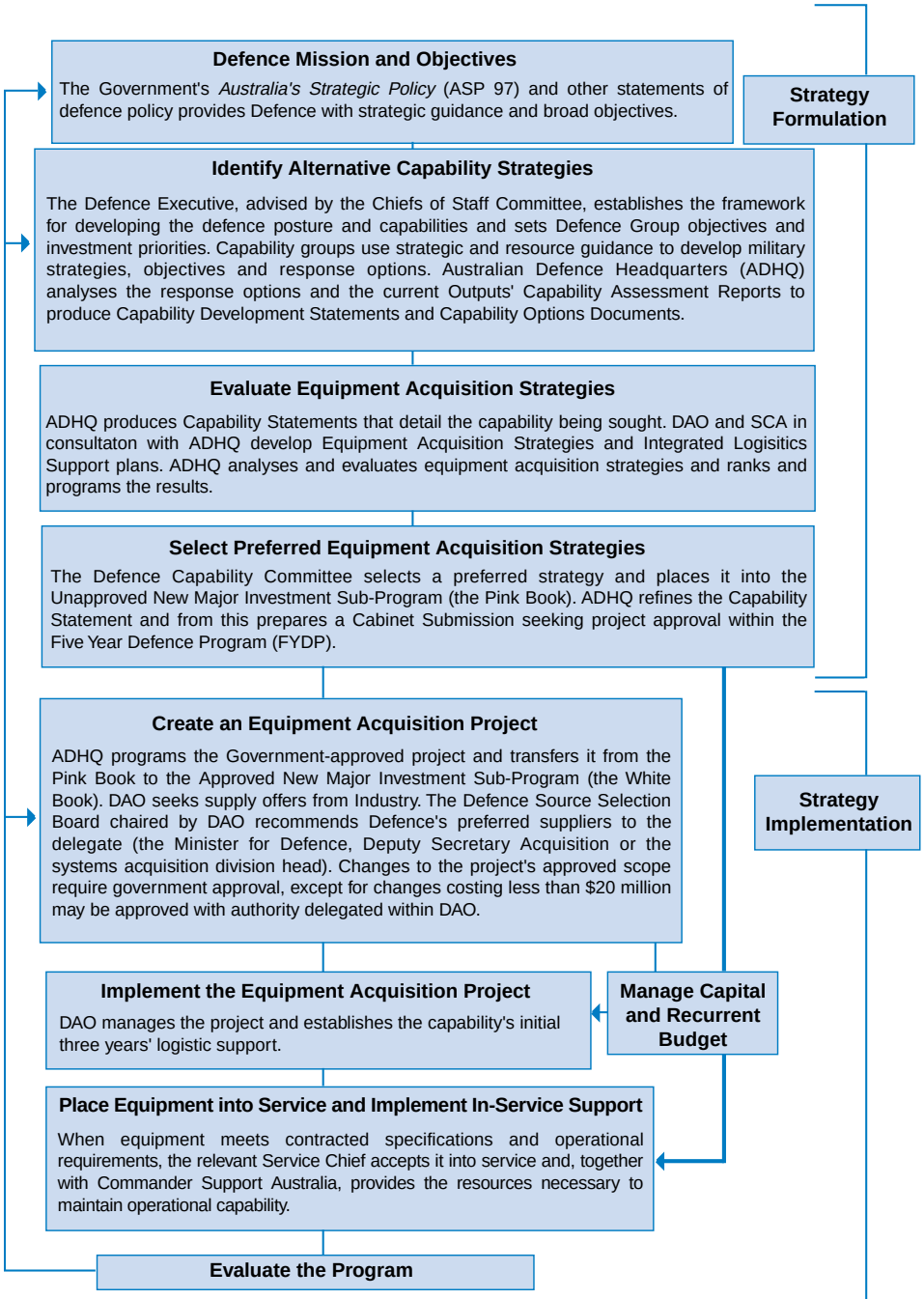
5 Department of Defence, *Portfolio Budget Statements 1999–2000: Budget Initiatives and Explanations of Appropriations 1999–2000*, p.153.

6 Department of Defence, *Australia's Strategic Policy*, 1997.

7 A recent reorganisation of the Defence Headquarters resulted in the former Capability Division being renamed Capability Analysis and Options Staff, and Capability Program and Resources Planning Division being renamed Management and Reporting Division.

Figure 1

Defence's Capability Planning, Programming and Budgeting System.[8]



Source: Prepared by the ANAO from Defence Documents.

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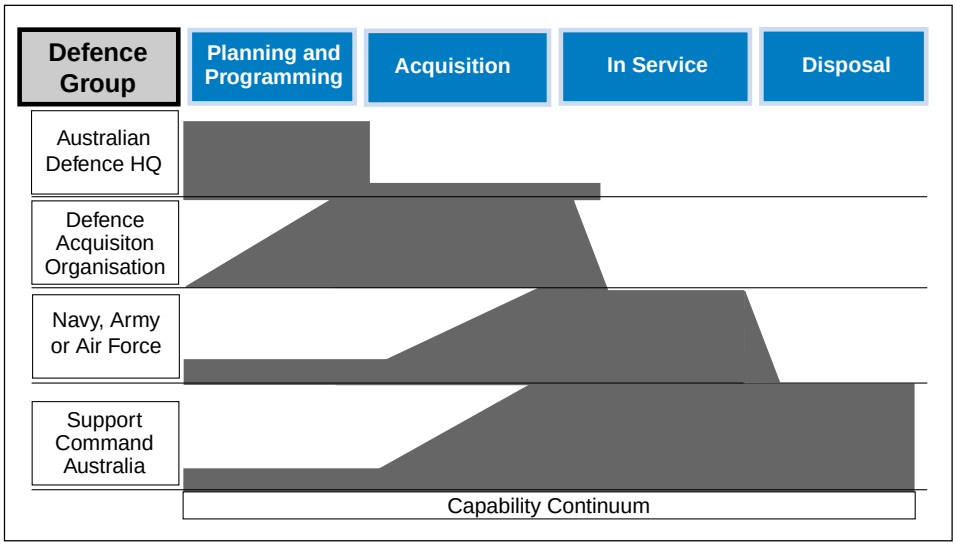
[8] This basic flow diagram is based on information from late 1998. Defence's capability management improvement initiative is seeking to enhance and streamline this system.

1.13. Of the seven Enabling Groups, Defence considers DAO to be one of the most crucial in view of its contribution to Defence capability in terms of force structure development and defence preparedness.[9] The audit's focus is the overall management of acquisition projects, rather than the project management process used within each DAO project.

Figure 2

Defence Group Activity within the Capital Equipment Cycle



Source: Prepared by the ANAO from Defence documents.

1.14. The shaded areas in Figure 2 show, for each phase of the capital equipment acquisition cycle, each Defence Group's increasing, constant or declining contribution over time. For example, during the new capital equipment planning and programming phase DAO assists ADHQ with defining the capital equipment project's scope, schedule and cost. Within the acquisition phase DAO is assisted by the relevant Service, Support Command Australia (SCA) and ADHQ. DAO provides technical advice to SCA and the Services during the equipment's transition from acceptance from contractors to its full acceptance into operational service.

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[9] Military capability consists of two components—Force Structure and Preparedness. Force Structure consists of military platforms, equipment, units and facilities. Preparedness has two time-specific elements—operational readiness and sustainability. Readiness is the ability of a force element to be capable of performing designated operational roles and tasks within a specified period of time. Sustainability is the ability to support forces from their deployment or commitment to operations until completion of assigned tasks. *Australia's Strategic Policy* (Department of Defence 1997) covers those elements of the Government's overall security policy which relate to the role of armed force in international affairs. Pages 38–39 and 55 of *Australia's Strategic Policy* discuss force structure and preparedness. See also Audit Report No.17 1995–96 *Management of ADF Preparedness*.

1.15. DAO is responsible for acquiring capital equipment and its initial three years' spares support; developing the supporting infrastructure; and coordinating the introduction of the capital equipment into operational service with the ADF. Support Command is responsible for logistics policy at the whole-of-Defence level and for implementing in-service support of all equipment placed into operational service. The relevant Service Chief[10] is responsible for accepting capital equipment from DAO into operational service and managing the resources necessary to maintain the agreed level of operational capability.[11]

Organisational design elements of capability planning programming and budgeting

1.16. Figures 1 and 2 indicate the need for coherent and integrated interactions between Defence's 12 functional Groups, particularly acquisition management interactions in ADHQ, DAO, the three Services and SCA. Planning and programming data passing between ADHQ's Capability Analysis and Options Staff and DAO's implementation of acquisition projects should be well defined and timely if DAO is to be fully aware of the statements of requirements (SORs) and so assist ADHQ develop sound acquisition strategies. SCA requires accurate technical data from DAO so that the acquired equipment may be supported by efficient and effective in-service support policies and integrated logistics.

1.17. Many Defence acquisition projects are of long duration, technologically complex and costly. This presents challenges in managing both strategy formulation and implementation over long periods as well as linking budgets and costs to capital equipment proposals and capability efficiency evaluations.

The audit

1.18. The audit arose largely from concerns about Defence's general management of major acquisition projects expressed by the parliamentary Joint Committee of Public Accounts and Audit (JCPAA) during its reviews of the audit reports on the $1 billion Jindalee Operational Radar Network (JORN) Project and the $5 billion New Submarine Project. Those audit reports had commented on the need for Defence to improve its risk management of the projects; take firm and prompt action with the contractors to resolve contractor performance and quality issues; and to pay only for achieved progress.

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[10] Chief of Navy, Chief of Army or Chief of Air Force.

[11] In recent years Defence has continually changed this planning and programming process, as indicated by changes in the relevant Defence Instruction General ADMIN 05–01. The Defence Publication, *Delivering Defence Capability—Roles and Responsibilities*, 15 June 1998, provides a broad outline of a recent stage in its development.

1.19. In its report on the JORN Project[12], the Committee made the following general comments:

> *The JCPA has examined a number of Defence projects and programs, which have revealed Defence's consistent inability to gain value for money. It is essential that Defence addresses project management shortcomings and establishes sound procedures, which will ensure that high cost projects are completed within allocated budgets and time-frames.*[p xxvi]
>
> *The Committee concluded that many project management problems which have been identified in previous inquiries by the JCPA are not yet resolved. The Committee therefore believes that the problems inherent in the JORN Project are evidence of a wider, more fundamental problem in the Department of Defence which warrants further investigation.* [p 121]

Objective

1.20. The audit objective was to assess Defence's arrangements for higher-level management of major equipment acquisition projects. The principal aim was to formulate practical recommendations that would both enhance Defence's management of major acquisition projects and provide a degree of assurance about its ongoing capacity to do so efficiently and effectively. In broad terms, the audit sought to:

- appraise, at a high-level, the capital equipment acquisition aspects of Defence's corporate governance framework and capability management;
- appraise Defence's capability management business process improvements;
- assess DAO's personnel career development and training in the area of project management; and
- formulate recommendations which support better management practices and overall performance.

1.21. The audit considered the overall management of acquisition projects, and not the project management process within each Defence project, although it did consider proposals for standardising the latter process.

Scope

1.22. The previous major ANAO review of Defence acquisition project management was reported in *Review of Defence Project Management* in 1983,

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[12] Joint Committee of Public Accounts and Audit Report 357 *The Jindalee Operational Radar Project* March 1998.

which was reviewed extensively by the Joint Committee of Public Accounts in 1986. Since then, there have been related individual Defence project audits. The audit scope adopted a wide perspective of Defence's management of acquisition projects. The audit covered relevant aspects of corporate governance, outputs budgeting and financial management, performance monitoring and reporting, business process improvement and personnel management. This audit report emphasises project management issues.

1.23. Audit fieldwork was conducted substantively in the period from September 1998 to May 1999. The audit encompassed fieldwork in Defence's Offices in Canberra and in Support Command Australia in Melbourne.

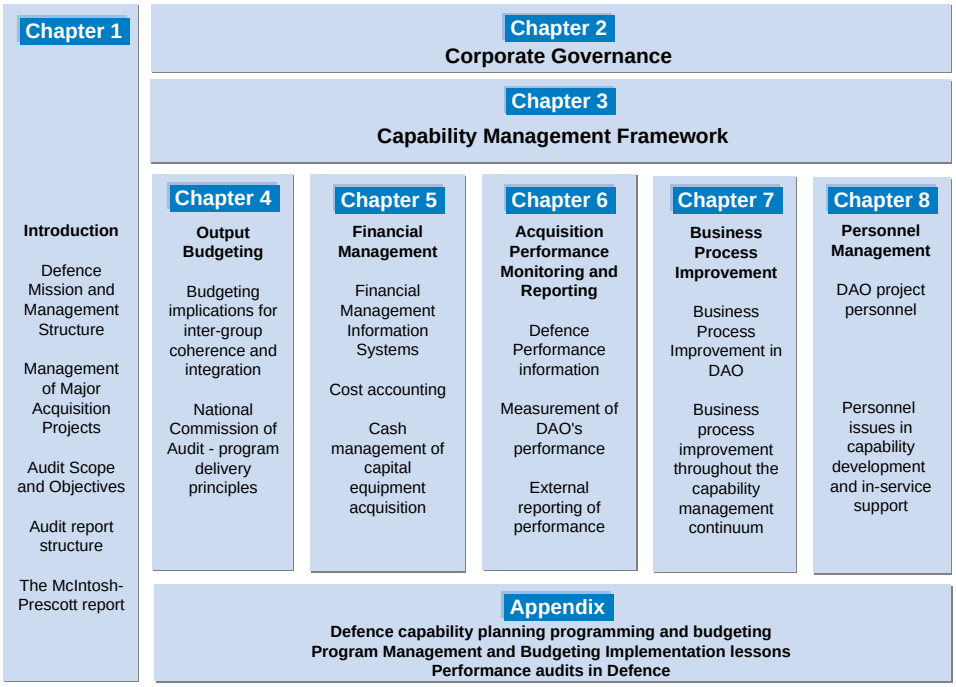
1.24. The audit covered a wide range of activities within Defence and involved discussions and review of documents. Discussion papers consolidating the findings from the audit were put to Defence in April 1999 for comment. The proposed report of the audit was sent to the Department in June for comment, which the Department provided in July. The comments, which focused mainly on the recommendations in the proposed report, were later revised after consultations with the ANAO.

1.25. The audit benefited from an audit reference panel comprising members with management expertise who advised the ANAO on management issues emerging in the audit. Members of the panel were: Dr John White, Mr John Randall, Mr Tom Hayes AO and Defence's then Deputy Secretary Acquisition Mr Garry Jones (Defence's nominated representative). The audit was conducted in conformance with ANAO auditing standards and cost $365 000 at the time of tabling.

Audit report structure

1.26. The audit report is organised into eight chapters as shown in Figure 3. The ANAO audited the management of acquisition projects from Defence's capability management perspective. Consequently, the first four chapters place acquisition project management within the context of Defence's corporate governance and capability management and budgeting framework. Chapters four and five discuss Defence's Output Budgeting and Financial Management and the remaining chapters increasingly focus on DAO.

Figure 3
Report Structure



McIntosh/Prescott Report

1.27. After the ANAO provided the proposed report of the audit to Defence, the Minister for Defence released a report on the Collins Submarine Project and related procurement matters (McIntosh / Prescott report).[13] The report identified several 'key deficiencies' in the Collins Submarine Project, including:

> *Inadequate reporting of these issues and their significance within Defence and to the Government, and lack of sufficient action to deal with them in a timely manner, partly caused by the structure of the original contracts, too great an adherence to some of the philosophies on which these were based even when circumstances have changed and the way in which the principal contractor and sub-contractors have been progressively released from their obligations (in Boeing's case) or not adequately held to the relevant performance standards (ASC and Boeing).*[14]

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[13] Sir Malcolm K. McIntosh, and John B. Prescott AC, *Report to the Minister for Defence on the Collins Class Submarine and Related Matters*, Commonwealth of Australia, Canberra, 20 June 1999. Available: http://www.defence.gov.au/collins/ [1 July 1999]

[14] Ibid. p.31.

1.28. The report commented that '*The main issue is to improve the managerial and contractual structures so that the deficiencies are recognised and addressed much more quickly and robustly'*.[15] The report made several recommendations relating specifically to the Submarine Project, and the following general recommendations on Defence procurement:[16]

- *Significantly strengthening the procurement structure, including upgrading the position of the [Submarine] project director to two star equivalent and the head of the [Defence Acquisition] Organisation to junior Secretary, with applicants for the latter sought from outside Defence to bring in more commercial expertise.*
- *Opportunities be found for Defence officers pursuing procurement careers to spend time in large commercial procurement projects and friendly, foreign procurement organisations.*
- *Coordinating committees be established for all major procurements under the relevant Service head to ensure that all aspects of the procurement, manning, support and operations are properly considered and integrated for a smooth transition into service.*
- *A study be made of procurement strategies for software-intensive projects, whether stand-alone or embedded in large hardware projects.*
- *In future major projects, there should be more attention to the Commonwealth's own role and some new approaches in contractual arrangements to achieve better assessments of costs including more realism and transparency in provisionally costed items and contingency; processes to ensure the Commonwealth is a smart buyer; other improved risk management processes; clear requirements for performance, supported by a full range of advance tests; clear milestones; and a different approach to mid-contract reviews.*

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[15] Ibid.

[16] Ibid. pp.32–33.

Annex to Chapter 1—Defence Groups and Outputs

Table 1

Defence's 12 Groups 1 July 1999

	Group	Group Manager
1	Defence Headquarters	Vice Chief of the Defence Force/Deputy Secretary Strategy Deputy Secretary Resources and Management.
2	Navy	Chief of Navy
3	Army	Chief of Army
4	Air Force	Chief of Air Force
5	Intelligence	Deputy Secretary Intelligence
	Enabling Group	**Group Manager**
6	Support Command General logistic support	Commander Support Australia
7	Joint Education and Training General training and education and Defence Personnel Executive Personnel policy and management	Head—Joint Education and Training Head—Defence Personnel Executive
8	Acquisition	Deputy Secretary—Acquisition
9	Science and Technology Science and technology policy and enabling research	Chief Defence Scientist
10	Defence Estate Estate planning and management	Head—Defence Estate
11	Defence Information Systems	Head—Defence Information Systems
12	Defence Corporate Support Corporate and administrative support	Head—Defence Corporate Support

Source: Prepared by the ANAO from Defence records.

Table 2

Defence's Outputs from 1 July 1999[17]

	Output	Output Manager	Description
1	Command of operations	Commander Australian Theatre	Provision of effective command of military campaigns, operations and activities.
2	Strategic Intelligence	Deputy Secretary Intelligence	Provision of intelligence collection, assessment and distribution services to Government, and to support the conduct of military operations.
3	Capability for major surface combatant operations	Chief of Navy	Provision of the major surface combatant force at levels of capability to assert sea control, conduct surveillance, maritime patrol and response operations, intelligence collection, counter-insurgency operations, the protection of shipping, offshore territories and assets and operations other than war in support of the Government.
4	Capability for patrol boat operations	Chief of Navy	Provision of the patrol boat force at levels of capability to conduct peacetime surveillance, and maritime patrol and response operations within coastal waters and operations other than war in support of Government.
5	Capability for submarine operations	Chief of Navy	Provision of the submarine force at levels of capability to conduct covert surveillance and reconnaissance, offensive operations against warships, submarines and merchant shipping, and mining and support to special operations.
6	Military geographic information	Vice Chief of the Defence Force	Provision of up-to-date and accurate information to support military planning and operations.
7	Capability for afloat support	Chief of Navy	Provision of the afloat support force at levels of capability required to provide under way replenishment of fuel, water, stores and ammunition, and strategic bulk fuel transport.
8	Capability for mine counter-measures and mining	Chief of Navy	Provision of the mine countermeasures force at levels of capability to conduct mine clearance from beaches, shallow and deep water, route survey and lead through operations. Provision of the ADF capability for mining.

[17] Defence advised that the overall structure and number of Defence Groups and Outputs is likely to change. See paragraph 4.20, point two.

	Output	Output Manager	Description
9	Capability for amphibious lift	Chief of Navy	Provision of the amphibious lift force at levels of capability to conduct to amphibious operations, and to support land operations from sea, provide strategic, operational, tactical and administrative sea transport, and provide support to beach intelligence gathering.
10	Capability for special forces operations	Chief of Army	Provision of special forces at levels of capability to conduct special operations beyond the scope of conventional forces, including special reconnaissance, offensive operations, special recovery operations, and support operations.
11	Capability for land task forces operations	Chief of Army	Provision of land task forces at levels of capability to undertake conventional land-based warfare, including mechanised, infantry, army aviation and land surveillance operations, and combat support to operations.
12	Capability for logistic support of land operations	Chief of Army	Provision of logistics support of land operations at levels of capability required to sustain deployed land forces.
13	Capability for air strike/ reconnaissance	Chief of Air Force	Provision of the F–111 air strike and reconnaissance force at levels of capability to undertake long-range land and maritime strike, battlefield interdiction and limited air reconnaissance operations.
14	Capability for tactical fighter operations	Chief of Air Force	Provision of the F/A–18 tactical fighter force at levels of capability to conduct air-to-air and combat, air-to-surface attack, plus associated training aircraft.
15	Capability for ground-based air defence	Chief of Army	Provision of ground-based air defence elements at levels of capability to defend air threats against key strategic assets.
16	Capability for strategic surveillance	Chief of Air Force	Provision of strategic surveillance elements at levels of capability to undertake wide area surveillance, point air defence, and airspace control.
17	Capability for maritime patrol aircraft operations	Chief of Air Force	Provision of the P3C maritime patrol aircraft force at levels of capability to conduct long-range maritime air patrol activities, including anti-shipping and anti-submarine warfare, and maritime surveillance.

	Output	Output Manager	Description
18	Capability for airlift	Chief of Air Force	Provision of Air Lift (including C–130, B–707 Caribou and F900 aircraft) at levels of capability to undertake tactical and strategic Air Lift and air refuelling operations.
19	Capability for Combat support of air operations	Chief of Air Force	Provision of deployed combat support to ADF air operations at main operating bases, forward operating bases and point of entry airfields.
20	Effective international relationships and contribution to international activities	Deputy Secretary Strategy & Intelligence	Provision of services which support the maintenance of a secure regional environment, better position the ADF for successful operations and shape Australia's strategic security environment, through the development and maintenance of effective international relationships, and management of overseas deployments.
21	Effective contribution to national support tasks	Vice Chief of the Defence Force	Provision of support to the Government and Australian community in non-combat related roles, which are possible as a result of military capacity. Includes the provision of assistance to the civil community, defence force aid to the civil power, assistance to civil search and rescue, support to civil surveillance through patrol boat and P3C maritime patrol capabilities, emergency management, and VIP air transport.
22	Strategic policy and direction	Vice Chief of the Defence Force and Deputy Secretary Strategy	Strategic Policy and Direction concerns decisions and advice to Government about the development and use of Australia's armed forces to most cost-effectively prevent or defeat the use of armed force against Australia.

Source: Prepared by the ANAO from Defence records.

2. Corporate Governance

This chapter provides an overview of Defence's corporate governance at both the strategic-level and the acquisition organisation level.

Introduction

2.1. It is essential that Defence, as such a large undertaking with an annual budget in excess of $11 billion, implements well-conceived corporate governance structures capable of assuring the chief executive that its personnel, facilities, equipment and records are managed effectively, efficiently and ethically, and that responsibilities have been delegated in a systematic manner with clear accountability for results. Defence advise that it already has these arrangements in place and is well on the way to further improving them.

2.2. Capability management makes significant demands on Defence's corporate governance because Defence has 12 functional Groups that contribute to 22 complex Defence 'outputs' or capabilities. The capability management process is a continuum flowing through at least four Groups—Australian Defence Headquarters, DAO, one or more of the three Services and Support Command Australia. Capability management requires centralised coordination and oversight to ensure high-level cross-functional integration, as well as lateral management processes that ensure needs are met within available resource limits.

2.3. Under the Minister, administration of the Defence organisation is shared by the Secretary of the Department and the Chief of the Defence Force (CDF). The main components of Defence's corporate governance structure are the Secretary, CDF, the Defence Executive (see below) and various Defence committees. Public Sector corporate governance concepts are outlined in the annex.

Defence's strategic-level corporate governance

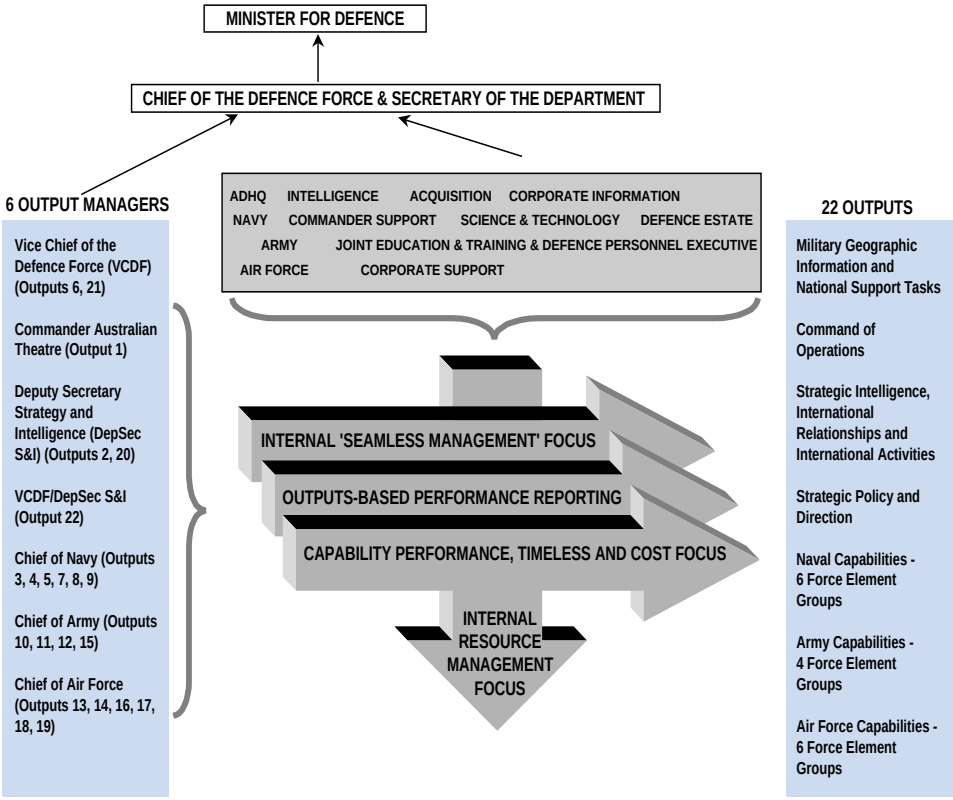
Output management framework

2.4. As shown in Figure 4, Defence's organisational design maintains the traditional hierarchically-structured functionally-orientated structure of 12 Groups that support the 22 Defence Outputs. The Secretary and CDF hold Defence's 6 Output Managers responsible and accountable for the delivery of the 22 Outputs to agreed levels of quantity and quality (including timeliness) at agreed levels of resources. Defence's Group Managers are accountable to CDF and the Secretary for the performance

of their groups and delivery of agreed services and support to Output Managers. The internal accounting and reporting arrangements remain aligned with the 12 Groups structure. However, external accounting and reporting are aligned with Defence's 22 Outputs.

Figure 4

Defence Output Management Framework[18]



Source: Prepared by the ANAO from Defence records.

2.5. Defence based its outputs mainly on ADF force element group (FEG) contributions to the Defence mission. The majority (16) of the Outputs are managed by the three Service Chiefs and these are aligned with FEGs. For example, Figure 4 shows Chief of Navy as responsible for Output 5—capability for submarine operations—which refers specifically to the submarine squadron FEG. The Output Managers require a broad operational and strategic management perspective of their outputs in terms of capabilities, deficiencies and their ability to achieve specified degrees of preparedness for a given level of resources.

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[18] Defence reduced the number of groups from 14 to 12 in July 1999, and advised that the overall structure and number of Defence Outputs is likely to change even for 2000–2001. See DepSec R&M 36/1999, *ANAO Performance Audit of Defence's Management of Major Acquisition Projects*, 19 August 1999, p.3.

2.6. Defence considers that aligning its Outputs with FEGs is a step toward simplifying resource-to-output allocation and avoiding difficulties in attributing resources to the many possible combinations of joint service outputs.[19] This would accord with the Government's new 'outcomes and outputs framework', as well as the PPBS/PMB concept of managing Defence resources from a military capability and strategic objectives perspective.[20]

2.7. The six non-FEG Outputs are managed by:

- Vice Chief of the Defence Force (VCDF)—Output 6 (Military Geographic Information) and Output 21 (National Support Tasks);
- Commander Australian Theatre (COMAST)—Output 1 (Command of Operations);
- Deputy Secretary Strategy and Intelligence (DepSec S&I)—Output 2 (Strategic Intelligence) and Output 20 (International Relations); and
- VCDF and DepSec S & I—Output 22 (Strategic Policy and Direction).

Defence Executive

2.8. The increasing complexity of public administration demands effective leadership and high standards of public administration. This situation often justifies a collective responsibility for agency governance and/or for specific aspects of governance. This collective responsibility may be met through an executive board of management that has two prime roles—to redefine and renew existing structures which support the leadership role of the chief executive and to stimulate a culture of collective responsibility for the overall performance of the agency.

2.9. Defence's highest management committee is the Defence Executive, which comprises 11 members and two participating external advisers.[21] Formed in July 1998, the Defence Executive evolved from the Defence Management Committee (DMC), which was known earlier as the Defence Program Management Committee (DPMC). In keeping with Defence's resource management framework, the Defence Executive acts as a corporate board and has a wider role than that of the DMC, which was in essence concerned with Defence's program management and budgeting,

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[19] Department of Finance and Administration, *Specifying Outcomes and Outputs: Implementing the Commonwealth's Accrual–based Outcomes and Outputs Framework*, 1998, p.67.

[20] Defence capability planning, programming, budgeting system (PPBS) and program management and budgeting (PMB) concepts are outlined in Appendix 1.

[21] The Defence Executive comprises the Secretary of the Department, Chief of the Defence Force, Vice Chief of the Defence Force, Chief of Navy, Chief of Army, Chief of Air Force, Deputy Secretary Corporate, Deputy Secretary Strategy and Intelligence, Deputy Secretary Acquisition, Chief Defence Scientist, Commander Support Australia and two advisers from the private sector.

the Budget and Additional Estimates procedures, and monitoring the individual performance of Defence's functional groups.

2.10. The Defence Executive is responsible for corporate analysis, evaluation and the coordination of Defence program proposals. It provides policy and strategic planning guidance and resources to Defence's 12 groups in accordance with the Government's key Defence strategy guidance document *Australia's Strategic Policy* (ASP 97).[22] The Executive provides an important focus for the integration of all elements of the corporate governance framework.

2.11. The Defence Executive requires each Group Manager to report on group performance every six months in Portfolio Budget Statement (PBS) format. ADF commanders report on military capability (force structure and preparedness) to the Chief of the Defence Force (CDF). Defence's performance information initiatives are outlined in paragraph 6.11.

Other strategic-level capability management related committees

2.12. Defence's senior committees that have strategic level capability management functions include the Defence Capability Committee (DCC) and the Capability Forum (CF), which determine capability solutions. They also include the Defence Source Selection Board (DSSB), which is chaired by DAO and recommends Defence's preferred suppliers to the delegate (the Minister for Defence, Deputy Secretary Acquisition or the systems acquisition division head). These committees are responsible to the respective delegate.

Defence corporate governance issues in previous audit reports

2.13. Many of the ANAO's recent audit reports on Defence raise issues relevant to good corporate governance. The reports drew attention to the need for improvements in: military preparedness objectives and strategies; management information systems; costing of activities and programs; performance information and benchmarking; monitoring and control of project performance; relationship with stakeholders; learning from experience elsewhere in Defence; links between programs and the budget process; cost consciousness; planning, coordination, monitoring, accountability and evaluation of programs and projects; risk management; and committee and executive responses to internal reports.

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[22] Department of Defence, *Australia's Strategic Policy*, 1997.

2.14. These management issues reflected in the various audit reports indicate the need for improved corporate governance to manage the complexities and scale of Defence operations. Similar corporate issues were brought to notice as early as 1993 by a management consulting firm's report indicating problems with Defence's implementation of Program Management and Budgeting (PMB)—see Appendix 2.

Defence committees

2.15. Defence's traditional reliance on vertically-oriented hierarchical command and management structures requires an extensive use of committees to coordinate its functional groups and capability management processes. The Defence Efficiency Review report (DER) commented that:

> *As a broad generalisation at the different levels in Defence, we think there are too many committees, with too many members and with far too much ritualised rather than thoughtful input.*[23]

2.16. DER noted the existence of divergent views within Defence as to whether committees were advisory or executive. The formal position is that each Defence committee provides advice to the delegate responsible for the area covered by the committee, and it is the committee chair who makes the final decisions and ensures it is carried out. However, DER found that in practice there were perceptions throughout Defence that its committees:

- had a life of their own regardless of who chaired them or their membership;
- included members who had no direct interest in many of the issues under discussion and were only there to ensure no other group obtained an "advantage"; and
- made decisions by consensus, which often equated to the lowest common denominator.

2.17. The DER Secretariat regarded this difference of view concerning the role of committees as having '*led to a diffusion of responsibility and accountability for decision-making.*' It found evidence that contentious decisions had '*been ignored, or their implementation delayed, in the absence of a clear lead being taken by those responsible for their determination.*' It also found that there were '*few clear measures of the effectiveness of these committees'* and the relationships between them were 'imprecise'. The DER Secretariat found this often resulted *'in flawed solutions, delay, an undue focus on process and an over emphasis on achieving consensus*.'[24]

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[23] Department of Defence, *Future Directions for the Management of Australia's Defence, Report of the Defence Efficiency Review*, March 1997, p.14.

[24] Department of Defence, *Future Directions for the Management of Australia's Defence, Addendum to the Report of the Defence Efficiency Review—Secretariat Papers,* March 1997, pp.48, 111, 143.

2.18. A resource management structure should provide assurance to the chief executive that human resources, facilities, equipment and records are managed effectively, efficiently and ethically. It should clearly identify who is responsible for what in particular areas, and provide assurance to the chief executive that responsibilities have been delegated in a systematic manner with clear accountability for results.

2.19. As noted earlier, Defence now comprises 12 separately-funded Groups, instead of the eight it had at the time of the DER. This is likely to result in increased dependence on committees to manage inter-group coordination in a mature management environment. The need to manage Defence's newly implemented 22 outputs that cross the 12 Groups adds to the task of Defence Executive and the other committees of coordinating and integrating the outputs and Groups, as does the longer-term task of managing the increasing complexity of capability management. All this underscores the need for proper implementation of the Defence Executive's 'seamless management' concept (see paragraphs 3.6 and 3.7).

Defence program audit and evaluation

2.20. An important component of corporate governance is an internal accountability structure that provides assurance to the chief executive on internal control and management of the organisation, planning and review of its operations and progress, and ensures consultation and constructive feedback on all its activities. A major reason for program audits and evaluations is management's need for assurance that programs are not being jeopardised by inefficient or ineffective management. Audits and evaluations also aid accountability through their collection of performance information and reinforcement of the focus on results.

2.21. The ANAO and DOFA define performance information as the systematic collection and use of evidence about performance.[25] Program performance evidence should address the relationships between key program elements, that is, what resources are used (inputs), what is done (process activities), what is produced (outputs) and what impacts are achieved (outcomes). Program performance evidence should enable evaluators to identify required outputs and outcomes and monitor and evaluate processes used to achieve them. Therefore, performance evidence should contain sufficient information to answer questions on key aspects of performance, such as:

- How effective is the program in achieving the desired outcomes?

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[25] Australian National Audit Office and Department of Finance, *Performance Information Principles Better Practice Guide,* November 1996, p.3.

- How efficient is it in using inputs to produce the required outputs?
- What is the quality of the program's outputs and outcomes?
- Are clients receiving a satisfactory product or service?

These are key questions for corporate governance that need to be answered by systematic performance monitoring and reporting systems as well as by audits and evaluations. Defence's acquisition performance monitoring and reporting system is discussed in Chapter 6. Its audit committee structure and operations are discussed below.

Defence Audit and Program Evaluation Committee

2.22. An important component of any corporate governance framework is a financial and resource management structure within agencies that provides assurance to the chief executive that resources are being managed efficiently, effectively and ethically. This structure includes an audit committee, which is required for all agencies under the *Financial Management and Accountability Act 1997* (FMA Act).

2.23. Defence has long had an audit committee, presently known as the Defence Audit and Program Evaluation Committee (DAPEC). The *Defence Annual Report 1997–98* stated (p.38) that DAPEC

> *oversees all program evaluation and audit activities, reviews the departmental financial statements, and monitors and reviews reports from external agencies such as the ANAO and the JCPAA.*

2.24. The ANAO found that DAPEC approves an annual program of evaluations and audits but does not review them until it receives the evaluation reports and an annual report on internal audit. DAPEC has not monitored or reviewed ANAO performance audit reports or JCPAA reports, although several ANAO and JCPAA reports have raised matters of concern particularly about management of major Defence acquisition projects.[26]

2.25. The FMA Act, which came into operation on 1 January 1998, requires (s46) chief executives to establish an audit committee for their agency with the functions required by the Finance Minister's Orders. These include reviewing all audit reports involving matters of concern to senior management and advising the chief executive on action to be taken on matters of concern raised in an internal audit report or ANAO report concerning the agency.

2.26. Following ANAO representations during 1998, and as part of a continuing refinement of DAPEC arrangements, Defence revised

[26] Defence informed the ANAO that JCPAA reports are reviewed elsewhere in the department.

DAPEC's functions in April 1999 to adhere to those required under the FMA Act 1997. This involves a broadening of DAPEC's functions. At the time of preparing this audit report (June 1999) DAPEC had not begun reviewing performance audit reports. The audit committee will make a greater contribution to Defence's corporate governance when it begins reviewing audit reports, advising the chief executive on matters of concern raised in them and perhaps even indicating appropriate remedial action.

Portfolio Evaluation

2.27. The Defence Evaluation Plans (DEPs) report evaluation activity across Defence. They contain data and synopses of major Defence evaluations and are required by the Government as part of the internal program evaluation process. DEPs supplement the more selective Portfolio Evaluations Plans submitted to the Department of Finance. The evaluation reports themselves vary significantly in scope and size.

2.28. The Government has discontinued its past evaluation strategy of evaluating systematically all programs every three to five years. This decision followed Cabinet consideration of a *Review of Reporting Requirements* in September 1997. Performance management and evaluation are to be guided by a set of *good practice principles* to be updated from time to time by the Minister for Finance and Administration. These principles will form a key part of the Government's performance management framework as it develops over time.

2.29. In December 1997 DAPEC endorsed a two-tier evaluation strategy for Defence. Tier 1 comprises internal Program evaluations that focus on problems identified during continuous monitoring. Tier 1 evaluations aim to adjust resource allocations or the level, quality or timeliness of outputs. Tier 2 evaluations are Portfolio-level evaluations that focus primarily on examining higher-level outcomes in terms of the effectiveness and/or continued appropriateness of planned outcomes, outputs or activities against changes in Government policy.

2.30. The ANAO is not aware of any evaluations conducted by Defence in recent years that cover the full-scope of major acquisition project activities.

Corporate governance—oversight of acquisition projects

2.31. DAO's April 1999 Biannual Report to the Defence Executive provided an eighteen-page narrative on 22 major capital equipment projects' progress toward improved corporate governance, Defence Reform Program savings and staffing matters and its performance against

forecasts and objectives and strategies for 1999–2000. The report did not provide benchmarks and key performance indicators against which the Defence Executive could objectively measure DAO's overall performance, nor of the progress of projects under DAO's management.

2.32. DAO has prepared a draft set of key performance indicators (KPIs—see paragraph 6.38). However, DAO has not implemented a KPI reporting process that takes in all its projects. This has implications for corporate governance elements such as accountability and reporting structures that provide, to those with legitimate claims to accountability, information about performance, decisions and actions, and correcting the agency's deficiencies and improving its performance. It also has implications for senior management, who need to be able to respond appropriately when project progress is unsatisfactory. (See paragraphs 6.41 and 6.45)

2.33. Since March 1998, DAO's corporate governance structure has included:

- the Acquisition Program Executive (APEX), which acts as a 'board of management' and operates in a manner analogous to the Defence Executive;
- the Defence Acquisition Review Board (DARB), which reviews and directs the progress of major acquisition projects;
- the Defence Source Selection Board (DSSB), which provides an advisory forum that reflects both acquisition expertise as well as a more corporate or portfolio perspective; and
- the DAO Audit and Evaluation Steering Group (AESG), which develops and oversees an annual program of audits, evaluations and performance improvement activities.

Defence Acquisition Review Board

2.34 DAO established the DARB in March 1998 to enhance accountability, improve program performance and enable better-informed decision-making. The DARB is chaired by the head of DAO (Deputy Secretary Acquisition) and meets monthly for the purpose of:

- monitoring the performance and overall health of approved major capital equipment projects;
- providing strategic guidance to the Directors General of the technology-based acquisition branches in respect of specific acquisition issues; and
- reviewing high-risk / high-value projects or other projects encountering particular challenges.

2.35. These internal arrangements seek to provide management assurance and are based on the premise that their improved integration as part of good corporate governance will improve accountability, program performance and decision-making.

2.36. In its review in September 1998 of the $5 billion New Submarine Project, the DARB noted the Project's complexity, uniqueness and lack of a 'parent' navy[27] to solve its teething problems. It noted the project's 20 month delay and commented that its over-optimistic schedule had created large underspends in the approved budget. It also briefly noted the difficulties experienced in achieving a number of key submarine platform and combat system performance specifications.

2.37. DARB considered that the following lessons arose from the project:

- Defence needs to conduct more funded Capability Definition Studies and further develop and refine [user] requirements before projects are approved;
- user expectations need to be better managed because operators have unrealistic expectations of what the contractor can achieve, and Navy's expectations have evolved from what was contracted for. The DARB noted that Project Sea 1439 (Design of the New Generation Submarine) should take note of this experience; and
- Defence's capability development process needs to accept the concept of 'schedule contingency' and 'scope contingency'.

2.38. The DARB lessons regarding the capability definition process upstream from DAO and customer expectations downstream from DAO underscore the critical need for Defence's groups to integrate their activities better. The findings reinforce the concept of cross-functional integration, which is a fundamental element of capability management. They also point to the critical role that the Defence Executive will have in coordinating and overseeing the capability management continuum and ensuring that highly-developed cross-functional integration does occur.

2.39. However, it was unclear to the ANAO whether DARB had conveyed the Collins submarine project lessons to relevant officers in Capability Analysis and Options Staff, Navy and Support Command Australia (SCA). There was no reference to lessons for DAO itself, which has main responsibility for the New Submarine Project. Nor was there

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[27] The term 'parent' navy is used by the RAN to refer to navies that have extensive local integrated logistic support infrastructures capable of designing, developing and supporting its weapon systems and platforms.

any reference to the Audit Report No.34 1997–1998 *New Submarine Project*, which contained many lessons for DAO. When that report was tabled, the Minister said, *inter alia*, that '*the report contains some valuable lessons, which will be useful in the management of all major Defence projects*'.[28]

2.40. DAO advised the ANAO that ADHQ's Capability Analysis and Options Staff have been added to the DARB membership. SCA is invited when issues relevant to his functional responsibilities are considered. DAO also advised that DARB's consideration of the New Submarine Project focused on latest progress and projection issues and not on issues which had already been covered by the ANAO and other reviews.

2.41. DAO maintains a 'lessons learnt' database which, the ANAO understands, comes within the responsibilities of the DAO Audit and Evaluation Steering Group. The database contains extensive references to the ANZAC Ship project but little else. No evidence was available that issues identified in ANAO and JCPAA reports on Defence acquisition projects are being taken into account by project managers. The ANAO suggests that DAO considers better practice identified by the ANAO and JCPAA reports for the management of current and future projects. It could be useful for relevant extracts to be entered into the DAO knowledge management system discussed in paragraph 7.12.

Conclusion

2.42. The DER Secretariat noted many shortcomings with the functioning of Defence's committees, including the diffusion of responsibility and accountability for decision-making. The ANAO considers that these problems are compounded by Defence's focus on functional Groups which requires the extensive use of committees to manage Defence's various capability management processes. The increased number of Defence groups and the formation of 22 outputs puts further stress on Defence's committee system.

2.43. There is a risk that the Defence Executive could be unduly distracted from its principal role of strategic-level management by the need to coordinate and integrate the efforts of the functional Groups. This has implications for the management of acquisition projects that require complex planning, programming and budgeting interactions across a number of Defence Groups as shown in Figure 1.

2.44. The ANAO considers that Defence should give increased emphasis to aligning its internal accountability structure, resource management

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[28] Minister for Defence, *ANAO Report on Australia's Submarine Project*, Min 41/98, 25 March 1998, p.2.

structure and financial management structure with its outputs management directions. This underscores the need for proper implementation of the Defence Executive's 'seamless management' concept discussed in Chapter 3.

2.45. Defence has recently taken steps to improve its corporate governance in line with the requirements of the FMA Act 1997. This is most evident in its increased emphasis on the audit committee and review board functions and DAO's improved ability to review selected acquisition projects. If properly implemented, these review processes will achieve increased accountability, improved group performance and better-informed decision-making. It should also increase the effectiveness of project teams through its distribution of lessons learnt from its own reviews as well as external reviews such as those of the JCPAA and ANAO.

Annex to Chapter 2—Public-Sector Corporate Governance

2.46. Corporate governance is the integrated framework of overall agency management of its objectives, strategies and performance including its relationship with its various stakeholders.[29] Effective public-sector governance requires leadership from the executive management of agencies and a strong commitment to quality control throughout the agency. Corporate governance is concerned with structures and processes for decision-making, with the controls and behaviour within organisations that support effective accountability for performance outcomes.

2.47. Corporate governance frameworks include the following:

- the formation of strategy by assessing the external environment and possible future events, and translation of strategy into policies to guide the agency's senior executives;
- leadership structures that monitor and supervise the activities and performance of the organisation. These require:
  - internal accountability structures that provide assurance to the chief executive on internal control and management of the organisation, the planning and review of its operations and progress, and ensure consultation and constructive feedback on all its activities;
  - financial management structures within agencies that provide

[29] See Australian National Audit Office, *Applying Principles and Practice of Corporate Governance in Budget Funded Agencies*, 1997, pp.7–10. This publication outlines key concepts that underpin public sector corporate governance.

assurance to the chief executive that Commonwealth resources are being managed efficiently, effectively and ethically. They include regular monitoring and reporting of progress against budgets; implementation of a fraud control plan for the agency; establishment of an audit committee for the agency; pursuit of each recoverable debt for which the agency is responsible; assurance that appropriate accounts and records of the agency are maintained; and preparation of financial statements giving a true and fair view of all matters that are required to be disclosed;

- resource management structures that provide assurance to the chief executive that human resources, facilities, equipment and records are managed effectively, efficiently and ethically. They identify who is responsible, and for what areas, and provide assurance to the chief executive that responsibilities have been delegated in a systematic manner with clear accountability for results; and
- external accountability and reporting structures that provide, to those with legitimate claims to accountability, information about performance, decision and actions, and correcting the agency's deficiencies and improving its performance. This requires reporting structures that make agency performance visible. An agency which has a clear understanding of its responsibilities and an open approach to the way in which they are discharged will assist the chief executive, the Minister and the Government in framing and winning support for these strategies. It will also increase general confidence in the operation of the public sector.

2.48. Statutory accountability is specified within the *Financial Management and Accountability Act 1997* (FMA Act) and within the more principles-based legislation relating to workplace arrangements. These reinforce a need for effective corporate governance as they establish a more devolved control and authority environment. In particular the FMA Act requires an agency's chief executive to manage the affairs of the agency in a way that promotes efficient, effective and ethical use of those Commonwealth resources for which the chief executive is responsible. This in turn has led to a renewed concern to align accountabilities with responsibility in agencies including the adoption of accountability 'sign-offs' by subsidiary managers to help the chief executive meet statutory responsibilities.[30]

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[30] Ibid. p.6. '*Under governance principles responsible officers are required to sign–off that they have discharged their responsibilities to an agreed standard.*'

3. Capability Management Framework

This chapter describes Defence's capability management framework and discusses management concepts that underpin Defence's major capital equipment acquisitions. It also discusses PMB implementation lessons learnt earlier that have relevance today. It examines capability management in DAO, Capability Analysis and Options Staff and Management and Reporting Division in ADHQ.

Introduction

3.1. Defence is taking steps to implement by July 1999 the Government's Accrual-based Outcomes and Outputs Framework and to build on Defence's earlier work on program management and budgeting (PMB). The new framework places agency outputs into a more contestable, price-focused environment that seeks to promote a more business-like performance culture within the public sector by:

- providing agency managers with better and more complete management information;
- assisting agency managers to report, explain or justify their performance to the Government and the Parliament; and
- providing a more complete and relevant picture of Commonwealth finances for external accountability purposes.[31]

3.2. The Government's financial management initiatives aim to focus agency attention more sharply on delivering outputs in the most efficient and cost effective way and to assist agency managers to identify better those business lines they should cancel or outsource. This requires managers to assess and compare systematically and accurately their agency's efficiency and effectiveness by:

- identifying their agency's core business in terms of outputs provided and outcomes achieved;
- consulting with key stakeholders and Government;
- specifying outputs and links between agency performance and agency staff performance appraisal systems; and
- measuring the quality and cost of their outputs.

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[31] Department of Finance and Administration, *Specifying Outcomes and Outputs: Implementing the Commonwealth's Accrual–based Outcomes and Outputs Framework*, 1998, pp.9–11.

Defence Efficiency Review

3.3. The Defence Efficiency Review (DER) report, released in April 1997, made many recommendations for change in Defence management and program structures with a view to achieving significant savings.[32] The DER report commented, amongst other things, on strategic management issues relevant to DAO and its stakeholders.[33] DER's broad objectives were to:

- shape management practices and organisations to fit Defence for the increasing challenges ahead;
- forge closer links with Australian industry in all its forms so that the national ability to adapt, expand and sustain military forces in time of need is assured; and
- free resources for further development of combat power.[34]

3.4. The Defence Reform Program (DRP) announced in April 1997 flowed from DER and sought to:

- enhance resource-related decision-making;
- clarify resource decision-makers' responsibilities and increase flexibility; and
- increase internal and external accountability.[35]

3.5. This audit indicates Defence is working toward achieving improvements in these areas.

Capability management framework improvements

3.6. Prior to being replaced by the Defence Executive in July 1998, the Defence Management Committee endorsed broad parameters for improving Defence's capability management framework. The improvements, planned since 1994, involve implementing a revised approach to resource management comprising 22 Outputs and seven Enabling Groups that contribute to a single corporate-wide outcome.

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[32] Department of Defence *Future Directions for the Management of Australia's Defence—Report of the Defence Efficiency Review 10 March 1997* and associated volume *Future Directions for the Management of Australia's Defence—Addendum to the Report of the Defence Efficiency Review—Secretariat Papers,* Directorate of Publishing and Visual Communications—Defence Centre Canberra.

[33] Department of Defence, *Future Directions for the Management of Australia's Defence, Report of the Defence Efficiency Review*, March 1997, pp.25–37. See also, Department of Defence, *Future Directions for the Management of Australia's Defence, Addendum to the Report of the Defence Efficiency Review—Secretariat Papers*, pp.147, 212.

[34] Department of Defence, *Future Directions for the Management of Australia's Defence, Report of the Defence Efficiency Review*, March 1997, p.4.

[35] Department of Defence, *Defence Resource Management Strategic Plan,* yet to be published.

These are shown in Tables 1 and 2 in the Annex to Chapter 1. This approach seeks to strengthen horizontal relationships across Defence's 12 functional Groups and sharpen their focus on the key products Defence provides to the Government.

3.7. In July 1998 the Defence Executive announced a fundamental review of Defence's capability management principles and practices across the whole capability continuum to ensure that Defence manages whole of life capability through 'seamless management'.[36] It established the Capability Management Improvement Team (CMIT) to explore options and make recommendations for improving Defence's capability management.[37] The Defence Executive decided that Defence's organisational structure should remain substantially unchanged, as should the key roles of ADHQ and DAO, and that budgets would continue to be allocated to, and managed by, Group Managers.[38] However, the Executive decided that 'seamless management' of whole-of-life capability would require new processes and systems that assign Output Managers with the responsibility for delivering effective defence capability and that meld together all of the elements that go into building an effective defence force: people, equipment, training, acquisition, doctrine, logistic, disposition, facilities and so on.'[39]

Group Manager responsibilities

3.8. Figure 4 (Chapter 2) showed that 12 Groups support 22 Defence Outputs. Defence Executive records indicate that Group Managers are accountable to the Secretary and CDF for the performance of their Groups, including;[40]

- delivering agreed services and support to Output Managers to support the delivery of capability and outputs;
- providing Supporting Services across Defence and to other Group Managers;
- bidding within the Budget FYDP processes, to the Portfolio, for resources required to support an agreed level of service delivery (including the development of Group impact statements where appropriate);

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36 Defence Executive: *A Message to all Defence Personnel from the Executive* (internal memorandum), Canberra 6 July 1998.

37 Department of Defence, *DEFGRAM NO 187/98, Formation of Capability Management Improvement Team,* 6 August 1998, Annex A: Capability Management Improvement Terms of Reference.

38 Defence Executive Agendum 16/98, *Capability Management Improvement Team Update*, (internal memorandum), 28 September 1998, p.2.

39 Defence Executive: *A Message to all Defence Personnel from the Executive* (internal memorandum), Canberra 6 July 1998.

40 Defence Executive Agendum 35/98 and 37/98 December 1998.

- providing designated levels of direct service and support to outputs (based on performance standards agreed by the Executive);
- providing Portfolio supporting services and business processes at levels of support/service agreed with Output Managers or other Group business units, as appropriate;
- managing resource inputs and business systems to achieve specified DRP objectives (including efficiencies), and discharging other areas of assigned responsibility (asset/liability manager);
- managing and monitoring Group performance and reporting Group performance to the Executive;
- providing required management information (eg. on resources expended to deliver support services) to Output Managers and other stakeholders; and
- providing timely advice of any reduction in their capacity to deliver adequate support services, and to explain Group performance at external fora such as Statutory Legislative Committee meetings.

Defence Executive records also indicate that, in relation to capability management improvement:

- Output Managers have flexibility, to an extent yet to be determined, to negotiate with Group Managers changes to inputs to achieve agreed outputs, with larger changes requiring Executive endorsement and all changes to be advised to FASRFP;
- Output Managers or ADHQ (DEPSEC S&I /VCDF) may initiate proposals for new or enhanced capability, and ADHQ coordinates and develops the proposals for senior committee consideration;
- COMAST's input to the capability development process is to occur primarily through the annual Joint Operational Capability Report (JOCR) and Capability Assessment Report (CAR) number one, Command of Operations;
- DAO acquires materiel and associated support, in accordance with the scope, timing and cost determined by the senior committees and approved by government, with;
    1. DAO responsible for delivery of materiel and initial support provided through contractor resources, but not responsible for delivery of a capability *per se*,
    2. DAO responsive to the Output Manager's input and perspectives as the recipient of the contracted products with responsibility for their integration, together with the other elements of capability, into the current force; and

3. DAO deciding whether the delivered products meet the contracted specification.

Output Manager responsibilities

3.9. Defence Executive records indicate that Output Managers' responsibilities for capital equipment acquisitions include:

- integrating new or enhanced capability into the current force and ensuring that all elements of capability have been addressed during the development [in ADHQ] and acquisition [DAO] phases;
- monitoring the continued relevance and appropriateness of the contracted products;
- proposing changes to contracts, either where specifications are no longer considered appropriate because circumstances have changed or where the original specifications were not comprehensive in a critical area. Output Managers are to gain DAO's agreement for minor changes and refer significant changes to the Defence Executive or to the Defence Capability Committee for approval;
- deciding whether the delivered products are fit for purpose from a safety perspective, and hence whether to accept them into service; and
- proposing future enhancements to improve warfighting capability.

3.10. These new arrangements present practical difficulties for the Output Managers, and increase their need for proper support through management information systems and business processes that facilitate exercise of their output management responsibilities efficiently and effectively. For example, the Chief of Navy remains a Group Manager responsible, under longstanding arrangements, for (vertical) management of Navy as a Group. But as an Output Manager he is now also responsible for (lateral) management of six naval Outputs. These include Output 5: capability for submarine operations, which refers mainly to the Collins Submarines Project. This project, however, is managed by another Group, DAO, which holds the budget for the Project and other major acquisition projects.

3.11. The recent Portfolio Budget Statements,[41] which set out the new arrangements in Defence, show that the Output Manager (Chief of Navy) is to be responsible for dealing with 'technological concerns' relating to the submarines and rectifying their 'shortcomings' although they are not yet accepted into naval service. As indicated at paragraph 1.14, these

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[41] Department of Defence, *Portfolio Budget Statements 1999–2000—Defence Portfolio,* May 1999, p.72.

are also matters for DAO, which, unlike Navy, holds the relevant budget and technological data and has daily interface with the submarine contractor.

3.12. There is a similar situation regarding the other Service Chiefs, who are also organisationally remote from acquisition projects undertaken for them and lack control over the relevant budgets. They do not manage the pre-contract capability planning, programming and budgeting activities or the acquisition contracts, they lack detailed project information and they do not control the acquisition budget.[42] Each Service Chief's wide responsibilities as Manager of numerous Outputs seem inconsistent with an Output Manager's need to focus on managing each Output's complex parallel capability management processes, in addition to the responsibility for managing the particular Service.

3.13. All these issues underscore the Output Managers' need for management information systems and business processes that will enable them to exercise their output management responsibilities efficiently and effectively.

Output Manager appointments

3.14. The present capability management arrangement has the three Service Chiefs as the Output Managers for 16 Outputs, as well as being members of the Defence Executive. Defence considers that this arrangement:[43]

- provides clear high-level accountability for the delivery of Outputs, thus avoiding unnecessary sub-division of accountability for Outputs which would occur if Output Managers were appointed from lower levels;
- relies on an already established supporting command and management structure to assist the Service Chiefs with the execution of their Output management responsibilities;
- relies on other organisational arrangements implemented under the Defence Reform Program which relieve the Service Chiefs of a wide range of other management responsibilities in relation to the provision of supporting services; and
- avoids confusion of accountability for the delivery of overall Capability Outputs with the delivery of major acquisition projects, which is only one contributor to capability.

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[42] Auditor–General Audit Report No. 34 1997–98, *New Submarine Project Department of Defence*, 24 March 1998, pp.53–55.

[43] Department of Defence, *ANAO Performance Audit of Defence's Management of Major Capital Acquisition Projects*, DepSec R&M 36/1999, 19 August 1999, p.2.

3.15. The capability management framework has the flexibility to allow Output Managers to be appointed to specific outputs from the management level below the Service Chiefs. For example, Defence's new arrangement (July 1999) for management of the Submarine Capability (Output 6) is tantamount to a separate Output Manager for that Output. It involves appointment of a Rear Admiral as Head Submarine Capability Team to take the lead, responsible direct to Chief of Navy, and supported by all functional organisations, with relevant authorities responding to his direction. This arrangement is consistent with the Defence Executive's 'seamless management' of capability concept, and should improve efficiency through better integration of the Groups involved with submarine capability development and in-service support.

3.16. Defence advised that the approach which has been adopted for the rectification of the current problems with the Submarine capability reflects the particular circumstances of the implications of the Collins Project on that capability, as well as the flexibility which Defence has to adapt current management arrangements to meet specific needs.

Capability management implementation

3.17. Management that focuses on outputs helps to resolve output priorities by emphasising the importance of applying dual channels of management to complex work across boundaries within an organisation. Dual lines of management of Defence's capability, shown in Figure 4 (Chapter 2), comprise:

- a traditional hierarchical management structure seeks to integrate vertically each of Defence's 12 functional Groups. This structure focuses on internal task specialisation, competence-building and centralised top-down task command and control; and
- a 22 outputs framework across the 12 functional Groups. This lateral structure focuses on internal and external performance and external resource management through core management processes that operate across the Group structure.

3.18. Output management frameworks employ matrix management concepts designed to allow managers to:

- deal directly with their output management counterparts without going through elaborate vertical structures;
- share with output managers a common set of objectives and business plans;
- gain directly from the output managers an appreciation of their role and the various interactions within the capability development process;

- share with output managers information systems and business processes that are critical to the capability development process;
- determine the effect on outputs of variations in organisational budgets or objectives; and
- enhance accountability for outputs and outcomes.

Earlier attempts to implement a capability management framework

3.19. A capability management framework should be well established in Defence. In 1990 Defence intended to derive its PMB design from Defence goals and objectives, as established in the Defence Plan, and that the PMB structure provide visibility of performance in terms of outcomes. At the time, Defence decided its major outcomes were combat forces at appropriate levels of readiness, so Defence saw the need to structure its programs and information systems to capture force element group performance and their resource consumption.[44]

3.20. This management structure and its supporting information systems did not eventuate. Instead Defence designated its functional groups as 'Programs' in line with a functional group structure that followed the Service chain of command and Departmental line management principles.[45] This provided for reasonably straightforward lines of responsibility and accountability for 'Program' outputs, particularly when the financial resources needed to achieve program objectives were allocated to the responsible 'Program' manager. However, the organisational focus on functional groups made it difficult to present functional group performance information in terms of defence outputs and their costs. Defence records indicate that this raised particular problems for the Services when they competed for resources with the other 'Programs' during the FYDP and Additional Estimates process.

3.21. The use of 'program' in this context created uncertainty about PMB's focus, which would have been better directed at managing performance in terms of 'combat forces at appropriate degrees of readiness' and 'reporting in terms of force element groups',[46] rather than in terms of Defence's functional groups.[47] More importantly, it delayed

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[44] Department of Defence, Resources and Financial Programs Division, *PMB Reference Manual*, First Edition June 1990, p.4–2.

[45] Ibid, p.4–3. The programs consisted of Forces Executive, Navy, Army, Air Force, Strategy & Intelligence, Acquisition & Logistics, Budget & Management, and Science & Technology. Also see *Defence Report 1989–90*, pp.11,13.

[46] Ibid, p.4–2.

[47] The more recent accrual–based outcomes and outputs framework does not use the term 'program'. This avoids any uncertainty regarding the terms used to describe an agency's structural elements and its outputs.

the development of a fully-integrated capability management framework supported by business processes and information systems—each being essential for effective management of the capability management matrix shown in Figure 4. Such processes and systems would allow resources to be managed according to their contribution to defence capability; would capture capital and recurrent costs of each Defence output; and would measure and/or assess shortfalls in force structure and preparedness.

3.22. This delayed development of a fully integrated capability management framework has wide resource management implications. The Joint Standing Committee on Foreign Affairs, Defence and Trade (Defence Sub-Committee) conducted an inquiry into the level of funding required for the ADF and reported its findings in 1998. In its report the Committee indicated its concern about a lack of relevant information. It cited the following comment made by Defence in 1997:

> *At present, Defence is not able to identify fully the costs of activities and outputs or the resources required to achieve them. …There are similar difficulties in the review of bids for additional funding, in terms of the level of funding required to achieve specific outcomes, their relative priority, and the opportunity cost of funding some activities rather than others.*[48]

3.23. The Committee commented later in its report as follows:

> *The Department provided no objective evidence specifically supporting its calculation of the need for two per cent real growth, and was generally unforthcoming on such detail throughout the inquiry. The Committee found this attitude disappointing, particularly as this inquiry provided the ideal forum for explaining the justifications for an increase in funding.*[49]

3.24. The lack of a fully integrated capability management framework also gives rise to capability planning and analysis problems of the kind listed in paragraphs 3.34 and 3.35. It may also hinder existing capability budgeting in terms of determining, through systematic risk management, which areas of military preparedness may be reduced in times of funding constraints (see Appendix 1 paragraph 11).[50] The relevance of capability budgeting and preparedness to the management of acquisition projects revolves around the need to strike a proper balance between new capital

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[48] Department of Defence, *Performance Information Review*, Joint Report of the Dept of Defence and Dept of Finance, July 1997. para 335. Cited in *Funding Australia's Defence,* report of the Joint Standing Committee of Foreign Affairs, Defence and Trade, April 1998, p.13.

[49] Parliament of the Commonwealth of Australia, Joint Standing Committee on Foreign Affairs, Defence and Trade, *Funding Australia's Defence*, April 1998, p.105.

[50] Department of Defence, *1990–2003 FYDP Review of Net Personnel Operating Costs*, p.7. See also Department of Defence, Naval Headquarters, *Naval Aviation Force Management Review*, December 1997, pp.227–236. [Classified internal report.]

equipment expenditure and the recurrent cost of supporting and operating the Defence capital equipment inventory.

3.25. The ANAO found in its 1996 preliminary study of the management of Defence force preparedness that Defence was slowly integrating its budgetary and preparedness processes.[51] The reason Defence gave for this limited progress was the complexity of the issues involved. Defence records indicate that by April 1999 Defence had developed a spreadsheet-costing program to assist preparation of annual preparedness directives. However, the spreadsheet-costing program was 'still fairly broad brush' in determining the likely personnel, supply and maintenance contingency requirements, and was 'yet to be tested'.[52] The ANAO considers that the capability management framework should, if properly implemented, reduce the overall complexity of the capability management process and thus increase Defence's ability to better manage its military preparedness.

Lessons learned from PMB

3.26. Listed in the Annex to this Chapter and highlighted in Appendix 2 are those lessons learned during the implementation of PMB in the 1980s are relevant to Defence's capability management framework today. ANAO audits, Defence reviews joint Defence-DOFA reviews and the Defence Efficiency Review (see below) indicate that a fully integrated planning-programming and budgeting system envisaged by Defence since the 1970s has not been achieved. The Defence Reform Program and the Defence Executive's proposed 'seamless management' of whole-of-life capability concept seek to address this situation. However, the capability management framework has only been in place since 1 July 1999, and so remains largely untested.

DAO's part in the capability management framework

3.27. DAO spends a quarter of the Defence budget ($2.8 billion in 1999–2000). It does not constitute a Defence Output since its function is only to assist in achieving Outputs. DAO is responsible for acquiring materiel and associated support items in accordance with the scope, timing and costs determined by the senior committees and approved by Government.

3.28. The Defence Executive has decided that DAO will not be held responsible for delivering a capability *per se*—rather it is the responsibility

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[51] Audit Report No. 17 1995–96 Preliminary Study, *Management of Australian Defence Force Preparedness, Department of Defence*, 2 April 1996, pp.10, 49–59.

[52] Headquarters Air Command, HQAC 2101/103/EQPt4(2),COPS–AC 19/99, *Inspector General's Evaluation of the Air Force Logistics Sub–Program*, 29 January 1999, p.1. Also Air Force Headquarters CAF97/6135/1 *DAPEC—Air Force Logistics Sub–Group Evaluation—Followup on Recommendations*, 6 April 1999, p.1.

of each Output Manager (the relevant Service Chief) to integrate new or enhanced capability into the current force. DAO is required to be responsive to each Output Manager.

3.29. As outlined in paragraphs 1.11–1.15, DAO has extensive interactions with the Capability Analysis and Options Staff and the Management and Reporting Division of ADHQ, the three Services and Support Command Australia. Management issues in one of these can affect outcomes of another. For example, over-optimistic project cost, performance and schedule estimates by ADHQ may appear later as inadequate project management during project implementation within DAO. Likewise, over-optimistic project management within DAO often appears as poor operational performance when the equipment is placed into service.

3.30. This underscores the need to treat acquisitions as a part of an output continuum that commences in the Capability Analysis and Options Staff of ADHQ; progresses through DAO; and ends with a capability outcome vested in the FEGs within the armed Services and logistically supported by Support Command Australia. This raises the issue of the best structure to facilitate efficient and effective interaction between Defence organisations that contribute to one or more outputs.

3.31. DAO is working to improve its links with Capability Analysis and Options Staff, the three Services and Support Command Australia. This work is crucial to both successful outputs and outcomes. Defence records indicate that some projects emerging from the project planning and programming process were not well defined and lacked accurate cost and schedule estimates.[53] Likewise, projects emerging from DAO, such as the ANZAC ships, JORN and the Collins submarines, often experience long delays in their complete acceptance into service. These issues illustrate the fact that capability development is a continuum that should be managed in a manner consistent with the Defence Executive's 'seamless management' concept.

3.32. The Defence Reform Program (DRP) aligned DAO's internal structure more closely with equipment suppliers, technologies and specialist functions. Defence considers that this will improve synergies between projects with like technologies, achieve economies of scale, improve opportunities for industry participation and increase commonality of equipment solutions. DAO's structure is reasonable given the advantages of task specialisation in functional Groups.

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[53] Inspector–General, *Evaluation of Strategy and Force Development, Preliminary Report*, January 1997, Chapter 3. [Classified internal report].

Capability Analysis and Options Staff and Management and Reporting Division

3.33. The capability development process establishes priorities for investment in new major and minor capital equipment based on Defence's strategic guidance and the Government's resource guidance. Australian Defence Headquarters' Head of Capability Analysis and Options Staff and Head of Management and Reporting Division are responsible for developing and programming new capability projects for Government approval.

3.34. The DER's view of the capability system was that it was large and cumbersome and needed rigorous analysis, coordinated decision making and clearly delineated accountability.[54] The DER Secretariat observed that problems within the capability development process had resulted in capability development:

- being driven by programming [budget expenditure and capability schedule] considerations; and
- becoming disorderly, resulting in inadequate analysis of military doctrine, capability mix, costs, preparedness, personnel, training, equipment supportability and industry involvement.[55]

This indicates that there was large scope for Defence to improve the analytic processes in capability planning, programming and budgeting system, the importance of which it identified in the early 1970s (see Appendix 1). It also indicates Defence acquisition projects may have been passed on to DAO for implementation without adequate defence capability and life-cycle cost considerations.

3.35. At the time of the audit Defence was endeavouring to resolve the following capability management problems:

- the Service Chiefs do not control the development of capability proposals and were not involved formally in the acquisition process despite having to accept and manage the resulting capability;
- decisions on capability development involving new major equipment acquisitions were seen to focus almost exclusively on trade-offs between capital investment and capability levels, largely neglecting important recurrent resource considerations. This resulted in inefficient life-cycle management of platforms and systems;

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[54] Department of Defence, *Future Directions for the Management of Australia's Defence,* 1997, p.23.

[55] Department of Defence, *Future Directions for the Management of Australia's Defence, Addendum to the Report of the Defence Efficiency Review—Secretariat Papers*, 1997, pp.141–142.

- guidance for force development and capability effectiveness assessments was ad hoc, with no regular process of updating the capability requirements against strategic guidance; and
- optimisation of capability cost and capability availability did not occur on a capability output basis.

The Defence Executive is using a capability management improvement team (CMIT) to find solutions to these problems. (See paragraphs 7.36–7.42)

Conclusion

3.36. Defence's capability management framework issues underscore the importance of the Defence Executive's 'seamless management' concept, which has significance for Defence's major equipment acquisitions. Defence did not effectively implement program management and budgeting in the 1990s and, as a consequence, its programs and information systems were not structured in terms of the Force Element Groups, that is, the users of major military equipment. Prompted by the Government's initiatives in Commonwealth agencies, Defence has a new external focus on outputs and their relationship to identified outcomes but the advantages to flow from this may not be realised without a stronger focus on their management.

3.37. Defence is implementing 'seamless management' of whole-of-life capability via a number of business process initiatives that apply across its 12 functional Groups. These should link ADHQ, DAO and Support Command Australia with the three Services and focus on increased efficiency, effectiveness, transparency and consultation, particularly in major equipment acquisitions. However, much remains to be done to improve the analytical processes involved in capability planning, programming and budgeting. Defence identified these as issues of importance nearly 30 years ago, and they now form part of the new outputs/outcomes budgetary arrangements.

Annex to Chapter 3—PMB implementation lessons[56]

Report Title	*Program Management issue*	*Appendix 2 Paragraph Reference*
Department of Finance, *FMIP and Program Budgeting: A Study of Implementation in Selected Agencies*, AGPS, Canberra, 1987	The agencies experienced a divergence between program management and the functional structure of the organisation.	2
	The agencies only partially used program budgeting concepts in resource management decisions.	3
	The agency performance indicators and management information systems remained largely underdeveloped.	4
	Agency personnel lacked skills in resource management.	5
	FMIP/PB implementation progress depended upon political perceptions and oversight.	6
Department of Defence, *Report of the PMB Post Implementation Review*, Attachment A to DPMC Agendum 8, 1992	Defence experienced difficulty in aligning its functional groups with program outcomes.	8
	Defence experienced difficulty in articulating its objectives and measuring their achievement.	9
	Defence inadequately linked its program objectives and resource allocations in terms of both planning and evaluation.	10
	Defence experienced widespread confusion regarding fundamental features of the PMB framework.	11
	Defence personnel often limited their interpretation of accountability.	12
	Defence provided only limited educational follow through.	13
	Defence devolved insufficient responsibility to program managers.	14
	Defence experienced difficulties with cash management.	15
	Defence gave insufficient priority to information technology planning.	16

[56] Appendix 2 refers.

4. Output Budgeting

This chapter discusses Defence's output budgeting policy that underpins Defence's output management framework and proposes that, when internal systems permit, Defence reconsider the benefits of allocating budgets to Output Managers to acquire services from the functional Groups on a 'purchaser-provider' basis.

Introduction

4.1. The Government's new 'outcomes and outputs framework' places particular importance on measuring the cost and price of outputs and outcomes rather than merely determining and controlling financial inputs. This is particularly relevant for the management of acquisition projects given that Defence spends about a quarter of its budget on capital equipment acquisitions and slightly less than that on equipment maintenance and stores.

4.2. Budget allocations and cost structures have important implications for Defence's Output Managers, who need business-like budget allocation policies. They need data on output costs, under optimal conditions and reasonable performance standards, so that they can decide what cost savings may be made without sacrificing the quantity, quality and timeliness of outputs. This has implications for lines of responsibility, authority and accountability, because output frameworks result in output managers becoming responsible for the effects of decisions made by the various functional Groups that contribute to their outputs.

4.3. Defence's currently allocates budgets to each of its functional groups rather than to the 22 Defence outputs that are funded by the Government. Funding only functional groups introduces diffused authority over the financial resources needed to develop and sustain each Defence output. Output Managers do not have direct financial control over the different service providers in the capability management continuum even though they are accountable for outputs that are affected by resource decisions they do not directly influence. This lessens the opportunity or incentive for Output Managers to manage their outputs more effectively and/or efficiently from the financial perspective.

4.4. For example, under the capability management framework, the Chief of Navy as an Output Manager assumes responsibility for platform selection decisions made by ADHQ and platform project management and contracting decisions made by DAO. (See paragraphs 3.27 *et seq.*) Also, if outputs have little-understood cost structures, budget decisions

within the Groups may lead to unexpected consequences for Output Managers and possibly for defence capability. For example, decisions made early in the capability development continuum to reduce an equipment's logistic support may have significant capability availability consequences for Output Managers and add to support costs many years later with potentially adverse implications for Defence capability.

Budgeting implications for cross-group coherence and integration

Budget allocation

4.5. Although defence capability is the key deliverable that Defence provides to Government, Defence's 12 functional Groups will be the primary basis for internal budget allocation and management. Rather than internally allocating budgets solely to the Output Managers, who are responsible and accountable for outputs in terms of quality, quantity and timeliness, budgets will be allocated to, and managed by, Group Budget-holders for each of Defence's 12 Groups. However, for external reporting purposes only, all costs will be allocated or attributed to the 22 outputs through 'business rules' with some backing from service-level agreements which contain no exchange of funds; that is, there are no purchaser-provider relationships.

4.6. The Defence Executive was advised in 1998 that internally allocating budgets to the functional Groups was preferred for the following reasons:[57]

> *Of the two options [budgets allocated to and managed by Group Managers or budgets allocated to and managed by Output Managers], the first is preferred. It provides a more appropriate mechanism to ensure focus on both outputs and Groups, in a more integrated organisation where the various elements work together to support the delivery of outputs. Through ensuring accountability at the Group level, it also meets the continued need to achieve efficiencies within Groups as identified under the Defence Reform Program.*

4.7. The Defence Executive accepted this advice. The ANAO sought records of the data and analysis that supported the policy decision, but was informed that they were no longer available. Accordingly it is unclear what incentives the traditional internal budget allocation to Group Managers provides for improved focus on outputs and organisational

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[57] Defence Executive Agendum 37/1998, *Development of the Defence Management Framework*, p.5. [Internal report.]

integration, particularly as Output Managers are responsible and accountable for 22 outputs, as well as the performance of their own Groups. Because Output Managers are affected by decisions made by Group Managers, complex corporate governance structures are needed to contend with Output Managers' lack of managerial or financial control over the Groups.

4.8. Rather than contributing to a more integrated organisation, allocating budgets to Defence's 12 Groups (Figure 4, Chapter 2) could continue the difficulties in developing greater integration and coherence in the outputs framework. It may also hinder implementation of the framework's underlying business process, management information and performance management systems. Defence's traditional internal budget allocation has been accompanied by a strong focus on Groups such as DAO. Maintaining this allocation may make it difficult to ensure a balanced focus on both Groups and outputs.

4.9. It is also unclear that the traditional internal budget allocation should be retained for reasons of efficiency. Decisions on efficiency measures should be made only after a thorough examination of their probable impact on capability effectiveness. Output Managers responsible for capabilities may be in the best position to make such decisions.

National Commission of Audit—program delivery principles

4.10. Defence's decision to leave budgets with service provider Groups such as DAO and Support Command instead of granting budget responsibility to the providers of Defence outputs could be reviewed in the light of the purchaser-provider model, which is a central feature of the National Commission of Audit's program delivery efficiency principles.[58] Under this concept, purchasers establish strategic objectives and negotiate contracts with providers. The Commission considered the purchaser-provider roles offer the following benefits:

- clearer and better specified policy priorities;
- improved working relationships through clearly defined expectations and responsibilities;
- minimised conflicts of interest because providers are not the sole source of advice on targets, evaluation and standards and the balance of power is not weighted in favour of the provider;
- enhanced contestability because potential providers are exposed to competition;

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[58] National Commission of Audit, *Report to the Commonwealth Government*, June 1996, pp.13–16.

- heightened accountability because purchasers may specify what performance information is expected from a provider;
- increased managerial autonomy because relevant roles and structures can be clarified; and
- improved responsiveness to clients because purchase agreements require the provider to meet client needs.

4.11. The purchaser-provider concept is also claimed to reduce managerial complexity by allowing providers to do what they think is necessary to achieve adequate performance, with minimal management interference from the purchaser, and so ensuring clear responsibility for outcomes.

An alternative budget allocation policy

4.12. The ANAO notes Defence's recent decision to leave budgets with the Groups but proposes that, when management and financial systems permit, Defence reconsider the benefits of allocating budgets to Output Managers as 'purchasers' of goods and services 'provided' by the Groups. With adequate corporate governance and a business management focus, the Output Managers could then exercise business management techniques to economise and influence the quantity, quality, cost and timeliness of products supplied to them. 'Provider' Groups could provide services according to service-level agreements and be funded for working capital and long-term expenses. Whether to allow Output Managers scope to purchase competitively from providers other than the established Groups raises issues that Defence would need to consider at the appropriate time, and within the context of key strategic imperatives such as the retention of core business capacity, knowledge and skills.

4.13. The 'purchaser-provider' concept can assist in avoiding 'stove pipe' or 'silo' attitudes developing in an organisation's culture and promoting functional groups' mutual dependence on each other. Within the Defence context Output Managers will always be dependent upon the providers—the 12 Groups. But, without the 'purchaser' funding principle outlined above, the 12 Groups may not always recognise their dependence on the Output Managers. Hence allocating the budget among the Output Managers would transparently establish the required mutual dependence. The 22 outputs are mutually dependent because military operations often require the integration of multiple force element groups. The Australian Defence Headquarters was established for that reason.

4.14. Financial expenditure delegations need to be distributed and managed according to an agency's prime function, so that money is spent properly to achieve the outputs and outcomes for which it was provided.

In Defence's case that suggests budget allocations aligned with military capability and strategic objectives. Given this principle, and the significant influence funding arrangements have on organisation culture and business incentives, allocating budgets to the Output Managers rather than to the 12 Groups could assist management of the outputs framework and align responsibility and authority with the accountability for outputs.

4.15. In summary, allocating budgets to the Output Managers would have the following advantages:

- enhance the functional Groups' incentives to improve the outputs framework and avoid any blurring of responsibility and accountability for Outputs;
- improve the transparency of current and capital expenditure in producing Outputs and increase the emphasis on efficient and effective management of Outputs; and
- accord with the Defence Executive's 'seamless management' initiative.[59]

4.16. The UK Ministry of Defence's Smart Procurement initiative, outlined in the annex to Chapter 7, provides a useful example of an implemented purchaser-provider arrangement covering the UK's £9 billion per year expenditure on defence equipment, spares and stores.[60] Another example is the US Navy's Public Works Center Corporation which operates nine support centres and has an annual revenue of some US$2.0 billion. The US Navy briefed the ANAO on its Public Works Center Jacksonville Florida. PWC Jacksonville supports various Defense customers located in the south east of USA with a diverse range of services such as facility support and maintenance services, and professional and engineering services.[61]

Conclusion

4.17. Defence's 12 functional Groups are the primary basis for internal budget allocations and management in seeking to produce defence capability, the key deliverable to government. Rather than placing the budgets with the Output Managers responsible for military capabilities, Defence has allocated them to the Group Budget-holders.

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[59] In chapter 3 the ANAO proposed that consideration be given to appointing separate Output Managers for each of Defence's capability outputs.

[60] Ministry of Defence (UK), 1998, *Strategic Defence Review: White Paper*, Chapter 8 [Online]. Available: http://www.mod.uk/policy/sdr/chapt08.htm [21 June 1999].

[61] US Department of Defense, *Public Works Center Jacksonville*, briefing for the ANAO, August 1999. Available: http://www.ncts.navy.mil/pwcjax/body.htm. [20 March 1999]

4.18. There would be benefits in Defence reconsidering a change from this arrangement to a purchaser-provider model in the longer term when internal systems permit such an approach to encourage greater accountability, efficiency and effectiveness. In line with Output Managers' responsibility and accountability for delivering effective capability, and in accord with the Defence Executive's 'seamless management' initiative, budgets could be allocated to the relevant Output Managers so that they could 'purchase' the services they need from the functional groups through purchaser-provider agreements. This should encourage a more disciplined approach to achieving value for money both in terms of acquisitions and Defence outputs. Although Defence has reservations about changing to a purchaser-provider model, the costs and benefits of such a change should be reconsidered in the longer term when internal systems permit such an approach. This model encourages greater accountability, efficiency and effectiveness through a virtual contractual arrangement which imposes greater management discipline in a more contestable environment.

Recommendation No.1.

4.19. The ANAO recommends that, when internal financial and costing systems permit, Defence reconsider the benefits of allocating capability output budgets to the relevant Output Managers, who, in turn, would fund the functional Groups through purchaser-provider agreements designed to achieve capability outputs.

Defence response:

4.20 Agreed, subject to the following qualifications:

- The resource management framework which has been adopted by Defence is a response to the inefficiencies and rigidities of previous arrangements. These were identified and addressed in the 1997 Defence Efficiency Review. That review made clear the need to consolidate the provision of various support activities into Enabling Groups which could focus on rationalisation and efficiency measures (central to the achievement of Defence Reform Program savings) and the provision of efficient and client-focused support to Output Managers. Any future return of support costs to capability output budgets should not jeopardise Defence's overall ability to achieve and sustain these efficiency gains. Within those constraints, it may be possible to identify those elements of support costs which are demand driven (ie. not relating to overall capital investment or common overheads), to allocate such funding to Output Managers and thus to provide greater discretion in how demand for such support is

expressed and acquired. Output Managers, through their related roles as Group Managers already are directly allocated about 50 per cent of the total cost of the Outputs for which they are responsible.

- The structure of both Defence Outputs and Groups is expected to continue to change over the next few years at least. Firstly, the progressive achievement of the Defence Reform Program and related management improvements will result in a reduction of the number of Groups. For example, from 1 July 1999, the Joint Education and Training and Defence Personnel Executive Groups have been merged, while the Finance and Inspector General Group has been incorporated within the Australian Defence Headquarters. Further changes to the number and structure of other Enabling Groups will be addressed as the changes resulting from the implementation of the Defence Reform Program are completed. Secondly, consideration is being given to revising the current Output structure to provide more manageable groupings. Over the longer term it is possible that the nature of the Output structure may be changed even more substantially to provide more task-oriented and frequently multi-Service outputs. Such changes could present difficulties in assigning management responsibilities for specific output budgets.
- The Defence resource management framework, which was considered and endorsed by the Defence Executive in December 1998 reflects the unavoidably complex relationship between the need to deliver a required level of capability outputs, while at the same time achieving large scale efficiency gains and managing complex processes such as major capital equipment acquisition. Defence considers that these new arrangements should be given an opportunity to be tested in practice.
- As essential feature of higher Defence resource management is the need to make judgements and tradeoffs in the development of the nature and level of capabilities which will be proposed to Government for delivery at the likely allocated level of Defence resources. This process involves the transfer of priorities and thus resources between outputs. Defence considers that this allocation and rationing activity is a key corporate governance issue which should be undertaken at the Defence Executive level rather than being left to any one manager of a group of Outputs. With the exception of COMAST, all Output Managers are members of the Defence Executive.

ANAO comment:

4.21. The ANAO understands Defence's view that the new arrangements should be retained and be given the opportunity to be tested in practice. The recommendation is that Defence reconsider the benefits of allocating capability budgets to the relevant Output Managers in the longer term, because of the benefits that this model would offer for both performance and accountability for that performance.

5. Financial Management

This chapter discusses Defence's financial management information systems, cost accounting and capital equipment acquisition budget management. The ANAO proposes that Defence's capital equipment roll over provisions be set at levels which allow project managers to achieve value for money.

Introduction

5.1. Best practice financial monitoring and control require formal and regular monitoring of expenditure against a financial plan to safeguard budget integrity, and to ensure appropriate executive approval of expenditure variations. This ensures resource expenditure is consistent with agency priorities and appropriations. Reporting mechanisms should ensure that managers have appropriate information to allow financial performance to be linked to outputs and outcomes.

Financial management information systems

5.2. Defence records and ANAO audits indicate that many Defence programs lack the quality of financial and resource management information needed for fully-effective planning, budgeting, managing, reporting and evaluation. Defence has a range of management information systems that are integrated to varying degrees with its corporate automated financial ledger known as DEFMIS—the Defence Financial Management Information System. DEFMIS provides data on Defence's financial receipts and payments, and non-Defence estate assets, but not on the full range of performance data required by Output Managers.

5.3. Defence recognises the shortcomings of DEFMIS and related systems and, in February 1998, established the $44 million Project ROMAN (Resource Output Management Accounting Network) to manage the design, development and implementation of a new corporate-wide MIS.[62] Project ROMAN is a recent response to the lessons learnt from the 1992 review of its PMB implementation, which found, amongst other things, that:

> *DEFMIS can provide the essential financial management system but this alone is not enough. …Defence needs to take full advantage of the MIS possibilities now available, and develop systems which cover not only*

[62] The cost estimate includes contractor costs and some Defence costs, but excludes Defence's Information Systems Group support and infrastructure costs. See Senate Foreign Affairs, Defence and Trade Legislation Committee, *Responses to answers to questions on notice,* 7–8 June 1999, Question 14.6.

financial transactions but also draws together the setting and achievement of objectives and positive outcomes.[63]

5.4. Project ROMAN, seeks to overcome the current MIS deficiencies and enable Defence to implement fully the accrual-based outcomes and outputs framework. Even though sections of ROMAN are still being designed, Defence plans to commence its final implementation phase by June 2000. Defence envisages the new MIS will enable it to manage better the financial resource inputs to its Groups by aligning its budget structures with its outputs framework and improving its purchase order management and payment management. More importantly, Defence records indicate that Project ROMAN is seeking to create an MIS that provides the management information required for the complete outputs management cycle of planning, programming and budgeting as well as project performance reporting and evaluation. (paragraphs 6.23 to 6.26.)

Project cost accounting

5.5. DAO finance managers enter project expenditure into DEFMIS. During recent project audits the ANAO found projects were provided with cash-limited administrative expenses (CLAE) to cover the general expenses associated with the conduct of project business such as travel, training, advertising and incidentals. They were also provided with Project Management Support (PMS) funds to cover project infrastructure such as consultancy, engineering support, office rental and maintenance, computing support, light, fuel and power, and public relations.

5.6. The ANAO found in the course of recent audits that DAO project offices could account for PMS and CLAE expenditure but they could not readily provide accurate costings of personnel and related overheads. This is because not all project costs, such as full personnel remuneration elements, information systems and accommodation costs, are allocated to the accounts of the project where the costs were incurred. For the purposes of those audits the ANAO estimated these costs by using Defence's Commercial Support Program estimates of typical personnel costs and related overheads.[64] The DER Secretariat reported similar cost accounting problems when it was estimating savings.[65] Attribution of inter-group costs is discussed in paragraphs 5.14–5.24.

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[63] Defence Program Management Committee Agendum 8/1992, *Report of the PMB Post Implementation Review*, 19 May 1992, Attachment A, p.7. [Internal report.]

[64] Department of Defence, *Commercial Support Program Manual*, Ready Reckoner (CSP Version) June 1994.

[65] Department of Defence, *Future Directions for the Management of Australia's Defence, Addendum to the Report of the Defence Efficiency Review—Secretariat Papers*, pp.32–34.

5.7. Defence records indicate that Navy, Army and DSTO have activity-based costing experience and that Defence is seeking to improve the costing information used within its planning, programming, budgeting and implementation processes.

Project progress payments

5.8. DAO equipment acquisition project expenditure data entered into DEFMIS is automatically copied daily into DAO's Project Reporting and Monitoring System (ProMIS). The data is available through ProMIS together with planned and projected expenditure at the project and aggregate levels. DAO considers that, when its projects' progress payments are linked to earned value and milestones, they are a reliable, but lagging, indicator of the actual physical progress on its projects.

5.9. However, the ANAO notes that, although finance officers may readily calculate progress expenditure, accurate measurement of project progress by client-focused earned value provides key challenges for project managers. Managers of technologically-advanced projects may often face difficulties in measuring actual progress objectively. The more complex the project, the more reliance must be placed on development processes and quality management systems to demonstrate or predict progress in terms of key performance indicators (KPIs) such as earned value, quality and milestone achievement. The ANAO found in the audits of the JORN and New Submarine Projects that contractors and Defence's project managers were unduly optimistic about progress and completion times on those projects. DAO advised that Defence plans to introduce regular audits of earned value analysis for various projects in DAO, and increase support to project offices on earned value analysis.[66]

Conclusion

5.10. Defence's financial management information system needs to provide a range of data and functions suitable for outputs management. Project ROMAN is to replace the present inadequate systems for the outputs management task. However, Defence recognised the need as early as 1992.

5.11. The ANAO considers that the new system should contain a project management system with the functionality and performance information needed to enable Output Managers to manage the tasks for which they are responsible and accountable. This requires the system to contain all the data required to manage costs, timing, as well as the attributes, codified in key performance indicator (KPI) form, on which a project will be reported and evaluated before acceptance into service.

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[66] Deputy Secretary Acquisition, *DAO Response to Draft ANAO Report on Management of Acquistion Projects*, 27 July 1999, p.3.

Cost accounting

5.12. Cost accounting is often called management accounting since its purpose is to assist managers to accumulate the costs of an organisation's products and services, and also assist setting of prices and reporting performance.[67] Measuring costs, setting prices and reporting performance are integral components of the outcomes and outputs framework, as stated by the Department of Finance and Administration (DOFA):

> *By emphasising that all outputs come at a price, government signals it is seeking a service that will best achieve the outcome at the best price. Good stewardship of taxpayer funds implies that agencies should seek to reduce their prices by using available management tools such as benchmarking, process re-engineering, and competitive tendering and contracting. Comparing the price of similar outputs will give the Government a bottom line verification of efficiency while avoiding examination of the detail of agencies' internal processes.*[68]

5.13. Defence's outputs represent government investment decisions in the range of capabilities necessary to achieve Defence's mission. Introduction of outputs-based appropriations and accrual-based output budgets will require Defence to account for its expenditure in terms of the direct and indirect costs of operating, maintaining and developing each output. Direct costs include personnel costs, training costs, operating costs, equipment and spares costs, and logistic support and facility costs. Indirect costs include all costs incurred by the 12 Groups and attributed to the 22 outputs. Defence will need to redesign its chart of accounts so that all costs are attributed according to the contribution they make to particular outputs.[69]

Allocation of budgeted resources and attribution of inter-group costs

5.14. Defence's budgeting process allocates resources to each Group. Defence's complex inter-group relationships result in some Groups devolving resources to other groups in support of the other Groups' objectives. For example, in 1998–1999 the three Services provided DAO, the receiving Group, with approximately 540 Service personnel to work in DAO's project teams and senior management positions. The outcomes

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67 Charles Horngren and George Foster, *Cost Accounting: A Managerial Emphasis*, 6th Ed, Prentice–Hall International Editions, 1987, p.3.

68 Department of Finance and Administration, *Specifying Outcomes and Outputs: Implementing the Commonwealth's Accrual–based Outcomes and Outputs Framework*, 1998, p.27.

69 Department of Defence, *Resource Management Framework Awareness Seminar Participant Manual, RFP Division*, 1999, p.35. [Internal document.]

framework requires managers to attribute all costs relevant to each output costs so that Defence and Government may gain an understanding of the total resources used in achieving each output.[70]

5.15. However, Defence has not yet implemented policies and procedures, which allow the full attribution of inter-group costs to the extent that may be expected within a fully implemented outputs management framework. The cost of services provided by a Group to other Groups is often met to varying degrees by the provisioning Group. For example, the costs of support services such as accommodation are not attributed to receiving Groups[71] but are borne by the Defence Estate Organisation. However, service salaries, military employee cash costs and related accruals, including the provisions for employee entitlements, are attributed to all Groups in line with staff postings.[72]

5.16. The allocation of budgets to all Defence Groups, and the functional limitations in Defence's financial management information system, complicate the calculation of the true cost of each Defence output. For example, the *Defence Annual Report 1997–98* indicated that DAO running expenses amounted to $158 million in that year (ie. the cost of DAO, whose main activity is administering payments to suppliers of equipment). The ANAO queried this figure with DAO, which then provided a revised estimate of $184 million—see Table 3. DAO advised that its efforts to provide a 'realistic' estimate of what the costs might be, involved using Defence's Commercial Support Program personnel costs ready reckoner and other assumptions.[73]

5.17. DAO explained the different amounts by stating that the personnel costs shown in the annual report do not include all personnel overhead costs. DAO advised that Defence's current financial management procedures do not allow it to provide the ANAO with the total cost of its military and civilian personnel, contractors and professional service providers (PSPs) together with all associated overhead costs. This example illustrates the limitations of Defence's financial management information system (DEFMIS).

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70 Department of Defence, Departmental Finance Instruction No.7/93, *Attribution of Personnel Resources*, 13 December 1993, p.1.

71 Department of Defence, *Defence Annual Report 1997–98*, pp.101,109.

72 Department of Defence, *Defence Annual Report 1997–98*, p.28. Also, DAO letter DAO 98–12945, 5 February 1999, *Management of Acquisition Projects—Attribution of Direct and Indirect Personnel Costs;* and Department of Defence, *Ready Reckoner of Personnel Costs and Related Overheads*, Edition 5—February 1998, pp. 17–21, 45–118.

73 Deputy Secretary Acquisition, *DAO Response to Draft ANAO Report on Management of Acquistion Projects*, 27 July 1999, p.3. [Internal Report]

Table 3
DAO Running Costs 1997–98

Running Costs— Annual Report	*$m*	*Running Costs— DAO's advice*	*$m*
Service Personnel	**49.3**	Employee costs	**152.4**
Civilian Personnel	**82.2**		**-**
Administrative Expenses	**28.8**		**-**
Maintenance and Stores	**3.8**		**-**
		Consultants	**1.2**
		Professional Service Providers	**21.6**
		Overheads	**8.8**
Total	**164.1**	**Total**	**184.1**

Source: *Defence Annual Report 1997–98*, p.145 and DAO advice to the ANAO.

5.18. DAO advised further that:

- it has no more difficulty than any other Group in Defence in determining the total cost of its military and civilian personnel because this has not been a requirement in the past therefore budgeting systems did not capture the information; and
- the move to accrual budgeting has necessitated the current change in Defence's financial systems and the way it accounts for resources.

5.19. DAO contracts in professional service providers (PSPs) to apply specialist skills to specific tasks in project management. In many respects they are similar to full-time project management staff. DAO expenditure on PSPs amounted to $21.6 million in 1997–98, increasing to an estimated $31 million in 1998–1999—see paragraphs 8.5–8.6.[74] DAO advised that, as PSPs are funded from administrative or direct project funds and do not form part of personnel costs. Hence, PSP costs are included in the amount disclosed as total payments on projects ($2.3 billion in 1997–98).[75] However, the ANAO considers that this practice obscures the cost of PSPs and that it would be preferable to show it in DAO's disclosed costs in the Defence annual report. Defence records indicate concern about the appropriateness of shifting labour costs from the personnel budget to the capital investment budget by using 'Pink Book' (unapproved) project capital funds for project management services.[76]

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[74] Department of Defence, Defence Acquisition Organisation, DAO 98–12945 Management of Acquisition Projects—Personnel Management and Defence Committee Roles Responsibilities and accountability, 25 February 1999, p.3. Also discussions with DAO 18 June 1999.

[75] Ibid.

[76] Defence Acquisition Organisation, Capital Equipment Program Division, *Engagement of Professional Service Providers of Project Management Activities*, December 1997 [Internal report].

5.20. Late in the audit Defence advised that

> *the replacement financial management system (ROMAN) should enable the cost of PSPs and Defence staff to be costed against specific projects where applicable, as well as be separately visible within the chart of accounts structure. The issue of funding from the pink book is a separate issue to the booking of costs.*[77]

5.21. DAO had indicated to the ANAO that its project management costs amounted to some five per cent of the amount paid on projects and that this was reasonable by industry standards. The DAO cost of $184 million in 1997–98, however, represents some seven per cent of the $2.3 billion DAO spent on projects and their management that year.[78] The ANAO suggests a review of DAO running cost attribution practices and that DAO benchmark its full costs against the costs of comparable activities in other organisations to demonstrate that its services represent good value. (See comments on benchmarking later in this chapter.)

5.22. Defence commented in response that Output costing and project costing are altogether different issues and that:

- inter-group costs should be assigned only to the extent justifiable on cost:benefit grounds;
- costs can be attributed to the nth degree with only a marginal impact on output costs; and
- Defence is seeking to determine where the balance appropriately lies between direct assignment to outputs and costing through intermediate attributions.

The ANAO considers that, for improved management of overall capability continuum costs, Defence needs to equitably attribute the cost of services provided by Enabling Groups to the various Defence Outputs. Defence's new $44 million output management accounting system (Project ROMAN) should provide this functionality.

Conclusion

5.23. Uncertainty about the total resources used to produce each Defence output raises significant difficulties in determining output efficiency or the impact that Group funding variations will have on the effectiveness of specific Defence outputs. In times of spending reductions,

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[77] DepSec R & M 36/1999, *ANAO Performance Audit of Defence's Management of Major Capital Acquisition Projects*, 19 August 1999. Attachment—*Additional Issues,* p.1

[78] Department of Defence, Department of Defence, Defence Acquisition Organisation, DAO 98–12945 Management of Acquisition Projects—Personnel Management and Defence Committee Roles Responsibilities and Accountability, 25 February 1999, p.3.

a lack of cost structure knowledge and efficiency and effectiveness information may result in decisions that produce a less than optimal outcome. This would most often result in changes to the level of Defence capability.

5.24. Defence's inability to allocate full inter-group costs systematically to outputs will hinder the implementation of its capability management framework. An absence of adequate cost accounting creates difficulties in evaluating the efficiency of outputs and examining the accuracy of Defence's budget program. In practical terms this may lead to budgets based on incremental changes to previous budgets, caused by reactions to resource demands, rather than budgets based on analysis of future output needs and their capital and recurrent costs. The replacement financial management system (ROMAN) should lead to improved monitoring and control over Group costs and better apportioning of costs of specific projects to relevant Outputs. However, ROMAN is not yet complete and so its overall capabilities remain untested.

Cash management of the capital equipment acquisition program

5.25. DAO requires its Project Managers to develop and use a Financial Management Plan (FMP) linked to each project's Project Management and Acquisition Plan (PMAP). The general aim of FMP is effective resource management at the project level. To this end Defence contracts provide for progress payments based on earned value shown by cost management systems, or based on key milestone achievement. This raises the expectation that progress payments, as a rule, would not exceed the value earned by contractors and so become prepayments for work yet to be done. Defence contracts also provide for 'deposits' on contract signature, and payments on a combination of milestones and earned value. The mix of milestones and earned value is determined on a variety of factors.

5.26. Cash-based budgets with only limited roll-over provisions, allowing some annual budget allocation in one year to be carried over to the next, have resulted in pressure to spend annual budget allocations. For example, the Defence Program Management Committee (DPMC) was advised in December 1996 that full achievement of approved project allocations in 1995–96 was only made possible by making payments higher than those programmed on the C–130–J Hercules aircraft ($127 million) and ANZAC ships project ($70 million), and by other measures including bringing forward expenditure on unapproved projects on a loan/repayment basis. The DPMC was also advised that the remaining 170 approved projects collectively underachieved their net cash allocations by up to $300 million.

5.27. In 1998 a review for DAO by a chartered accounting firm found that two projects (the ANZAC/OPC Helicopter Capability project and the Lead-In Fighter Capability Project) had made progress payments to the contractors that exceeded their earned value by a total of $185 million, or about 50 per cent of the then actual progress.[79] The accounting firm recommended that Defence reclassify the excess payments as 'prepayments' rather than allowing them to remain as progress payments. This demonstrates the potential flow-through effects of some project management decisions on Defence's financial statements.

5.28 In January 1998 the Defence Management Committee (DMC—formerly known as the DPMC) was advised that slippage in deliveries in the C–130–J project resulted in a need to address a $60 million underspend in DAO's approved project cash-budget by using the flexibility it has to vary payments on other projects.

5.29. The 1996 audit report on the JORN Project commented (p.30) on the pressure that Defence applied to its project managers to spend their annual budget allocation in order to help Defence spend the annual expenditure estimates set in the Defence budget.[80] The ANAO commented that this attitude to maintaining the Defence budget '*was not in the Commonwealth's interests from either a contractual or a budgetary perspective*.' On the audit of New Submarines the issue was not of immediate relevance because, by the time of the audit, Defence had already spent over 95 per cent of the project budget and there was little left to spend. There were, however, indications that this pressure had occurred in the past.[81]

5.30. Pressure on managers to spend their appropriation came to light a year later in the DER. The *Report of the Logistics and Regional Support Sub-Review Team* submitted to the DER in February 1997 commented (at page 28) as follows:

> *A disturbing feature of current financial management practices is the impact on purchasing practices of the need to satisfy an annual performance indicator of total expenditure against allocation. Inventory profiling and expenditure profiling over time highlight decision-making resulting from satisfaction of that performance indicator that could be perceived as less than acceptable.*

5.31. Defence is allowed an annual budget carryover of $150 million. This amount may be exceeded for major capital projects provided the

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[79] Ernst & Young, *Acquisition Program—The Second Phase Review*, August 1998, p.18. [Internal Report]. See also Ernst & Young, *Scoping Study for Program Manager Sign–off: Acquisition Program*, May 1998, [Internal Report].

[80] Auditor–General Audit Report No. 28 1995–96*, Jindalee Operational Radar Network Project Department of Defence*, 14 June 1996.

[81] Auditor–General Audit Report No. 34 1997–98*, New Submarine Project Department of Defence*, 24 March 1998, pp.60–61.

required carryover was raised in the budget process and, where appropriate, was agreed by the Expenditure Review Committee. This arrangement lapses in July 2000. The DER Secretariat found that Defence had been reluctant to make use of budget carryover arrangements due to a commonly held view within Defence that '*use of a carryover would effectively constitute a demonstration that Defence was over resourced*.'[82] The DER report itself did not comment on this issue.

5.32. Defence's budget carryovers since 1995 have been as follows:[83]

- 1995–96 $0.760 million (borrowing);
- 1996–97 $0.486 million (borrowing);
- 1997–98 $0.994 million (borrowing); and
- 1998–99 $179.353 million (borrowing).

Conclusion

5.33. This and past audits indicate that Defence's cash-based accounting emphasises the achievement of each year's budgeted expenditure estimates. This presents capital equipment budgeting problems at times when earned value on projects has not been achieved. There is a need for sensible carryovers between successive major capital equipment budgets, since project progress shortfalls in one year increase project funding requirements in later years.

5.34. To 'smooth out' successive annual demands on the capital equipment budget, Defence has occasionally reprogrammed its capital equipment activities to either increase progress on some projects or slow progress on others. Again, however, it would be preferable to have carryover provisions that allow cost-effective reprogramming of the capital equipment acquisition program. This would allow project managers to link progress payments to commensurate earned value.

5.35. Project managers should exercise business judgement in spending their annual allocation of funds in the best interests of the Commonwealth. Spending to maintain Defence budget estimates should not be regarded as an end in itself.[84] Given the changes to department funding and decentralised banking introduced under the Government's financial

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82 Department of Defence, *Future Directions for the Management of Australia's Defence, Addendum to the Report of the Defence Efficiency Review—Secretariat Papers*, 1997, p.29.

83 Advice from the Department of Finance and Administration 28 July 1999. DOFA provided the 1998–99 carryover figure on 15 September 1999.

84 In the report of its review of an audit report on another agency, the JCPAA recommended that: 'The Minister for Finance and Administration should address the issue of incentives and penalties related to agency expenditure of Budget appropriations to ensure that agencies' concerns to achieve their expenditure bids do not overshadow the Commonwealth's interests'. JCPAA Report 366 (March 1999) p25.

management reforms, it would be timely for Defence to review current practices to encourage a more commercial focus on contract management and outcomes.

Recommendation No.2.

5.36. The ANAO recommends that Defence seek Ministerial approval, in consultation with the Department of Finance and Administration, for annual capital equipment acquisition budget carryovers at levels commensurate with sensible re-programming of capital equipment acquisition activities and Commonwealth budget imperatives in order to assist cost-effective acquisition, with project managers only making progress payments to contractors in accordance with earned value.

Defence response:

5.37 Agreed with qualification. Defence supports both the need for the ability to sensibly re-program capital acquisition activities (both equipment and facilities) in order to assist cost-effective acquisition, and the policy of only making progress payments on the basis of earned value. However, Defence has a technical difficulty with the recommendation regarding the point of whether further Ministerial action is required to confirm or extend existing carry-over provisions.

6. Acquisition Performance Monitoring and Reporting

This chapter provides an overview of Defence's acquisition performance monitoring and reporting. It includes reporting to the Minister and the Parliament, internal performance monitoring, key performance indicators and benchmarking at the project level, the output level and the Group level.

Introduction

6.1. Effective corporate governance and the Government's new 'outcomes and outputs framework' rely to a large extent on control, monitoring and reporting systems that focus on the essential elements that contribute to organisational success. This requires systems that measure and evaluate performance against agreed objectives, regardless of the degree of difficulty involved.

6.2. Performance information is evidence, either quantitative or qualitative in nature, about performance that is collected and used systematically to assist internal decision-making and external reporting on program achievement. It encompasses the setting of clear and realistically achievable objectives, and the development of applicable strategies and performance indicators, which link these objectives to other related processes. An agency's performance information should include a balanced range of measures; that is, it should include assessments of the economy, efficiency and effectiveness of inputs, outputs and outcomes in meeting program objectives.

6.3. Internal reports should provide performance information needed to support day-to-day decision-making and effective program management. This information also provides the basis for external reporting, particularly through the annual report, which should be focused more on the achievement of output performance targets and costs and include successes and improvements required.

6.4. Given that the scope of this audit takes in DAO and its interactions with other Defence Groups involved in the capability management continuum, this chapter looks at both external and internal acquisition performance monitoring and reporting, key performance indicators and benchmarking at three different levels: the capability management continuum or output level, the Group level and the project level.

Defence performance information

Internal measurement of capability management performance at the output and Group levels

6.5. Prior to its adoption of the capability management framework, Defence reported performance along Group (or 'Programme' as it was then called) lines. Under the new capability management framework Output Managers are now accountable for the performance of their outputs and must have ready access to up-to-date information about their output's performance if they are to exercise fully this responsibility.

6.6. The Performance Information Review (PIR) of 1997 brought to notice Defence's need to improve its monitoring and reporting of both capability management and Group activities.

6.7. Initiated by the then Government in 1995, the PIR sought to address shortcomings in agencies' performance information and reporting. The PIR's objective was to improve the capacity of agencies to demonstrate what performance has been achieved against the objectives set by government. The PIR sought to assess the quality and clarity of existing objectives and performance information, to identify good practice, and, where necessary, to propose improvements in performance information or propose strategies for making those improvements. As part of the review Defence and the then Department of Finance jointly conducted the Defence PIR and reported the results to their respective Ministers in July 1997.[85]

6.8. Defence records indicate the PIR found the following 'major shortcomings' in Defence's Group-based performance monitoring and reporting process:

- no clear and cascaded linkages of performance information from the Portfolio to the Programs [functional Groups] and Sub-Programs [functional sub-Groups] and below;
- little systematic or comprehensive reporting of performance by Programs [functional Groups] to the Portfolio, and limited visibility at the Portfolio level of Program [functional Group] and Sub-Program [functional sub-Group] performance;
- limited reporting on outputs, with the most reporting on the consumption of inputs and the conduct of activities;
- duplication of effort in meeting differing reporting requirements;

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[85] Department of Defence, *Portfolio Budget Statements 1998–99* p.21.

- uncoordinated review and evaluation processes, with no overall evaluation plan;
- no system to identify fully the costs of activities and outputs or the resources required to achieve them. There were similar difficulties in the review of bids for additional funding, in terms of the level of funding required to achieve specific outcomes, their relative priority, and the opportunity cost of funding some activities rather than others;
- wide variance in the standard of performance measurement and assessment across the Portfolio and little evidence to suggest Portfolio assessment of the validity, reliability, accuracy and relevance of information; and
- Insufficient guidance relating to performance measurement and assessment provided to programs [functional Groups] and sub-programs [functional sub-Groups]. The PIR found it essential that there be more coordinated guidance from the Portfolio to programs.[86]

6.9. Defence records indicate the review identified many examples of good practice in standards, targets, benchmarking etc. However, the review found Defence's performance information patchy and more the result of individual or group initiatives rather than a coordinated approach to performance measurement and assessment.

6.10. The PIR recommended that Defence shift its performance information focus from top-down to an outputs focus supported by performance information statements on capability and performance level requirements. The PIR commented that this would need to be progressively implemented as key relationships are established, processes modified and supporting corporate systems enhanced.

6.11. The *Defence Annual Report 1997–98* (p.32) stated that the PIR review led to the following initiatives:

> *Performance Management Framework*
>
> *A new performance management framework is being developed to provide a comprehensive and planned performance management environment and culture in which the contribution each element of the Defence organisation makes to higher-level objectives and outputs is identified, performance information is collected and aggregated to inform decision-making, and managers are held accountable.*
>
> *[Functional—Group] Program Managers now report biannually, in March*

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[86] *Performance Information Review*—Joint Report of Department of Defence and Department of Finance July 1997 and DMC Agendum 10/1997 *Performance Information Review*. (internal documents).

and September, on their Program's performance to the Defence Executive. This internal reporting is tied to the budget process and is designed to inform Defence's external reporting in the Portfolio Budget Statements, the Additional Estimates Statements and the budget.

A Capability Assessment Report is being developed for each Defence output. The reports will describe the current level of capability of the output—readiness, sustainability and effectiveness for various roles—as well as identifying approved and proposed options for varying the capability. They are intended to inform long-term planning and subsequently the Five Year Defence Program and the budget.

The full performance framework is planned to be implemented by 1 July 1999 to fit in with a number of other related initiatives including accrual-based output budgeting, accounting and reporting.

Conclusion

6.12. The PIR's findings raised concerns about Defence's implementation of the performance monitoring and reporting aspects of its program management and budgeting and its corporate governance. The lack of performance information to the degree found by the PIR also casts doubt over Defence's ability to exercise efficient and effective resource management over its outputs framework. This situation is most critical in DAO, where risks arise in the capability management continuum from the complex nature of DAO activities.

6.13. Limiting the visibility of individual program performance constrains the ability of senior executives to exercise effective program control. The need for clear and coherent performance information will increase under the capability management framework.

6.14. Defence states that it faces significant challenges in developing criteria for group performance measurement and achievement. Defence's newly-introduced Capability Assessment Reports (CARs) are to provide performance information and establish a baseline for measuring performance improvements at the output level. Defence nevertheless needs to develop appropriate and meaningful reporting structures that are linked to improved management information systems capable of processing accrual-based output budgeting and cost accounting. Defence records indicate that the management information systems capable of satisfying these requirements was not available before July 1999 when the Government's accrual-based performance management was scheduled for implementation.

Measurement of DAO's performance

6.15. Complex organisations such as DAO require a variety of integrated performance management systems that monitor project cost, schedule and quality, and expenditures versus budgets.

6.16. Defence has stated that DAO's performance is measured by the extent to which:

- new capital equipment met operational and support requirements and acquisitions occurred within approved cost estimates, on schedule and in accordance with government industry procurement policies; and
- defence industry policies, programs and procurement help develop and sustain cost effective capabilities relevant to the nation's defence.[87]

This audit covers only those DAO's activities referred to in the first point above. The ANAO found little evidence to show that DAO's performance is measured and reported in the manner Defence indicated. The following section assesses DAO's project-level and Group-level performance measurement.

DAO Group-level performance measurement

6.17. In July 1993 Defence's Acquisition and Logistics Executive (ALEX—now known as APEX) identified, as a high priority issue, the need for Defence Acquisition and Logistics [now DAO] to develop a set of overall group-level performance measures. Subsequently, ALEX tasked a 'tiger team' with identifying a small number of high return, high priority performance measures to be used in the major capital equipment acquisition phase. Since then DAO has been seeking a set of 'top-down' performance measures and benchmarks that would assist in:

- evaluating actual performance;
- allocating accountability; and
- identifying future management issues, problems and associated options.

The issue of group-level performance measurement has now been taken up by DAO's Performance Reporting and Evaluation (PR&E) system which DAO is implementing as part if its business process re-engineering (see paragraphs 7.11, 6.24–6.26) and its Key Performance Indicator (KPI) initiatives discussed in paragraphs 6.37–6.40.

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[87] Department of Defence, *Defence Annual Report 1997 –1998*, p.250.

DAO project-level performance measurement

6.18. DAO uses quantitative measures such as target dates, milestones and funds expended for most of its principal project management activities. Generally, these measures are valid and useful at the project management level if they are linked to client-focused earned value. Since the early 1990s DAO's principal indicators of project progress have been a mix of cost and schedule control systems based on earned value and the more traditional milestone achievement.

6.19. During the audit of the New Submarine Project in 1997 the ANAO, concerned that Defence senior management lacked a clear view of actual progress on major projects such as JORN and New Submarines, put to Defence a suggestion for regular project progress reporting and monitoring in accordance with a rigorous format to show actual progress on each project. The ANAO considered existing reporting processes lacked rigour, that progress reporting requirements should be driven by senior executives from the top down and that report formats should not be left to the project managers to decide. The ANAO's view was that this was basically a corporate governance issue. (The issue arose partly from the nature of the prime contracts for those projects—fixed price contracts extending over several years—which pose particular risks, as indicated in Annex A to this chapter.)

6.20. Defence's senior management need regular reports on actual progress on major projects for other purposes too; namely, to assist in assessing the value added by Defence's project managers and to assist the Output Managers, with a wider perspective than the project managers, in deciding when to intervene and to implement contingency measures in response to variations from planned progress. Progress reports can promote the engagement by senior management that corporate governance requires.

6.21. In the absence of a standardised and effective performance measurement and reporting system the ANAO suggested that the manager of each major project submit a monthly one-page report based on DAO's earned value management processes, milestones, systems engineering management, general risk management and quality assurance issues to show the actual state of the project. It was developed with assistance from a project management consultant engaged by the ANAO. The ANAO suggested that DAO implement the reporting system without delay, rather than wait for other methods to be refined.

6.22. DAO replied at the time that its senior managers review projects on a regular basis and are kept informed of what is being achieved. The ANAO understood that the information channels were a mix of oral briefs

supported by ad hoc written reports. DAO also advised that it was implementing ProMIS, which is discussed below. In July 1999 DAO advised it would examine the ANAO's suggested reporting format and that it had developed a one-page senior management reporting format for use by the majority of projects using earned value. However, regular reporting to senior management on actual project progress remains a matter of concern to the ANAO, and this is discussed below.

DAO's automated project-level performance measurement

6.23. Since 1996 DAO has been developing an automated Project Reporting and Monitoring System (ProMIS) to provide information on each project's status, financial performance and performance trends. DAO intends to use ProMIS as a high-level risk management tool to help identify project risk trends and potential difficulties. DAO scheduled ProMIS for full operation by late 1998. However, this has not been achieved. ProMIS is still being developed to provide a more holistic view of project status in connection with DAO's business process re-engineering, discussed in Chapter 7. It needs further significant upgrades in order to integrate into Project ROMAN discussed in paragraph 5.4. DAO indicated in this audit that:

- it is working to more clearly define its information management environment, particularly in terms of new corporate systems, and especially Project ROMAN;
- once DAO's information management environment is better defined, there will be rationalisation of the ProMIS content with the corporate systems; and
- ProMIS capability is being extended to cover unapproved projects and is now available to ADHQ through the Canberra Region Information Systems Precinct Project. Further development of this capability as a single shared project information system has been endorsed by the Capability Forum.

6.24. As discussed in paragraph 5.4, Defence has established Project ROMAN as part of its efforts to improve its information management systems. In addition, DAO's business process re-engineering includes a Performance Reporting and Evaluation (PR&E) study at the project-level as part of its efforts to improve risk management and program reporting. The study is assessing the following proposals:

- All projects are to submit monthly performance reports, quarterly performance reports or reports on demand comprising an executive summary and risk assessments and, where relevant, containing:

  a) baselines for cost, schedule and technical performance;

b) activity narratives;

c) budget issues; and

d) earned-value performance data.

- Risk assessments are to cover five key risk areas identified by the Project Director, with narratives covering technical performance, design and production, Australian industry involvement, cost, schedule, budget, contracts, test and evaluation, introduction into service, project management, and logistics and supportability.

6.25 The study is also considering a requirement for all Heads of Systems Acquisition to establish internal processes to assure the quality of quarterly reports, as well as a requirement to draw on specialist advice.

6.26. DAO advised the ANAO that:

- Project ROMAN is on schedule for implementation in July 2000 and DAO is participating in the Project with the aim of updating financial management systems;
- the PR&E initiative has been taken up in ProMIS with the one page summary as the ANAO recommended [paragraph 6.21 refers]; and
- ProMIS is being broadened to provide a more holistic view, which will cover schedule, risk, earned value and other aspects such as industry issues.

Conclusion

6.27. DAO slowly developing its project-level performance measurement systems. Nevertheless, the ANAO considers that DAO should already have well-established systematic reporting on all key performance issues in all of its projects. Defence's senior management should be requiring this, given the financial and military significance of DAO's portfolio of major projects. The need for systematic reporting arises from the program management and budgeting concept adopted by Defence in 1990 and from corporate governance accountability principles.

External reporting of performance

Portfolio Budget Statements and Annual Reports

6.28. Portfolio Budget Statements (PBS) are published annually with the Government's Budget and provide information on what a portfolio plans to achieve with its budget allocations for the following financial year. PBSs are therefore key reporting and accountability documents and are expected to show:

- what outputs will be produced;

- how well they will be produced in terms of quantity, quality, cost and timeliness;
- how well outputs will contribute to planned outcomes; and
- how outcome achievement will be assessed.

6.29. Agencies are required to provide annual reports for tabling in the parliament in October each year. Department of Prime Minister and Cabinet (PM&C) guidelines[88] specify that annual reports (and PBSs) should include performance measures of a quantitative and qualitative kind that focus on program objectives and results, and that program impact or effectiveness should be discussed. PM&C specify, amongst other things, that performance reporting *'should be a balanced and candid account of both successes and shortcomings.'*[89]

Conclusion

6.30 DAO's data in Defence's *Portfolio Budget Statements 1997–98* (7 May 1997)[90] and the annual report for that year (*Defence Annual Report 1997–1998*) (21 October 1998) indicate inconsistencies between the stated performance measures and the way project outcomes were reported. For example, DAO's section in the Defence annual report presented largely descriptive product delivery information. It did not consistently report results in terms of product impact or effectiveness; that is, the extent to which DAO's products met its clients' operational requirements, achieved value for money and are supportable.

6.31. It would have been preferable had the DAO section of those documents reported individual project cost, schedule and quality outcomes in terms of the extent to which delivered platforms and weapon systems met Defence output needs such as the equipment's Statements of Requirements (SORs) or acceptance into service criteria.

6.32. For example, with regard to major capability projects such as the Navy's ANZAC Ship and New Submarine Projects, it would be relevant to report any delays in achieving acceptance into service and whether these were affecting the relevant Defence output, as well as on contract deliveries and percentage of funds expended. It may also be useful to report major equipment operational availability as an overall measure of capital equipment investment outcomes.

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88 Department of Prime Minister and Cabinet, *Annual Reporting Guidelines*, March 1995, p.5.

89 Department of Prime Minister and Cabinet, *Requirements for Departmental Annual Reports*, April 1998, p.6.

90 Department of Defence, *Defence Annual Report, 1997–1998*, 21 October 1998, pp.249–257, *Portfolio Budget Statements 1997–98 Defence Portfolio, Budget Related Paper No. 1.3A* 7 May 1997, pp.93–97.

6.33. DAO advised the ANAO that such measures are not available until the project is very mature, as many years of design and production activity may occur before a platform is tested against the SOR or accepted into service. The ANAO considers that this should not prevent Defence from reporting such performance indicators when the results become available, in addition to data on equipment delivery.

6.34. Defence's recent *Portfolio Budget Statements 1999–2000* are its first PBS to attempt to report on the Government's new 'outcome and outputs framework' basis. Prior to that, Defence PBSs had presented cash and Group-based budget. The new framework has led to changes in the way that major military equipment acquisition performance is reported. Progress on selected projects previously reported in the annual PBS under DAO is now reported under the relevant output. This allows greater visibility of the total costs, both capital investment and recurrent, of a capability across the capability management continuum.

6.35. Defence's *Portfolio Budget Statements 1999–2000* show improvement over past PBSs by presenting Defence's 22 outputs in terms of output descriptions, their composition, performance information and performance targets. This will provide the basis for significantly improved accountability for the delivery of military capability, and underscores the need for each output manager to have the managerial authority and responsibility that goes with the accountability for achieving agreed performance targets. However, there is still scope for improved cost attribution and reporting of capital equipment acquisition in terms of the key results areas described above.

6.36. There is also a need for DAO to report as a Group on its overall performance to the Defence Executive. This would involve reporting on the aggregate performance of its projects by comparing current estimated costs and in-Service dates against approved budgets and time-scales. It should include information on DAO's project management costs to allow comparisons with those of similar organisations. DAO should also report on its project management personnel in terms of shortfalls, military-civilian mix and professional qualifications and experience. For a discussion of DAO's personnel management, see Chapter 8.

Key performance indicators

6.37. Performance indicators are intended to provide information on an activity's progress in meeting its objectives and its efficiency and economy in using the resources available to it. Key performance indicators (KPIs) are the most significant indicators in a ranking of performance measures.

DAO's KPIs

6.38. At the time of the audit, DAO's business process re-engineering (BPR) project team was developing a set of KPIs to measure DAO corporate performance and another set to measure progress of its BPR reforms. (DAO's BPR is discussed in Chapter 7.) These KPIs are shown in Tables 4 and 5. However, the KPIs are still in draft, do not yet have values assigned to them and are not in use. DAO has not yet implemented a KPI reporting process for all its projects. There is still no system implemented to show, for example the performance of all DAO's 230 projects in terms of time overruns of three months or more or cost overruns of five per cent or more, based on the Government's original approvals. DAO advised that further work is needed on the KPIs to relate them to DAO's overall performance and BPR implementation.

6.39. Nevertheless, the ANAO considers that KPIs are a valued method of reporting project progress to senior management, and that DAO should use the KPIs it has now, or complete the consideration of KPIs as a matter of priority. Reports should highlight project management issues that indicate project performance in terms of allowable limits so that senior management may respond appropriately. The audit of the JORN Project and New Submarine Projects disclosed DAO reports on project progress containing optimistic narratives of limited value in indicating project variances and the need for senior management action.

Table 4

DAO Proposed Key Performance Indicators—1998.

Metric	*KPI*	*Tolerance*	*Comments*
Time	Slippage to in-service or delivery date	3 months	Schedule compared to both latest approved version and orginal (including milestones)
Time	Delays to significant milestones	1 month	Cycle times of key processes (eg. RFT preparation, source selection)
Cost	Cost increase and contingency usage	5%	Cost compared to both latest approved version and original (includes contingency)
Cost	Project management overhead costs	5% (minors) 3% (majors)	Cumulative management costs as a percentage of total contract value (requires measurement of all staff and other costs)
Quality	Risk trend and predicted future risk profile	Risk metric of 0.2 or one assessment level	Risk assessment—a predictive assessment of technical or quality risk by the Project Director based on a table of probability and consequence within a framework of Australian Standard guidelines and definitions
Quality	Sponsor satisfaction as customer representative	One assessment level	Sponsor satisfaction—a rating by the project sponsor on their satisfaction that the delivered product will meet the stated user requirement
	Earned Value-based KPIs		
Time	Schedule Variance (SV)	SV% >3 months and Sv_{cum} >5%	Schedule Variance (SV) = Budgeted Cost for Work Performed (BCWP)—Budget Cost for Work Scheduled (BCWS)
Cost	Cost Variance (CV)	5%	Cost Variance (CV) = Budgeted Cost for Work Performed (BCWP)—Actual Cost of Work Performed (ACWP)
Cost	Projected contractor cost overrun	5%	Variance at Completion (VAC) = Budget at Completion – Estimate at Completion
Quality	Contractor performance and efficiency	10%	To Complete Performance Index (TCPI) = efficiency needed to complete the contract within the stated Estimate at Completion

Source: Department of Defence.

6.40. The draft KPIs would be capable of indicating to senior management which projects are performing well and which projects require additional management attention. However, there is scope for DAO to improve its focus on external issues of importance to its suppliers (capability development and industry) and customers (the Output Managers and SCA) and its stakeholders.

Table 5

DAO Business Process Re-Engineering—Proposed Key Performance Indicators

Key Performance Indicators	*Status of Results*
% of projects managed under SPMM	42 projects being piloted.
% of projects completed on time, in budget to agreed quality	Quantitative data should be available by June 1999
% of projects that completed White Book to contract faster than pre BPR initiative	Quantitative data should be available by end 2000.
% of customers satisfied with DAO's performance on projects	Questionnaire to be released to obtain data.
ISO 9000 compliance	By 2000 (planned)
Number and severity of non-conformance with DAO policies, processes and procedures	Mid 1999 (planned)
% of improvement proposals unresolved within target timeframe	Mid 1999 (planned)
% of projects with standardised (SPMM/PR&E) reports	3 (a further 17 planned by end of March 1999)
% of projects using standardised reports advising reduction in reporting effort	Quantitative data should be available by June 1999.
% of projects with formal internal and external partnering arrangements	Quantitative data should be available by June 1999.
% of projects at project approval and endorsed Transition Plan	6 (planned).
% of projects that meet endorsed requirements	Quantitative data should be available by June 1999.

Source: Department of Defence.

KPIs throughout the capability development continuum

6.41. Performance indicators are capable of identifying gaps in process performance which enable managers to devise business process improvements. KPIs are generally recognised as crucial for effective program management, particularly when programs cross a number of complex functional groups. The ANAO would expect Defence to develop,

not only Defence group-specific KPIs, but a general set of KPIs that cover the full planning, programming, budgeting and implementation continuum from a Defence capability management perspective. This would be in line with Defence's proposed 'seamless management' of capability development.

6.42. Support Command Australia (SCA) is developing a set of KPIs that address the following key business concerns:

- customer satisfaction with the achievement of agreed service levels with relevant Defence outputs;
- financial management that minimises the cost of providing effective materiel support for relevant Defence outputs;
- business processes that are well designed and implemented, continuously improving and supported by integrated, reliable and user friendly information systems;
- people management that is focused on SCA's people being highly motivated, adaptable, skilled and able to contribute positively in an environment of continuous change; and
- relationships with industry based on an increasing understanding of industry capabilities and needs.

6.43. SCA has conducted a Best Practice Workforce Attitude survey based on the Australian Quality Award criteria. Defence records indicate that SCA's score was in the normal range of a first survey result.

6.44. The three Services have developed KPIs for their outputs which are published in Defence's *Portfolio Budget Statements 1999–2000*. They have also developed KPIs for each Service Group.

Conclusion

6.45. DAO has a reasonably well-developed draft set of KPIs that cover both pre-contract and post contract project performance. However, DAO has not implemented KPI data collection and reporting to the Defence Executive that covers all of its projects. This has implications for accountability and may also deny senior management the opportunity to take appropriate action if KPIs indicate a need to do so. It would be desirable for DAO to implement its KPIs now instead of waiting to refine them.

6.46. Defence also needs to develop further the 'cross-functional' or 'cross-group' KPIs needed to properly monitor its 'seamless management' of capability development.

Benchmarking

6.47. Benchmarking is crucial for business performance management because benchmarks provide reference points for defining corporate visions, setting achievable performance goals and improving business processes. Benchmarking involves examining internal business processes and historical data, and comparing these with processes and data from external organisations. Benchmarks can be:

- internal (that is, comparisons of the same activity between different parts of the same organisation or at different times);
- external (that is, comparisons of the same activity with other organisations); or
- generic (that is, comparisons of similar processes with other organisations that may have different products).

6.48. Business managers responsible for benchmarking develop performance indicator data for each relevant business process and record past performance data. This data is periodically reviewed and adjusted for any significant business process change. Such a process enables the organisation to assess its overall performance with reference to performance benchmarks.

DAO's performance benchmarks

6.49. DAO states that it benchmarks its performance through high-level trilateral meetings with acquisition heads from the United States and Canada. These relationships may provide DAO with opportunities to make comparisons across common areas of project management. However, DAO advised the ANAO that differences in the size of the respective organisations and in the nature of procurement, as well as different legislative processes, often reduce the relevance of detailed comparisons.

6.50. DAO advised that, because of difficulties with benchmarking against comparable organisations, it places more reliance on objective measures of performance such as the extent to which new capital equipment meets:

- operational and support arrangements as signified by acceptance by the Service customer;
- approved cost estimates on schedule as signified by project schedule and cost control systems; and
- government industry and procurement policies as signified by Policy and Support Centres.

6.51. DAO advised that Defence is exploring opportunities for international benchmarking on the time taken from project approval to contract signature, as part of the implementation of the Defence and Industry Strategic Policy Statement (June 1998).

6.52. In mid-1998 the then head of DAO, Deputy Secretary Acquisition, was overseas on an APS Senior Executive Service Fellowship studying other countries' procurement systems. The report of his study was unavailable in mid-1999 at the time of preparation of this audit report.

6.53. The ANAO understands that during the audit other DAO personnel were overseas researching the following performance benchmark issues:

- models for comparing DAO's core business performance against international best practice; and
- suitable benchmarks for evaluating both DAO's and its suppliers' costs and times of tendering for complex procurements, so that Defence, in consultation with industry, can rate its performance against international best practice.

6.54. In February 1999 the ANAO requested DAO's advice on external and internal benchmarks used to measure its performance over the previous five years and on its performance trend analysis carried out using this data. DAO's response covered only external benchmarking initiatives which are still in the planning stage as discussed below.

Benchmarking against the private sector

6.55. Successive Governments have recognised that the public sector must systematically review its management and administrative procedures having regard to the best private sector practice. DAO's involvement in project management activities has much in common with private industry, and this may provide opportunities for benchmarking some DAO projects against private sector practice. In its report on Defence procurement in 1994, the Industry Commission recommended that:

> *in order to improve the efficiency of the procurement process and to provide a benchmark for its in-house administrative costs, Defence contract out the procurement process for a few selected projects.*[91]

6.56. The recommendation was made within the context of an Industry Commission view that it may be appropriate, in the case of selected [DAO] projects, for Defence to conduct contracting-out trials of the procurement process from request for tender (RFT) onward to project completion.

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[91] Industry Commission, *Report No.41 Defence Procurement*, Australian Government Publishing Service, Canberra, 30 August 1994, p.125.

6.57. In response to the ANAO's query about implementation of the Industry Commission's recommendation DAO advised the ANAO as follows:

> *For some years Defence has employed a significant and growing number of contractors in the management of acquisition projects. However, unlike the construction industry that deals with far less sophisticated technologies, the major equipment sector does not contain companies that specialise in the management of defence projects. Typically small firms of professional consultants are reluctant to insert themselves between Defence, as the customer, and large prime contractors and accept the risks to survival of their business that comes with such a contractual relationship in a high-risk industry. This is why most contractor support to defence project offices is provided under contractual terms and conditions that describe the provision of professional services, with personal and corporate liability severely limited.*
>
> *The DER considered that tasks associated with advice in specialist areas such as legal, quality assurance and engineering evaluation and support services could be contracted, but the responsibility of committing the Commonwealth should not be out-sourced. It concluded that the Commonwealth's core interests in Defence acquisition should continue to be protected by Commonwealth employees and that only by undertaking core procurement tasks internally could Defence continue to retain its 'wise-buyer' skills. While it is a matter of judgement about the extent of private sector involvement that is consistent with the DER recommendations, Defence believes that the limits of such out-sourcing are already being approached.*
>
> *While major Defence projects account for 25 per cent of the Defence budget, they are managed by less than two per cent of Defence staff. [That amounts to] about 1800 in-house people, several hundred professional service providers, and other contracted staff engaged for varying periods in the provision of support to projects.*

6.58. DAO also advised the ANAO that:

- Defence has accepted an invitation to join the International Project Management Benchmarking Network in Sydney;
- the first opportunity DAO has to benchmark will occur when all members of the PacRim Network complete a Corporate Practice Questionnaire containing some 160 questions (by mid-May); and
- the data from these questionnaires will be analysed by Human Systems, the facilitator for the Network, and a report will then be produced which compares DAO with other Network participants.

Disclosure of contracts

6.59. From time to time there has been parliamentary interest in viewing significant provisions in major Commonwealth contracts. The ANAO considers that public disclosure of the main provisions in contracts could prompt project managers to improve negotiation and management of contracts but accepts that disclosure raises issues beyond the scope of this audit. Annex B to this chapter considers some of the issues involved.

Overall conclusion

6.60. Reporting of progress on major projects is a matter of concern to the ANAO. Defence needs a system of uniform reporting to show clearly which projects are exceeding approved schedule or cost or not meeting required quality. Not all acquisition projects proceed according to plan, but project managers should be expected to report actual progress accurately, manage any variations from plan promptly and report to senior management any significant progress variations from authorised tolerances. Well-developed regular reporting, KPIs and performance benchmarks would assist in accounting for the substantial expenditure of public funds on capital equipment projects in terms of their progress toward Defence's outputs. KPIs and benchmarks would provide a wider view of what constitutes successful project management and organisational performance than that currently available.

6.61. As part of regular reporting to senior management, KPIs can assist senior managers in assessing whether a project's progress or performance calls for implementation of contingency or fall-back plans. This is most crucial for projects likely to have significant impacts on Defence capability and strategies. This underscores the need for disciplined project reporting to senior management that accurately and objectively shows progress, as well as the need for considered review of reports. These two issues form key elements in accountability.

6.62. Work is in hand in Defence on improving performance reporting and benchmarking but is proceeding slowly. There is some way to go before results are available that indicate improved acquisition project performance. The ANAO found reasonably well-developed draft KPIs in DAO and SCA. DAO is extending its internal performance indicators to take in a more holistic view of project performance. However, since DAO is not responsible for delivery of a capability *per se*,[92] there is scope for DAO to improve its focus on external issues of importance to its suppliers (capability development and industry), its customers (the Output Managers and SCA) and its stakeholders.

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[92] See paragraph 3.8.

Recommendation No.3.

6.63. The ANAO recommends that, to promote efficient and effective management of acquisition projects and achievement of capability outputs, Output Managers:

(a) receive regular reports (until a suitable electronically-based executive management information system can be developed) on each major equipment acquisition project relevant to their responsibilities in a format that includes details of, for example, actual contractor progress against scheduled progress (earned value); contract milestones achieved against milestones due; any expected difficulties in meeting imminent milestones; quality assurance issues that have arisen; and actual expenditure against scheduled expenditure;

(b) have authority to intervene in project management in accordance with agreed protocols and to implement contingency measures in response to adverse variations from scheduled progress, cost and quality; and

(c) provide, for consideration by Defence senior management, reports on major equipment acquisition projects disclosing any adverse variations from approved tolerance limits on scheduled progress, cost and quality, together with advice of any action considered necessary in the circumstances.

Defence response:

(a) Agreed. The Defence Acquisition Organisation already provides more summary level reports to the Defence Executive (which includes all Output Managers) on major equipment acquisition projects as part of the Executive's monthly review of major management issues, and as part of a six monthly review of the performance of each Defence Group. In addition, the current establishment of Capability Management Boards by each Chief of Service—in their role as Capability Managers—will provide a mechanism for a more detailed review of relevant project. It would be appropriate to include the aspects proposed in the recommendation in that scrutiny process. Overall, Defence considers that high level project reporting should be made to both relevant Capability Managers and to the Defence Executive as a whole.

(b) Agreed, with qualification. There is a need to maintain clear lines of responsibility for the management of major equipment acquisition projects. That responsibility appropriately lies with project managers within the Defence Acquisition Organisation. The progressive implementation of the results of the Capability Management Improvement project provides extensive opportunities for Capability

Output Managers to set out and sustain their requirements. These arrangements will provide the necessary protocols to allow the effective involvement of such managers in capital projects which relate to Outputs for which they are responsible, while still maintaining appropriate project management discipline.

(c) Agreed, with qualification. The need for such reporting is fully accepted; the issue is which authority should be responsible for the provision of such reports. Taking a whole of capability approach, this responsibility should lie with each Capability Manager, with the element of each report which relates to specific acquisition projects being provided by Defence Acquisition.

Annex A to Chapter 6—Fixed-price contracts

6.64. The prime contracts for JORN and New Submarines were fixed-price contracts, which the ANAO has reported are not without risks. The ANAO made the following observations in the audit report on the New Submarine Project:[93]

> *The Project Office's advice to the ANAO that* 'in a fixed price contract the balance between quality assurance and quality control is an issue for the contractor' *is not consistent with sound project management…The ANAO considers that the Project Office should be more circumspect in the confidence it places in the security of the fixed-price contract. For example, the contract provides for almost the full amount of the contract sum to be paid before the completed products are delivered.* [p xvi]

> *The [JORN and New Submarines] project offices appeared over-confident that Defence was protected by a fixed-price contract. Even with payments to contractors running ahead of effective progress on the projects, the project offices remained unconcerned on the grounds that the contractors would be required to deliver the final product for no more than the total contract price.* [p137]

6.65. The JCPAA also addressed this issue in its recent review of the ANAO report[94]. It made the following comments concerning Defence's need for better management of the risks involved in fixed-price contracts:

> *The Committee is concerned, as it was in its report on Defence's management of the Jindalee Operational Radar Network [JORN] Project, that Defence's undue reliance on fixed price contracts and apparent lack of concern about*

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93 Audit Report No.34 1997–98 *New Submarine Project*, March 1998.

94 JCPAA Report 368: *Review of Audit Report No.34 1997–98 New Submarine Project, Department of Defence, June 1999.*

wider and ongoing Commonwealth liabilities in the event of cost overruns, continues to have a negative influence on its behaviour towards the contractor and on its project management. [p36]

The Committee considers that when fixed price contracts are used in a developmental project of this magnitude, the contractor is asked to accept considerable risk, and to require large performance guarantees is probably commercially unrealistic. [p7]

The Committee acknowledges the dilemma in relation to large penalties for failure to meet performance guarantees and contract cost, and considers that the resolution lies, at least in part, in better project management and cost control systems. [p7]

While Defence appears to rely heavily on the fixed price nature of the contract and the availability of certain securities in support of Commonwealth rights, the Committee considers that Defence must undertake appropriate risk management to reduce the possibility of prime contractor default. [p26]

Annex B to Chapter 6—Disclosure of contract details

6.66. Public sector management includes provision of information about performance, decisions and actions to those with legitimate claims to accountability. This extends to accountability to the Parliament regarding major contracts between the Commonwealth and private-sector firms.

6.67. There is parliamentary interest in disclosure of Commonwealth Government contracts. A Senate committee report on Government contracting in May 1998 argued strongly for public disclosure of Commonwealth contracts. The relevant chapter of the report concluded (in part):

The committee is firmly of the view that only relatively small parts of contractual arrangements will be genuinely commercially confidential and the onus should be on the person claiming confidentiality to argue the case for it. A great deal of heat could be taken out of the issue if agencies entering into contracts adopted the practice of making contracts available with any genuinely sensitive parts blacked out.[95]

6.68. At present only limited information about Commonwealth contracts is made available to the Parliament and the public. Apart from

[95] Senate Finance and Public Administration References Committee *Contracting out of Government Services—Second Report—May 1998*. The Government Response (tabled 30 Nov 1998) did not address the issue of disclosure. See also comments by committee member Senator Andrew Murray at Hansard 25 Nov 1998 P466 and 30 Nov 1998 P604.

some minimal notification of contracts in the Gazette,[96] there may be only a general public announcement of the purpose and nature of a major contract.

6.69. Government guidelines to the public service encourage the freest possible flow of information between the public service, the Parliament and the public.[97] Contract terms and conditions dealing with delivery dates, payment milestones, insurance, indemnities, quality assurance, warranties, liquidated damages, recourse for under-performance and other provisions to protect Commonwealth interests are of interest to the Parliament in its role of reviewing Executive Government. Particular contract specifications could be withheld if public disclosure would prejudice commercial or national interests ('public interest immunity'). [98]

Defence contracts

6.70. Defence has responsibility for many major Commonwealth contracts. The ANAO proposed to Defence that disclosure of major Defence acquisition contract terms and conditions would be in the interests of accountability and would encourage:

- improved management of the contract and monitoring of contractor progress, which in turn would enhance the prospects of achieving successful outcomes from the particular acquisition project; and
- improved negotiation of contracts from the Commonwealth's viewpoint and better protection of Commonwealth's interests.[99] (The prospect of public disclosure of contract details would need to be explained to tenderers at an early stage. It would generally not be appropriate to disclose proposed contract details before the contract is signed.)

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[96] The Commonwealth Procurement Guidelines (made under Regulation 7 of the FMA Regulations) require that certain details of a Commonwealth contract are to be notified in the Commonwealth Gazette, including a description of the goods and services sufficient to identify the nature and quantity of the procurement and total estimated liability.

[97] *Government Guidelines for Official Witnesses before Parliamentary Committees and Related Matters—November 1989* Dept of Prime Minister and Cabinet, paragraph 1.1.

[98] For a discussion of the issues, see *Commercial Confidentiality—A Matter of Public Interest*, Presentation by Pat Barrett AM, Auditor–General, at 1999 ACPAC Biennial Conference, Commercial Confidentiality—Striking the Balance, 21–23 February 1999.

[99] See comment in Audit Report No.34 1997–98 *New Submarine Project* (par 20): *'The contract provides only modest recourse by the Commonwealth by way of financial guarantees and liquidated damages…The Commonwealth should be able to do better in commercially–based contracts.'*

6.71. Defence considered that disclosure would be contrary to the Commonwealth's interests because any concessions agreed for a particular contract would be revealed to industry, which would seek to adopt such modified terms and conditions as baseline negotiations points on later acquisition projects. Defence would prefer to continue to disclose only their preferred contract terms and conditions, known as DEFPUR 101. The ANAO accepts that disclosure of actual contract details raises issues beyond the Defence portfolio and which need to be dealt with in the broader context of accountability by the Government and the Parliament.

7. Business Process Improvement

This chapter provides an overview of the Defence Acquisition Organisation's business process re-engineering initiatives, of similar initiatives in other parts of Defence's capability management continuum and of the Defence Executive-initiated review of capability management across the continuum.

Introduction

7.1. Management best practice differentiates Business Process Re-engineering (BPR) from incremental process improvement programs by seeking dramatic organisational improvements through fundamentally reorganising an organisation's business processes. BPR seeks to avoid simply using information and communication technology to automate inefficient processes. Instead, whole organisations are re-engineered to achieve the greatest possible improvements in cost, quality, service and delivery.

7.2. No single functional Group within Defence is able to re-engineer the complete capability management process. Often many groups are involved in different aspects of capability management. In the case of capital equipment acquisitions, capability management is a continuum flowing through ADHQ's Capability Analysis and Options Staff and Management and Reporting Division, DAO, the three Services and Support Command Australia (as shown in Figure 1). However, DAO is developing a standard project management method (SPMM) that builds upon a core process called PRINCE 2 (Projects in Controlled Environments version 2), which is the UK Government's generic project management standard.[100] PRINCE 2 is capable of providing a project management framework that covers all acquisition phases from project first conception within ADHQ, through capital equipment acquisition in DAO, equipment operational service within the Services and logistic support, to final disposal.

7.3. To implement its 'seamless management' of whole-of-life capability concept (see paragraph 3.7) the Defence Executive established within ADHQ the Capability Management Improvement Team (CMIT) to explore options and make recommendations for improving Defence's capability management. ADHQ and Support Command Australia are piloting business process improvement projects that are to varying

[100] Prince® is a registered trademark of the Central Computer and Telecommunications Agency (CCTA) of the United Kingdom Government and the use of the term is controlled. See Department of Defence, *DAO MANUAL*, Part. 4.0 (still being written).

degrees based on PRINCE 2 and both are working with DAO to improve the transition of projects into and out of DAO. The concerns addressed by the Australian Department of Defence's Capability Management Improvement initiative and by DAO's BPR team are similar to those addressed by the British Government's Strategic Defence Review (SDR), and in particular by the Smart Procurement Initiative (SPI) studies that were part of that review. The SPI findings are outlined in Annex A to this chapter.

Business process improvement in DAO

7.4. The Defence Reform Program initiated in 1997 required DAO to 'do more with less'—manage more acquisition projects, and to produce better quality outcomes with a reduced level of staffing.[101] DAO responded to the DRP in two major ways—through structural change and by seeking to re-engineer its business processes.

7.5. DAO structural changes involve:

- reducing DAO's divisions from six to five;
- regrouping about 120 acquisition projects into eleven technology branches;
- establishing policy and support centres to assist the technology branches with advice on contracting, finance, industry, integrated logistic support, systems engineering, earned value management, quality assurance, business and other disciplines; and
- reducing its military personnel from 35 per cent of total personnel to a target of 15 per cent by mid 2002.[102] As discussed in paragraph 8.23 this target has been revised by DAO upward to some 25 per cent in line with the policy of 50 000 members in the ADF.

Defence considers that this structure, together with the collocation of DAO, will improve synergies between projects with like technologies, and provide within three years ongoing savings of 200 personnel. DAO expects its personnel numbers will fall to about 1900 by the year 2000.

7.6. Accompanying DAO's restructure is a BPR project which commenced in September 1997 and aims to improve acquisition project outcomes and DAO performance through:

- increased consistency in project management through the application

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[101] Department of Defence, DAO Minute DEPSEC Acquisition 440/97*: DAO Business Process Re–Engineering Project*, 30 September 1997, p.1; and Department of Defence Acquisition Program Executive 12 December 1997, Item 1—*Discussion of DAO Position on DRP Savings Framework,* (internal memorandum), p.1.

[102] Department of Defence, *Defence Acquisition Organisation Strategic Plan 1998–2001*, February 1998, pp.18–19.

of a standardised project management method and the standard application of systems engineering principles; and

- increased efficiency in the acquisition process by seeking to ensure that each step in the new equipment acquisition process actually adds value, and that any unnecessary duplication or layers of consultation, review and reporting are eliminated to the greatest extent possible.

7.7. Table 6 provides a list of major capital equipment acquisition issues and impacts identified by a consultant to DAO's BPR project. The table is necessarily in summary form but provides a useful outline of the issues considered by the BPR project. [103]

Table 6

Issues Identified by DAO's Business Process Re-engineering

Issue	*Impact*
Lengthy cycle time.	• Results in delayed delivery of increased capability; and • Increases the risk that capability may not satisfy operational requirement by the time it is deployed.
Lack of formal/required consultation with critical stakeholders at critical times.	• Increases the risk that capability will not satisfy stakeholder requirements;
No funded resources for pre-approval.	• Increases the risk of inadequate life cycle costing; and • Increases the risk of a loss of continuity between project stages as there may not be dedicated project staff.
Single process does not fit all types of acquisitions.	• Results in a lack of flexibility in ways of achieving outcomes; and • a lack of flexibility in relationships with suppliers.
Use of committees for decision making.	• Dilutes accountability; and • Slows decision-making.
Over-emphasis on contract formulation and a lack of emphasis on project management.	• Increases the risk that capability will not satisfy customer requirements, and • Increases project cycle times.
Long waits for approvals/approvals	• Lengthens project cycle times only made at very senior levels.
No exit points.	• Increases the risk that projects which no longer satisfy user requirements are not cancelled.

[103] Department of Defence, *Redesigned Acquisition processes, Executive Summary*, Product ID 2.2.1.3. [Internal report]. See also DAO 98—12945 DEPSEC A 122/99, *DAO Response to Draft ANAO Report on Management of Acquisition Projects*, 27 July 1999, p.4. [Internal Memorandum]

Issue	*Impact*
Little guidance on how to manage a project.	• Increases the risks of inconsistency between projects; and • Increases the risks of a need for re-work to correct avoidable mistakes.
Emphasis on processes to manage to contract, not project outcomes.	• Increases the risk of not delivering to customer requirements by being too internally focused. [this assumes that the management process is defective]
Life-cycle cost is not assessed at points in the decision making process where there is greatest leverage.	• Reduces Support Command's ability to properly plan for future support costs; and • Increases the risk of incorrect decisions being made due to a lack of appropriate information.

Source: Prepared by the ANAO from Department of Defence records.

7.8. The BPR initiative will contribute to holding authorised managers accountable for their performance and provide a management framework where the right work is performed at the right level. It is consistent with the principles of high performance organisations put forward by the Secretary of the Department at Defence's February 1999 senior leadership conference. These include:

- better focus on customer needs;
- better focus on performance and continuous improvement;
- improved information systems that are more open, simple and focused;
- improved management systems through innovative and re-engineered business processes that emphasise quality; and
- improved management culture and value systems.

7.9. DAO's BPR Project established four key interdependent initiatives:

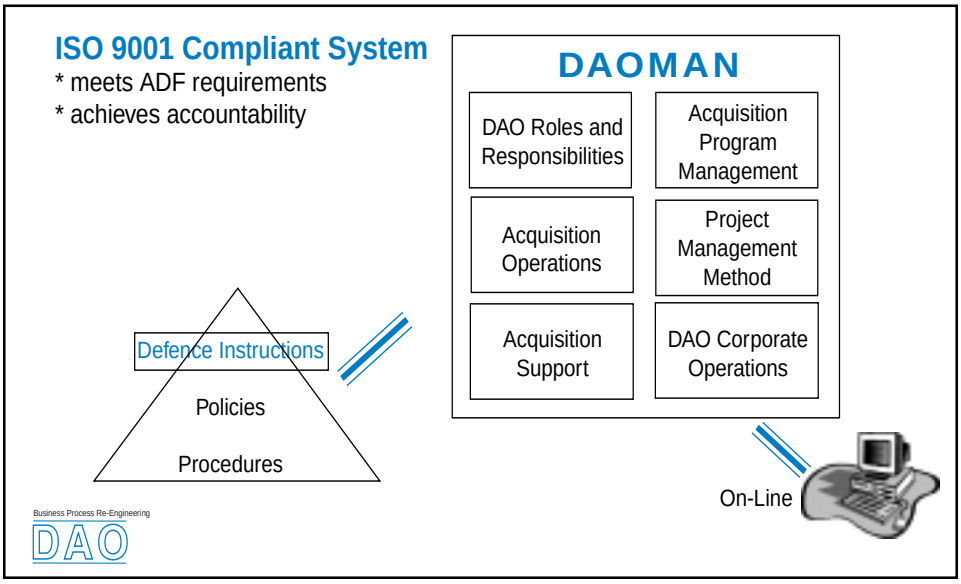
- Business Management System (BMS) compliant with International Standard ISO9001;
- Standard Project Management Method (SPMM);
- Performance Reporting and Evaluation (PR&E); and
- Redesigned Business Processes.

DAO's Business Management System

7.10. In March 1997 the DER Secretariat recommended that DAO embrace quality standards comparable with those which Defence imposes on industry to assure quality outcomes and deliverables through sound processes and procedures.[104] DAO adopted this recommendation and in September 1998 APEX approved the development of a DAO-wide Business Management System (BMS) as part of its BPR. The proposed BMS is shown in Figure 5.

Figure 5

DAO—Business Management System Conceptual Framework



Source: Department of Defence.

7.11. The BMS proposed by the BPR Project includes:

- a quality management system that satisfies industry standard AS/NZS ISO 9001;[105]
- a performance reporting & evaluation (PR&E) system that combines separate reporting requirements (weekly summary reports, monthly financial reports and SPMM highlight reports) into a single approach in order to satisfy line management's need for project performance monitoring. The PR&E is discussed in paragraphs 6.24–6.26;

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[104] Department of Defence, *Future Directions for the Management of Australia's Defence, Addendum to the Report of the Defence Efficiency Review—Secretariat Papers*, p.148.

[105] Australian Standard/New Zealand Standard—International Standards Organisation (ISO) 9001 *Quality Systems for Design/Development, Production, Installation and Servicing.*

- an SPMM (as mentioned earlier) based on PRINCE 2; and
- a continuous improvement framework included within the quality measurement system mentioned above.

Knowledge management

7.12. An important component of the SPMM is a knowledge management system. Part one of the system contains codified knowledge of project management mandatory instructions and non mandatory guidelines. These will take the form of DAO's new corporate policy and procedures manual (DAOMAN), which is being developed to replace DAO's capital equipment procurement manual (CEPMAN). Part two contains more personalised knowledge in the form of a hints and tips database for less explicit lessons learnt-type knowledge such as project management perspectives or intuition gained through experience. DAO expects both parts of the knowledge base to benefit from the proposed quality management system. The knowledge base will be delivered in an electronic business system format so that DAO staff and stakeholders have ready access to relevant and current policies, procedures and guidance.

7.13. DAO is seeking to ensure that the SPMM will adequately address both general project management and systems engineering requirements. DAO requires on-going cooperation with ADHQ's Capability Analysis and Options Staff and Support Command Australia so that the capability management continuum is underpinned by holistic management of:

- system requirements definition;
- integrated logistic support; and
- responsibility transitions between each capability management phase.

7.14. DAO's BMS is intended to provide a solid foundation for subsequent more advanced business improvement strategies, including the application of systems engineering capability concepts and other Defence reform initiatives. It requires that DAO staff work in accordance with the documented policies and procedures compiled in the DAO Manual (DAOMAN). Compliance by DAO staff with these policies and procedures would be periodically verified through internal audit.

SPMM implementation in DAO

7.15. APEX agreed in February 1998 that, due to a shortage of experienced project management staff in the DAO, it was essential that a standard, flexible set of project procedures be developed and agreed to as a matter of priority. DAO's BPR project has already made progress in piloting the implementation of the SPMM in a range of projects in DAO.

DAO conducted a pilot study of its SPMM implementation during 1998 and the BPR project reported the results to APEX in February 1999. DAO's BPR project used the SPMM pilot to refine the SPMM knowledge base and tools, and as the basis of implementing recommendations submitted to APEX.

7.16. The evaluation report prepared by DAO's BPR team,[106] together with other observations by the ANAO, indicate that the SPMM based on PRINCE 2 has the potential to improve acquisition project outcomes, improve corporate governance generally; as well as providing some of the basic information that will be required under the accrual-based outputs and outcomes framework. DAO expects that within about 18 months all new projects will be managed using SPMM concepts except where exceptional circumstances apply.

7.17. A centrepiece of BPR achievements is the draft Project Management Manual developed from the knowledge base of the pilot SPMM projects. It forms part of the DAOMAN. It is now ready for wider trial and evaluation, including in Support Command Australia and ADHQ.

SPMM organisational structure

7.18. The BPR project piloted the SPMM in five DAO Branches and structured each project's Project Board as indicated in Figure 6.

7.19. According to PRINCE 2, Project Boards are decision-making bodies which have, within the project mandate set by corporate or program management, authority to provide overall direction and management of projects under their control, and responsibility for committing resources. The Project Board has three roles: the Executive; the Senior User; and the Senior Supplier. Each project's Executive is accountable for the project in terms of its responsibility for ensuring the project remains on course to deliver products of the required quality to meet the project's Business Case. The Business Case records the project's objectives, benefits, cost and timescale.[107]

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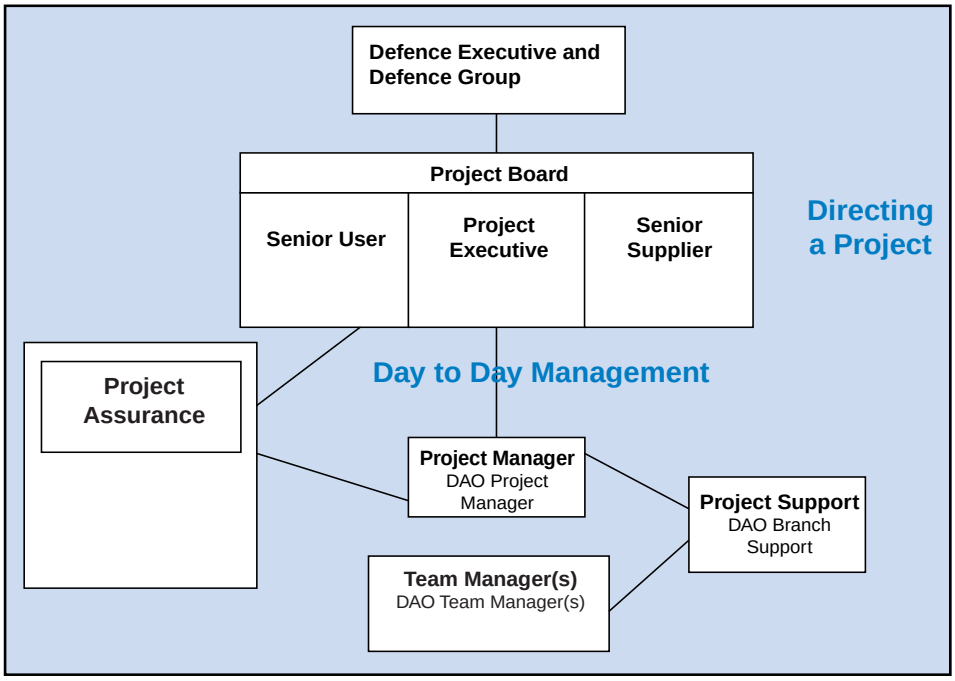
[106] Department of Defence, DAO Business Process Re–engineering Project, *SPMM Implementation Evaluation Report,* Version 3.0 (internal report).

[107] Central Computer and Telecommunications Agency, *Prince 2: Managing Successful Projects with PRINCE2*, published by IBM UK LTD for CCTA, 1988, Section 4.2.

Figure 6

DAO Business Process Re-engineering Pilot Study—SPMM Organisational Structure.



Source: Department of Defence.

7.20. The BPR pilot Project Board membership was adapted to reflect the top-level responsibility structure for capability management in Defence. For example, the Senior User group contained representatives from Capability Analysis and Options Staff, the operational user area and Support Command Australia (SCA). The Senior Supplier role was filled by the relevant Systems Acquisition Division in DAO. The Capability Analysis and Options Staff representative's responsibility included ensuring that the overall project objectives remain valid for the project.

DPR Pilot Study Project Board—related results

7.21. The BPR Project Board initiatives, piloted under BPR, indicate the potential for significant increases in capability management performance. The ANAO considers that providing Project Boards with members who have the necessary authority and responsibility will assist efficient and effective capability management in each acquisition project, and so reduce the occurrence of unsatisfactory work transits between capability development phases. The evaluation report indicates that the SPMM will have benefits broadly in two kinds, indicated below.

7.22. The SPMM is expected to improve stakeholder involvement within the projects through Project Boards (mandated as part of PRINCE 2)[108] and more widespread use of integrated project teams (IPTs—see paragraphs 7.54 to 7.59). The pilot Project Boards were varied to suit the requirements of each project, and included stakeholder representatives from the Services, Support Command Australia, ADHQ's Capability Analysis and Options Staff, and the two DAO support divisions (Capital Equipment Program, and Industry and Procurement Infrastructure). Improved stakeholder involvement led to more timely and clearer project requirements, performance measures and responsibility transitions. Problems and mis-matches in interpreting capability requirements were identified and resolved earlier in the project life-cycle. This led to Project Plans being updated using clearly defined and agreed terms of reference, and resulted in increased levels of involvement and commitment from senior members of stakeholder organisations.

7.23. SPMM is also expected to reduce the time and costs of project performance monitoring by requiring Project Managers to report performance highlights regularly and to report all project events that are likely to result in project time, cost and quality tolerances being exceeded. This will provide Project Boards and other senior management with only that project management information which is essential for determining the need for board intervention. It also increases the focus on reporting time, cost and effort and thus encourages Project Managers to establish robust monitoring systems as defined in the SPMM. All this potentially reduces rework of project planning documents and higher delegate submissions as a result of the devolved environment and a 'right-first-time' approach involving all key stakeholders.

Pilot Study project management—related results

7.24. The evaluation report prepared by DAO's BPR team and observations by the ANAO indicate that the SPMM based on PRINCE 2 has the potential to improve acquisition project outcomes. The evaluation report indicates that the SPMM will:

- improve the management of quality within projects by providing Project Quality Plans (PQPs) that clearly identify the criteria against which the final equipment will be measured. The SPMM provided the projects with business cases that clearly stated the costs, timeframes, benefits and business justification for the project in one focused document. The benefits were also cross-checked to the Project Quality

[108] Department of Defence, DAO Business Process Re–engineering Project, *SPMM Implementation Evaluation Report,* Version 3.0 (internal report), p.3.

Plan to ensure that, if the measures defined within the Project Quality Plan were met, the benefits would be achieved. DAO advised that, although such management controls already exist in many projects, the SPMM ensures a consistent and disciplined project management approach is applied across all projects.

- improve schedule (time) management as well as expenditure management for the project. Previously few of the piloted projects had sufficiently realistic project plans or a controlled process for measuring actual performance. The BPR project anticipates that the application of predefined schedule tolerances (permissible variation in milestone achievement) will significantly improve schedule performance and at least provide higher management with timely advice of schedule risks.
- improve cost control mechanisms through each Project Board setting tolerances on costs. This ensures that Project Managers remain committed to monitoring cost and to alerting the Project Board of potential cost overruns before they happen.[109] The pilot program found that previously no costs had been attributed to project delays. For example there was no attribution of the real cost of a six month delay in project approval. [The ANAO noted in the JORN Project audit report that Defence did not attribute to the project the costs of delays in bringing JORN into service.[110]]
- improve planning and accounting for staff resources. This assists projects to manage the risks posed by insufficient staff numbers and skills limitations. The SPMM includes the regular collection and analysis of staff resource data. This allows Project Managers to anticipate problems and take corrective action, and to provide accountability for resource usage and comprehensive costing of individual project products.

Redesigned business processes

7.25. This initiative comprises:

- improved acquisition review process, involving participation from all relevant stakeholders, Integrated Project Teams and closer links with customers and suppliers;
- adoption of a systems engineering approach across DAO; and

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[109] Department of Defence, DAO Business Process Re–engineering Project, *SPMM Implementation Evaluation Report,* Version 3.0 (internal report), p.14.

[110] Auditor–General, Audit Report No.28 1995–96, *Jindalee Operational Radar Network Project*, 14 June 1996, pp.xiv, 5.

- effective transition management between DAO and the Services, SCA and other stakeholders.

7.26. The BPR Project focuses on both the requirements of the ADF customer and on the organisation's capability to deliver those requirements, and aims to strengthen corporate governance. DAO advised that the BPR is trying to establish frameworks that ensure that the interests of the three Services, ADHQ SCA, and other stakeholders are taken into account in setting priorities and in pilot study initiatives. The BPR Project has developed working links with ADHQ's Capability Management Improvement Team (CMIT) and SCA's Logistics Enterprise Architecture Project (LEAP). The CMIT and LEAP are to varying degrees based on PRINCE 2.

7.27. DAO's SPMM implementation pilot study found the SPMM improved visibility of conflicting requirements to stakeholders, and provided a framework that facilitated a more rapid resolution of the conflicts that arise during hand-over of projects from ADHQ to DAO. The pilot study highlighted inconsistencies in the process of accepting projects into DAO from Capability Analysis and Options Staff ADHQ. DAO identified a need for a more formalised and jointly managed transition from project planning in ADHQ to implementation in DAO. DAO identified a need for:

- improved analysis and communication of DAO project office resource requirements so that DAO may better manage its human and financial resources; and
- improved communications of project information so that DAO and ADHQ may better define project scope and improve overall project planning.

7.28. ADHQ is responsible for the development and programming of new capability projects for Government approval. ADHQ's interests in the BPR reforms include:

- improving acquisition project planning, programming and budgeting;
- improved ADHQ/DAO engagement;
- Project Board membership;
- improved project transitions between the Groups involved with capability development; and
- operation of IPTs through the materiel continuum.

7.29. The head of Support Command (COMSPTAS) has overall responsibility for logistics policy and in-service support, which justifies SCA's representation on Project Boards from the onset of capability

concept phase. COMSPTAS can contribute to key decisions on logistics, through-life support and technical standards.

7.30. COMSPTAS' interests in DAO's BPR reform include:

- top-level roles and responsibilities;
- Project Board membership;
- earlier input into materiel continuum;
- technical regulatory framework;
- transition management;
- Integrated Logistics Support and through-life capability management; and
- development of key performance indicators (KPIs).

DAO's SPMM throughout the capability management continuum

7.31. The ANAO agrees with DAO's assessment that, if the SPMM is used in the capability development process, it has the potential to reduce the overall capability delivery time and increase output quality through better-informed business decisions earlier in the process. DAO's SPMM applies throughout the materiel continuum, and therefore has the potential to deliver corporate-level benefits. DAO advised that the SPMM may also simplify information and management transfers to subsequent capability management phases, and that earlier consideration of business issues will:

- provide a catalyst for Australian industry participation;
- reduce the current loading of unapproved Pink Book projects; and
- release capability development resources to plan and manage better the projects, which are more likely to succeed in gaining project approval.

7.32. However, DAO advised that risk assessment on some projects may result in an extended pre-contract phase to allow planning and programming to be properly defined and agreed by all stakeholders. The ANAO considers that extra time taken to treat the risks is generally worthwhile because, in the long term, Output Managers have little to gain from projects that are based on ill-defined specifications, plans, programs and budgets.

Conclusion

7.33. The SPMM seeks to achieve consistently high performance in all projects. ANAO recognises that there is some variation in the standard of project management in DAO, and that some projects may already be

managed and controlled using concepts that are the same as or similar to those employed in the SPMM. However, even these projects will benefit from the project board concept within the SPMM. In some projects shortcomings are more the result of resource and skills shortages, and of the inherent challenges involved in managing projects to acquire advanced, rapidly developing technology. The SPMM would enable project managers to deal with these problems in a more efficient, effective and timely manner.

7.34. In terms of corporate governance, SPMM and related BPR initiatives are intended to build systematic linkages between project-level, corporate-level, and capability management framework performance information and reporting. BPR aims to improve DAO's ability to deliver capability to the ADF customer, and improve corporate governance and accountability. It also indicates DAO would receive sufficiently improved systematic feedback of the kind normally provided by fully integrated corporate governance. The ANAO considers this corporate governance would be improved if project boards were accountable to the Output Manager for matters within the Output Manager's responsibility.

7.35. The pilot program only considered SPMM implementation within the acquisition phase of capability management. Therefore, improvements in project cycle times are limited to those achieved through the better management of resources and schedules of approved acquisition projects.

Business process improvement throughout the capability management continuum

Capability management improvement

7.36. As indicated in paragraphs 3.7, 3.35 and 7.3, the Defence Executive has established the Capability Management Improvement Team (CMIT) to undertake a review of its capability processes with a view to ensuring that it manages whole-of-life capability through 'seamless management'. Defence expected to establish by 30 June 1999 the appropriate underlying processes and systems needed for 'seamless management', including the merging of all elements that contribute to building an effective defence force.

7.37. The Defence Executive decided at its meeting on 28 September 1998 that the following shortcomings of the current approach should be addressed:[111]

- systems enhancements or new capabilities are not being introduced into service in a timely manner;

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[111] Defence Executive Agendum 16/98, *Capability Management Improvement Team Update*, (internal memorandum), 28 September 1998, p.1.

- the management of capability is fragmented;
- the responsibilities, accountabilities and authorities of key stakeholders are not clearly defined or fully aligned;
- there is not a sufficiently coherent sense of direction to provide a stable framework for capability development and management;
- development decisions are narrowly based;
- inadequate provision is made for recurrent expenditure, in particular for personnel and in support service;
- there is excessive diversity in processes supporting information systems; and
- relationships with industry are frequently inappropriately adversarial.

The Defence Executive also decided that it would be important to focus on other barriers to improved performance, particularly those stemming from culture and practice, and from the limited number of staff with appropriate competencies.

7.38. The Defence Executive made decisions on the roles, responsibilities, authorities and accountabilities of Output/Capability Managers and other key stakeholders and decided that Capability Management Boards (CMB) with appropriate broad representation should be established to assist the Output Managers to fulfil their responsibilities.[112] The Services are establishing new business management practices to enable Output Managers to execute their new responsibilities and influence the full spectrum of capability development and delivery.[113]

7.39. An Output Manager has no direct financial control over the different service providers in the capability management continuum. DepSec Strategy & Intelligence, VCDF and DepSec Acquisition have retained their responsibilities for capability planning and the delivery of major equipment.[114] The Output Managers may have recourse to the Secretary/CDF to seek changes to decisions made by these three, if there are compelling reasons for doing so and after seeking to resolve the matters with the original decision-makers. Consequently the Output

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[112] Defence Executive Agendum 16/98, *Capability Management Improvement Team Update*, (internal memorandum), 28 September 1998, p.2.

[113] Department of Defence, Army Corporate Management Framework, Section 2: *Capability Management*, Version 10 dated 3 Nov 98 (draft internal report), p.1. See also Department of Defence, *Capability Management In The Royal Australian Air Force*, DIAF ADMIN 2–3 Issue No 1/98 1 JUL 98 (draft internal report); and Department of Defence, Proposal for Naval Capability Management, Prepared by DPREP–N 27 August 98 (internal document).

[114] Defence Executive Agendum 12/99, *Capability Management Improvement*, (internal memorandum), Annex A: *Involvement of Capability Managers*, p.1.

Managers will have to exert their influence through the CMBs and lower level management arrangements such as the Weapon Systems Management Boards (WSMBs). These have representatives from all functional Groups and other stakeholders, including ADHQ, DAO, Defence Personnel Executive and SCA, and assist in the coordination of all activities affecting the capability by facilitating the exchange of information on, and discussion of, plans, progress, events and issues.[115]

7.40. This arrangement indicates a weakness in the capability management framework, given that Output Managers have no direct financial control over the different service providers in the capability management continuum. Output Managers accountable for outputs that are affected by resource decisions they do not influence will have little opportunity or incentive to manage their outputs more effectively or efficiently in a financial sense. This issue was addressed in Chapter 4.

Continued focus on functional groups

7.41. After an initial consideration of the whole capability management continuum, the CMIT decided for a number of reasons to concentrate on the acquisition project re-approval phase in ADHQ.[116] Both SCA and DAO had already initiated reform programs that appeared to cover all the areas requiring improvement that the CMIT had identified further down stream. And the CMIT believed that the biggest gains were likely to come from improvements in the pre-approval phase, and that a number of these were pre-requisites for improvements downstream.

7.42. The Defence Executive's review of the whole capability management continuum has become a set of parallel reviews conducted separately by DAO, SCA and ADHQ into their own Group processes.

Business process re-engineering of in-service support

7.43. Commander Support Australia (COMSPTAS) heads SCA and is responsible for logistics policy at the whole-of-Defence level and for implementing in-service support of all equipment placed into operational service. Logistics policy applies through the full capability management continuum and covers matters such as logistics concepts and planning, transition into service, through-life costing and the effectiveness of engineering regulatory authorities. (DAO is responsible for integrated logistic support during the acquisition phase. In particular, acquisition projects are responsible for acquiring logistics items necessary to ensure

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[115] Ibid, p.2.

[116] Department of Defence, Capability Management Improvement Team, Discussions with Australian National Audit Office (ANAO) on Capability Management Improvement (CMI) Initiative, 5 Jan 99, p.3.

that the prime equipment and systems are supportable for the first three years of service.)

7.44. Defence records indicate that SCA's own BPR, known as the Logistics Enterprise Architecture Project (LEAP) (see Figure 7), identified scope for improved process related to its core activities of sustaining and enhancing Defence capability.[117] These processes included SCA's need to:

- link operational requirements firmly to logistics investment;
- conduct cross functional trade-offs between logistics activities in order to minimise cost throughout equipment life-cycles;
- maintain processes that perform well in rapidly changing operational environments;
- influence, from an early stage, the planning, programming and implementation of capability development; and
- provide logistics support assurance regarding planned levels of operations.

Conclusion

7.45. Each of the three separate BPR initiatives provide a crucial focus on the business processes that occur laterally across capability development, acquisition and through-life-support. The ANAO notes DAO's advice that PRINCE Project Boards already have cross-functional organisational elements on them with representatives from ADHQ, DAO and SCA, and from other areas as appropriate.

7.46. Nevertheless there is a need to ensure that cross-functional elements of DAO proposed standard project management method are merged to minimise any adverse effects of the organisational boundaries between the three main areas. This is because management best practice in BPR extends process re-engineering beyond optimising the performance of sub-processes carried out by several specialised functional areas within the organisation. It also seeks to avoid simply using information and communication technology to automate inefficient processes. Instead, whole organisations are re-engineered to achieve the greatest possible improvements in cost, quality, service and delivery. A single authority to determine policy for the application of the standard method within the capability management framework should help achieve this.

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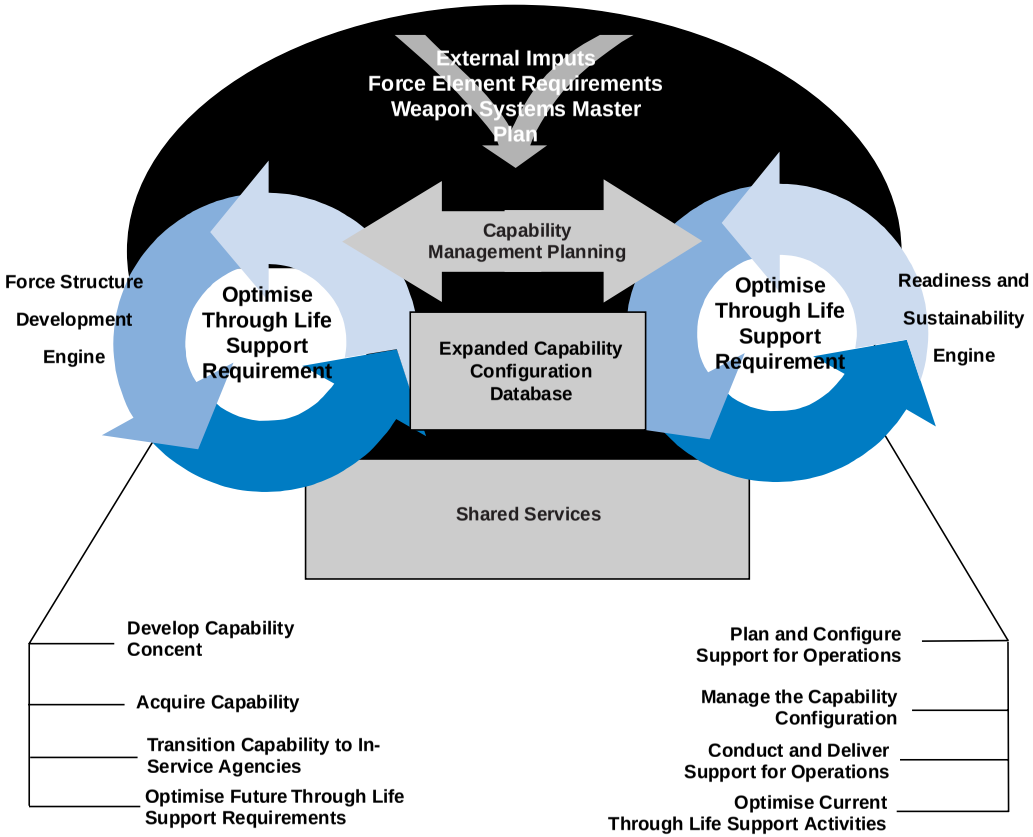
[117] Support Command Australia, Logistics Enterprise Architecture Project, *Business Architecture The 'To Be' Process Model*, 2 March 1999, pp.4,5.

Figure 7
The LEAP Conceptual Model



Source: Department of Defence, Logistics Enterprise Architecture Project (LEAP)

Recommendation No.4.

7.47. The ANAO recommends that, to minimise any adverse effect of Group boundaries on the capability acquisition process across Groups, Defence apply the Defence Acquisition Organisation's proposed standard project management method to all Groups involved with capital equipment acquisitions.

Defence response:

7.48. Agreed.

Need to align accountability, responsibility and authority

7.49. As stated in paragraph 3.9, Output Managers' responsibilities for capital equipment acquisitions include:

- integrating new or enhanced capability into the current force and ensuring that all elements of capability have been addressed during the development [in ADHQ] and acquisition [DAO] phases;
- monitoring the continued relevance and appropriateness of the contracted products;
- proposing changes to contracts, either where specifications are no longer considered appropriate because circumstances have changed or where the original specifications were not comprehensive in a critical area. Output Managers are to gain DAO's agreement for minor changes and refer significant changes to the Defence Executive or to the Defence Capability Committee for approval;
- deciding whether the delivered products are fit for purpose from a safety perspective, and hence whether to accept them into service; and
- proposing future enhancements to improve warfighting capability.

7.50. This raises a need to ensure the business processes allow an alignment of accountability for Output Management performance with authority over resources and responsibility for what is expected from each functional group.

Recommendation No.5.

7.51. The ANAO recommends that, to better align equipment acquisition project team focus with customer needs, Defence consider making Project Boards accountable to the Output Manager responsible for delivering the relevant output.

Defence response:

7.52. Agreed with qualification. The establishment of Capability Management Boards already has the practical effect of making Project Boards responsible to relevant Capability Managers. The basic point of concern with the recommendation relates to the concern with recommendation 3(b) that there remains a need to maintain clear management responsibility for the conduct of major equipment acquisition projects, which should rest with the Head of Defence Acquisition. It is important not to confuse accountability for project management with accountability for overall Outputs to which the delivery of particular acquisition projects may contribute.

ANAO comment:

7.53. The ANAO notes Defence's response regarding responsibility and accountability vis a vis DAO and the Output Managers. Since project management responsibility rests with DAO, DAO's management should monitor and control DAO personnel performance. However, it is also clear that Defence's capability management framework holds Output Managers responsible and accountable for the Outputs (products) that contribute to Defence capability. The recommendation relates to the latter because DAO has no responsibility for delivery of a capability *per se.*

Integrated Project Teams and Integrated Acquisition Teams

Introduction

7.54. The basis principle behind the IPT and IAT concepts is that decisions should be made at the lowest level commensurate with the risk. Collectively the team members should represent the know-how needed and have the ability to control the resources necessary for getting the job done. Individually the team members should be empowered and authorised to agreed limits to make commitments for the organisation or functional area they represent.

Integrated project teams and project management boards in the Capability Definition phase

7.55. The Defence Executive decided in September 1998 that IPTs and project management boards being initiated through the DAO BPR should be trialed in the pre-approval stage for some major projects.[118] The rationale for the IPTs and project management boards in the capability definition stage is to improve the quality of decision information by

[118] Defence Executive Agendum 16/98, *Capability Management Improvement Team Update*, (internal memorandum), 28 September 1998, p.2.

ensuring that stakeholders provide input to the development of proposals and that proper account is taken of those inputs.[119]

7.56. The CMIT has proposed that IPTs have representatives from all significant stakeholders internal to Defence, preferably from conception to in-service—with differing representation and stakeholder levels of involvement and influence at different stages. It proposes that these teams be managed directly by line management or by project management boards comprising key stakeholders such as ADHQ, DAO, the Output Manager, Defence Personnel Executive and SCA.

7.57. Under the CMIT proposal the project management board will guide the IPT and ensure that the IPT's products fairly and accurately reflect the inputs of the stakeholders. IPTs and the project management boards are responsible to the Head Capability Analysis and Options Staff in ADHQ. Project management boards would assist Capability Analysis and Options Staff to carry out its responsibilities; but do not reduce its authority and accountability for the development of proposals.

7.58. While the Output/Capability Managers do not control the development of capability proposals, they may have significant input. Under the CMIT proposal they would have the opportunity to input through the Head Capability Analysis and Options Staff (who should be a member of all Capability Management Boards); the Head Capability Analysis and Options Staff representative on Weapons System Management Board; or via Output Manager representatives on the IPT or project management board.

7.59. The CMIT believes that IPTs potentially offer better outcomes improved decision-making resulting from increased visibility and feedback; more comprehensive information and consideration of important aspects/details and perspectives; and the existence of a forum for stakeholder input. The CMIT considers that the resulting parallel processing of capability definition and implementation concepts, reduced re-work and improved continuity will shorten time-scales and improve consistency.

Integrated acquisition teams in DAO

7.60. DAO's BPR team has proposed IATs as a means of shortening the acquisition cycle time.[120] The BPR team considers that an authoritative input from the IAT members will shorten or eliminate the review processes.

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[119] Defence Executive Agendum 12/99, *Capability Management Improvement*, (internal memorandum), Annex C: *Integrated Project Teams (IPTs) and Project Management Boards in the Capability Definition Stage*, pp.17–20.

[120] Department of Defence, DAO Business Process Re–engineering Project, *Integrated Teams*, pp.1–2

7.61 The DAO BPR proposes that, rather than having one integrated project team that spans the whole life of a particular project from conception to disposal as is the case in the UK, each functional Group should have its own integrated project team for its phase of the project. This would involve integrating teaming transitions from ADHQ to DAO and thence into service without the actual transfer of personnel from one organisation to another.

7.62. The DAO Integrated Acquisition Team (IAT) would consist of a DAO project manager, core DAO staff from the relevant DAO division and non-permanent members from appropriate Defence organisational elements. They will be collectively responsible for the implementation of the Capability Statement requirements, using DAO acquisition processes, based on System Engineering principles and managed by the project management method sourced from PRINCE2. The DAO BPR proposes that DAO rely on the Services, Support Command and other Defence elements as well as professional service providers for expert input, detailed analysis and some project management outcomes instead of trying to make DAO project offices as autonomous as possible.

7.63. DAO has advised that guidance on the implementation of IATs is being discussed with pilot projects and their stakeholders to ensure the preparations for a trial are complete. The details have not yet been presented to higher management for approval, but the IAT work is consistent with the broader Defence direction for more integrated management in the capability management continuum.

Conclusion

7.64. The integrated project team and integrated acquisition team concepts may assist better planning and decision-making based on the probability of improved information gathering. However, attention should be given to the degree of complexity and diffused responsibility that integrated teams may generate if indeed their role extends beyond that of advisors to Output Managers with respect of matters which the Output Managers are held accountable.

Annex to Chapter 7—British Defence procurement

Ministry of Defence's Smart Procurement Initiative[121]

7.65. The *Strategic Defence Review* (SDR) of 1998, which reported on the future direction of British Defence policy, included a Smart Procurement Initiative (SPI) to ensure that future equipment procurement was faster, cheaper and better. The concerns addressed by the British SPI studies were thus similar to those currently being addressed by the Australian Department of Defence's Capability Management Improvement initiative and by DAO's BPR team.

7.66. The SDR report commented, *inter alia:*

> *151 One of the first conclusions to emerge from the Strategic Defence Review was the need for a radical reappraisal of the way we carry out defence procurement. We spend some £9Bn a year on equipment, spares and stores. Despite previous efforts to improve our procurement process, many of our projects take longer and cost more to bring into service than we planned. The 1997 National Audit Office report on major programmes*[122] *reported an average delay of 37 months, unchanged from 1996.*
>
> *152 This is not only poor value for money but also brings operational penalties. The length of the procurement cycle means increasingly we are not keeping pace with the rate of technological change which in many areas is now commercially led. The 'Smart Procurement' initiative announced by the Defence Secretary in July 1997 was aimed at adapting our procurement processes to meet these challenges. [SDR rpt ch8]*

7.67. With assistance from the consultancy firm McKinsey, the SDR considered various organisational options with the aim of achieving greater clarity in customer/supplier relationships, and greater flexibility in personnel matters without reducing the scope for personnel interchanges with the rest of the Ministry of Defence (MOD). It decided that this would be best achieved by turning the Procurement Executive (the equivalent of DAO) into a Defence agency.

7.68. The Defence Procurement Agency (DPA) was created on 1 April 1999. Its Chief Executive (CE/DPA) is personally responsible to

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[121] Ministry of Defence (UK), 1998, *Strategic Defence Review: White Paper*, [Online], Available: http://www.mod.uk/policy/sdr/index.htm [21 June 1999]; Ministry of Defence (UK), 1999, *Smart Procurement Initiative: IPT Pilot Guide Edition 4*, [Online], Available: http://www.mod.uk/policy/spi/iptguide /iptguide.htm, [17 June 1999]; and Ministry of Defence (UK), 1999, *Smart Procurement Initiative: The MOD Acquisition Handbook*, [Online], Available: http://www.mod.uk/policy/spi/handbook/front.htm [17 June 1999].

[122] National Audit Office, Report by the Comptroller and Auditor General *Ministry of Defence Major Projects Report 1997* HC 695 Session 1997–98 13 May 1998.

the Minister for Defence Procurement for the management and performance of the agency. The Chief Executive is also accountable to MOD's Principal Accounting Officer for the exercise of his / her delegated powers. The Chief Executive will place annual reports with signed full cost accruals-based accounts before Parliament.

7.69. The Smart Procurement Initiative identified clearly the need to move from a *functionally* based management and reporting structure to a *projec*t based organisation based on Integrated Project Teams (IPTs). The IPTs would bring together all stakeholders and involve Industry (except during competition phases) under a team leader able to make trade-offs between performance, cost and time within boundaries set by the approving authority. Functional links to policy-setting authorities outside the IPT will remain, and members will draw advice from these authorities.

Internal customer supplier (purchaser-provider) relationships.

7.70. One of the central themes identified in the Strategic Defence Review analysis of MOD procurement was the need to achieve greater clarity in internal customer supplier relationships. The successful formulation of a single, central defence customer, the Capability Manager, in the Systems Area of MOD headquarters, and the clear definition of the relationship between this central customer and the IPT, were seen as critical to achieving the full potential of the Smart Procurement Initiative.

7.71. The relationship between the customer (the Capability Manager) and the supplier (the relevant IPT) will be formalised in Customer Supplier Agreements specific to each project and to each phase of the project. This will give the customer more control throughout the procurement life-cycle. It will also provide the supplier (that is, the IPT) with a clear and unambiguous framework in which to operate and, within that, the flexibility it requires to meet the agreed project deliverables.

7.72. The Central Customer, as represented by the Capability Manager, is solely responsible for tasking and reviewing the IPT's work. The Capability Manager looks across a broad range of capabilities and develops specific equipment concepts to meet capability gaps, guided by the Departmental Strategic Plan and the Equipment Plan. The Capability Manager will also accept the equipment into service if it meets the agreed Acceptance and Verification Criteria. To support the Capability Manager, a Capability Working Group will be formed as soon as the need for a specific type of equipment becomes clear. The Group, consisting of representatives of all the key stakeholders, will take input from, amongst others, research work, in-service users, concept and doctrine branches, industry and the IPT.

7.73. The Capability Manager determines expenditure plans and sets individual IPT budgets encompassing both operating and equipment costs. Once set, individual IPT budgets become constituent parts of the annual budgets of the DPA and the Defence Logistics Organisation. The Capability Manager makes any necessary adjustments to planned expenditure on IPTs' projects in the different equipment capability areas between planning rounds and agrees to any changes to project progress and deliverables required to maintain in-year expenditure within the budgeted levels.

7.74. IPT Leaders manage resources within the annual budget set for their projects to deliver the agreed project outputs. They are directly accountable to the Capability Managers for delivering agreed targets and milestones within agreed expenditure through the provision of equipment acquisition and support functions. IPT Leaders are also accountable to their Line Management (the relevant acquisitions or logistics functional organisations) for keeping expenditure within allocated resources while meeting the agreed outputs and ensuring value for money, propriety and accurate accounting.

7.75. DAO advised it is monitoring the UK Smart Procurement Initiative and identifying elements that may be beneficial to the Australian procurement environment.[123]

Committee of Public Accounts comment

7.76. A recent report by the House of Commons' Committee of Public Accounts indicates that the Smart procurement initiative could have avoided problems that arose in the UK Department of Defence's Project Trawlerman, a defence intelligence computer procurement project abandoned without being used.[124] The Committee commented, *inter alia:*

> *The information technology which the Department rely upon to manage their administration and operations is expensive, and can be as complex as weapons systems. The waste of £40 million on Project Trawlerman might have been avoided if the Department had managed the procurement more effectively, and had used procedures similar to those they have been developing for operational systems. They should have recognised at the outset the complexity of the system required; had more involvement with the contractor when the project ran into difficulties; and staged the introduction of the system so as to take advantage of technological advances…*

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123 DAO 98—12945 DEPSEC A 122/99, *DAO Response to Draft ANAO Report on Management of Acquisition Projects*, 27 July 1999, p.4. [Internal Memorandum]

24 House of Commons—Session 1998–99—Committee of Public Accounts, Eighteenth Report, *Ministry of Defence: Appropriation Accounts 1997–98*, 24 May 1999, HMSO.

We also note the Department's view that SMART procurement could have avoided many of the problems with the Trawlerman contract, and that the SMART methodology can be adapted to improve the procurement of Information Technology systems. This would mean, for example, much closer partnering with the contractor at an early stage in contracts, and providing a longer term perspective of what projects are trying to achieve. [report pages v and ix]

8. Personnel Management

This chapter discusses some significant personnel management issues within DAO, ADHQ and SCA and longstanding concerns about Defence's acquisition project management skills.

Introduction

8.1. An organisation can perform well if it recruits, retains and motivates appropriately-skilled personnel who act effectively and are held accountable for the results. Personnel management is a key component of public sector management reforms, which seek to improve work performance in achieving agency corporate goals by improving individuals' understanding of their work responsibilities and the performance standards expected of them.

8.2. For acquisition activities Defence requires skilled and experienced personnel within the defence capability analysis and programming sections of ADHQ and the Services, and within project teams in DAO and SCA. They must be skilled at setting and analysing project performance data, and be willing to act decisively when problems arise. Management procedures and business processes are also important but these cannot replace the intuitive insights required to manage the diverse range of issues faced by personnel within the capability management framework. This diversity is complicated by the sheer size of the acquisition activity.

8.3. Project managers need not only manage contract provisions and contract price skillfully but also to respond appropriately to pressure that can arise from contractors and final equipment users to vary the contract scope. This calls for professionalism focused on ensuring user requirements are met. They must also ensure that contractors and their own project team share their knowledge of the capability requirement, and that the contractors remain fully informed of all technical issues relating to platform construction and weapon system requirements.

DAO project personnel

8.4. External reviews and ANAO's previous audits have drawn attention to high staff turnover leading to a loss of skills and experience.[125]

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[125] Joint Committee of Public Accounts and Audit Report 357, *The Jindalee Radar Network Project*, March 1998, pp.100–103. Also Auditor General Report No.34 1997–98, *New Submarine Project, Department of Defence*, 24 March 1998, p.50, and Auditor General Report No.17 1998–99, *Acquisition of Aerospace Simulators, Department of Defence*, 25 November 1998, pp.44–45.

Defence records indicate that in May 1999 DAO employed 1238 civilians, almost 200 less than its budget estimate of 1440. In February 1999 DAO employed 537 members of the ADF posted to DAO from their particular Service.[126] At the time of the audit, over 90 of the Service personnel held positions at Director General, Project Director or Project Manager levels. DAO's 70–30 per cent mix of civilians and military personnel respectively makes the development of a professional project management career structure within DAO very challenging and increases management risks. This ratio is well above the DER recommended military-civilian ratio of about 10 per cent.[127]

8.5. DAO also employs Professional Service Providers (PSPs) on contract to apply specialist skills to specific tasks. Defence records show that the number of PSPs on-site in DAO had increased from 215 in December 1997 to 248 in July 1998 and to 356 in April 1999.[128] DAO also advised that the number of PSPs changes daily, making it difficult to measure their numbers precisely. Some PSP contracts involved DAO work off-site in contractors' premises. The numbers of PSPs working off-site may not be known since some contracts involve contracted deliveries rather than the employment of specified numbers of PSPs.[129]

8.6. DAO's PSPs come from Defence industries and related sectors and are contracted for periods ranging from a few days to a few years. DAO considers that PSPs are expensive in comparison with APS and ADF personnel. The cost of PSPs rose from $21.6 million in 1997–98 to $31 million in 1998–99.[130] DAO advised the ANAO that PSPs may not always have the skills required to meet all DAO's needs and, in general, are less flexible than Defence personnel given that they are contracted for specific tasks. However, PSPs satisfy DAO's personnel needs in specialist positions that are difficult to fill, such as software engineering, where APS/ADF remuneration may not be attractive.

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[126] Data provided by Defence Acquisition Organisation, 2 February 1999. Also see Department of Defence, Defence Acquisition Organisation, *HR Quarterly Report,* May 1999, p.5. [Internal report]

[127] DAO 98—12945 DEPSEC A 122/99*, DAO Response to Draft ANAO Report on Management of Acquisition Projects*, 27 July 1999, p.5. [Internal Memorandum]. See also Department of Defence, *Future Directions for the Management of Australia's Defence, Report of the Defence Efficiency Review*, March 1997, pp.26, E–5.

[128] Department of Defence, Defence Acquisition Organisation, Capital Equipment Program Division*, Engagement of Professional Service Providers of Project Management Activities*, December 1997, p.1. [Internal report]. Also, Department of Defence, Defence Acquisition Organisation, Acquisition Executive Seminar—Bowral 29 November–1 December 1998, *HR Quarterly Report Number 2.* November 1998, Annex A. [Internal report]

[129] Discussions with DAO representatives 16 June 1999.

[130] The total value of PSP contracts amounted to $91 at April 1999. DAO *HR Quarterly Report,* May 1999, p.5. [Internal report]

8.7. The mix of civilians and military personnel results in a personnel rotation system that is inconsistent with the development of a professional project management career structure within DAO. Defence's internal audit reported in 1998 that

> *'there were strong indications that some Project Offices were inadequately resourced, and/or did not have the required skills set to meet the workloads and time constraints placed upon them.'*[131]

8.8 Figure 8 shows the number of years of project experience of 88 DAO project managers in April 1998. The military project managers are numbered 1 to 61 and the civilians are numbered 62 to 88. The total number of projects managed was 171 and some of the project managers managed more than one project.

Figure 8

Years of Project Experience of 88 DAO Project Managers

Source: Prepared by the ANAO from April 1998 data provided by the DAO.

8.9. The April 1998 data indicate formal qualifications were held by 58 per cent of the military project managers and 56 per cent of the civilians. DAO advised in May 1999, however, that it had 90 per cent of its 'funded' workforce in place and that they possess the requisite skills and experience.

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[131] Department of Defence, Inspector General Division, Management Audit Branch, *Report to Group Managers and Selected Senior Officers on Audit Activity on the Period 1 April to 30 September 1998*, MAB Report—GMR 1/98. p.4.

8.10. DAO advised that these were the first data of that kind that DAO had collected, and that it had not drawn any meaningful conclusions from the data because there were no benchmarks for purposes of comparison. DAO advised, however, that some differences were noticeable between Service and civilian managers. It acknowledged that generally there has been a high turnover of project managers but saw this as not being markedly different from the private sector. Nevertheless the high turnover casts doubt on DAO's ability, at the time, to manage its essential demographics such as skills inventories and continuity and succession planning. Since then DAO has established a Human Resource Policy and Support Centre (HR PSC) to address these personnel planning and development issues. DAO's HR PSC has, with the assistance from a consulting firm, completed a set of HR strategy analysis and planning tasks and settled on a set of action priorities. These are discussed in paragraphs 8.28 to 8.30.

8.11. A high turnover of uniformed project managers puts at risk DAO's skilled personnel development and retention.[132] The ANAO acknowledges, however, that a lower turnover of staff or long experience are not necessarily indicators of good performance. As mentioned in paragraph 7.2, DAO is proposing to standardise its project management procedures as part of its business process re-engineering initiatives. This may improve project management. However, there would be advantage for Defence to do more to develop both its project management career structures and its ability to maintain expertise within project management teams.

Professional project personnel are essential

8.12. The Joint Committee of Public Accounts' review of Defence project management in 1986 reached the following conclusions on the selection of project personnel:[133]

- Managerial skills required for major Defence projects are similar to those required for major equipment projects elsewhere in the public sector and in private industry. These environments are not so different as to make comparisions invalid.
- Because of the multiplicity of issues bearing on Defence procurement, it is essential for project directors to have appropriate and adequate management skills and background.

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[132] Auditor–General Report No. 17 1998–99, *Acquisition of Aerospace Simulators Department of Defence*, 25 November 1998, pp.44–45, reported: 'high staff turnover continues to be a cause of serious problems to some projects. For example, the Black Hawk and F–111C simulator projects have had seven project managers between them in a total of seven project years.'

[133] Joint Committee of Public Accounts, 1986, Report 243, *Review of Defence Project Management Vol 1*—Report, p.103.

- The relative importance of technical skills will be directly related to the stage of development of the project, being most important during the design and development phase.
- Project management skills must be clearly distinguished from the general management training received by military officers.
- Personnel with extensive project management skills appear to be relatively scarce in Defence. Military training does not necessarily provide these skills.
- Defence may need to make use of contract project management services to bridge shortages of skilled project personnel.

8.13. In 1987 the JCPA identified 'low retention of project knowledge due to a high staff turnover' as one of the 'several structural deficiencies in the Department's approach to project management.'[134]

8.14. Project management training includes both formal education in engineering and business management as well as experience gained within project team key functional areas. Providing only on-the-job training for senior project management personnel increases the risk of poor project performance. Mr F.N. Bennett, former Chief of Capital Procurement in Defence, commented as follows:

> *If project managers are to succeed in their task they must have more freedom to act quickly and decisively as and when necessary. As in other professions where individual judgement is required, the project manager's actions should be based on professional knowledge and skill, be in accord with good professional practice and with professional ethics. It is only when project managers are fully professional in this sense that the necessary trust can be placed in them. If for no other reason than this, the need for a community of project management professionals in all defence departments and military services is absolute and urgent.*[135]

8.15. Defence has still some way to go in developing a cadre of professional project management staff. DAO recognised in 1998 that it had not managed well its career planning and individual staff development. Defence records indicate that its Personal Development Plans (PDPs) were used unevenly and DAO perceived that problems

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134 Joint Committee of Public Accounts, 1987, 267th Report, *Response to Review of Project Management Report*, AGPS, Canberra, particularly pp.13–14.

135 F.N. Bennett, *The Amateur Managers: A Study of the Management of Weapons Systems Projects*, Canberra Papers on Strategy and Defence No.67, Australian National University, Canberra, 1990, p.88.

arising from the Defence Reform Program (DRP) may potentially leave DAO with significant skills gaps and unstructured, poorly articulated career paths. The records did not specify the DRP-related problems.

Management of JORN and New Submarine Projects

8.16. This audit arose from concerns expressed by the JCPAA about Defence's general management of major acquisition projects during the inquiries into the JORN Project and the New Submarine Project. The audit report (1998) on the latter project said *inter alia:*

> *…There are close parallels between Defence's management of the New Submarine Project and the JORN Project, which the ANAO audited in 1996… The ANAO considers that the main messages from the two audit reports would be to encourage Defence to give high priority to improving the effectiveness of its contracts for major capital acquisitions and its project management capabilities.* [p xxiii]
>
> *The ANAO acknowledges the inherent complexities in managing such large projects but nevertheless considers that a more business-like and commercial approach by the department to project management would better protect the Commonwealth's financial and other interests. It is essential that the inevitable risks in projects of this nature be managed sensibly in the interests of all parties. This should be done in a strongly-disciplined and systematic fashion throughout the project which inevitably means having to take the difficult decisions which could lead to short-term criticism of the management of the project but would help ensure a cost-effective outcome.* [p xxiv]
>
> *The project offices lacked a sense of the time-cost of money by allowing payments in key areas of the projects to exceed actual value earned. They were reluctant to determine the true state of progress on the project, and came to regard the amount of money paid to the contractor as the value of work completed. They were not firm in quizzing contractors on progress measurements and failed to pursue deficiencies in quality of product deliveries or to insist that contractors meet their contract deliverables.* [p 137]
>
> *Payments limited to actual progress are a tangible way of clearly indicating dissatisfaction with any under-performance and prompting action to achieve full performance. While recourse to such action may be seen as a potential breakdown in contractual relations and only used as necessary, it is nevertheless one of the few effective ways by which a purchaser can achieve required outcomes.* [p 138]

Recent JCPAA concerns on Defence project management

8.17. In the report of its review of the JORN Project the JCPAA concluded that:

> *As there is no career stream of project managers in the military there is no opportunity for personnel to accumulate the level of expertise required to manage large projects in today's commercially oriented environment.*[136]

DAO advised the ANAO that the military are now introducing sub-specialisation categories of which acquisition is one. [137]

8.18. Arising form its concerns about the JORN Project, the JCPAA made several recommendations relating to Defence project management. These recommendations and Defence's responses (January 1999) are set out below:[138]

> **Recommendation 1**—That Defence obtain the best possible managers, if necessary from overseas, for major acquisition projects.
>
> Defence agrees. Defence has long recognised the criticality of the project management role in the acquisition of major capital equipment and will continue its efforts to recruit the best possible managers for this role.
>
> **Recommendation 2**—That Defence choose appropriately qualified consortiums or companies to acquire major defence capabilities, with a particular focus on choosing the best project managers.
>
> Defence agrees. Defence has a very structured procedure for evaluating tenders and selecting consortiums or companies when acquiring major defence capabilities. Project management skills are a key consideration in the overall evaluation process.
>
> **Recommendation 3**—That Defence establish a career structure in procurement and project management.
>
> Defence agrees. The DAO is developing a career development framework for project staff, based on a 'job family' concept. This activity will formally articulate the range of tasks to be undertaken

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136 Joint Committee of Public Accounts and Audit Report 357, *The Jindalee Radar Network Project*, March 1998, pp.100–103. Also Auditor General Report No.17 1998–99*, Acquisition of Aerospace Simulators, Department of Defence*, 25 November 1998, pp.44–45.

137 DAO 98—12945 DEPSEC A 122/99*, DAO Response to Draft ANAO Report on Management of Acquisition Projects*, 27 July 1999, p.5. [Internal Memorandum]

138 Letter of 13 January 1999 from the Minister for Finance and Administration to the Secretary of the Joint Committee of Public Accounts and Audit. These recommendations reiterate some of the JCPA key recommendations in its 1986 Review of Defence Project Management. (Joint Committee of Public Accounts, Report 243, *Review of Defence Project Management*, Vol 1, pp.101–111.)

and identify the competencies required to undertake them. The DAO is also developing a scheme for Acquisition Middle Managers, incorporating tertiary study, job rotations and on-the-job training. This is in addition to the development schemes for entry level officers (Acquisition Trainees) who participate in a 12-month training program, which combines job rotations and specific procurement and project management training.

The Defence Organisation was at the forefront of project management competencies for the APS which were nationally endorsed by the Australian National Training Authority in October 1997. DAO has a comprehensive project management and procurement training program and sponsors in excess of 1700 students each year in non-tertiary project management courses. Defence is also a leader in the implementation of mandatory procurement competencies with over 8500 Defence staff having participated in procurement training since 1992. The competencies serve as useful benchmarks of performance in the procurement discipline, and are an important career planning device for both managers and staff.

Recommendation 4—That Defence employ the most appropriately qualified and experienced personnel in its senior project positions and not limit identification of these personnel to Defence or Government staff, bringing in non-Defence Department experts on contract, where necessary.

Defence agrees. The DAO has initiated programs to develop and retain its project management skills base. Many of the initiatives have been in place for a number of years, and include:

Graduate Recruitment Programs

Acquisition Trainee and Middle Management Development Programs

Career Development for Project Managers

Workforce and Succession Planning

A Project Management Education and Training Program

A Procurement Training and Education Program

Seventy-one per cent of the DAO project managers have project management or other professional qualifications.

When appropriate skills are not available within the Department, recruitment is initiated from the wider community and not limited

to Defence or Government staff. DAO also employs Professional Service Providers (PSP), mainly for short duration tasks, when in-house expertise is not available.

Defence Efficiency Review—acquisition personnel aspects

8.19. The Defence Efficiency Review (DER) found that military staff with recent operational and support experience in the relevant systems are essential to equipment project teams. Because of this experience they can provide advice on the many small variations to a project offered by the contractor and which are usually assessed within the project team itself. They can also ensure that the hand-over of the equipment to the operators and maintainers is conducted in an orderly fashion. However, the DER commented that military staff were invariably more expensive than equivalent civilian staff and, because they stay [within DAO] for shorter periods and spend most of their careers outside acquisition, are less expert in pure acquisition aspects. These factors, it argued, set the bounds on the proportion of military and civilian staff.[139]

8.20. The DER report, which became the basis of the Defence Reform Program announced in 1997, recommended, in respect of Defence Acquisition, that:

- while many specialist aspects can be out-sourced, the core procurement task must be internal;
- new procurement approaches should be adopted in the acquisition of software intensive systems;
- military staffing in DAO should be reduced from about 30 per cent to about 10 per cent;
- the head of DAO should be the employing delegate for all staff in DAO;
- DAO should be reorganised into functional groups—eg. surface ships, submarines and land vehicles; and
- DAO should be collocated, with consequent savings of 15 to 20 per cent.

8.21. As recommended, DAO is seeking to implement new procurement approaches for acquisition of software-intensive systems, which may result in better risk management and so reduce some management overhead in these projects. DAO has also reorganised into functional areas and has collocated the majority of its Canberra staff into two buildings. The collocation is reported to have made unnecessary

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[139] Department of Defence, *Future Directions for the Management of Australia's Defence, Report of the Defence Efficiency Review*, March 1997, p.26.

145 positions and saved $5 million a year in personnel costs mainly from administrative support areas. DAO advised there no connection between the above savings and the significant increase in the annual expenditure on PSPs (see paragraph 8.6).[140] Reduction in military staff, however, has presented difficulties, as indicated below.

Replacement of DAO military personnel with civilians

8.22. Defence records indicate that DAO has been unsuccessful in its attempts to replace military personnel with civilians in line with the DER's recommendation. In May 1999 only 1238 of DAO's budget estimate of 1440 civilian positions were filled, and it was experiencing difficulty in attracting suitable applicants for its vacancies, for the following reasons:[141]

- inability to offer competitive remuneration packages;
- loss of non-Australian Public Service applicants due to the length of time taken to recruit into the APS—particularly the time taken to determine starting salaries; and
- deferment of civilianisation of some positions due to the need to align with Service posting cycles.

8.23. DAO expects to decrease its military personnel to 490 by July 2001. This would represent 25 per cent of DAO personnel, well above the DER recommended proportion of about 10 per cent.[142] DAO considers the numbers of military personnel reflects the Services' recognition of the importance of having military personnel in DAO whom can bring the skills and expertise needed to deliver the best possible capability. DAO is aware, however, that many military personnel regard a posting to a DAO position as only an interim placement pending return to their Service and a military position.

8.24. DAO's own survey shows that many officers posted as project managers have little or no prior project management experience. DAO often benefits from the specialist advice military personnel involved in project management can provide on systems engineering, systems operational requirements and integrated logistics support. However, not all officers involved in project management have this kind of expertise.

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[140] DAO 98—12945 DEPSEC A 122/99*, DAO Response to Draft ANAO Report on Management of Acquisition Projects*, 27 July 1999, p.6. [Internal Memorandum]

[141] Department of Defence, Defence Acquisition Organisation, Acquisition Executive Seminar—Bowral 29 November—1 December 1998, *HR Quarterly Report Number 2.* November 1998, pp.1, 2. [Internal report]

[142] DAO 98—12945 DEPSEC A 122/99*, DAO Response to Draft ANAO Report on Management of Acquisition Projects*, 27 July 1999, p.5. [Internal Memorandum]. See also Department of Defence, *Future Directions for the Management of Australia's Defence, Report of the Defence Efficiency Review*, March 1997, p.26, E–5.

DAO personnel recruitment and career structures

8.25. ANAO discussions with Defence personnel indicate that, although Deputy Secretary Acquisition is DAO's employing delegate, this seems in practical terms to have little impact on DAO's ability to recruit or retain either military or civilian personnel. The person concerned can refuse to accept military personnel posted to DAO, but can only request specific individuals or skill-categories to be posted in to DAO and cannot determine the length of any military posting. Recruitment of civilian personnel can be difficult because of the need to adhere to Australian Public Service (APS) terms and conditions of employment and Defence policies and remunerations (although, as mentioned below, individual Australian Workplace Agreements now provide some flexibility in these areas).

8.26. DAO is considering a range of career structure management initiatives based on the increased flexibility permitted within the industrial relations framework. DAO sees a need for streamlined and focused workforce planning, recruitment, selection and placement practices that better satisfy DAO's long-term needs. This may result in a DAO-specific career structure supported by increased intervention in the management and placement of DAO staff. The overall aim is increase the depth and breadth of DAO personnel experience and expertise by providing specific training and development opportunities in line with DAO priorities and individual personnel capabilities and needs. DAO considers these initiatives have particular relevance to those personnel identified as having the potential for advancement to higher levels, such as the participants in its graduate programs.

8.27. DAO advised the ANAO that it is making a major effort to develop both an acquisition career structure and acquisition career development framework. DAO advised that there is now a project manager development program and a project director-designate course and that it is recruiting large numbers of university graduates.[143]

Personnel management strategy

8.28. Produced in 1998, the *DAO–People–Strategic Plan 1998–2000* is a personnel management strategic plan with the following goals:

- obtain and retain the required number of people with the right skills and experience to staff and manage an increasing project workload so as to deliver, on time and to budget, the weapons and systems required by the ADF; and

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[143] DAO 98—12945 DEPSEC A 122/99, *DAO Response to Draft ANAO Report on Management of Acquisition Projects*, 27 July 1999, p.5. [Internal Memorandum]

- deliver the savings and other significant changes to its personnel profile required by the Defence Reform Program.[144]

8.29. During its strategy analysis and planning process DAO decided that some of its personnel management functions required improvement and has set priorities to address deficiencies in the following areas:

- resource planning and analysis—DAO aims to improve its strategic management approach to developing and maintaining its core project management skills;
- staffing practices and deployment—DAO aims to recruit its personnel more pro-actively and strengthen the links between recruiting, career development and personnel mobility;
- performance management and recognition—DAO aims to link the *Defence Employees Industrial Agreement 1998–99* with its divisional workplans and performance management system;
- personal development and training—DAO aims to implement a more structured and systematic approach to career management, including utilising compulsory individual development plans linked to career management and DAO's mission; and
- team development—DAO is centralising its Canberra personnel into two locations to assist in streamlining its business processes and in optimising its corporate and administrative support resources and systems.

8.30. DAO has tasked its Human Resource Policy and Support Centre (HR PSC) with the lead responsibility for developing priority strategies and action to improve those functions. Defence records indicate that these initiatives are under way. However, the issues raised in this chapter indicate that, although DAO is making a concerted effort to implement its personnel strategy, there is much to be done to address DAO's personnel needs.

Personnel performance management

8.31. A performance management system was being developed for all employees covered by the *Defence Employees Industrial Agreement 1998–99*.[145] Employees and their representatives were involved in jointly developing this system, which was to include open, participative and structured feedback on performance and to provide some links between performance and remuneration. DAO advises it has no DAO specific performance

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[144] Department of Defence, Defence Acquisition Organisation, *DAO–People–Strategic Plan 1998–2000*, June 1998, p.3.

[145] Department of Defence, *Defence Workplace Relations Manual*, May 1998, p.33.

incentive scheme and that it will comply with the wider Defence Civilian Performance Management scheme.

8.32. The ANAO considers that there may be scope for Defence to make greater use of individual Australian Workplace Agreements (AWAs) to provide some remuneration flexibility to resolve project management staffing problems, when it is cost effective to do so.

Personnel training strategy

8.33. Defence has made it mandatory for all project directors and managers dealing with strategically important and complex acquisitions to have achieved competency accreditation at the complex procurement level by 31 December 1999.[146]

8.34. DAO informed the ANAO that its procurement and project management training program is based on competencies endorsed by the Australian National Training Authority. DAO also seeks to recruit Graduate Acquisition Trainees with backgrounds in engineering, law, accounting and economics, and to provide practical placements to prepare them for project management duties. DAO advised the ANAO that since the introduction of competency-based training in 1998, approximately 1600 students have attended project management training courses. Of these:

- 126 have Certificates;
- 60 are expected to have Graduate Certificates in Strategic Procurement by June 1999;
- nine have been assessed at Diploma level or above; and
- three have been assessed at advanced level and with a further seven awaiting assessment.

Given Defence's demand for competent procurement managers (particularly in light of the size of the acquisition activity) the ANAO sees Defence's intentions directed at 'growing' its own managers as being highly important to improvements in performance.

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[146] Department of Defence, *DEFGRAM NO 134/98, Procurement Training and Assessment Arrangements During July–August 1998,* 17 June 1998, p.1. Also see, Department of Defence, Departmental Procurement Policy Instruction No. 1/99, *Best Practice Guide to Standing Offers for Panels and Sole Providers*, 22 January 1999, p.2. [Internal document.]

Personnel issues in capability development and in-service support

8.35. The personnel turnover and career structure issues discussed earlier may well also apply to other parts of Defence's capability management continuum such as ADHQ's Capability Analysis and Options Staff and Management and Reporting Divisions and Support Command Australia (SCA).

8.36. Defence records indicate that ADHQ's Capability Analysis and Options Staff has 50 per cent staff turnover each year and Management and Reporting Division also has a high staff turnover. Defence considers the time taken to train new personnel increases project risks in terms of project schedule and loss of staff continuity, and that capital equipment proposals might have two or three different desk officers during the four or so years it takes to progress to government approval.[147]

8.37. SCA's Workforce Attitude Survey records indicate that career issues are the greatest concern to SCA personnel.

Conclusion

8.38. Defence has some 230 capital equipment projects with a total estimated cost of some $43 billion of which $26 billion will have been spent to June 1999. Of the balance of $17 billion Defence plans to spend $2.8 billion in 1999–2000.[148] Given the crucial importance of retaining and motivating appropriately-skilled project personnel, the ANAO and JCPAA have indicated concern regarding Defence's project management staff turnover and career development. DAO is seeking to develop appropriate workforce planning structures and career development structures.

8.39. Capable project managers need professional judgement, appropriate skills, experience, determination and commitment to protect the Commonwealth's interests as well as support by senior management in their attempts to bring about satisfactory project outputs and, ultimately, outcomes. The current audit has shown that Defence and DAO are aware of the need to improve project management skills and have various initiatives in train to achieve that objective. However, Defence does not seem to have been very successful attracting or producing sufficient numbers of appropriately trained and experienced

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147 Department of Defence, Defence Capability Forum, Paper No. 4/1999, *Revised Capability Development Process*, p.12. [Internal report.]

148 Department of Defence, *Portfolio Budget Statements 1999–2000*, p.153.

project management personnel; developing appropriate project management career structures; or achieving the military-civilian mix recommended by the DER.

8.40. The audit report on the New Submarine Project commented on Defence's JORN and New Submarine Project Offices as follows:

> *Located mainly in Canberra, the project offices had limited day to day knowledge of actual project progress in Melbourne or Adelaide. This affected their ability to monitor and control early departures from the agreed development and quality standards. This adversely affected the value added by the project offices. Even with a large staff (JORN had 45 staff and New Submarines had 113) the project offices lost sight of significant issues which remained unresolved as they engaged in churning of issues in meetings, reports and correspondence with the contractor and others in Defence. The same output of work could have been achieved with fewer staff, had the project offices been better located and more decisive and focused in dealing with the contractor.[p137]*

8.41. The JCPAA's recommendations regarding project management are particularly relevant. The Government's initiative in introducing Australian Workplace Agreements in the APS may help to provide some flexibility to resolve staffing problems in DAO and to attract the appropriate expertise. The rising cost of temporary professional service providers is a further matter of concern to Defence managers, and this should be factored into DAO's workforce planning. The ANAO suggests the use of AWAs whenever it is cost effective to do so. Given the significant amounts invested in capital equipment acquisitions it seems reasonable to expect that a concerted effort be made to establish conditions of service that attract, develop and retain the acquisition professionals required by Defence.

8.42. The Defence initiatives described in earlier chapters relating to Business Process Re-engineering and introduction of the Standard Project Management Method will assist in making Defence project management a more attractive environment to prospective applicants for project management positions in Defence. The ANAO's proposals should also assist in this regard, particularly those concerning payments limited to earned value and regular reporting to senior management.

8.43. Adoption of a more business-like environment for Defence project management is more likely to attract better applicants from the private

sector. The initiatives and proposals, if implemented, should assist in moderating the demand for project staff and avoiding the practice observed in the earlier audits where large project offices engaged in churning unresolved issues and producing outputs that could have been achieved by fewer staff.

8.44. To assist in protecting Commonwealth interests and achieve capability Outputs, Defence needs to make a concerted effort in the difficult but essential task of building a corps of skilled and experienced acquisition professionals to serve in DAO and other groups involved in major acquisition projects. The ANAO does not consider that project offices require a large support staff. What each major project needs, essentially, is alert and proficient project management teams with the experience, knowledge and skills to manage contractor performance and to have the full backing of senior management in doing so. The teams should know and understand the Defence environment, including capability outputs, and be commercially-oriented in their approach to contract management.

8.45. The ANAO acknowledges that DAO, in its 1998 personnel strategic plan, has begun to address the issues that have been of concern within and outside DAO. There would be merit in maintaining it as a practical plan that brings together DAO's current personnel and workforce initiatives and manages workforce demographics to increase the availability and continuity of experienced project managers. The plan should be revised as necessary to take account of any changed work practices and economies from initiatives such as DAO's Business Process Re-engineering. The plan should also take account of the views and needs of the Service Chiefs, who, as Output Managers responsible for capability outputs, depend on major equipment acquisitions and supply officers to assist in staffing project offices.

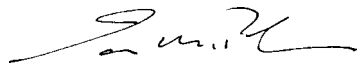
Recommendation No.6.

8.46. The ANAO recommends that DAO, in consultation with Output Managers responsible for capability outputs, maintain its personnel strategic plan as a workforce plan that brings together its current personnel and workforce initiatives and manages workforce demographics to increase the availability and continuity of experienced project managers, and revise the plan as necessary to take account of any changed work practices and economies from initiatives such as business process re-engineering.

Defence response:

8.47. Agree. The need for enhanced personnel management and planning within Defence Acquisition is recognised. Additional steps being taken include:

- recruiting experienced project managers into DAO; and
- provision being made for secondment to industry of senior acquisition personnel, in order to strengthen commercial and project management skills throughout the organisation.



Canberra ACT
11 October 1999

Ian McPhee
Acting Auditor-General

Appendices

Appendix 1

Defence capability planning, programming and budgeting

1. Government funding is limited and Defence and must compete with other Government priorities for the resources it receives. Defence's major capital equipment projects often stretch over decades, thus making forward planning, programming and budgeting necessary for two reasons:

- to provide Government with information on whole-of-life cost of proposed new or enhanced Defence capabilities; and
- to facilitate better management of Defence capability in terms of overall cost, quality and timeliness.

Planning

2. Planning-Programming and Budgeting System (PPBS) concepts are intended to underpin Defence group interactions, which is outlined in Figure 1 in Chapter 1. PPBS was developed in the USA during the 1950s and implemented by the US Department of Defense (US DoD) in 1961. US DoD recognised that organising resources and budgets in terms of activities or functions (such as procurement, personnel, training etc), rather than by military capability or strategic objectives, had several defects. The most important defect was that it separated budgeting from capability planning and decision-making.[149] Capability costs were often not linked systematically to capital equipment acquisitions in terms of evaluating alternative capital equipment proposals and the actual recurrent cost of capability delivered. Budgeting therefore became incremental in nature, with a focus on funding inputs rather than rigorous analysis of long-term capability needs and their initial and recurrent (life-cycle) costs.

Programming

3. Defence in 1969 recognised that the scale and cost of Australian defence were such that it too should avail itself of PPBS,[150] and it commenced implementing PPBS in 1970.[151] Defence's Five Year Defence Program (FYDP—formerly known as the Five Year Rolling Program—FYRP) aimed to produce a program budget which linked long-range plans

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149 David Novick, 'The Department of Defense', *Program Budgeting: Program Analysis and the Federal Budget*, David Novick, Ed, The RAND Corporation, 1965, p.83.

150 The Parliament of the Commonwealth of Australia, *Defence Report 1969*, Commonwealth Government Printing Office Canberra, 1969, p.7.

151 The Parliament of the Commonwealth of Australia, *Defence Report 1970*, pp.7–10.

for weapon systems and all their supporting elements (Defence capabilities) to the financial resources required for new acquisitions (capital expenditure) and the recurring cost of maintaining defence capability. *Defence Report 1970* stated:

> *The new programme [FYRP] uses the 'programme budgeting' approach. This is aimed at the production of a programme which identifies the major objectives of the Defence Forces—Anti-Submarine Warfare, Air Defence and so on—and assigns all the costs—R & D, Capital and Operating—associated with each activity over a period far enough into the future to show, to the extent practicable and necessary, the full resource needs.*[page 9]

4. The FYDP system projects forward for five years the indicative resource management activities and funding requirements that are set within program plans and expenditure limits endorsed by Cabinet. In 1990 Defence considered that the then Government's Program Management and Budgeting (PMB), would improve the planning phase of its implementation of PPBS.[152]

Budgeting

5. A crucial component of PPBS, PMB and the present Government's Accrual-based Outcomes and Outputs Framework is the need to factor both capital and recurrent costs into Defence capability planning and budgeting. This requires the use of life-cycle cost (LCC) techniques at key stages of capability planning and implementation. The life-cycle cost of Defence equipment accounts for a substantial portion of the Defence Budget. However, Defence has been slow to fully implement the links between capability planning and budgeting described earlier. Defence has analysed some acquisition life-cycle costs since at least the early 1980s, but the analysis falls short of that required to ensure adequate recurrent costs are factored into the FYDP.

6. By 1983, Defence recognised that '*whenever a decision to spend money is to be made, through-life cost should rate as a basic parameter and an essential criterion for choice.*'[153] The then Secretary and the then Chief of the Defence Force (CDF) directed in 1989 that greater emphasis be placed on LCC in procurement processes. The first Defence Instruction on the subject was issued in 1992.[154] An ANAO audit report on life-cycle costing (LCC) in Defence (May 1998) concluded as follows:

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[152] Resources and Financial Programs Division, Department of Defence, *Program Management and Budgeting, Key Changes in Defence Decision Making and Budgeting Systems under Program Management and Budgeting*, February 1990, p.9.

[153] Department of Defence, *DRB 37: Value Analysis,* March 1983, p. 13–9 (internal document). Also, Department of Defence, *1990–2003 FYDP Review of Net Personnel Operating Costs*, p.1.

[154] Defence Instruction, DI(G) LOG 03–4. See Auditor–General Audit Report No. 43 1997–98, *Life–cycle Costing in the Department of Defence*, 12 May 1998, pp.5, 10, 13.

> *There are many cases where Defence uses LCC to support decisions, mostly in relation to tender selection. However, LCC is not generally used at other stages of the acquisition life cycle, such as the early concept development stages, and the in-service and disposal stages. Defence policy has been set for LCC for some time, but there seems to be little top-level enforcement or encouragement at present for the use of LCC throughout the acquisition life-cycle.*[155]

Defence agreed to implement recommendations designed to promote LCC in Defence activities. Defence called for tenders from firms to assist in developing and implementing capital equipment life-cycle costing strategies, plans and analytical techniques to support management decision processes.[156]

7. The Defence Executive sought to establish the link between budgeting and capability planning and decision-making in its December 1998 policy statement that:

> *…investment resource planning be coupled more closely to planning for personnel and recurrent costs, and, in particular that no investments would be approved without provision being made for the associated recurrent resourcing.*[157]

Indications of inadequate budgeting for the recurrent cost of capital equipment

8. Defence records state that, until 1999, Defence's capability planning and programming process failed '*to look at the whole of capability (support requirements, personnel and training needs and recurrent costs)*' and that there was '*…generally poor consideration of Net Personnel and Operating Costs (NPOC) with an approach which is reactive rather than pro-active.*'[158] Only '*25 per cent of capital equipment projects awaiting approval included an NPOC estimate, and the amount of effort put into estimating the NPOC of unapproved projects tends to be minimal.*' The NPOC process is designed to identify the variations in personnel and operating costs over the FYDP caused by the introduction of new or enhanced major capital equipment.[159]

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[155] Auditor–General Audit Report No. 43 1997–98, *Life–cycle Costing in the Department of Defence*, 12 May 1998, p xii.

[156] Advertisement in *The Canberra Times* 15 May 1999 p B11.

[157] Defence Executive Agendum 35/98 and 37/98—Outcomes*, Capability Management Improvement/ The Defence Management Framework*, December 1998, p.3. [Internal report.]

[158] Department of Defence, Defence Capability Forum, Paper No. 4/1999, *Revised Capability Development Process*, p.1. [Internal report.]

[159] See Budgeting for new acquisitions in Auditor–General Audit Report No. 43 1997–98, *Life–cycle Costing in the Department of Defence*, 12 May 1998, pp.57–60.

9. Defence records indicate as follows:

- Since the NPOC process commenced in 1995–96 the '*ongoing increase in [NPOC] funding is roughly constant at a rate of $75 million per annum'*. This represents about three per cent of the average annual capital equipment investment over the last decade. '*On current projections the total NPOC bill will be comparable with total DRP [Defence Reform Program] savings by the end of the next decade'*.[160] (NPOC funding, bids and pink book estimates are shown in Figure 9.)
- The Defence Executive decided in December 1997 to allocate from DRP savings $645 million in the 1998–2002 FYDP towards logistics shortfalls. This amount of reinvestment was subsequently reduced in March 1998 to $463 million across the 1998–2002 FYDP. Defence's *Portfolio Budget Statements 1999–2000* show that DRP savings have provided $436 million across the 1999–2003 FYDP for capability-related logistics shortfalls and a further $314 million for NPOC bids.[161]

10. Unless Defence budgets sufficiently for the recurrent costs of operating and maintaining its major capital equipment, it is likely that the Services will be required to absorb more costs and NPOC bids will continue to increase. This particularly applies to the costs associated with maintaining, enhancing or replacing aging high-cost weapon platforms such as Navy's DDG destroyers and FFG frigates and Air Force's F–111 and F/A–18 aircraft. Defence records indicate that new and enhanced capabilities cause NPOC growth because:

- new capabilities result in additional cost structures;
- improved capabilities are often more expensive to operate;
- locally-developed capabilities that only Australia operates introduce new overhead costs; and
- multiple platform and weapon types introduce additional overhead costs.

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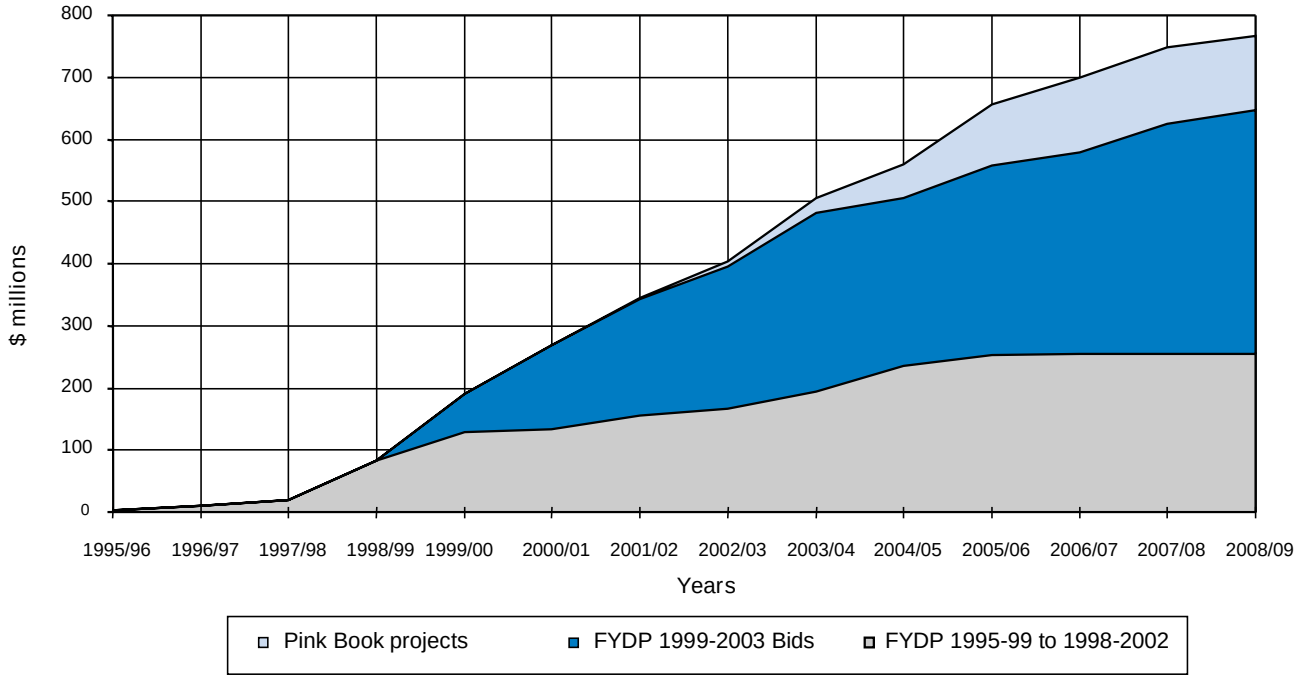
[160] Department of Defence, Annex J to Defence Executive Agendum 36/98, *1990–2003 FYDP Review of Net Personnel Operating Costs*, p.2. [Internal report.]

[161] Department of Defence, *Portfolio Budget Statement 1999–2000*, Table 1.4 p.15.

Figure 9

Net Personnel and Operating Cost



Source: Department of Defence

11. Defence records indicate that NPOC bids have been funded through efficiency savings and more effective resource reallocations. However, in future, it is likely that these costs would be met from reductions in the new capital equipment investment program,[162] or absorbed by the three Services and Support Command Australia via reductions in preparedness through logistics funding cuts or the retirement of existing lower priority capabilities.[163]

12. This indicates advantages that could accrue from organising Defence acquisition management, resources and budgets in terms of military capability or strategic objectives rather than by input activities or functional groups (such as procurement, personnel, training and logistics). This would assist capability planners to factor into their decisions more accurate estimates of the recurrent costs of alternative capital equipment proposals. Output Managers could more accurately link capital costs of equipment acquisitions and actual recurrent cost of capability delivered. With improved planning and budgeting Output Managers could better advise the Defence Executive on areas of military structure or preparedness that could be reduced in times of funding constraints, based on informed systematic risk management. This would, however, require improved financial and cost information systems and improved business processes of the kind envisaged by Defence capability management concepts based on PPBS and PMB that have evolved since the 1960s.

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[162] Department of Defence, Defence Capability Forum, Paper No. 4/1999, *Revised Capability Development Process*, p.1. [Internal report.]

[163] Department of Defence, Annex J to Defence Executive Agendum 36/98 *1990–2003 FYDP Review of Net Personnel Operating Costs*, p.7.

Appendix 2

Program Management and Budgeting implementation lessons

1. In 1987 the then Department of Finance (DOF) reported a study of the implementation of the Financial Management Improvement Program (FMIP) and Program Budgeting (PB) in selected agencies, excluding Defence.[164] The study found that the main benefits derived from FMIP/PB related to organisation structure and that the agencies were still implementing the core concept of performance evaluation. The DOF study found the agencies had satisfied PB's primary strategic-level objective of re-appraising corporate and program objectives and re-examining their structures and processes. However, the study also found that to sustain these benefits the agencies needed deeper system changes to make programs a central focus for strategic resource management and policy decision-making. The PB implementation study identified the following problems.

2. The agencies experienced a divergence between program management and the functional structure of the organisation. This raised a need to manage conflicts between dual lines of authority within the matrix organisation. The agencies experienced the risk of only superficially aligning their programs and structure and so obstructing the real need to focus program analysis on strategic issues. The study suggested that agencies would find it easier to assess performance against objectives if they had single lines of authority to manage both routine management issues and strategic analysis and review.

3. The agencies only partially used program budgeting concepts in resource management decisions. They formally presented Budgets in program terms but allocated and managed their budgets on a division, group and region basis. DOF was of the opinion that this did not place FMIP/PB at risk, provided the basic purposes of the agency were re-examined and performance eventually assessed against objectives. However, DOF considered that, if agencies did not use performance data to effect budget allocations consistently and significantly, this would weaken the required shift to evaluating and justifying budget estimates on output-related criteria. DOF also suggested that a program format to the annual appropriations would enforce the FMIP/PB concepts. However, DOF felt that, before this could happen, departmental managers needed to demonstrate their management effectiveness and the practicability of program performance assessment.

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[164] Department of Finance, *FMIP and Program Budgeting: A Study of Implementation in Selected Agencies,* AGPS, Canberra, August 1987.

4. The agency performance indicators and management information systems remained largely underdeveloped. The study noted the limited development of performance indicators and the relatively low level of management information system (MIS) development. The study considered MIS to be the end product of the reform and that the degree of MIS development was a key indicator of progress in implementing FMIP/PB. It maintained MIS could be developed only in pace with the development of corporate management systems and would require a clearer establishment of management processes and the definition of actual data inputs. DOF felt that the success of FMIP/PB depended on the development of both performance indicators and MIS and that this required full commitment by the executive and other units involved in organisational and system change, as well as ample time and resources.

5. Agency personnel lacked skills in resource management. DOF found technical line managers and their support staff lacked skills in resource management techniques and were reluctant to become involved in resource management issues. The study called for a major effort in resource management training.

6. FMIP/PB implementation progress depended upon political perceptions and oversight. Progress on FMIP/PB implementation depended to a substantial extent on how these programs and their effects were perceived by politicians, as well as the extent to which parliamentarians wished to examine public service management issues.

Defence's implementation of PMB

7. Defence implemented its Program Management and Budgeting (PMB) by July 1990 reviewed its PMB in 1992.[165] The review focused largely on functional units—renamed programs—and paid little attention to cross-functional lateral output programs. It therefore illustrated a major deficiency in Defence's implementation of PMB—the failure to shift the focus from functional groups and their inputs to organisational outputs. When the review used the term Program it was referring to the functional unit and not to the cross-functional lateral program of PMB. The review identified the following key problems:

8. Defence experienced difficulties in aligning its functional groups with program outcomes. These difficulties extended to linking Sub-Program outcomes (including capability outcomes) with resource allocation (or input) processes. The review noted that Defence's eight program structure was based on command and line management responsibilities rather than Defence capability outcomes.

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[165] Department of Defence, *Report of the PMB Post Implementation Review*, Attachment A to DPMC Agendum 8/1992. [Internal report.]

9. Defence experienced difficulty in articulating its objectives and measuring their achievement. This was attributed to: a state of peace; the problem of identifying 'clients'; and organisational and functional complexity. The review recommended that Defence assist its accountability by setting more precise, vertically-integrated and assessable objectives and reviewing them annually against achievement. The review reported some progress at the higher levels but found a need for sub-programs to improve their self-evaluation and their contribution to wider portfolio assessments.

10. Defence inadequately linked its program objectives and resource allocations in terms of both planning and evaluation. The review commented that this situation was largely a consequence of the non-availability of data on resource utilisation against Program outcomes, and on the resources planned to be allocated against Program objectives. The review also stated that there was no routine mechanism for re-basing resource allocations between Programs to reflect substantial adjustments such as changes of strategic guidance or significant changes to resource availability. The review found that this resulted in resource allocations being largely based on historical achievement, rather than on what the portfolio should be doing and why. The review recommended Defence establish formal annual program reviews that consider Program objectives, resources used in achieving outcomes against those objectives, and the resources identified as required to pursue future initiatives.

11. Defence experienced widespread confusion regarding fundamental features of the PMB framework. The review found this confusion extended to the meaning of objectives, the identification and measurement of outcomes, and the role of outputs and performance indicators.

12. Defence personnel often limited their understanding of accountability. The review found that often Defence personnel limited their interpretation of accountability to meaning only probity and culpability for transgressions of established regulation. This truncated the intended broader meaning of a responsibility for performance or achieving goals and objectives, and a responsibility to report that performance at successive levels up through the accountability chain.

13. Defence provided only limited educational follow through. The review found no coordinated campaign to reinforce the role of PMB within the Department, to advise of the achievements of others, or to canvass the difficulties organisations were encountering. This included inadequate promulgation of senior departmental management decisions and initiatives.

14. Defence devolved insufficient responsibility to program managers. The review found insufficient devolved responsibility resulted in inflexible performance. This jeopardised Program objectives as managers concentrated on achieving short-term financial results rather than achieving outcomes against planned Program objectives. Where authority had been devolved there was a perception that, in some cases, the activities devolved had not been matched with resources adequate to carry them out. There was also a perception that the process lacked direction and momentum, and that devolved authority was not accompanied by relevant training.

15. Defence experienced difficulties with cash management. Government initiatives to introduce a year-on-year carryover of running costs were found by the reviewers to be contrary to Defence's interests, due to the need to pay interest on funds advanced, and the impact of deferred expenditures on Defence's real growth budget base. The review reported that Defence considered the limited size of the carryover amounts resulted in the initiative being of only marginal use.

16. Defence gave insufficient priority to information technology planning. The review recommended IT planning to be subordinate to, but aligned with, corporate planning under the clear direction of corporate management and subordinated to corporate objectives and performance indicators. The review identified a need to develop Program objectives and performance indicators that drive the priorities for data capture and management information system design. The review reported that DEFMIS was inadequate for this purpose and that it had to be integrated into management information systems that draw together the setting and achievement of objectives and positive outcomes.

Consultants' report in 1993

17. Similar issues came to notice in 1993 in a management consulting firm's report that indicated the following problems with the implementation of Defence program management and budgeting.[166]

18. Corporate direction and oversight: The report argued (p.43) that '*a more directive and corporately insistent approach needs to be taken in relation to inter- and multi-Program initiatives*'. It stressed (p.137) that

> *PMB authority and services command and control structures in Defence tend to reinforce vertical Program interests unless additional or special corporate directives or incentives apply. As a result, inter Program and/or*

[166] Department of Defence, *A Review of the Commercial Support Program and its Performance*, August 1993 [internal report].

multi-Program activities are unlikely to progress very far without some special corporate directive authority and clearly identified incentives. Additionally, based on comments from different sources within Defence, it appears that many question whether there is sufficient "corporate will" to overcome narrower Program interests.

19. Implementing PMB effectively: The report highlighted (p.19) inadequate devolution within Programs and 'stove-pipe' mentality at senior management level. It found that 'the "stove pipe" mentality implicit in some senior managers' perceptions of what PMB means, engenders little confidence that cross-Program activities ... will be seriously addressed—at least, not without some strong corporate direction and persistence.' According to the report (p.30),

anecdotal evidence suggests that PMB has accentuated the "stove-pipe" mentality of many and, as a result, is complicating progress in relation to multi-Program activities. As well, there was some question about the effectiveness which PMB has been implemented in Defence. They argue it has been largely super-imposed on the pre-existing structure of management. Thus, complementarities in service production/delivery have not been addressed … . As a result, after the implementation of PMB, Defence must address such issues [of scope] by adopting what might be considered "second best" management structures, such as single service management of some activities on behalf of other Services/Programs.

Appendix 3

Performance audits in Defence

Set out below are the titles of the ANAO's performance audit reports on the Department of Defence and the Australian Defence Force (ADF) tabled in the Parliament in the last five years.

Audit Report No.2 1994–95
Management of Army Training Areas Acquisition of F–111 Aircraft

Audit Report No.13 1994–95
ADF Housing Assistance

Audit Report No.25 1994–95
ADF Living-in Accommodation

Audit Report No.29 1994–95
Energy Management in Defence ANZAC Ship Project Contract Amendments Overseas Visits by Defence Officers

Audit Report No.31 1994–95
Defence Contracting

Audit Report No.8 1995–96
Explosive Ordnance (follow–up audit)

Audit Report No.11 1995–96
Management Audit

Audit Report No.17 1995–96
Management of ADF Preparedness

Audit Report No.26 1995–96
Defence Export Facilitation and Control

Audit Report No.28 1995–96
Jindalee Operational Radar Network [JORN] Project

Audit Report No.31 1995–96
Environmental Management of Commonwealth Land

Audit Report No.15 1996–97
Food Provisioning in the ADF

Audit Report No.17 1996–97
Workforce Planning in the ADF

Audit Report No.27 1996–97
Army Presence in the North

Audit Report No.34 1996–97
ADF Health Services

Audit Report No.5 1997–98
Performance Management of Defence Inventory Defence Quality Assurance Organisation

Audit Report No.34 1997–98
New Submarine Project

Audit Report No.43 1997–98
Life-cycle Costing in Defence

Audit Report No.2 1998–99
Commercial Support Program

Audit Report No.17 1998–99
Acquisition of Aerospace Simulators

Audit Report No.41 1998–99
General Service Vehicle Fleet

Audit Report No.44 1998–99
Naval Aviation Force

Audit Report No.46 1998–99
Redress of Grievances in the ADF

Glossary of Terms

Accountability: The extent to which individuals are held responsible for achieving particular results and for the management of the resources used. Accountability relies on performance information being sufficient to explain the results achieved and the resources used.

Activity: A specific and distinguishable unit of the work performed by an organisation.

Allocation: Assigning items of budgets or revenue to one or more sections of an organisation. This sets their budget for future expenditure.

Appropriateness: The extent to which program objectives or desired outcomes align with Government priorities or policy and client needs.

Attribution: Assigning of items of expenditure to one or more sections of an organisation. Attribution in program management and budgeting terms is the provision of resources by one program manager to further the objectives on an outer program. Subsequent resource expenditure is attributed to the receiving program's costs, so that the total resources used in achieving program objectives is known.

Benchmarking: A process by which an organisation seeks to determine and introduce best practice, and assess program performance. Benchmarks can operate as standards or targets for performance levels by using comparisons of products, services, practices and processes with similar programs either within the organisation or in other organisations or countries. Benchmarks usually operate as best practice standards.

Capability: A measure of the ability of a system to achieve the mission objective given the system condition during the mission. Capability specifically addresses the performance spectrum of the system.

Capability development: A process which establishes priorities for investment in new capabilities. The process uses strategic guidance to inform capability analysis that creates programs and budgets through which equipment is then acquired. The process is often highly iterative requiring extensive interaction between capability analysis and planning staff, equipment acquisition staff and logistics support staff.

Capital: Any asset, or a group of similar assets, that has a value exceeding a certain value. Defence has decided that any asset, or groups of assets, with a value exceeding $25 000 are capital items.

Client measures: Performance information which relates to the level of client service. This may be determined by undertaking a survey of client opinions and/or by measuring aspects of the client process, such as the time to respond to clients seeking assistance. Client measures may also be indicative of process efficiency.

Devolution: The transfer to line managers of specific authority over the use of resources and the setting of priorities and their subsequent accountability for performance and the management of resources.

Effectiveness: The extent to which program outcomes are achieving program objectives. The effectiveness of a program should be distinguished from the adequacy of the administration of the program, which concerns efficiency.

Efficiency: The extent to which program inputs are minimised for a given level of program outputs, or to which outputs are maximised for a given level of inputs. Efficiency is concerned with the process (activities/strategies/operations) by which the program is delivered and which produces the outputs of the program.

Efficiency is a relative rather than an absolute concept. It is not possible to say a program is 'efficient'. Rather, it can only be stated that a program is more (or less) efficient than, say, it was at this time last year or than a comparable program.

Evaluation: A considered assessment of a program, project or activity in relation to elements such as appropriateness, stated objectives, risk management, efficiency and effectiveness in achieving desirable outcomes, and management accountability. An evaluation may focus on more than one of these issues, depending on the evaluation's purpose and on the stage which the relevant business has reached.

Financial Management Improvement Program: A joint initiative by the former Department of Finance and Public Service Board designed to promote more efficient and effective strategic planning, the formulation of policy proposals and priorities, and the management of programs and activities. FMIP's centre-piece was Program Management and Budgeting.

Functional organisation: A type of organisation design where work is divided into single purpose groups. These organisations are characterised by vertically integrated chains of command that seek to match the right individuals with the right tasks and to monitor, control and reward their performance. These organisations are also known as vertical organisations that are hierarchically structured and functionally orientated.

Force Element: A unit or association of units having common prime objectives and activities. For example, a Navy ship, the Special Air Services Regiment, a Tactical Fighter Force operational squadron.

Force Element Group. An aggregation of force elements grouped together for planning and presentation purposes. For example Navy Submarines, the Army Special Forces, and Air Force Tactical Fighter Force.

Goals: A statement, from the point of view of the Government, of the reasons for the existence of an organisation; they set out the broader and longer term purposes against which programs develop their objectives.

Inputs: Human and other basic resources used to produce program outputs.

Key performance indicators: KPIs are performance indicators that exist at the top of a hierarchy of ranked performance measures.

Life-cycle costs: These costs can be defined as the sum of all monies expended, attributed directly and indirectly to a defined system from its conception to its disposal, encompassing the acquisition, ownership and disposal phases of a project. These costs include costs for research and development, production, personnel to operate and maintain the system, ongoing logistic support, facilities and eventual disposal.

Major and Minor Capital Equipment Projects: Defence classifies capital equipment projects according to their capital and recurrent costs or whether they have Defence policy or joint Service implications. If the capital equipment and its initial three years' spares support are expected to cost more than $20 million, it is classified as a major capital equipment project and managed by Defence Acquisition Organisation. Projects that cost less than $20 million or do not have Defence policy or joint Service implications are classified as minor capital equipment projects. These are normally managed by Output Groups or Support Command Australia.

Management Information System (MIS): A system (or systems) concerned with providing relevant and timely information, in both financial and non-financial terms, to various levels of management and that assists in monitoring the achievement of objectives, outcomes, outputs and targets and resource usage, and in identifying where remedial action is required.

Matrix Organisation: Formed by a combination of vertically orientated functional groups, intersected by laterally orientated output (product) groups. The lateral groups develop outputs by using functional group resources. The groups often share personnel. The organisation's senior executive must clearly define the authority and responsibility for output task accomplishment. In the private sector, the functional groups are known as cost centres and the output groups are known as profit centres.

Objectives: Concise, realistic, outcome-oriented statements of what the program, sub-program or other element of the program aims to achieve. Objectives must be stated in a way that clearly communicates what is to be achieved and measured.

Outcomes: All the results, impacts or consequences of the agency on the community, beyond its direct outputs. Outcomes are sometimes delayed or long term and they are not necessarily intended or anticipated. Outcomes should be distinguished from outputs. For example, the output of an employment training program may be a skills training course, but the (desired) outcome is employment. As specific outcomes may result from multiple factors, causal relationships between a program and outcomes must be demonstrated before they can be claimed as program outcomes.

Outputs: The products or services, which are produced and delivered by an agency group or by the agency in total. Output and throughput measures (for example, the number of products delivered, the number of cases processed) are often more readily identifiable than outcomes. However, outputs may provide useful background information about the group, but they generally are not by themselves a useful measures of outcome achievement.

Output Manager: Defence has 22 Outputs and six output managers. Outputs 1–19 relate to military capabilities and Outputs 20–22 relate to international relations, defence strategy and national support tasks.

Performance indicators: Predetermined measures, expressed in quantitative and/or qualitative terms, which together provide key information about aspects of program performance. Indicators are designed to prompt questions and to support, but not to replace, judgements on performance and achievement. They are usually not conclusive and more detailed investigation would be needed of their sources. Indicators provide a guide on performance where causal links are not obvious and the changes in performance are difficult to measure directly.

Performance information: Quantitative and qualitative evidence about performance that is collected and used systematically. Effective performance information should enable judgements to be made on the extent to which program activities are achieving the desired results. The information may relate to program effectiveness, appropriateness, efficiency, social justice and client service.

Performance measures: Provide a more precise measure of performance than indicators. They relate to outputs and are used when there is a direct causal link between an action and an easily measurable change in performance.

Pink Book: The list of unapproved major new equipment projects planned for the future. The Pink Book is managed by the Australian Defence Headquarters. Once a Pink Book project is approved it is entered into the approved major new equipment sub-program known as the White Book.

Preparedness: The ADF capability model consisting of two elements—force structure (the number, type and grouping of military units, personnel, equipment and facilities) and the preparedness of that structure for operations. Preparedness is time specific and consists of two separate but related elements—operational readiness and sustainability. Readiness is the ability of a force element to be capable of performing designated operational roles and tasks within a specified period of time. Sustainability is the ability to support forces after their deployment or commitment to operations and until completion of assigned tasks.

Program: A time-phased list of budgets and activities that are aligned with an agency's end objectives.

Program management and budgeting: Seeks to focus budgetary decisions on end products and on gross categories of output such as Government objectives, instead of on discrete inputs such as personnel, equipment or maintenance. Program budgeting emphasises the need for clearly defined goals and objectives, and the need to estimate the total financial cost of reaching goals. Cost/benefit analysis is used to select, among alternatives, the most advantageous programs to fulfil goals and objectives. Once priorities among objectives are set up, budgeting by programs is supposed to determine how much should be spent on one program versus another. Programs should be seen as interrelated wholes in order to determine the best expenditure mix in the annual budget for producing the largest future benefits.

Program element: An individual entity, which contributes to a common strategic objective. In US DoD terms, program elements are the basic elements of the DoD's budget. For example, aircraft, tanks, helicopters, buildings and Army divisions.

Program evaluation: The analysis of the efficiency and effectiveness of programs including assessment of whether program objectives are in agreement with Government policy, and of alternative strategies for achieving objectives.

Quality: Quality relates to the characteristics by which an organisation, product or delivery is judged by customers or stakeholders. In its broadest sense it incorporates the assessment of outputs, processes and outcomes and takes into consideration the relevant objectives and resources. Assessment of quality involves the use of information gathered from key interests (citizens, direct and indirect consumers, staff, professionals and Government) to identify differences between the expectations and experience of users.

Standards: Predefined levels of excellence or performance specifications, which can be set on various aspects of an organisation, including inputs, processes, outputs or objectives. Progress in the provision of the service can be measured against the standard. Standards can relate to quality and objectives of a service or to aspects of service delivery, and can be set at different levels (eg. national/local).

Strategies: Groupings of activities used to achieve an objective. For example a strategy to raise awareness of an issue can encompass activities like publishing pamphlets, creating networks, holding conferences and meetings.

Targets: Quantifiable performance levels or changes in level to be attained at a specified future date. By enabling a direct judgement of performance, targets can clarify and simplify the process of performance monitoring.

Vertical organisation: (also known as functional organisation): A type of traditional organisation design where work is divided into functions and tasks. Limits to spans of managerial control result in vertically integrated management hierarchies.

White Book: The list of approved major new equipment projects together with the planned direct and indirect expenditure associated with these projects. The White Book is managed by Defence Acquisition Organisation.

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