

The Auditor-General  
Audit Report No.8 2005–06  
Performance Audit

# **Management of the Personnel Management Key Solution (PMKeyS) Implementation Project**

**Department of Defence**

© Commonwealth  
of Australia 2005

ISSN 1036-7632

ISBN 0 642 80865 1

### **COPYRIGHT INFORMATION**

This work is copyright. Apart from any use as permitted under the *Copyright Act 1968*, no part may be reproduced by any process without prior written permission from the Commonwealth.

Requests and inquiries concerning reproduction and rights should be addressed to the Commonwealth Copyright Administration,  
Attorney-General's Department,  
Robert Garran Offices,  
National Circuit  
Canberra ACT 2600

**<http://www.ag.gov.au/cca>**



Canberra ACT  
26 August 2005

Dear Mr 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*. Pursuant to Senate Standing Order 166 relating to the presentation of documents when the Senate is not sitting, I present the report of this audit and the accompanying brochure. The report is titled *Management of the Personnel Management Key Solution (PMKeyS) Implementation Project*.

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

Yours sincerely

A handwritten signature in black ink, appearing to read 'Ian McPhee', is positioned above the printed name.

Ian McPhee  
Auditor-General

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

## AUDITING FOR AUSTRALIA

The Auditor-General is head of the Australian National Audit Office. The ANAO assists the Auditor-General to carry out his duties under the *Auditor-General Act 1997* to undertake performance audits and financial statement audits of Commonwealth public sector bodies and to provide independent reports and advice for the Parliament, the Government and the community. The aim is to improve Commonwealth public sector administration and accountability.

For further information contact:

**The Publications Manager**  
**Australian National Audit Office**  
**GPO Box 707**  
**Canberra ACT 2601**

**Telephone:** (02) 6203 7505

**Fax:** (02) 6203 7519

**Email:** [webmaster@anao.gov.au](mailto:webmaster@anao.gov.au)

ANAO audit reports and information about the ANAO are available at our internet address:

<http://www.anao.gov.au>

### Audit Team

Andrew Sibraa  
Claire Dunstall  
Colin Cronin

# Contents

---

Abbreviations .....	6
<b>Summary and Recommendations .....</b>	<b>9</b>
Summary .....	11
Background .....	11
Overall audit conclusions .....	12
Key findings .....	14
Agency response .....	21
Recommendations .....	22
<b>Audit Findings and Conclusions .....</b>	<b>23</b>
1. Introduction .....	25
Background .....	25
PMKeyS Project .....	28
Project JP 2080 .....	30
Audit approach .....	33
2. Project Planning and Approval .....	34
Defence procurement guidance and policy .....	34
Project approval .....	37
3. Contractual Arrangements .....	44
Background .....	44
Software Vendor contract .....	46
4. Cost Performance .....	55
Project cost breakdown .....	57
End-user training .....	61
5. Schedule Performance .....	64
Project phases .....	64
System remediation .....	73
Future system upgrade .....	74
<b>Appendix .....</b>	<b>77</b>
Appendix 1: Agency Response .....	79
Index .....	81
Series Titles .....	83
Better Practice Guides .....	84

# Abbreviations

---

ACMIS	Army Central Manpower Information System
ADF	Australian Defence Force
ANAO	Australian National Audit Office
APS	Australian Public Service
BMG	Business Managers Group
CENRESPAY	Central Reserve Pay
CEPMAN	Capital Equipment Procurement Manual
CIVILPRISM	Civilian Personnel Resource Information System Management
CPAC	Civilian Personnel and Administration Centre
CWBS	Contract Work Breakdown Structure
DAO	Defence Acquisition Organisation
DBAPI	Directorate of Business Analysis and Process Information
DEFMIS	Defence Finance Management and Information System
DISG	Defence Information Systems Group
DPE	Defence Personnel Executive
DPMI	Directorate of Personnel Management Information
EL-HCM	Enterprise Licence–Human Capital Management
HDPE	Head of Defence Personnel Executive
HR	Human Resources
HRIS	Human Resource Information System
NPEMS	Navy Personnel and Establishment Management System
OSSRT	On Site Support Response Time
PCSC	PMKeyS Customer Service Centre
PMAP	Project Management and Acquisition Plan
PMKeyS	Personnel Management Key Solution

PMP	Project Management Plan
ROMAN	Resource and Output Management and Accounting Network
SDSS	Standard Defence Supply System
SRT	System Restoration Time
VCDF	Vice Chief of Defence Force





# **Summary and Recommendations**



# Summary

---

## Background

1. Defence recognised the requirement for an integrated personnel management system in 1997, as an outcome of the Defence Efficiency Review. The Personnel Management Key Solution (PMKeyS) Project (the Project) was a significant and complex human resource business process change in Defence, and involved moving military and civilian staff off purpose-built long running human resource legacy systems to a common platform. Implemented between September 1997 and December 2002, the PMKeyS system has become Defence's core management information system for personnel management. PMKeyS is the authoritative management record for all Defence personnel in the areas of: administration and leave; development and training; career management; organisational structure; workforce planning; and recruitment. PMKeyS also manages payments to Defence's 19 028 civilian staff as at 30 June 2004. In excess of 10 000 staff are certified as PMKeyS users, who perform transactions on PMKeyS as part of their normal work function.

2. In September 1997, the Project was initiated with the establishment of the Project Working Group that was tasked with defining the Defence personnel management functional requirement, the selection of an implementation partner, and the recommendation of a preferred software vendor solution. The Project's planned procurement activities were very complicated, extended across five phases over two years and, by Project closure, had included the provision of a diverse range of services and products by over 40 contractors.

3. In respect of the Defence Financial Statements 2003–04, the ANAO reported that it was unable to express an opinion as to whether the financial statements were true and fair.<sup>1</sup> The ANAO identified a \$1.23 billion audit limitation of scope in respect of the Australian Defence Force (ADF) employee leave provision, which related to historical leave records deficiencies and PMKeyS system data integrity failings. The Defence Financial Statement Audit reported issues with PMKeyS relating to, inter alia, security administration; operator classifications; system training; leave and civilian payroll processing; and military data inconsistencies.

---

<sup>1</sup> Defence Annual Report 2003–04 and ANAO Report No.21, 2004–05, *Audits of the Financial Statements of Australian Government Entities for the Period Ended 30 June 2004*.

## Audit approach

4. The objective of the audit was to assess the Project's planning and approval processes and the Project's contract and project management. The audit addresses the scope of the delivered system, the expectations of end-users, and the system's ability to meet their capability requirements.

5. The ANAO's ability to audit Project expenditure was limited by an absence of reliable financial records and documentation. As a result, the ANAO is unable to provide a high level of assurance over Defence's own reporting of aggregate expenditure of \$63.4 million for this Project. Defence was however able to validate and attribute vendor expenditure across a limited sample of Resource and Output Management and Accounting Network (ROMAN)<sup>2</sup> transactions, selected at random by the ANAO. The Project's ROMAN financial record has not been used to validate Project expenditure reporting throughout the Project.

## Overall audit conclusions

6. The Project, when completed, was to deliver a single integrated system that would consolidate both the delivery of personnel management functions<sup>3</sup> and the number and disparate nature of the systems that performed those functions. The Project was to deliver these outcomes by June 2000. The Project suffered from extensive schedule slippage, with Phase 1 delayed by 39 weeks and Phase 2 components rolled out between 75 and 158 weeks late. When the Project closed in December 2002, major outcomes under Phases 3 and 4 had not been delivered (see Figure 1).

7. The Project was also to facilitate significant savings of \$100 million per annum, which had been identified in the 1997 Defence Efficiency Review. The Defence Personnel Executive (DPE) reported in May 2003, nearly six months after Project closure, that PMKeyS was yet to demonstrate a return on investment and that although savings had been achieved through decommissioning the legacy systems, those savings fell well short of the costs so far expended.

8. The ANAO found that the Project was not approved in accordance with Government requirements, including failure to obtain Cabinet approval. The Project met Defence's own criteria for classification as a Major Capital Equipment project. The ANAO notes that the Project was not treated as a

---

<sup>2</sup> The ROMAN system is Defence's core financial management information system.

<sup>3</sup> The Working Group focused the needs analysis and functional fit assessments for the PMKeyS software solution in the areas of Career Management, Organisational Structures and Workforce Planning, Personnel Development and Training, Personnel Administration and Leave, and Recruitment.

Major Capital Equipment project within the applicable guidance available at the time of initiation.<sup>4</sup>

9. The Project was found to have exceeded its notional budget of \$25.0 million by \$38.4 million, representing an increase of more than 150 per cent. In addition to Project expenditure, Defence reportedly incurred additional costs for Infrastructure (\$26.3 million) and Production Support (\$41.2 million) between July 1998 and June 2003. The total cost to Defence to bring PMKeyS into service, including the Production Support costs during the Project rollout period, is estimated to be at least \$131 million. This cost exceeded Defence's 1998 estimate of \$103.5 million to maintain its legacy personnel systems for five years by more than \$26 million.<sup>5</sup>

10. When the Software Vendor was unable to commit in August 2000 to a fixed price for Phase 2, after nearly 18 months of work on Phase 2, Defence did not have effective contractual control over Project costs and outcomes. Extensive Project delays, along with a significant underestimation of the training requirement, resulted in higher costs in the delivery of training to end-users. When rolled out, the Project training was inadequate in that it often did not reflect the delivered functionality. Initial Phase 2 training, which was delivered 14 months prior to the system's rollout to Army, was inappropriately timed.

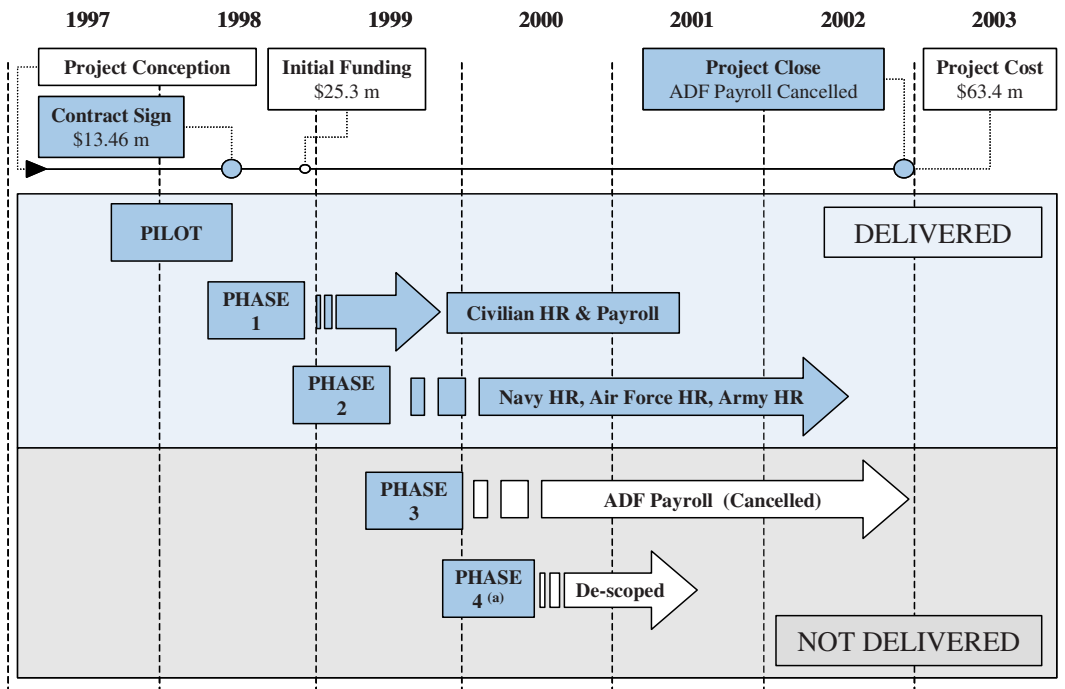
---

<sup>4</sup> The ANAO's audit of the SDSS Upgrade Project (Audit Report No.5, 2004–05, Management of the Standard Defence Supply System Upgrade) also found that business management information systems were not treated as Major Capital Equipment procurement activities.

<sup>5</sup> The comparison of cost between the legacy systems and the new system does not recognise any quality and functionality improvements that may have occurred over time.

**Figure 1**

**Project delivery to end-users**



Note: (a) Phase 4 was to include website enablement and employee self-service functionality.

Source: ANAO analysis of Defence records

## Key findings

### Project planning and approval (Chapter 2)

11. The ANAO found that the Project Office, as part of its planning processes, did not develop, complete and update a number of the key project planning and management documents, as mandated by Defence procurement policy. The absence of this documentation contributed to the Project's inadequate financial management, as well as to further procedural and procurement policy non-compliance.

12. The ANAO found that the DPE did not follow Defence management guidance on at least two occasions. In July 1997, the then Vice Chief of the Defence Force (VCDF) stipulated that a Minor Capital Submission would need to be prepared for Defence Executive consideration. In September 1997, at the time of a \$4.0 million initial funding allocation, the Defence Management Committee requested validation of the scope, cost, schedule and achievability

of the Project prior to further funding allocation. Defence could not substantiate that these internal governance obligations were met.

13. The Project was not managed as a strategic procurement activity,<sup>6</sup> nor was it managed as a Major Capital Equipment project. Initial Project funding of \$25.3 million, allocated between September 1997 and December 1998, exceeded the Defence threshold requiring management as a Major Capital Equipment project and also exceeded the then funding threshold requiring Cabinet approval of the procurement activity. Defence advised the ANAO in June 2005 that it was not Defence practice at that time to treat corporate IT systems as a Major Capital Equipment project. The ANAO found that Defence did not seek, nor obtain Cabinet approval for the Project as was required.

14. Additional departmental funding of \$20.3 million, \$9.0 million and \$4.2 million, in support of cost increases, was allocated to the Project between September 1999 and June 2003. The ANAO found that Defence did not seek, nor obtain approvals from Cabinet, or the Minister for Defence and Minister for Finance and Administration for any of these cost increases in accordance with Defence procurement policy. Allocated funding to Project activities totalled \$58.8 million, which was \$4.6 million less than the actual Project expenditure reported by Defence of \$63.4 million.

### **Contractual arrangements (Chapter 3)**

15. In the Project planning phase, Defence identified a requirement for a Review Partner and selected SMS Consulting Group Pty Ltd from a shortlist of two interested parties in October 1997. The total contract price and the price of individual contract deliverables were not fixed across the service period of October 1997 to June 1998. Payments were determined by the application of agreed fixed hourly or daily rates for specified personnel to the number of post approved work hours incurred toward each contract deliverable on a monthly basis (known as a 'time and material' contract).

16. Defence and the Review Partner undertook a selection process to identify a software vendor from the then Office of Government Information Technology shortlist of human resource management system providers. In July 1998, Defence announced that PeopleSoft Australia Pty Ltd had been selected as the Project's Software Vendor. The Software Vendor was contracted on a fixed price basis to implement the Project between July 1998 and June 2000 at a cost of \$13.46 million, which included a licence fee of \$3.5 million. Under this contract, which was known as the Official Order, Defence was also required to

---

<sup>6</sup> Strategic procurement activities are focused on delivering outcomes that are critical to Defence's ability to meet its core objectives.

pay an annual maintenance fee of \$0.7 million to the Software Vendor.<sup>7</sup> In July 1998, Defence advised the then Minister for Defence that the contract value was \$16.5 million.

17. The Official Order required that prices for the Project's phases were to be fixed in advance. However, Defence did not always approve prices in advance and prices were often determined retrospectively. In 1999, the Software Vendor and Training Contractor<sup>8</sup> were operating for an extended period without contractual coverage for the work that they were undertaking.

18. The ANAO has assessed that expenditure of at least \$27.6 million, or 44 per cent of Defence's estimated total Project costs of \$63.4 million, was incurred on contract terms akin to 'time and material' terms. Figure 2 illustrates the breakdown of the Project's total costs by the underlying contractual terms, principally fixed cost or time and material.

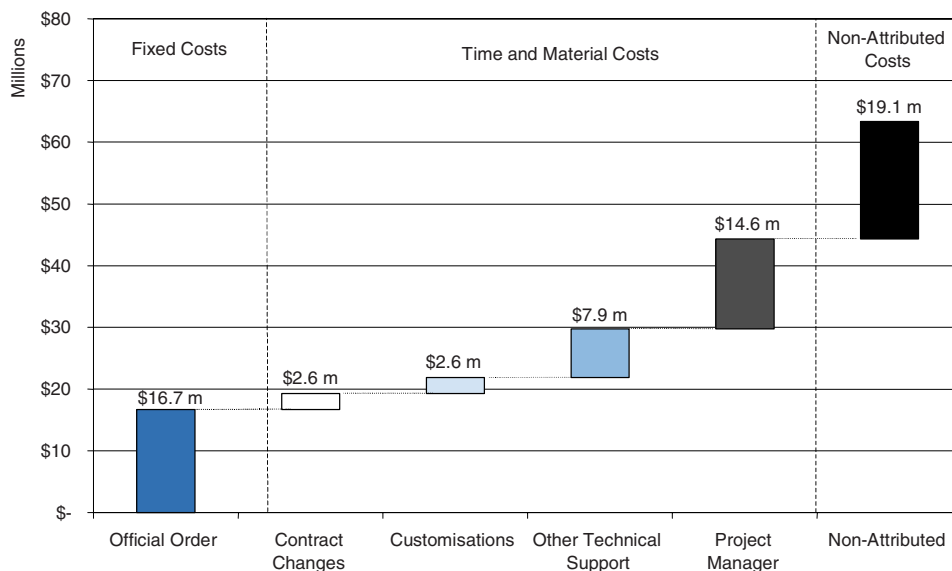
19. Following the completion of the software and vendor selection process in June 1998, SMS Consulting Group was re-contracted as the Project Manager on the same time and material payment terms. In this role, the Project Manager was accountable to the Project Director who was a Defence employee. Defence have advised that for a period between 1999 and 2001, the Project did not have a Project Director and employees of the contracted Project Manager fulfilled the Project Director's role.

---

<sup>7</sup> Defence exercised a contractual option to upgrade the database upon which PMKeyS was to operate. The additional cost of this option was \$1.26 million and included a \$0.70 million increase in the Licence Fee and a \$0.14 million increase in the Annual Maintenance Fee for four years.

<sup>8</sup> DA Consulting Group was contracted by Defence in October 1999 to develop training materials and to deliver training to Phase 1 end-users.



**Figure 2****Breakdown of Project costs of \$63.4 million by contractual terms**

Note: Non-attributed costs have not been attributed by the ANAO as either fixed or time and material costs.

Source: ANAO analysis of Defence records

**20.** The cost of software customisations and technical support provided by the Software Vendor, as well as the costs of the Project Manager, were effectively determined by the period of time that contractor resources were applied against those tasks. The time and material nature of these services meant that Defence bore the cost risk associated with schedule delays.

**21.** The Office of Government Information Technology contract with the Software Vendor required that services provided under the Official Order had to be formally accepted by Defence by way of a Certificate of Acceptance. The ANAO found limited evidence of Certificates of Acceptance and Defence have advised that they had adopted less specific acceptance criteria. In the absence of Certificates of Acceptance, most of the payments made to the Software Vendor under the Official Order were not made in accordance with the contract terms.

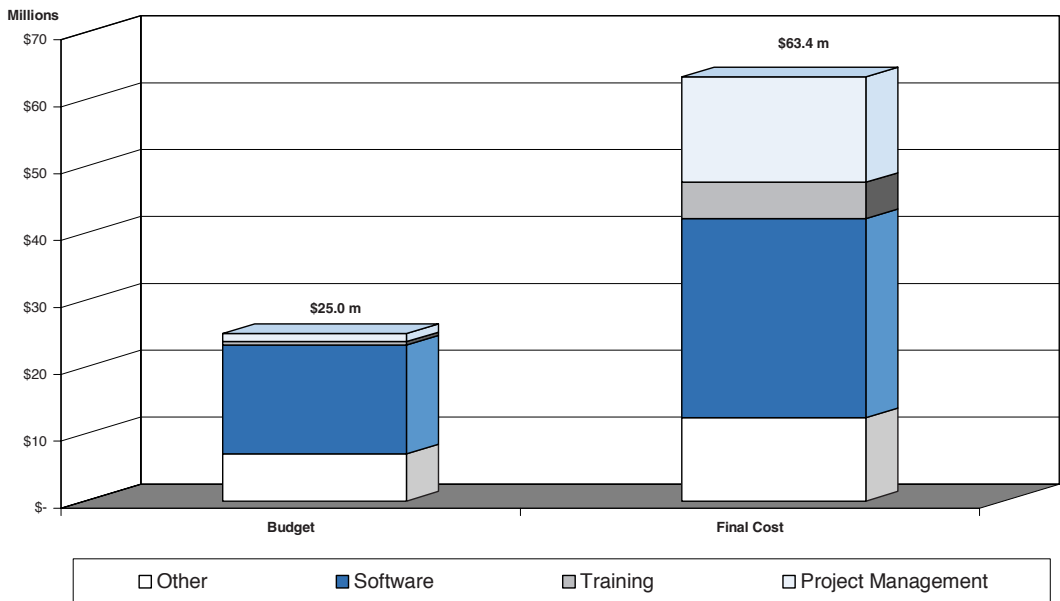
**22.** The Official Order was not compliant with Defence procurement guidance in that it did not include specific provisions for liquidated damages and performance incentives. Rebates were to become payable under the Official Order in the event of missed contract milestone dates. Notwithstanding that the Project missed all milestone dates, no rebates were paid to Defence.

Cost performance (Chapter 4)

23. The Project Office put forward a notional budget of \$25.0 million in March 1998. The budget proposal was not formally endorsed and, even though the Project had not received approval by an appropriate authority, initial funding of \$25.3 million was allocated to the Project. The Project was closed down in December 2002 and Defence have reported that total Project expenditure to June 2003 was \$63.4 million. However, as at May 2005, Defence was unable to identify the source of budget funding approval for Project expenditure in excess of the total allocation of \$58.8 million.

24. Defence was found to have spent \$15.76 million on contracted project management services, which was a thirteen-fold increase over the initial budget estimate of \$1.22 million (see Figure 3). The Project Manager was paid \$14.58 million or 92 per cent of the costs related to Project Management.

Figure 3  
Comparison of forecast and actual Project expenditure



- Notes:
- (a) Software includes the core software, licence and maintenance fees payable to the Software Vendor from within the Project's budget.
  - (b) Other includes, inter alia, infrastructure, civilian salary, travel and other contractor expenditure.

Source: ANAO analysis of Defence records

25. The Project Office underestimated the cost of providing training to PMKeyS end-users, which increased nearly fourteen fold, from \$0.35 million to a total contractor cost of \$4.79 million. Following Project rollout, responsibility

for training was devolved across Defence, producing a disparate ongoing training environment that was reported to adversely effect personnel data quality. This situation was addressed through the establishment of a central training authority in early 2004, more than four years after the first stage of PMKeyS rollout.

## **Schedule performance (Chapter 5)**

26. As the Project was not formally approved, the Project's scope and schedule were not formally approved, nor were they examined for their achievability, as requested by the Defence Management Committee in September 1997.

27. The Project did not deliver significant elements of the scope for which it was initially funded, such as ADF Payroll. Career Management functionality, a major element of PMKeyS Phase 2, is not fully utilised by Army when planning its annual posting cycle.

28. Major Project outcomes, including payroll functionality for military staff (Phase 3) and website enablement and employee self service (Phase 4), were not delivered. Total Project costs however increased by \$38.4 million.

29. Upon rollout of the delivered Project phases, end-users suffered problems with: network performance; losses of functionality compared to the legacy systems; and the quantity and quality of migrated data. Navy temporarily restarted their NPEMS<sup>9</sup> system when Career Management data was not transferred adequately into PMKeyS. Civilian staff lost the retrospective functionality of their previous personnel system, which has necessarily resulted in the development of a number of manual workarounds.

30. With the Project's closure in December 2002, DPE reported that it would delay the planned upgrade to give greater priority to correcting serious deficiencies in the current system that had resulted in the increased stress, lost productivity and lower morale of staff. The cost of the related system remediation activities to May 2005 has been reported by DPE to be \$6.0 million.

31. Defence submitted the First Pass Business Case for the PMKeyS Upgrade Project to the Defence Capability Committee in December 2004. The submission identified strategies for the upgrade of PMKeyS including the transition to an alternate software platform, which was rejected by Defence as being high risk and too expensive. The Defence Capability Committee endorsed the Upgrade Project's preferred strategy to sole source the PeopleSoft Version 8 application.

---

<sup>9</sup> The Navy Personnel and Establishment Management System or NPEMS was Navy's major legacy personnel system.

32. Defence effectively committed to the sole source strategy in June 2004 when additional funding of \$5.248 million was approved by DPE to complete the purchase of the Software Vendor's seven-year enterprise licence at a total cost of \$6.4 million.<sup>10</sup> In doing so, the DPE did not consider the impact that this decision would have on subsequent evaluation of Upgrade Project options. In December 2004, as part of its Upgrade Project Business Case submission, Defence stated that prior investment in the Software Vendor's product had been a factor in DPE's decision to recommend sole source selection of the software platform. Defence advised the ANAO in June 2005 that:

... the purchase of the enterprise licence was not the driver for 'sole source' of the PeopleSoft Version 8 software application ... the Upgrade (Project) Business Case makes it clear that staying with PeopleSoft for the next software generation delivers best value for money.

33. At the time of ANAO fieldwork, the PMKeyS Upgrade Project, which is planned to be funded under Joint Project 2080 Phase 2B, was not approved. Joint Project 2080 Phase 2B received Government First Pass approval in July 2005.

## Lessons learnt

34. The lessons to be learnt from the Project include:

- The need for project approval processes for IT systems to comply with Government and departmental requirements. To ensure improved project governance, future management information system projects should be approved in accordance with applicable Government and departmental procurement policies.
- Defence incurred significant project and infrastructure related expenditure in excess of the original funding allocation. To improve relative project cost and schedule outcomes, future management information system projects should be based on realistic estimates of project costs and system infrastructure requirements that have been subject to close analysis and review, prior to project approval. This will be facilitated by the strengthened two-pass project approvals process, which comprises:
  - **First pass approval** – Government considers alternatives and approves a capability development option(s) to proceed to more detailed analysis and costing, with a view to subsequent approval of a specific capability; and

---

<sup>10</sup> Defence had previously purchased two components of the enterprise licence at a combined cost of \$1.165 million. The contract price of \$5.248 million, which was paid on 24 June 2004, was observed to be non-cancellable, non-refundable and non-contingent.

- ❑ **Second pass approval** – Government agrees to fund the acquisition of a specific capability system with a well-defined budget and schedule.
- The need for a structured process of periodic management review, following the awarding of contracts, to provide additional assurance on the robustness of schedule, cost and performance outcomes being achieved in material projects.
- Project management business processes should accord with sound management practice for contractual and financial management, and for the retention of appropriate records, to ensure legislative compliance and that project outcomes meet with end-user needs.
- To improve Defence training outcomes, training delivered to end-users as part of new management information system implementations should be appropriately timed and reflect the functionality of the delivered system. Where this does not occur, follow-up or revised training programs need to be implemented.
- Meaningful and measurable key performance indicators should be implemented to assist Defence in the monitoring of the effectiveness of management information system remediation initiatives.

## Agency response

35. Defence accepts the thrust of the ANAO report and agrees with the recommendations and ANAO's lessons to be learnt from the Project.

# Recommendations

---

*Set out below are the ANAO's recommendations, with report paragraph references and an indication of the Defence response. The recommendations are discussed at the relevant parts of this report.*

**Recommendation No.1**  
**Para 2.30** ANAO recommends that the Defence Personnel Executive complete a stock take of the approvals of all existing material contracts to ensure administrative and legislative compliance.

*Defence response: Agreed.*

**Recommendation No.2**  
**Para 3.22** ANAO recommends that the Defence Personnel Executive review its contract deliverable acceptance and payment processes to accord with Defence's Chief Executive Instruction for Payment of Accounts.

*Defence response: Agreed.*

**Recommendation No.3**  
**Para 5.51** ANAO recommends that, when contemplating long-term contractual arrangements, Defence should explicitly consider the value for money implications for future project upgrades.

*Defence response: Agreed.*

## **Audit Findings and Conclusions**





# 1. Introduction

---

*This chapter examines the functions of PMKeyS, its relationship with other business information system projects, and outlines the overall audit approach.*

## Background

**1.1** Defence capability is strategically supported by a large number of Management Information Systems. Defence management relies on the outputs of these systems to make strategic decisions concerning current and projected personnel and equipment availabilities, and assessments of preparedness and operational readiness.

**1.2** Defence has three Enterprise Resource Planning systems in the management information domains of Finance (the Resource and Output Management and Accounting Network or ROMAN system), Personnel (the Personnel Management Key Solution or PMKeyS system) and Logistics and Inventory Management (the Standard Defence Supply System or SDSS). The division of system responsibility within the management information domains is illustrated in Figure 1.1.

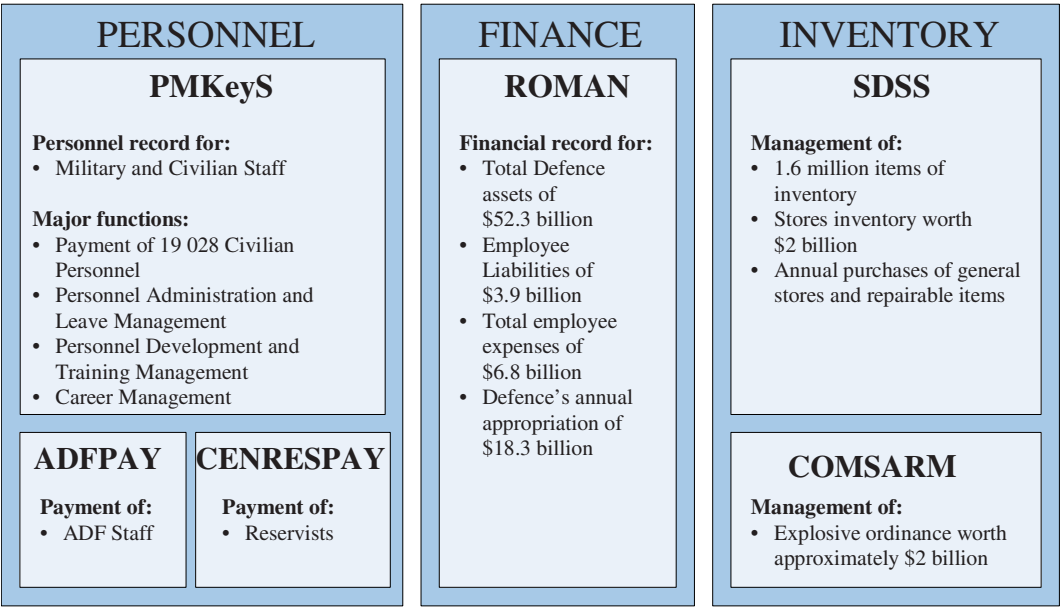
**1.3** These three systems are supported by three smaller, but no-less important systems.<sup>11</sup> The ADFPAY and Central Reserve Pay (CENRESPAY) systems are responsible for the payment of salaries and allowances to Defence's permanent and reserve staff. COMSARM is a tri-service system for the management of explosive ordinance.

---

<sup>11</sup> Defence has a very large number of management information systems. For simplicity, the ANAO has only identified the core systems in the Finance, Personnel and Inventory domains.

Figure 1.1

Defence’s major management information systems



Source: ANAO analysis of information from the Defence Annual Report 2003–04

1.4 Every Defence employee has a unique PMKeyS number and record. PMKeyS currently supports, inter alia, the management of Personnel Leave Administration; Career Management; and Personnel Development and Training for over 93 000 permanent ADF, reserve and civilian staff. It is also the payment system for over 19 000 civilian staff. The PMKeyS record is designated by Defence to be the authoritative record for Defence employee leave balances. The total employee liability recorded in Defence’s 2003–04 Annual Report was \$3.91 billion, 44 per cent of which is Defence’s leave balance liability.

1.5 The movement of the ADF and the Department away from purpose-built long running human resource systems, to a common platform delivering human resource business process reforms, has been a significant change program within Defence. It was undertaken during the implementation of the Defence Reform Program following Government decisions associated with the 1997 Defence Efficiency Review, compounded by increased operational tempo.

1.6 Defence’s three main management information systems have been the subject of significant investment over the decade, particularly with the rollout of the new PMKeyS and ROMAN systems commencing in the late 1990s. Although the SDSS was introduced in the early 1990s, it was the subject of a major upgrade project in 2001–03, followed by the SDSS Get Well Program

starting in 2004.<sup>12</sup> All three systems have undergone smaller upgrades and remediation projects since their initial introduction to Defence.

## Personnel management systems

**1.7** In 1994, the 'Serving Australia' review noted that the lack of common Defence corporate data was a key deficiency of the organisation, and that there was a need for 'interoperable personnel information systems for aggregate management of the Australian Defence Force (ADF), with the characteristics of consistent terminology, transparency, analytic and modelling capability, and accessibility'. Recommendation No 38 of the Defence Efficiency Review proposed the formation of a single Personnel Executive with the specific intent of achieving greater commonality, integration and efficiency with the three services and the Department. The Defence Personnel Executive (DPE) was subsequently established.

**1.8** At the time of the Defence Efficiency Review, Army was in the process of proposing a \$25 million Army Central Manpower Information System (ACMIS) Project to upgrade its personnel systems, and had already allocated \$8 million toward this objective. The Defence Efficiency Review's preference for a single Human Resource Information System led to the initiation of the Proud Review, a Defence wide study of the status of current Human Resource (HR) systems and their ability to meet future Defence HR information requirements. The review concluded that:

- the Army and Air Force personnel systems required urgent attention;
- the Navy personnel system (Navy Personnel and Establishment Management System or NPEMS) had no link to payroll, limited flexibility, limited modelling and auditing capability, and limited scope for meeting future needs without redevelopment; and
- the civilian personnel system (Civilian Personnel Resource Information System Management or CIVILPRISM) gave limited access for non-expert users, and would require major upgrades over the next two years.

**1.9** The Proud Review found that the effectiveness and efficiency of the DPE would be severely restricted without a fully integrated information system for personnel management and administration. It recommended that Defence integrate its personnel function under a single corporate system, and that it purchase a commercial-off-the-shelf product from the Office of Government Information Technology Shared System Suite. This

---

<sup>12</sup> The ANAO's audit of the SDSS Upgrade Project (Audit Report No.5, 2004–05, *Management of the Standard Defence Supply System Upgrade*) found that it had not delivered value for money in that it had failed to deliver many of the outcomes for which it was funded, and was delivered significantly over schedule and over budget.

recommendation was subsequently endorsed by the then VCDF and Army's ACMIS Project was cancelled.

## PMKeyS Project

**1.10** The new integrated system was to allow Defence to manage the personnel function in a more cost effective manner, consolidating the postings, recruitment, appointments and other personnel related functions into a single complete system.

**1.11** The Project was initially conceived in three stages:

- **Stage 1** - identify a commercial package that offers best practice for personnel management in the Australian Defence environment;
- **Stage 2** - progressively implement the package throughout Defence, starting in July 1998 and ending in December 1999; and
- **Stage 3** - provide ongoing support to the system.

**1.12** The Project's objective to consolidate and retire Defence's existing human resources and payroll systems into a single authoritative system was expected to deliver the following benefits to Defence:

- achievement of the personnel savings identified in the Defence Efficiency Review (over \$100 million p.a.), through staff reductions and process improvements brought about by the integration of personnel management functions and adoption of best practice throughout the Defence Organisation;
- accurate and timely data for executive information and decision support, including real-time capability planning and realistic scenario analysis;
- improved synergy in personnel functions, thereby reducing the overhead involved in these functions and improving service levels;
- a significant reduction in the support requirements for personnel systems, offering greater efficiency and further reductions in resource requirements; and
- inclusion of personnel considerations in the development of Defence capabilities.

**1.13** The Project had a notional budget of \$25.0 million but was allocated \$25.3 million in four tranches between September 1997 and December 1998. The proposed Project term specified delivery of the required products by June 2000.

**1.14** The Project commenced with the establishment of a Project Office in September 1997 and the appointment of a Review Partner in October 1997. The Project undertook a selection process that sought to identify the business and functional requirements of likely end-users and assess the subsequent degree of fit with the vendors' proposed software solutions.

**1.15** The main service providers to the Project were:

- Defence Information Systems Division for the development of Defence specific code, including interfaces with other Defence systems;
- PeopleSoft for the installation and limited customisation of their Version 7 software, negotiated enhancements to achieve new business requirements, and technical support services;
- SMS Consulting Group for Review Partner and Project Management services; and
- DA Consulting Group for the development and maintenance of training materials, as well as the delivery and evaluation of initial end-user training.

## **Audit reports**

**1.16** From Project closure to December 2003, Defence Management Audit Branch produced three major reports on the Project and the continued management of the PMKeyS system activities, including a Lessons Learnt Report. Of the 17 recommendations made across these reports, the ANAO found in April 2005 that only 11 recommendations were reported as complete across all areas of Defence that were designated as responsible; and, of these, only three were completed on schedule.

**1.17** The PMKeyS Lessons Learnt report in December 2002 identified that one of the key activities that Defence needed to be complete prior to any attempt to upgrade the PMKeyS systems was a re-engineering and consolidation of its personnel management business processes.

**1.18** As part of the 2002–03 Defence Financial Statement Audit, Defence undertook a systematic sampling review of military employee leave entitlements, which are recorded on PMKeyS, and found errors in respect of military leave balances. The errors, which Defence reported to be outside acceptable parameters, represented an uncertainty in the book value of military annual leave and long service leave balances of \$732 million. In its 2002–03 Annual Report, Defence stated that this uncertainty would be reduced in 2003–04 and 2004–05 as a result of a continuing comprehensive data quality review program. The 2003–04 Defence Financial Statement Audit outcomes were that the uncertainty had increased to \$1.23 billion and that the data

quality review program had highlighted additional system and process deficiencies that had not been fully addressed.<sup>13</sup>

**1.19** In February 2005, Defence advised the ANAO that the Financial Statements Project Board had approved 14 remediation plans to address ANAO Financial Statement Audit findings.

**1.20** In its 2005-06 Portfolio Budget Statements, Defence outlined remediation plans for Military Leave Records (Remediation Plan S5) and Civilian Leave Records (Remediation Plan S6). These plans were implemented to overcome shortcomings in leave provision supporting documentation and inadequate controls<sup>14</sup> and processes. Defence's objective is to provide an accurate representation of the military and civilian leave liability by ensuring the integrity of data captured and recorded in PMKeyS.

## **Project JP 2080**

**1.21** The Defence Capability Plan 2004-2014 states that maintaining the current plethora of legacy and specialist systems with the domains of finance, personnel and logistic is inefficient, as is the lack of interconnection between the core systems and a range of other disparate management systems used within Defence.

**1.22** Project JP 2080 (see Table 1.1) was established in 2000-01 to improve Defence management systems. Responsibility for the management and oversight of Project JP 2080 funding and objectives rests with the recently expanded Chief Information Officer Group. The strategic end point envisaged from Project JP 2080 is to provide an integrated business system management environment, against which Defence can accurately manage its business.

---

<sup>13</sup> The ANAO attributed the increased uncertainty to the lack of integrity associated with the capture and recording of data within Defence's personnel systems and the appropriate maintenance of primary evidentiary documentation.

<sup>14</sup> Subsequent to the ANAO's Financial Statement Audit 2002-03 Interim Controls Report, Defence undertook a number of steps to rectify PMKeyS operator classes, including changes that were directly written into the PMKeyS production environment. In December 2003 however, Defence incorrectly migrated 'old' operator classes from the test environment to the production environment and over-wrote the work performed.

**Table 1.1****Defence management systems improvement: Project JP 2080**

Phase	Scope	Approval Year/s	In-Service Delivery	Estimated Expenditure (\$m)
1	Urgent improvements to selected Defence management systems	2000–01	2003–04	40
2A	Improve the availability of management information	2003–04	2004–06	6
2B	Improve and rationalise Defence's management systems	2003–04	2005–07	50 to 75
3	Maintain and upgrade Defence's management systems	2007–08	2009–11	30 to 50
4	Maintain and upgrade Defence's management systems	2013–16	2016–18	30 to 50

Source: Defence Capability Plan 2004–2014

**1.23** Phase 1 of Project JP 2080 was approved for \$40 million in 2000–01 to support improvements to Defence's financial, personnel and logistics corporate systems, as well as to undertake specific projects to improve Defence's business process and financial reporting. Activities under Phase 1 were reported by Defence to have been largely completed by October 2003 at a cost of \$39.9 million.

**1.24** Phase 2A of Project JP 2080 was reported by Defence to have been approved at \$6 million by the Minister for Defence in January 2004. Phase 2A was to enable the development of a more capable Management Information Domain by improving existing software and hardware of the domain. Defence has reported that \$1.9 million was expended on Phase 2A to December 2004.

**1.25** Phase 2B provides the funding source for the planned upgrades of PMKeyS and ROMAN. The Defence Capability Committee endorsed the PMKeyS Upgrade Project First Pass Business Case in December 2004.

**1.26** Defence's Investment Analysis Branch presented an agendum paper for Defence Capability Committee consideration alongside the Initial Business Case. The paper identified that an upgrade of PMKeyS was required to resolve key deficiencies in the current system, which are listed in Table 1.2.

**Table 1.2****Identified PMKeyS deficiencies: December 2004**

Deficiency	Issues
Identity Management	The current system cannot readily match military personnel records, making the gathering of management information complex.
Data Accuracy	Errors in payments to military personnel and the calculation of leave balances are relatively common in the current system, and increase during troop deployments.
Efficiency	The current system requires double entries in the military pay and HR systems and the current range of interfaces between PMKeyS and the rest of Defence's Management Information Domain is inefficient.
Flexibility	The ADFPAY system has a very limited capacity to cope with major changes to ADF conditions of employment.
Archiving	The ADFPAY and Reserve Pay systems have only limited archiving capability.
Deployability	Due to limitations in its technical architecture, PMKeyS cannot currently be operated in a deployed environment without the operation of a continuous high bandwidth link.
Security	PMKeyS does not run on the Secret system.
Operating Cost	Operation of the current Version 7 and legacy-based systems will become more expensive and more difficult over time. Support costs, which are already around \$30 million per annum, are expected to increase significantly.

Source: Defence Investment Analysis Branch research paper, December 2004

**1.27** In May 2005, Defence advised the ANAO that the main reasons for completing the upgrade are to:

- incorporate military payroll with military HR in a single HR and payroll management system;
- deliver effective through-life support for the Defence personnel and payroll system;
- deliver expanded self-service and workflow capabilities; and
- improve support for deployability.

**1.28** The Upgrade Project put forward three acquisition options based on the proposal to upgrade PMKeyS to PeopleSoft Version 8. The Upgrade Project has advised that its proposal to upgrade PMKeyS under JP 2080 Phase 2B received Government First Pass consideration and approval in July 2005.



## Audit approach

**1.29** The audit reviewed the planning, approvals, delivery, project management and remediation activities of the PMKeyS Project. The audit addressed the scope of the delivered system, with specific regard to its ability to meet end-user capability requirements.

**1.30** The audit also reviewed the overall success of the PMKeyS Project in its ability to deliver a product that meets with user requirements and expectations within approved schedule, scope and budget. As such, this was not an audit of contractor performance, but of the formation and contract management of the acquisition project by Defence.

**1.31** The ANAO's ability to audit Project expenditure was limited. As a result, the ANAO is unable to provide a high level of assurance over Defence's own reporting of aggregate expenditure of \$63.4 million. Defence was however able to validate and attribute vendor expenditure across a limited sample of ROMAN transactions, selected at random by the ANAO. The Project's ROMAN financial record has not been used to validate Project expenditure reporting throughout the Project.

**1.32** The audit did not address the effectiveness of Defence's personnel management business processes, nor were tests completed to assess the adequacy of the security and process controls within the PMKeyS system. These issues, to the extent to which they relate to financial reporting, are addressed as part of the annual ANAO Financial Statement audit.

**1.33** Fieldwork was conducted between September 2004 and April 2005. Five Issues Papers were provided to Defence in April 2005, followed by a Discussion Paper in May 2005. The draft Section 19 Report was issued to relevant parties in July 2005.

**1.34** The audit was conducted in accordance with ANAO Auditing Standards at a cost to the ANAO of \$275 000.

## Report structure

**1.35** The remainder of this report is structured into four chapters. Chapter 2 outlines the Project planning and approvals processes. Chapter 3 discusses the Project's contractual framework. Chapter 4 examines the Project's cost performance and end-user training delivery. Chapter 5 looks at the Project's delivery schedule, system remediation and future plans.

## 2. Project Planning and Approval

---

*This chapter discusses the background to the PMKeyS Project and the mechanisms for project approval and funding.*

### Defence procurement guidance and policy

**2.1** In July 1997, the then VCDF wrote to the then Deputy Secretary Corporate seeking agreement to freeze the portfolio funding associated with the Army Central Manpower Information System (ACMIS) Project, re-directing those funds to a re-scoped project that would not only satisfy the initial Army requirement, but create the platform for a single integrated personnel information system for the DPE. VCDF further advised that, subject to withdrawal of the ACMIS funds, the Head of Defence Personnel Executive (HDPE) would pursue the development of a Minor Capital Submission, for Portfolio consideration, which would revise the ACMIS Project to achieve the identifiable broader portfolio needs.

**2.2** This proposal was agreed and it was noted that funding approval for the new PMKeyS Project was to be sought from the Defence Management Committee (now known as the Defence Committee). Defence advised the ANAO in May 2005 that no Major Capital Equipment or Minor Capital Submission was prepared for Defence Management Committee consideration.

**2.3** The primary sources of Defence procurement guidance and policy at the time of project initiation in September 1997<sup>15</sup> were the Capital Equipment Procurement Manual (CEPMAN) 1<sup>16</sup> and the Defence Procurement Policy Manual. CEPMAN 1 has since been superseded by a number of systems including the current Defence Materiel Organisation's Quality and Environmental Management System.<sup>17</sup>

---

<sup>15</sup> The Project Office was established with the formation of a Working Group in September 1997. The Project then entered into a contract with SMS Consulting Group Pty Ltd for Review Partner services on 29 October 1997. Project expenses first noted on the November 1997 monthly report for the Personnel Systems Information Management (PSIM) Branch. The Project was formally recognised within Defence as a project with the publication of DEFGRAM No.253/97 on 22 December 1997.

<sup>16</sup> Introduced in April 1992, CEPMAN 1 was jointly authorised by the Secretary and Chief of the Defence Force for use within the Department of Defence and the ADF for the procurement of Capital Equipment. CEPMAN 1 was departmental policy and was the primary reference for the procurement of all capital equipment. It provided procedures for the procurement of major (and significant minor) capital equipment and was also to be used as a guide by Defence Program Managers for the procurement of minor capital equipment.

<sup>17</sup> ANAO Report No.45, 2004–05, *Management of Selected Defence System Program Offices*, paras 2.12 to 2.19

**2.4** The Project met Defence's own criteria for classification as a Major Capital Equipment project.<sup>18</sup> The ANAO notes that the Project was not treated as a Major Capital Equipment project within the applicable guidance available at the time of initiation.

**2.5** As an early decision by Defence was taken to implement the Project within the DPE, none of the project management methodologies and reporting tools developed by the then Defence Acquisition Organisation (DAO) and mandated for application within DAO projects, were mandated for the Project.<sup>19</sup> The ANAO notes that a Defence report later found that nearly five months after contract signature, and twelve months after project initiation, no formal project management methodology was in place.

### *Project planning*

**2.6** The ANAO did not observe a Project Management and Acquisition Plan (PMAP) or an Equipment Acquisition Strategy for the Project, which are core Defence procurement planning documents.

**2.7** The Project Office did develop a Project Management Plan during Phase 1 of the Project. However, the Project Office only released the Project Management Plan in March 1999, nearly nine months after contract signature, and eighteen months after Project initiation. The Project Management Plan did not contain, nor provide references to, many of the required PMAP documents, as listed in Table 2.1.

---

<sup>18</sup> CEPMAN 1 defined Capital Equipment to include, inter alia, major assets such as ships, aircraft, armoured vehicles, weapons, communications systems, electronic systems or other armaments. Capital equipment projects included projects where: (a) all one time costs incurred in bringing capital equipment into operational service and providing the (usually) first three years spares is \$20 million or more; or (b) the unit cost of an individual equipment in a multi item acquisition is \$1 million or more; and/or (c) there are significant Defence policy or Joint Service implications. The PMKeyS Project was designed to: implement a Defence wide strategic resource management system; support the establishment of the DPE; and had an estimated cost of \$25 million.

<sup>19</sup> These included the DAO's then Standard Project Management Methodology.

**Table 2.1****Completed elements of the PMAP for the PMKeyS Project**

Element	Identified in Original PMP	Completed	Estimated Date of Requirement	Date Actually Completed
Equipment Acquisition Strategy	X	X	Nov 1997	-
Financial Management Plan	✓	X	Jul 1998	-
Tender Evaluation Plan	X	X	Nov 1997	-
Quality Assurance Plan	✓	✓	Jul 1998	Aug 2000
Test and Evaluation Master Plan	X	✓	Dec 1998	Jun 1999
Configuration Management Plan	✓	✓	Jul 1998	Jan 1999
Data Acquisition and Management Plan	✓	✓	Jul 1998	Nov 1998
Risk Management Plan	✓	✓	Jul 1998	Feb 2000
Transition Plan	X	✓	Jun 1999	Dec 1999
Training Plan	X	✓	Jul 1998	Feb 2000

Source: ANAO analysis of Defence records

**2.8** The ANAO found that Defence completed only seven out of the ten applicable PMAP elements from CEPMAN 1. Of these, none were completed or were under development at the time of contract signature. As a substitute for a Test and Evaluation Master Plan, the Project Office produced a Testing Strategy Specification in June 1999 for Phase 1. This strategy included Functional, Integration and Performance Test Plans but did not specifically address Interface or User Process testing. These plans should have addressed the requirements for the conduct of Test and Evaluation to be performed by Defence during the project to validate new or upgraded equipment.<sup>20</sup>

**2.9** Even though the Project Management Plan identified the requirement for a Financial Management Plan, none was developed during the Project. The absence of this documentation contributed to the Project's inadequate financial management, as well as to further procedural and procurement policy non-compliance.

<sup>20</sup> In its April 2001 review of Defence's IT projects including the PMKeyS Project, Defence Management Audit Branch reported that testing is often the first casualty of project slippage, with the result that the implemented software is potentially unable to perform or is inadequate for the role for which it was designed.

### *Project cost estimation*

**2.10** Defence did not develop a Project Cost Breakdown Structure prior to contracting the Software Vendor, nor was a Defence Force Capability Proposal or Major Capability Submission developed as part of the approvals process. Further, the ANAO did not observe a detailed Project Work Breakdown Structure or a Contract Work Breakdown Structure for the Project, from which a detailed Project Cost Breakdown Structure could have been developed.

**2.11** The Project budget forecast of \$25.0 million<sup>21</sup> that was put together between August and September 1998, nearly two months after the prime contract signature, was not sufficiently developed or detailed to meet normal Defence requirements for a Project Cost Breakdown Structure.

**2.12** The ANAO found that the Project's September 1998 budget estimate of \$25.0 million was no different to that initially presented to the then Defence Information Management Board in March 1998, which itself was based on little more than Defence's observation that the Australian Taxation Office had taken three years and \$7.5 million to implement a system covering 16 500 personnel.

## **Project approval**

**2.13** Following Government decisions in 1989, Defence policy requires that project approval must be obtained for capital equipment projects before approval can be given to a proposal to spend public monies and commit the Department.<sup>22</sup> By December 1998, total allocated departmental funding to the Project was \$25.3 million, which was above the then \$20 million threshold requiring Cabinet approval that is identified in Table 2.2.<sup>23</sup>

---

<sup>21</sup> The Project budget estimate did not include a contingency provision.

<sup>22</sup> There are six specific steps required in order to progress a Defence capital equipment project, namely:

- (a) Endorsement of a Defence Force Capability Options Paper for further development as a Major Capability Submission;
- (b) Program Approval, (provision for the requirement has been included in the documents, covering both expenditure and liability, which have been approved for funding purposes in the context of the Budget Estimates);
- (c) Project Approval;
- (d) Approval to a Proposal to Spend Public Moneys;
- (e) Approval to the Method of Procurement; and
- (f) Approval to Commit the Commonwealth

<sup>23</sup> In ANAO Report No.5, 2004–05, *Management of the Standard Defence Supply System Upgrade*, Recommendation No.1 was that: *The ANAO recommends that Defence adopt approval processes for business information management systems that align with processes used for other major capital acquisitions.* Defence agreed to apply this recommendation for future projects.

**Table 2.2**

**Project approving authorities: Pre 2004 thresholds**

Estimated Project Cost	Business Rules		PMKeyS Project Compliance
	Estimated Total Project Cost	Approval Authority	
\$25 million Project budget submitted to the Defence Information Management Board in July 1998.	Greater than \$20 million.	Cabinet.	The Project did not obtain Cabinet approval.
	Less than or equal to \$20 million.	Minister for Defence with the concurrence of the Minister for Finance.	The Project did not obtain concurrent Ministerial approval.
	\$8 million or less.	Minister for Defence.	The Project did not obtain Ministerial approval to commence.
	\$5 million or less.	Secretary, Chief of the Defence Force and Program Managers.	The Defence Information Management Board <b>noted</b> that the Project budget estimate was \$25 million in July 1998.

Source: CEPMAN 1, Part 3, Annex A to Chapter 7

**2.14** Following the endorsement of the Proud Review’s recommendation in May 1997 for Defence to introduce an integrated personnel information system, the DPE sought additional funding to support its implementation. In September 1997, and as part of the 1997–98 Additional Estimates process, the DPE requested that the Defence Management Committee consider a proposal to fund the implementation of the new system at a cost of \$4.0 million in 1997–98 and \$4.5 million in 1998–99. The Defence Management Committee agreed to provide funding of \$4.0 million for 1997–98 Project activities, with the provision of further funding subject to internal validation of the scope, cost, timing and achievability of the Project.

**2.15** In December 1997, the Defence Management Committee considered a paper presented by Defence’s Resources Finance and Planning Division on the further development of the 1998–02 Five Year Defence Plan. The Defence Management Committee agreed that Portfolio funding be provided for a number of recommended extraordinary bids including, inter alia, \$4.5 million for the Project. This brought the total allocated funding for the Project to \$8.5 million, above the \$8.0 million threshold requiring concurrent approval by

the Minister for Defence and the Minister for Finance and Administration, as identified in Table 2.2.<sup>24</sup>

**2.16** In March 1998, the Project Office reported to the then Defence Information Management Board on its progress with vendor selection. The Defence Information Management Board were further advised that the estimated Project cost was around \$25 million, excluding infrastructure costs, with funding currently approved to \$8.5 million. The Defence Information Management Board noted that it would be necessary to seek Defence Management Committee approval for further project funds once the scale of the total project costs had been identified, and that refined cost estimates would not be available until late April 1998.

**2.17** In July 1998, DPE advised the then Minister for Defence Industry Science and Personnel (with a copy provided to the then Minister for Defence for his information) that a \$16.5 million contract had been signed with PeopleSoft, the selected software vendor. The Minister was further advised that Project implementation would take place between July 1998 and December 1999 and realise personnel savings in excess of \$100 million per annum through staff reductions and process improvements.

**2.18** The then Defence Information Management Board met in late July 1998 where a draft Implementation Plan and the forecast expenditure breakdown were presented by the Project for consideration. The Defence Information Management Board was also informed of the value of Defence's contract with PeopleSoft, which exceeded the approved Project funding of \$8.5 million by \$8.0 million.<sup>25</sup> The Project had not received formal approval as a project at this time.

---

<sup>24</sup> In November 1997 the DPE advised the then Minister for Defence Industry Science and Personnel (with a copy provided to the then Minister for Defence for his information) that three software vendors had been initially identified from the Office of Government Information Technology supplier list as offering solutions that were broadly suitable. At this time, the first round of vendor evaluation had been completed with one of the vendors being eliminated from further consideration. No mention was made of the estimated Project cost or budget currently sought at this time. The then Minister for Defence Industry Science and Personnel was found to have only noted Project progress.

<sup>25</sup> In November 1998, the Project budget was supplemented by \$6.9 million as part of the 1998-99 Portfolio Additional Estimate Statements processes. In December 1998, Personnel Systems Information Management Branch was notified that the current Defence Executive guidance was for \$9.9 million to be allocated to the Project across the 1999-03 Five Year Defence Plan.



**2.19** As at July 1998, there was inadequate allocated funding for the Project to enter into a contract worth \$16.5 million. Defence was unable to provide the ANAO with evidence that relevant *Financial Management and Accountability (FMA) Act (1997) Regulations*<sup>26</sup> had been complied with.

## Variations to project approval

**2.20** Defence policy states that variations to the approved cost or scope of a capital project require a revised Project Approval to be sought from the appropriate authority. In determining the appropriate authority, a distinction is to be made between changes in 'real' resource terms as opposed to changes in 'price' terms.<sup>27</sup> The ANAO notes that the Project did not directly seek variations to funding as a result of changes in 'price' terms.

**2.21** Significant variations due to real changes, particularly changes in scope, usually require referral to the original approval authority. Where the variation(s) cause the project cost, in real terms, to exceed the original authority's approval threshold, the approval of the variation is to be referred to a higher authority. Table 2.3 identifies the timing, size and approver for each of the variations to the Project's original approved funding.

---

<sup>26</sup> FMA Act (1997) Reg 9(1): An approver must not approve a proposal to spend public money (including a notional payment within the meaning of section 6 of the Act) unless the approver is satisfied, after making such inquiries as are reasonable, that the proposed expenditure:

- (a) is in accordance with the policies of the Commonwealth;
- (b) will make efficient and effective use of the public money; and
- (c) if the proposal is one to spend special public money, is consistent with the terms which the money is held by the Commonwealth.

Reg 10: If any of the expenditure under a spending proposal is expenditure for which an appropriation of money is not authorised by the provisions of an existing law or a proposed law that is before Parliament, an approver must not approve the proposal unless the Finance Minister has given written authorisation for the approval.

Reg 12: If approval of a proposal to spend public money is not given in writing, the approver must record the terms of the approval in a document as soon as practicable after giving the approval.

Reg 13: A person must not enter a contract, agreement or arrangement under which public money is, or may become, payable (including a notional payment within the meaning of section 6 of the Act) unless a proposal to spend public money for the proposed contract, agreement or arrangement has been approved under Regulation 9 and, if necessary, in accordance with Regulation 10.

<sup>27</sup> 'Price' variations are limited to those variations in cost that can be traced from nominated economic factors (indices for labour, material, services, etc) and / or nominated exchange rates as explicitly referenced in the Project Approval submission. 'Real' variations are subsequently defined by Defence policy as increases / decreases to the level of expenditure arising from a change in the nature or scope of the original proposal.



**Table 2.3****Project approval variations**

Date	Event	Approval Amount (\$m)	Cumulative Variation (\$m)	Actual Approver	Approval Authority	Achieved
Jul 98	Initial Project Funding	25.3	0.0	No Approver	Cabinet	<b>X</b>
Sep 99	PMKeyS Business Case	20.3	20.3	Vice Chief of the Defence Force (VCDF)	Cabinet	<b>X</b>
Jun 02	Finalisation of 2001–02 DPE Group Allocations <sup>(a)</sup>	9.0	29.3	Secretary and Chief of the Defence Force	Concurrence of the Minister for Defence and Minister for Finance	<b>X</b>
Jun 03	Finalisation of 2002–03 DPE Group Allocations <sup>(b)</sup>	4.2	33.5	Chief Finance Officer	Concurrence of the Minister for Defence and Minister for Finance	<b>X</b>
Note: (a) Retrospective approval and allocation of funding was made after 2001–02 expenditure was incurred by the Project. (b) Retrospective approval and allocation of funding was made after 2002–03 expenditure was incurred by the Project.						

Source: ANAO analysis of Defence records

**2.22** As was the custom in Defence, the Project was not initiated or managed as a Major Capital Equipment project within the applicable guidance available at the time of initiation.<sup>28</sup> The Project approval process did not follow either the documented approval methodology, or the procedural rigour required in preparing a Project Management Plan, as laid out in CEPMAN 1 for the inception, approval, management and delivery of a Strategic Project. The Project was not classified by Defence as a strategic project, and was not managed as a strategic procurement activity.

<sup>28</sup> The ANAO's audit of the SDSS Upgrade Project (Audit Report No.5, 2004–05, *Management of the Standard Defence Supply System Upgrade*) also found that business management information systems were not treated as Major Capital Equipment procurement activities.

## *The PMKeyS Business Case*

**2.23** The PMKeyS Business Case submission to the then VCDF and Deputy Secretary Resources and Materiel in September 1999 was the first Real Cost Increase to the Project's notional budget of \$25.0 million. The submission identified that the Project would require funding of \$19.06 million in 1999–2000 and \$9.11 million in 2000–01 to complete Phases 1, 2 and 3 of the Project.<sup>29</sup> The Project Office sought and obtained an additional \$3.27 million in 1999–2000 to provide business support services.<sup>30</sup> The Project Office estimated expenditure to date to be \$13.65 million and, excluding the estimated business support costs, forecast total Project expenditure at \$41.82 million.

**2.24** The PMKeyS Business Case further identified that, including the \$3.27 million in business support costs and an estimated \$7 million for additional computing mainframe capacity; the total investment needed to bring PMKeyS into full operation would be \$52 million.

**2.25** The case for a Real Cost Increase for the Project was largely predicated on the current investment in a concurrent DPE project, the Defence Service Centre, and the benefits that both projects would bring to Defence once implemented and integrated. The Defence Service Centre Project, separately funded at that time to \$31 million, in concert with the implementation of PMKeyS across Defence, aimed to establish a centralised service centre operation responsible for the delivery of the majority of Defence's personnel services to both civilian and military staff.

**2.26** The PMKeyS Business Case observed that a separate business case for Stage 1 of the Defence Service Centre Project had initially identified potential mature savings of \$42.9 million per annum, primarily in the areas of Civilian Personnel Administration and ADF Relocations. Defence noted that the potential savings had been independently revalidated. The Defence Service Centre Business Case further noted that subsequent stages of the Defence Service Centre Project which were intended to address the delivery of Military Personnel Administration could well lead to additional savings in excess of \$50 million per annum.

**2.27** The ANAO did not find documentary evidence to suggest that Defence either measured or actually achieved these savings targets.

---

<sup>29</sup> The ANAO notes that the 1999-03 Five Year Defence Plan guidance had provisionally approved Project funding of \$5.6 million and \$2.3 million in 1999–2000 and 2000–01 respectively.

<sup>30</sup> This included \$2.43 million to provide Phase 1 Business Support until June 2000, and \$0.84 million for PeopleSoft's annual support fee.

**2.28** The ANAO did not observe documentary evidence of the Real Cost Increase approval. The ANAO notes that subsequent funding guidance documentation suggests that the requested Project funding, an additional \$20.3 million over the then funding baseline, was approved in full.

**2.29** Subsequent Project funding was retrospectively provided through the Portfolio Additional Estimate Statements and DPE Group Budget reconciliation processes. In 2001–02, Project expenditure of \$12.961 million was supported by a late capital budget adjustment within the Portfolio of \$9.0 million.<sup>31</sup> In 2002–03, the year that the Project closed, Defence’s Chief Finance Officer retrospectively funded Project expenditure of \$4.2 million. In both of these years, the Project was running expenditure in excess of the allocated funding.

## Recommendation No.1

**2.30** ANAO recommends that the Defence Personnel Executive complete a stock take of the approvals of all existing material contracts to ensure administrative and legislative compliance.

### *Defence Response*

**2.31** Agreed.

---

<sup>31</sup> The DPE End of Financial Year Report for 2001–02 confirmed that PMKeyS capital expenditure (reported therein as \$9.234 million) was supported by a late capital budget adjustment of \$9.0 million.

## 3. Contractual Arrangements

---

*This chapter discusses the contract management aspects of the PMKeyS Project.*

### Background

**3.1** In December 1997, the DPE announced that it had formally established the PMKeyS Project as a project. The PMKeyS Project framework was to comprise: a Steering Group (or Project Board) of senior management representatives; the Working Group; a core personnel management Business Managers' Group; and a number of Focus Groups.

**3.2** The Working Group was to recommend, by no later than June 1998, a preferred Defence personnel management solution from the Office of Government Information Technology panel of Shared System Suite Personnel Management Information Systems. To assist in the process to identify the preferred Shared System Suite solution, Defence sought to contract a review partner.

**3.3** Three potential consulting firms were invited to complete a questionnaire relating to their respective experience in implementing human resource management systems. Of these, two were requested by Defence to make presentations outlining, inter alia, their likely principal consultant, specific costs, and their specific experience with each of the Shared System Suite vendors under consideration at that time.

**3.4** In late October 1997, SMS Consulting Group Pty Ltd (hereafter known as the 'Review Partner') was formally contracted by Defence to provide review partner services. Specifically, the Review Partner was contracted to assist with the evaluation, selection and implementation of a personnel management solution. The contract period was from 24 October 1997 until at least 30 June 1998. At 30 June 1998, the Review Partner had invoiced Defence \$557 201 for services provided out of approximately \$1.4 million in total recorded Project expenditure.

### Software Vendor selection

**3.5** At the time of Project initiation, the Office of Government Information Technology Shared System Suite contained four commercial human resource management systems. One of these vendors immediately disqualified themselves from consideration, as they considered that their product would not be suitable for Defence requirements. For the three remaining vendors, Defence undertook a two-stage evaluation:

- Between October and December 1997, Defence conducted the first stage of this evaluation, which included product demonstrations, reference

site visits and the provision of indicative costs over a five-year period. At the completion of this stage, Defence set aside the software solution and vendor that it assessed as being least suitable and pursued a more detailed fit analysis of the two remaining software solutions.

- During the second stage of vendor evaluation, conducted between December 1997 and June 1998, Defence undertook further product demonstrations and reference site visits using Focus Groups.

**3.6** The proposed five-year or life cycle cost of the successful tenderer (\$16.35 million) met with the notional budgetary limitations (\$25.0 million) of the Project, whereas that of the unsuccessful tenderer did not.<sup>32</sup>

**3.7** The Selection Report noted that the unsuccessful tenderer had provided a fixed price quote, but that it was conditional on their proposed solution being accepted in full. In contrast, the successful tenderer gave a preliminary indication of the final price, indicating that a fixed price quote could not be offered until a number of issues had been confirmed.

**3.8** Defence conducted a cost-benefit analysis of the preferred vendor's solution against the cost of its existing personnel systems over the period 1997–02. Defence estimated the five-year present-value cost<sup>33</sup> of its existing personnel systems to be \$89.76 million, and compared this to the five-year present-value cost of the preferred vendors solution of \$15.1 million. Based on this analysis, Defence forecast that the present value savings achievable over the next five years, through the implementation of the preferred vendors solution, would be \$74.66 million. The cost-benefit put forward by Defence in support of the Project is summarised in Table 3.1.

**Table 3.1**

**Defence analysis of costs and benefits in Software Vendor selection**

Cost and Benefits	1997–98 (\$m)	1998–99 (\$m)	1999–00 (\$m)	2000–01 (\$m)	2001–02 (\$m)	Total (\$m)
Present Value Cost of Current System Expenditure	25.10	19.70	16.42	14.77	13.77	89.76
Present Value Cost of the Successful Tenderer's Solution	(11.06)	(2.16)	(0.69)	(0.65)	(0.54)	(15.10)
Net Estimated Benefit	14.04	17.54	15.73	14.12	13.23	74.66

Source: ANAO analysis of the Software Vendor selection report

<sup>32</sup> The unsuccessful tenderer proposed a five-year or life cycle cost that exceeded the notional project budget and was nearly 100 per cent higher than that of the successful tenderer.

<sup>33</sup> Defence used a 5.3 per cent discount rate for this analysis, which was based on the prevailing five-year Treasury Bond rate.

**3.9** The ANAO found that the discounted cost-benefit analysis used by Defence to justify the acquisition of proposed software solution, compared to retaining the existing systems, had the following weaknesses:

- it identified potential savings that would never be achieved due to the staged delivery schedule of the Project. That is, savings were recognised in periods before the functionality required to support those savings was to be delivered by the Project;
- it did not provide for any post-implementation support costs of the proposed solution, other than the successful tenderers annual maintenance fee; and
- it included current and planned capital expenditure on parallel projects as savings, but many of these parallel projects were not cancelled following initiation of the Project.<sup>34</sup>

**3.10** The Selection Report recommended that PeopleSoft Australia Pty Ltd be selected.

## Software Vendor contract

**3.11** In July 1998, Defence entered into a seven-year, \$13.46 million fixed-price contract (hereafter known as the “Official Order”) with PeopleSoft Australia Pty Ltd (hereafter known as the “Software Vendor”) to implement the fully integrated personnel system. The amount included Licence Fees of \$3.5 million and Implementation Services that were not to exceed \$9.96 million. This did not however include an Annual Maintenance Fee of \$0.7 million, which was a fixed percentage of the Licence Fee.

### *Contract deliverables and payments*

**3.12** Payments for Implementation Services were to be made on Defence acceptance of each deliverable, and in accordance with the principles identified in Table 3.2.

---

<sup>34</sup> The Selection Report identified savings that included capital expenditure forecast under committed projects including the Army Training Information Management System project (\$4.897 million in 1997–98) and the ADF Pay project (\$4.274 million across FYs 1997–00).

**Table 3.2****Official Order payment principles**

Payment Principle	Achieved
A fixed price shall be determined for each phase of the Project.	X
Payments to be made to the supplier for each phase shall be detailed in a Change Order to be issued prior to the commencement of each phase.	X
The payment plan for each phase shall be developed prior to the commencement of that phase and shall identify the price for each of the major deliverables, together with the agreed delivery and acceptance dates.	X
Payment of 95 per cent of the agreed price for each deliverable shall be made on acceptance of the deliverable.	✓
The remaining 5 per cent due for each and every deliverable shall be withheld until successful completion of Operational Tests to be performed on the total combination of the items delivered during each phase.	✓

Source: ANAO analysis of the Software Vendor Official Order, July 1998

**3.13** In respect of Defence compliance with these payment principles (see Table 3.2), the ANAO found:

- that contract prices were not determined and fixed prior to the commencement of each Project phase;
- that Change Orders were used retrospectively, not prospectively, to adjust contract prices for each Project phase; and
- no evidence of a payment plan consisting of prices and agreed delivery dates for major deliverables in any of the Project phases. Delivery dates were only observed for the overall completion of each phase.

**3.14** A Defence report in October 1999 found that the majority of Project contractors did not have deliverables and duties defined as a part of their contract.

*Contract deliverable testing, acceptance and payment*

**3.15** The underlying Office of Government Information Technology Shared Systems Contract formalised the testing and acceptance process. Within five days of the completion of acceptance testing for a particular item, and if Defence was satisfied on reasonable grounds that the relevant acceptance tests had been passed, Defence was to issue a Certificate of Acceptance specifying the date of issue of that certificate.

**3.16** By April 2005, Defence had only been able to provide the ANAO with documentary evidence of nine Certificates of Acceptance. Of the nine documented, only three could be matched against a specific contract deliverable or prior service agreement. The ANAO notes that Certificates of Acceptance should have been generated for Official Order deliverables, as well as for at least 49 separate Statements of Service outside of the Official Order. The absence of a Contract Work Breakdown Structure within the Official Order and supporting Defence documentation, means that the number of Official Order deliverables is not able to be determined with any certainty.

**3.17** Notwithstanding the Defence's contractual obligation to issue Certificates of Acceptance, Defence advised the ANAO in March 2005 that:

... there was no formal document passed to PeopleSoft. Acceptance was on the basis of the outcomes of acceptance testing by the authorised Defence business representatives. Sign-off was obtained for each rollout within a "Proceed Decision Pack". The document contained a hierarchy of signatures, ranging from representatives for each specific functional area to the delegated officer for each rollout ... Acceptance with respect to PeopleSoft was resolved formally through authorised payment of invoices for software delivered in each release.

**3.18** The Project Office's approval of Software Vendor contract deliverables did not accord with contractual requirements.<sup>35</sup> In respect of the receipt of goods or services, Defence's Chief Executive Instruction of July 2002 required that the decision to accept goods or services must be documented and the date of the decision recorded.

**3.19** The payment terms of the Office of Government Information Technology Shared Systems Contract required that Defence only make payments after the receipt of a correctly rendered invoice following the issuance of a Certificate of Acceptance or the delivery of a service. The Project Office did not adhere to this contractual requirement.

**3.20** In the event that the acceptance testing demonstrated that the item tested was not in accordance with the Official Order then Defence could request the Software Vendor to correct and re-test the item or provide a work-around with all reasonable costs incurred by Defence as result of carrying out such tests to be reimbursed by the Software Vendor.

**3.21** In March 2005, Defence advised the ANAO that there were several instances where the Software Vendor had agreed that parts of a new release

---

<sup>35</sup> Defence advised the ANAO in May 2005 that:

*Notwithstanding ANAO's observations in relation to Certificate of Acceptance, the DPE considers that the acceptance testing process to validate the performance of services/deliverables prior to the payment of invoices to the Software Vendor was sound. Each build and release was acceptance tested and payment was on the basis of successful acceptance testing and user acceptance testing.*



had failed acceptance testing. Defence further advised that in cases where test failures were the result of a programming error, the Software Vendor corrected it immediately or in a subsequent build free of charge. The ANAO found that Defence did not track its additional testing costs in these cases, nor did it seek reimbursement under the provisions of the Office of Government Information Technology Shared Systems Contract.

## Recommendation No.2

**3.22** ANAO recommends that the Defence Personnel Executive review its contract deliverable acceptance and payment processes to accord with Defence's Chief Executive Instruction for Payment of Accounts.

### *Defence Response*

**3.23** Agreed.

### *Contract schedule*

**3.24** The Official Order identified that the Project would be delivered in five phases. A description of the contracted Project phases and their corresponding milestone or completion dates is reproduced in Table 3.3.

**Table 3.3**

### **Original project phases and milestones**

Phase	Description	Scheduled Milestone Date
Pilot	Installation of Version 5.8 of the Shared Systems Solution, Establishment of the Department Tree, Headcount Strategy, Base Data for Personnel Administration, Detailed Scope for inclusion of Payroll in Phase 1 and detailed design of Phase 1	31 July 1998
Phase 1	Functionality for Staff Movements, Establish Position Data/Tree, Future Requirements, Position Data, APS Leave and Payroll, Installation of Version 7.5 the Shared Systems Solution and detailed design of Phase 2	31 December 1998
Phase 2	Functionality for Performance Appraisals, Courses, Human Resource Budgeting, Position Attributes, APS Recruitment, Employee Data, ADF Leave, Time and Attendance and detailed design of Phase 3	30 June 1999
Phase 3	Functionality for Career Planning, Clearances and Promotions, Succession Planning, Enrolments, Training Needs, Trend Analysis, Workforce Requirements, ADF Recruitment, Reserves Payroll, ADF Payroll and detailed design of Phase 4	31 December 1999
Phase 4	Integration of Smart Card Technology, Web Transactions and Employee Self Service	30 June 2000

Source: Defence records

### *Contract performance provisions*

**3.25** The Official Order provided for a rebate to become payable to Defence if the Software Vendor missed a Scheduled Milestone Date (see Table 3.3). The rebate was payable at \$1 000 per day, up to a maximum of 30 days, effectively capped at \$30 000 per missed milestone. Based on the five project phases, the maximum rebate payable to Defence would have been \$150 000, just 1.1 per cent of the total initial Official Order value. Even though most of the initial milestones were not achieved, the ANAO found that Defence did not make any rebate claims or receive any rebates.<sup>36</sup>

**3.26** In May 2005, Defence advised the ANAO that:

Schedule delays were a combination of Defence business users, infrastructure and vendor poor performance. There were insufficient or at best tenuous grounds for Defence to seek any rebate over the life of the Project.

**3.27** There were no performance indicators under the Official Order except for the Software Vendor's performance in relation to On Site Support Response Time (OSSRT) and System Restoration Time (SRT). The Official Order assigned priority level definitions against both OSSRT and SRT categories to set service level expectations, and fee adjustment schedules in cases where the Software Vendor failed to deliver. The ANAO did not find any evidence that Defence tracked the OSSRT and SRT compliance of the Software Vendor, and consequently, that Defence could not have reliably known, at any point in time, if the Software Vendor may have been in breach of its service obligations and that a fee adjustment had become payable. The ANAO found no evidence that Defence received any fee adjustments from the Software Vendor failing to meet its service obligations.

### **Software Contract Change Orders**

**3.28** The Official Order was maintained throughout the Project, from July 1998 to December 2002. In this period the Official Order was amended four times by Change Orders, primarily due to Project delays and changes in the Project's scope, at a total additional cost to Defence of \$4.53 million.

**3.29** In relation to the Change Orders, the ANAO found that the first three were not proposed and approved in accordance with the Official Order's payment principles (see Table 3.2). That is, in each case, the phase price was determined well after the phase had commenced. The ANAO notes that in the case of Change Order 2, nine months after the analysis and design stage was complete, and well into the software build stage, the Software Vendor was still

---

<sup>36</sup> Under Section 47 of the *Finance Management and Accountability Act (1997)* there is an obligation on an agency to recover debts owing.

unable to commit to a fixed price for this phase. At this point, Defence did not have effective contractual control over Project costs and outcomes.

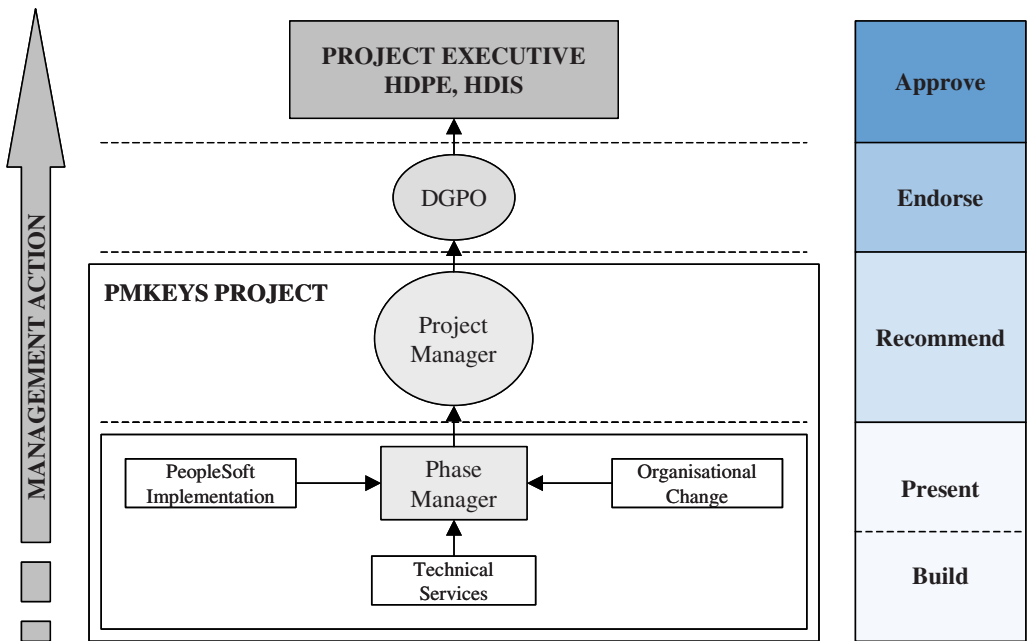
### *Scope approval framework*

**3.30** In December 1999, following the initiation and approval in the first Change Order request, Defence and the Software Vendor established a Common Agreed Principles document. This document was designed to assist the Project in determining whether new work fell inside or outside of the scope of the Official Order and preceding Change Orders. It also defined Defence and Software Vendor responsibilities in relation to the design, development, testing, rollout and support of new functionality. Later versions also outlined Software Vendor expectations in relation to network and system performance, including the mechanism by which the Software Vendor would be compensated for excessive performance downtime (more generally known as an excusable delay). In March 2001, Change Order 3 amended the Official Order to provide the Software Vendor with \$492 159 as compensation for performance downtime to December 2000.

**3.31** The Common Agreed Principles document also identified the framework through which changes to the Project's scope were to be approved (see Figure 3.1). The process identifies that 'approval' for scope change was to be concurrently given by HDPE and Head of Defence Information Systems (HDIS). However, the ANAO found that Change Orders 2, 3 & 4 were actually 'approved' by the then Director General of Personnel Operations (DGPO), and not by HDPE and HDIS.

Figure 3.1

Approval process hierarchy for scope



Source: Defence records

Other Software Vendor contracts

3.32 As the Project progressed, Defence identified a need for additional services from the Software Vendor to support both: the development of new functionality not provided within the scope of the Official Order; and elements of the system that had been delivered into service at that point.

3.33 In September 1999, Defence entered into a Consulting Services Agreement with the Software Vendor. Under this agreement, the Software Vendor was to provide Defence with services outlined in a Statement of Service, with each Statement of Service agreed by both parties prior to the commencement of work. Each Statement of Service was deemed to have been completed once Defence executed the Certificate of Acceptance for that work. As previously noted, Defence did not issue Certificates of Acceptance to the Software Vendor.

3.34 Under the Consulting Services Agreement, Defence was obligated, inter alia, to pay the Software Vendor at the rates specified in the applicable Statement of Service, and reimburse the Software Vendor for all reasonable expenses, including travel and living expenses, incurred in the performance of

that service. In turn, the Software Vendor was obligated to perform the service described in each Statement of Service in a timely and competent manner.

**3.35** Defence has provided documentation for 49 of the Statements of Service that it initiated under Consulting Services Agreement, but is unable to advise the extent to which other Statements of Service are outstanding.

**3.36** All but one of the reviewed Statements of Service were provided on a time and materials basis. The Statements of Service did not always identify the specific resource(s) tasked with the provision of that service. Further, the Statement of Service deliverables were generally very broad, often describing an ongoing support requirement within the Project, and were without an integrated set of performance criteria. For these reasons, it may have been difficult for Defence to assess actual progress against the deliverables when invoiced by the Software Vendor.

**3.37** The Project's expenditure to June 2003 on services supplied by the Software Vendor outside of the Official Order totalled \$10.16 million.

## **Project management contractor**

**3.38** In July 1998, and at the end of the Software Vendor selection process, Defence contracted SMS Consulting Group Pty Ltd (previously the Review Partner and hereafter known as the 'Project Manager') to provide professional consulting services to the Project from 1 July 1998 to 30 June 1999.<sup>37</sup>

**3.39** The Project Manager was not selected following an open tendering process. The contact price was determined on a time and material basis using a previously advised schedule of rates for specific contractor resources. The Project Manager was also to be reimbursed, at cost, for travelling expenses and living expenses. The contract did not define the process for the assignment and acceptance of discrete deliverables, nor did it provide criteria or indicators against which the Project Manager's performance would be monitored and measured. The contract did not have a liquidated damages clause.

**3.40** The original Project budget included total provisions for Consultants and Professional Service Providers of \$1.22 million and \$2.11 million respectively. Following contract signature in July 1998, Defence raised an initial purchase order of \$350 000 for the Project Manager's provision of consultancy services for the period 1 July 1998 to 31 December 1998.

**3.41** In July 1999, Defence expanded the Project Manager's role on the basis that there were no Defence staff available at that time, with the requisite skills and experience, to take on the role of the Project's management. Defence

---

<sup>37</sup> As the contract deliverable under this agreement, the Project Manager was to assist with the evaluation, selection and implementation of a personnel management solution for Defence.

renewed the Project Manager Contract a number of further times prior Project closure in late 2002.<sup>38</sup>

**3.42** The Project's expenditure on services supplied by the Project Manager to the Project's financial closure in July 2003 was reported by Defence to be \$14.58 million.

---

<sup>38</sup> The terms of the August 2000 Contract were based around a fixed monthly payment for the provision of professional services. Contract deliverables for the Project Manager, were to be agreed with the Project Director. Defence have advised the ANAO that, at that time, the lead consultant of the Project Manager was also fulfilling the Project governance role of Project Director.

## 4. Cost Performance

---

*This chapter discusses Defence's management of Project expenses and the delivery of training to PMKeyS end-users.*

### Background

**4.1** Following cost overruns and schedule slippage in Phase 1 of the Project, the DPE identified in September 1999 that Phase 4, although a key element in effecting the previously identified personnel management savings of \$100 million per annum, would no longer form part of the Project's scope.<sup>39</sup> Phase 4 was formally de-scoped<sup>40</sup> in July 2001.

**4.2** The Project was funded and supplemented at portfolio level up to \$58.8 million (see Table 2.3). The ANAO found that allocated funding did not reconcile with reported Project expenditure of \$63.4 million. As at June 2005, Defence was unable to explain this discrepancy.

**4.3** The ANAO constructed the expenditure profile for the Project that is illustrated in Figure 4.1. The shaded area in Figure 4.1 reveals the points at which the reported Project expenses and/or budget exceeded funding approval.

---

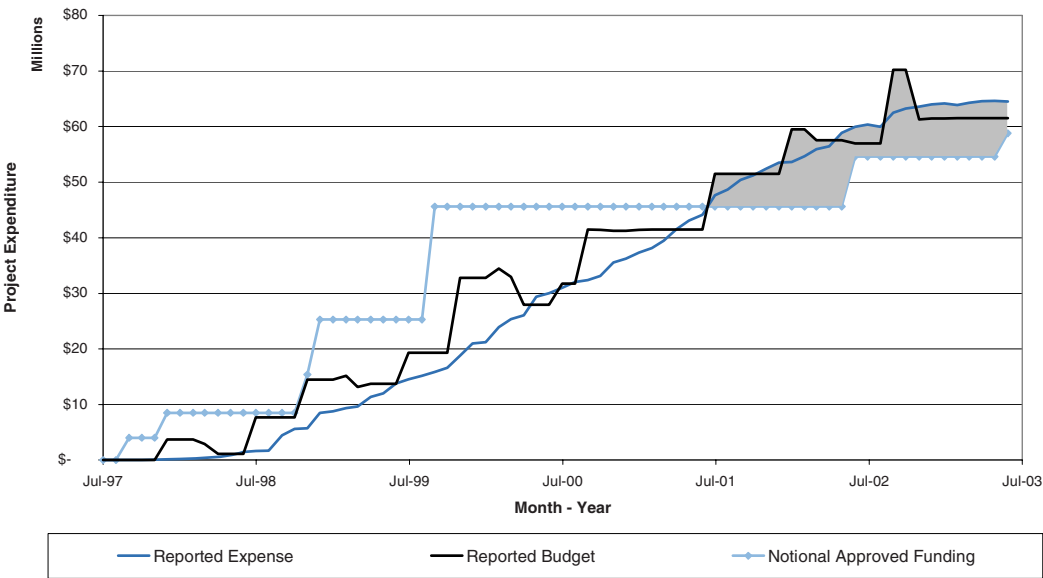
<sup>39</sup> Defence advised the ANAO in June 2005 that:

*It was agreed at the time that the scope of Phase 4 would be developed as the Project matured. Given the delays in the delivery of the PMKeyS system, the rapid development of technology and the availability of commercial software, it was decided not to continue with Phase 4 in its present form.*

<sup>40</sup> *De-scope* is a common Defence term used to describe project activities and/or contract deliverables that are eliminated from a project's original (or current) scope, which then may or may not be delivered and/or funded by an alternative project.

Figure 4.1

Project expenditure profile: November 1997 to June 2003



Source: ANAO analysis of Defence records

*Capitalisation of project costs*

4.4 In accordance with standard accounting practice, Defence has capitalised a significant amount of its expenditure of the PMKeyS system development. As at April 2005, the capitalised investment in PMKeyS was \$56.53 million, which relates to the current version of the system.

4.5 Table 4.1 illustrates the breakdown of this investment across each of the Project's phases.



**Table 4.1****PMKeyS Project capitalisation by project phase: April 2005**

Project Phase	Capitalisation (\$m)	Defence Asset Code/s
Phase 1	27.00	PMKeyS, PMKeyS Additions
Phase 2	12.22	PMKeyS Phase 2
Phase 3	10.34	Defence Asset Suspension Account <sup>(a)</sup>
Employee Self Service	0.77	PMKeyS Additions
Licence Fee (7 years)	6.20	PMKeyS Additions
<b>All Phases</b>	<b>56.53</b>	
Note: (a) In June 2004, Phase 3 depreciation was reversed by Defence. Defence have advised that Phase 3 expenditure will be held in an asset suspension account (non-depreciable) until an Asset Under Construction account code is created.		

Source: ANAO analysis of Defence ROMAN records

**4.6** Defence advised the ANAO in April 2005 that the expenditure on Phase 3 of the Project was still a Defence asset in that it provided a baseline specification for any subsequent implementation of ADF Payroll. It was held to be an asset despite the specification being developed for PeopleSoft Version 7 functionality when the implementation of ADF Payroll will likely be on PeopleSoft Version 8. Defence maintain that the business rules identified in the Project remain valid for the planned Upgrade Project.

**4.7** Defence is currently seeking to have ADF Payroll expenditure recorded as an Asset Under Construction<sup>41</sup> despite the expenditure being incurred three to five years ago and ADF Payroll not being implemented under Version 7. The extent to which ADF Payroll development costs of \$10.34 million will not provide a future economic benefit in the rollout of ADF Payroll under Version 8, these costs could be expected to be expensed by Defence.

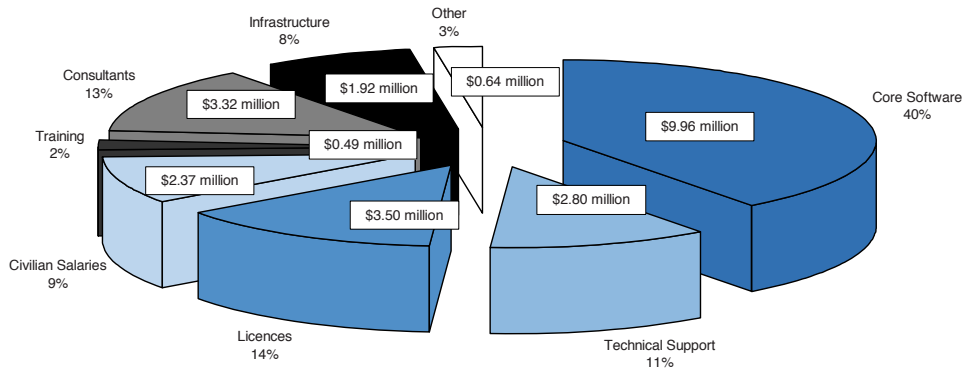
## Project cost breakdown

**4.8** The ANAO has categorised the Project's forecast expenditures, as identified in the Project Office's notional budget submission to the then Defence Information Management Board in late July 1998, and presented them in Figure 4.2.

<sup>41</sup> An Asset Under Construction is an asset that has not been brought into service and accordingly, is not subject to depreciation.

**Figure 4.2**

**Breakdown of the Project’s notional budget of \$25.0 million: July 1998**



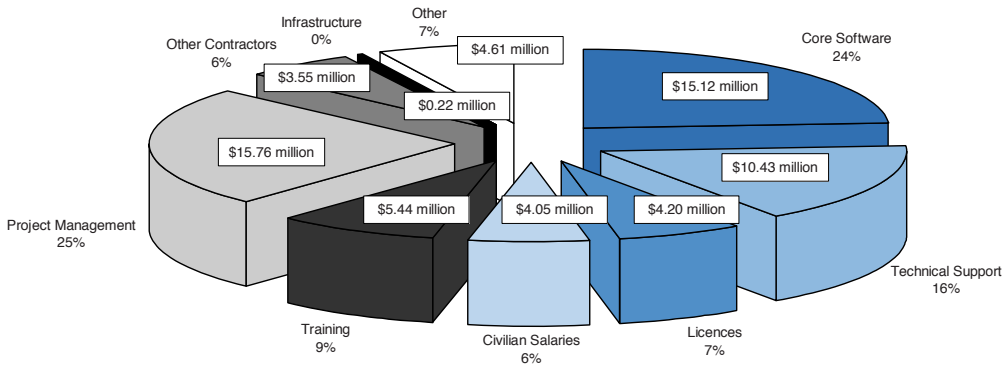
Source: ANAO analysis of Defence records

**4.9** The Project allocated a large proportion of its notional budget of \$25.0 million to the provision by the Software Vendor of Core Software and Implementation Services (\$9.96 million) and Licence Fees (\$6.3 million).<sup>42</sup> The balance of the budget was largely allocated to the payment of: Civilian Salaries within the Project (\$2.37 million); Consultants including Professional Service Providers (\$3.32 million); and Infrastructure (\$1.92 million).

**4.10** The notional Project budget was reduced in September 1998 to \$23.9 million to compensate for approximately \$1.4 million of expenditure during the Project’s software vendor selection phase to June 1998.

**4.11** The breakdown of final Project costs is illustrated in Figure 4.3. Delayed Project implementation and changes in Project scope resulted in substantial increases in many of the forecast costs, particularly those for the provision of the Core Software (\$15.12 million) and Training (\$5.44 million). The direct cost of software customisations was \$2.60 million. The Project underestimated the cost of providing training to PMKeyS end-users, which increased nearly fourteen fold, from \$0.35 million to a total contractor cost of \$4.79 million.

<sup>42</sup> The Licence Fees provision included the agreed upfront Licence Fee (\$3.5 million) and the first four years of the Annual Maintenance Fee (\$0.7 million per year or \$2.8 million).

**Figure 4.3****Breakdown of the Project's final costs of \$63.4 million: June 2003**

Source: ANAO analysis of Defence records

**4.12** Other than the Annual Maintenance Fee payable to the Software Vendor, the Project Office made no allowance for the technical support of PMKeyS once implemented. The Project expended \$10.43 million on technical support services provided by the Software Vendor, which was an additional \$7.91 million over and above the \$2.52 million in Annual Maintenance Fees that were paid by the Project between 1998–99 and 2000–01.

**4.13** Project Management expenditure increased nearly thirteen fold, from \$1.22 million to \$15.76 million, with 92 per cent of the final amount being paid to the Project Manager. Other Contractors' expenditure increased from \$2.11 million to \$3.55 million.

**4.14** Due to the state of the Project's financial records, the ANAO was unable to reliably allocate \$2.30 million of the Project's stated expenditure. Accordingly, this unallocated expenditure represents nearly half of Other Expenditure (\$4.61 million) which otherwise includes, inter alia, travel costs of \$1.86 million.

### Infrastructure support costs

**4.15** The Project made an infrastructure provision for \$1.92 million in its budget submitted to the then Defence Information Management Board in July 1998. This provision was to fund network improvements (\$1.80 million) and

computers and printers (\$0.12 million). Defence advised the ANAO that the Project did not fund the network improvements undertaken by Defence to support the implementation of PMKeyS.<sup>43</sup>

**4.16** In December 1998, Defence Information Systems Group (DISG) reported that, although it had previously not been funded to support a number of current information systems including the PMKeyS Project, additional short-term funding of \$6.4 million in 1998–99 and \$19.9 million in 1999–2000 was required for PMKeyS. At the completion of audit fieldwork, DISG had been unable to confirm the expenditure that it had incurred in support of the PMKeyS Project.

**Operational support costs**

**4.17** Following the rollout of Phase 1 in October 1999 and Phase 2 between October 2001 and July 2002, the Personnel Systems Branch of DPE established and funded a number of new directorates to provide technical and management support to PMKeyS end-users. The directorates included the PMKeyS Customer Service Centre (PCSC), the Directorate of Personnel Management Information (DPMI) and the Directorate of Business Analysis and Process Information (DBAPI). The annual Defence reported expenditure of each of these directorates, from their inception until June 2004, is outlined in Table 4.2.

**Table 4.2**  
**PMKeyS support costs after rollout**

Directorate	1999–00 (\$m)	2000–01 (\$m)	2001–02 (\$m)	2002–03 (\$m)	2003–04 (\$m)	Total (\$m)
PCSC	3.35	4.60	12.71	5.23	5.49	31.38
DPMI		0.28	1.92	2.18	1.87	6.25
DBAPI			0.36	10.52	14.05 <sup>(a)</sup>	24.93
<b>Total</b>	<b>3.35</b>	<b>4.88</b>	<b>14.99</b>	<b>17.93</b>	<b>21.41</b>	<b>62.56</b>
Note: (a) Defence records indicate that \$7.36 million of this expenditure was capital expenditure.						

Source: ANAO analysis of Defence records

<sup>43</sup> Between June and September 1998 the Project Office purchased personal computers (\$0.19 million) and network devices (\$0.03 million).

**4.18** These support costs were directly related to the introduction of the PMKeyS system across Defence. The ANAO did not find evidence that the Project Office or Defence management actively tracked changes in the personnel management costs directly attributable to PMKeyS, and those of the legacy systems that it replaced, to confirm the achievement of claimed Departmental savings of \$100 million per annum (see paragraph 4.1).

## End-user training

**4.19** Defence signed a contract with DA Consulting Group in October 1999 (hereafter known as the 'Training Contractor') to deliver PMKeyS training to Phase 1 end-users.<sup>44</sup> The contract was signed after Phase 1 had been rolled out to its end-users. The ANAO notes that the Training Contract was initially drafted in July 1999. Under this Contract, training material development was to be completed by mid August 1999 and training was to be rolled out to all Phase 1 end-users by late September 1999.

**4.20** In October 1999, Defence reported that a contract was still being developed for work being performed by the Training Contractor for the development and delivery of training.

## Phase 2 training delivery

**4.21** In February 2000, the Training Contractor was re-contracted to provide services for the development, delivery and evaluation of training services for PMKeyS Phase 2. Under this contract, Phase 2 training deliverables were to be developed and tested prior to May 2000, with training delivery, support and modifications to materials to be completed by December 2000. The contract price was \$1 114 850, of which \$392 350 was for training development and \$722 500 was for training delivery. Additional services were to be provided on a time and materials basis.

**4.22** Delays in the Project schedule meant that the terms and timing of this contract had to be renegotiated in November 2000 such that training rollout was deferred until February 2001. The Training Contractor also agreed to deliver training and materials for the Personnel Development and Training functionality, now to be rolled out under Phase 2 for an additional \$148 790.<sup>45</sup>

**4.23** In December 2000, the Project had advised end-users that the Phase 2 training and system rollout dates were finalised as per Table 4.3.

---

<sup>44</sup> Defence had previously contracted the DA Consulting Group to conduct Business Process Workshops in June and July 1999 at a cost of \$69 000.

<sup>45</sup> Defence again amended the training contract in February 2001 to include the provision of Phase 3 training services and materials at an additional cost of \$661 175. The total contract value at that time was \$1 924 815.

**Table 4.3****Scheduled Phase 2 training and system rollout**

Service	Training Rollout	Revised System Rollout <sup>(a)</sup>	Actual System Rollout	Slippage
Navy	19 Feb–30 Mar 2001	2 Apr 2001	22 Oct 2001	203 days
Army	19 Mar–11 May 2001	14 May 2001	8 July 2002	420 days
Air Force	30 Apr–25 May 2001	28 May 2001	18 Feb 2002	266 days
Note: (a) The Software Vendor was originally contracted to deliver Phase 2 functionality to end-users by June 1999.				

Source: ANAO analysis of Defence records

**4.24** In May 2001, Defence reported that the Navy implementation had been delayed pending resolution of critical issues. Phase 2 training was delivered to schedule. However, a fully operational system was not rolled out to end-users until much later than scheduled.<sup>46</sup> Defence staff advised the ANAO that they thought that their initial PMKeyS training was neither adequate nor relevant.

**4.25** The Project acknowledged the effect the rollout delay would have on the effectiveness of the Phase 2 training and sought to investigate options for skills maintenance, including but not limited to, the use of self-paced tutorials. Defence staff advised the ANAO that subsequent training provided through self-paced learning tutorials and modules was ineffective and was not user friendly for staff with normal job requirements. Other Defence staff advised that no further official training was provided following the initial training and prior to Phase 2 rollout.

**4.26** Defence's Management Audit Branch reported in November 2001 that PMKeyS users appeared to be inconsistently applying the training received, but was unable to determine if this was as a result of deficiencies in the training or problems with acceptance of change. In a later report, end-users asserted that the training had been application based and had not sufficiently included training in the new business processes to be applied.

**4.27** Following Project closure in December 2002, DPE acknowledged that:

It is recognised that the training delivered by the PMKeyS Project for Version 7 was inadequate in that it often did not reflect the functionality delivered, and was inappropriately timed.

<sup>46</sup> Defence advised the ANAO in May 2005 that:

*ADFHR functionality rolled out to the Navy on 27 August 2001. Issues with data migration led to NPEMS being turned on, principally for career manager access/use. The Navy ADFHR functionality remained available to allow data entry for all other Navy PMKeyS users – this issue was essentially restricted to one Navy user group (career managers).*

**4.28** Defence advised the ANAO in April 2005 that the Training Contractor had delivered PMKeyS training in accordance with its contractual obligations. Defence records indicate that to June 2003, the Project had made payments totalling \$4.57 million to the Training Contractor.

**4.29** In relation to training development, delivery and on going management, Defence's Management Audit Branch made a number of recommendations during the PMKeyS Project. Many of these were not implemented at the time of Project closure.

## Post-project training arrangements

**4.30** In December 2003, Defence's Management Audit Branch reviewed the progress of the PMKeyS training arrangements. They assessed that the PMKeyS training arrangements were not meeting Defence's corporate requirements and again concluded that DPE, as the enterprise system owner, should be responsible for the through life delivery and support of the system. They also concluded that the devolution of training responsibility to the Groups and Services had an adverse effect on data quality, process efficiency and effectiveness and staff morale.<sup>47</sup> The ANAO notes that in the absence of coordinated development and delivery of training, internal data consistency and targeted process efficiencies are unlikely to be achieved by Defence.<sup>48</sup>

**4.31** In response to these findings, Defence established the Defence Business Training Centre, which has progressively taken ownership of the development, delivery and evaluation of PMKeyS training across Defence from early 2004. This PMKeyS training framework is not yet mature. The current training delivered by the Defence Business Training Centre is primarily for military personnel.<sup>49</sup>

---

<sup>47</sup> The report found that weaknesses in training delivery, and the disparate nature of the PMKeyS training environment, had contributed to:

- the training requirements and subsequent delivery of training of Military Personnel Administration Centre personnel, who perform the majority of military personnel administration processing, not being addressed;
- individual Civilian Personnel Administration Centres developing their own training materials and delivering their own training; and
- a large number of errors existing against PMKeyS business rules that had been created and promulgated.

<sup>48</sup> The ANAO Financial Statement Audit 2003–04 found that despite Defence's implementation of a number of initiatives to remedy inadequacies in PMKeyS training, including the establishment of a Training Functional Working Group, there was still inadequate communication and training provided to end-user groups in relation to the implementation of new PMKeyS functionality. ANAO observations that PMKeyS users continued to use workaround procedures after the appropriate functionality had been implemented were attributed to these weaknesses.

<sup>49</sup> Defence advised the ANAO in May 2005 that CPAC managers remained responsible for the coordination and delivery of both PMKeyS and business process training to CPAC staff.

## 5. Schedule Performance

---

*This chapter discusses the project management aspects of the Project, specifically with regard to schedule performance, system remediation and future system upgrades.*

### Project phases

**5.1** Consistent with the requirements of the Official Order, the Project was to deliver a fully integrated personnel management system across Defence by June 2000. This was to be completed over five phases, beginning with a pilot phase to install the base level software and scope the design requirements for the next phase. The pilot phase was to be followed by four main Project phases (known as Phases 1 to 4).

**5.2** The Project cost during the pilot phase from July 1998 to September 1998, was reported by Defence to cost \$3.01 million. This amount included, inter alia, the Software Vendor's price for achievement of the pilot phase milestone (\$676 380) and part payment (\$1 750 000) of the Software Vendor's Licence Fee per the requirements of the Official Order.

**5.3** As at Official Order signature in July 1998, the main Project phases could be summarised as:

- **Phase 1** – Workforce Structures; and Civilian Leave and Payroll.
- **Phase 2** – Human Resource Management and Budgeting; Civilian Recruitment; and Military Personnel Administration.
- **Phase 3** – Career Management; Personnel Development and Training; Military Recruitment; Reserves and Military Payroll.
- **Phase 4** – Internet Based Functionality; and Employment Self Service.

**5.4** Table 5.1 summarises all of the Project's scope and schedule changes. The continual redefinition of the scope of each of the Project's phases, and the concurrent delay in their implementation, are illustrative of the level of effective control that Defence had over the Project. The Project's schedule was found to have slipped by 39 weeks in Phase 1 and between 75 and 158 weeks in Phase 2. The rollout of Phase 3 was postponed while Phase 4 was de-scoped.



**Table 5.1**

**History of Project scope and schedule changes**

Phase	Original Milestone	Change Order 1	Change Order 2	Change Order 3	Revised Description	Change Order 4	Final Description	Milestone Completed	Slippage (weeks)
Pilot	31 Jul 1998	No Change	No Change	No Change	No Change	No Change	No Change	1 Oct 1998	9
1	31 Dec 1998	1 Oct 1999	No Change	No Change	No Change	No Change	Civilian HR and Payroll	1 Oct 1999	39
2	30 Jun 1999	30 Jun 2000	13 Sep 2000	5 Dec 2000	ADF HR (Civilian)	No Change	Civilian HR	5 Dec 2000	75
				12 Jun 2001	ADF HR (Military)	No Change	Navy HR	22 Oct 2001	121
							Air Force HR	18 Feb 2002	138
							Army HR	8 Jul 2002	158
3	31 Dec 1999	31 Dec 2000	No Change	28 Sep 2001	ADF Payroll	No Change	ADF Payroll	Postponed	
4	30 Jun 2000	31 Dec 2000	No Change	No Change	No Change	De-scoped	No Change	De-scoped	

Source: ANAO analysis of Defence records

## Phase 1

5.5 Under the Official Order, Phase 1 of the Project was to be implemented by the end of December 1998. The analysis and design activity for Phase 1 for the Project commenced in September 1998, prior to Steering Group's review of the Scoping Study report, and was completed by October 1998. The Phase 1 scope document was produced by Defence in April 1999 and identified that Phase 1, when implemented, would support Defence business outcomes including: APS Payroll Services, Leave Administration, Recruitment, Personnel Administration, Organisational Structures and Position Management; and Military Compensation Payments.

5.6 When the DPE sought additional funding of \$23.6 million in September 1999, the PMKeyS Business Case submission claimed that one of the major reasons for Project delays was that Defence had to bring forward the implementation of the Civilian payroll system.<sup>50</sup>

5.7 The ANAO notes that the Phase 1 scope was not significantly different from that contracted to the Software Vendor by Defence in July 1998, which included, inter alia, APS Payroll and Leave functionalities.

5.8 In respect of Phase 1 delays, the PMKeyS Business Case noted that:

Delays have also been caused by the inability of Defence to resolve business and process issues affecting PMKeyS implementation. At an average Project expenditure of \$1 million per month, in simple terms the delay in implementation of Phase 1 has cost the Project upwards of \$10 million.

5.9 The Project's stated objective of avoiding payment of the annual CITEC fee of \$0.73 million, in addition to the stated business and process issues, had contributed to additional Project costs of \$10 million being incurred.

### *Testing and user acceptance*

5.10 Prior to the rollout of Phase 1 to the APS (Defence Civilians), the Project conducted a series of data trials to test the effectiveness of the PMKeyS system. Trial 1 was conducted in July and August 1999 and commenced with the transfer of approximately 20 000 employee data records from CIVILPRISM to a trial PMKeyS environment. From this, nine types of payroll errors were identified across 2 061 records (10.3 per cent). These records were then corrected to form the baseline data for the trial. The list of transactions that was subsequently applied to each of these records in CIVILPRISM was then

---

<sup>50</sup> DPE reported in September 1999 that, in June 1998, the Department of Finance and Administration (Finance) decided to cease its payroll service to the APS from July 1999 ... This meant that Defence needed to bring forward the PMKeyS payroll functionality for civilians, or face the prospect of prolonged payment of substantial fees to CITEC, the outsourcer for the Finance APS payroll system ... This forced a fundamental change to the proposed implementation of PMKeyS.

directly entered into PMKeyS.<sup>51</sup> When the next pay process was run in the PMKeyS trial environment for 1 533 employee records, 833 records (54.3 per cent) did not match their corresponding CIVILPRISM record. Notwithstanding these poor results, Defence concluded that the first trial was successful and did not, after sourcing and correcting the individual errors, rerun this trial.

**5.11** Trial 2 was conducted in August and September 1999. The trial involved three more payroll test runs whose results are reported in Table 5.2.

**Table 5.2**

**Pre civilian rollout: Trial test results**

Pay Number	Records Tested	Technical Errors		Data Entry Errors		Data Migration Errors		Rounding Errors		Total Errors	
4 / D	2 416	210	8.7%	112	4.6%	28	1.2%	86	3.6%	491	20.3%
5 / E	2 418	81	3.3%	157	6.5%	64	2.6%	132	5.5%	443	18.3%
6 / F	1 417	51	3.6%	84	5.9%	20	1.4%	66	4.7%	329	23.2%

Source: ANAO analysis of Defence records

**5.12** The Trial 2 payroll test error rates did not significantly improve between test runs 5 and 6. However, Defence declared the Trial 2 tests successful and proceeded with Phase 1 rollout. The ANAO notes that Defence also acknowledged that, prior to rollout, the limited functional trial of Recruitment was partly successful and the functional trial of Organisation and Establishments was unsuccessful. Phase 1 was rolled out to Defence Civilians in early October 1999.

**5.13** An independent review of the implementation of PMKeyS Phase 1 in December 1999 found that the implementation date for Phase 1 in April 1999 was not subsequently changed, despite circumstances that may have made an amendment prudent. The report concluded that this policy exposed the Project to high risk in terms of: not achieving the planned date; staff having to work

<sup>51</sup> Defence stated that in this process they avoided using most of the PMKeyS data entry panels.

under a high degree of pressure; and a reduction of the scope of functionality actually implemented, as compared to that which was planned.<sup>52</sup>

**5.14** The Project produced a draft response to the issues raised in the independent post-implementation review in January 2000. The Project did not contest any of the review findings.

**5.15** In October 2000, Defence reported that Phase 1 was still operating with a number of deficiencies. The system performance deficiencies identified by Defence's Management Audit Branch included, inter alia, that:

- (a) the PMKeyS application rolled out as Phase 1 is insecure and because all operators have access to all records there is a continuing privacy issue. A low level of access security is exacerbated by the lack of a usable audit trail and inadequate control of documents with the Civilian Personnel Administration Centres (CPACs);<sup>53</sup>
- (b) the application does not comply with the Long Service Leave regulations and is unable to properly manage sick leave, graduated return from work, overseas postings and a range of other issues. The Long Service Leave data contained in PMKeyS as at 30 June 2000 is not accurate and cannot directly be relied upon for the 1999/2000 financial statements;<sup>54</sup>

---

<sup>52</sup> The report also identified a number of factors that would have adversely affected the quantity, quality and comprehensiveness of pre-rollout testing including, inter alia, that:

- analysis and design of Phase 1 was completed before the scope document or the project plan were finalised;
- quality assurance regimes deteriorated as Phase 1 of the Project neared implementation. Limited resources and very late changes to the system near to the implementation date resulted in excessive pressure on staff, and quality control suffered accordingly;
- late fixes and changes made pre-production testing almost impossible in many instances. Changes were being processed through the system only hours before going live;
- the length and scope of the trial was insufficient to fully test all Phase 1 functionality and identify problems;
- regression testing was inadequate; and
- testing in Phase 1 was severely hampered by an unstable environment which resulted in considerable downtime.

<sup>53</sup> Defence records show that this weakness still existed following Phase 2 of the Project. Defence Management Audit Branch concluded in December 2003 that the minimal audit trail for ADF leave records meant that it was not able to provide assurance that all recreational leave taken by ADF members was appropriately recorded on departmental systems.

<sup>54</sup> The ANAO Financial Statement Audit 2003–04 found that there were instances of members taking Long Service Leave and the amount being deducted multiple times from their leave balances. At the time of completion of that audit, the ANAO reported that this issue of multiple deductions of Long Service Leave had not been fully resolved by Defence. Defence advised ANAO Financial Statement Audit that, of the 850 instances identified, only 40 related to civilian employees.

- (c) there is no protection against fraudulent transactions entered by CPACs and no means to detect or identify fraudulent transactions entered by individuals;
- (d) transactions which fall chronologically between existing data entries require substantial work-arounds in order to modify the existing record to reflect the situation that actually occurred (i.e. no retrospective functionality); and
- (e) management reports that were to be an outcome of Phase 1 were not delivered under Phase 1.

**5.16** In February 2005, Defence advised the ANAO that they continued to operate PMKeyS without retrospective functionality, a functionality that had been available in CIVILPRISM. Consequently, manual work-arounds continued to be extensively applied in PMKeyS data processing.

#### *Legacy system closure*

**5.17** Defence advised PMKeyS users in February 2001 that CIVILPRISM was to be closed down and that, with the short-term exception of CPAC staff, Defence staff would no longer have access to CIVILPRISM. Although not fully decommissioned until September 2003, four years after the initial rollout of PMKeyS functionality to civilian personnel, Defence have advised ANAO that CIVILPRISM was maintained as a 'read-only' system after October 1999.

## **Phase 2**

**5.18** Under the Official Order, Phase 2 of the Project was to be implemented by June 1999. The analysis and design activity for this phase was reported by Defence to have commenced in February 1999, but was not completed until November 1999. The functionality to be offered in Phase 2 was endorsed by the Business Managers Group in November 1999.

**5.19** Defence records indicate that the initial milestone date for Phase 2 of the Project may have been artificially constrained to June 1999 due to Defence's desire to implement PMKeyS and retire legacy personnel systems because of Year 2000 (Y2K) compliance concerns for those systems.

**5.20** In July 2000, the Phase 2 scoping document identified that Phase 2 was to provide an application capable of adequately supporting endorsed business functionality and reporting needs in the areas of: Organisation Structures; ADF Leave Administration, Personnel Administration, Career Management; Professional Development and Training (partial rollout); and Workforce Planning (partial rollout).

**5.21** The rollout of Phase 2 functionality was to take place in a number of stages. Phase 1 users were to be upgraded to the Phase 2 functionality in September 2000. Phase 2 was then to be rolled out to Air Force then Army then Navy. In September 2000, the Project announced that Phase 2 rollout to service personnel would be further delayed until the first half of 2001, with current Phase 1 users being upgraded to Phase 2 functionality in December 2000.

**5.22** Defence attributed the delay to a number of factors, including significant scope changes in the Career Management module. Defence stated that the postponement would enable the planned Phase 3 Career Management and Phase 3 Personnel Development and Training functionalities to be included in the Phase 2 rollout. Following these changes, Phase 2 was to be known as ADF HR, and Phase 3 was to deliver ADF Payroll functionality only. In December 2000, the Project confirmed that ADF HR would be sequentially rolled out to Navy then Army then Air Force in April and May 2000. Training for each rollout was scheduled in the 4-6 weeks immediately preceding the respective service rollout date (see Table 4.3).

**5.23** Prior to the attempted rollout of Phase 2 to Navy in August 2001, the Project was to migrate data from NPEMS, following which NPEMS data was to be archived. A Defence report identified that upon implementation, significant problems associated with data,<sup>55</sup> system performance<sup>56</sup> and functionality led to the restarting of NPEMS and the further delay of Navy rollout until October 2001.

**5.24** PMKeyS rolled out to Air Force in February 2002, nearly three years after that identified in the Software Vendor contract, and nearly one year after the delivery of PMKeyS rollout training to Air Force.

**5.25** In February 2005, Air Force staff advised the ANAO that there had also been significant problems with data migration from legacy systems to PMKeyS. The ANAO was advised that:

- Prior to rollout, Air Force leave records were validated between July 1999 and February 2002 (immediately to Air Force rollout). This history was to be entered into PMKeyS to provide leave history within the new system.
- Personnel leave histories were manually transferred from individual leave cards to a website interface, from which it was to be loaded into PMKeyS.

---

<sup>55</sup> The report identified that data mapping between the Navy NPEMS application and PMKeyS had been discovered to be incomplete.

<sup>56</sup> The report stated that there was a concern within the PMKeyS Project and Service units about the ability of the Departmental networks to cope with the additional load of PMKeyS transactions when it is rolled out to the Services.

- The upload from the website interface to PMKeyS was not successful, with approximately 60 per cent of Air Force PMKeyS leave records having at least one error.

**5.26** Air Force advised the ANAO that these errors were initially corrected as and when they were identified, and then by targeted remediation activities.

**5.27** Rollout of PMKeyS Phase 2 was completed with its rollout to Army in July 2002. However, Army Career Managers advised the ANAO that they are unable to effectively generate reports in PMKeyS to identify groups of individuals by proficiency in order to facilitate the planning of the annual posting cycle.<sup>57</sup>

### Phase 3

**5.28** Under the Official Order, Phase 3 of the Project was to be implemented by December 1999. The Project produced a Phase 3 Analysis and Design Stage Plan in March 2000 that identified that the analysis and design work for this phase was to be conducted between March and September 2000. The plan stated that Phase 3 was to include functionality for: Personnel Development and Training for all Defence employees; ADF Payroll; Career Management; interfaces with other systems; Human Resource Budgeting; and non standard reports.

**5.29** Following the delays to Phase 2 of the Project, Phase 3 was re-scoped in September 2000 so that it was then primarily responsible for the delivery of ADF Payroll functionality. Neither the Phase 3 Plan or the Phase 3 Analysis and Design Stage Plan were updated to reflect the change in scope.

**5.30** The ANAO found a lack of documentary evidence of testing and acceptance documentation for Phase 3 of the Project. The ANAO has not been able to validate the extent of the Project's progress toward implementation of Phase 3 between March 2000 and Project closure in December 2002. Defence records indicate that it had capitalised \$10.34 million of expenditure on Phase 3 activities to June 2002.

**5.31** In April 2002, the Project presented options to the Personnel Systems Steering Committee for the rollout of Phase 3 and the implementation of ADF Payroll functionality. The Project's recommended option was to implement ADF Payroll on PeopleSoft Version 8 by October 2003 at an additional cost of \$19.9 million. The Personnel Systems Steering Committee agreed that development on PeopleSoft Version 7 would be stopped and that the Project

---

<sup>57</sup> Directorate of Officer Career Management (Army) and the Soldier Career Management Agency are responsible for the career management of in excess of 6 000 officers and 20 000 soldiers respectively. In May and June 2005 they advised the ANAO that they continue to use legacy systems (external databases and tools) to match position vacancies with suitably qualified personnel. Defence state that PMKeyS will not be used for this matching process until the 2007 posting cycle.

would make a submission for funding approval to the Defence Committee in July 2002.

**5.32** Phase 3 of the Project was terminated in December 2002 without implementation of ADF Payroll.

## **Phase 4**

**5.33** Phase 4 of the Project was to have delivered website enablement and Employee Self Service functionality under the Official Order. Phase 4 was initially to be delivered by June 2000, at an unknown cost.

**5.34** The ANAO found that the Project had informally de-scoped Phase 4 in the September 1999 PMKeyS Business Case submission which stated that:

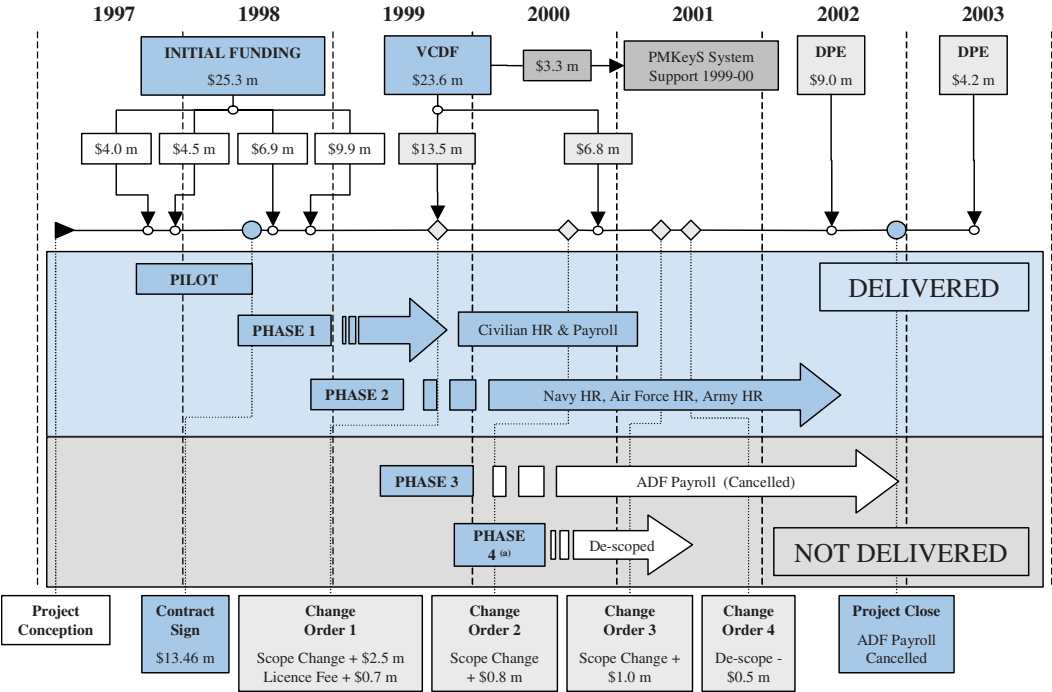
Given the need for Defence to take further decisions on the enhanced PMKeyS employee self service and personnel management information capability it wishes to implement in Phase 4, the current scope of the PMKeyS project encompasses Phases 1 to 3 only ... those aspects proposed for Phase 4 of PMKeyS will be the subject of a separate Business Case to the Defence Executive.

**5.35** Phase 4 was formally de-scoped from the Project in June 2001 with the final change order to the Official Order between Defence and the Software Vendor. As compensation for the de-scoping of the Software Vendor's Phase 4 obligations, Defence received a \$0.5 million reduction in the Official Order value.

**5.36** Figure 5.1 provides a timeline for the Project's funding allocations, scope changes and schedule slippages and Software Vendor contract variations.



**Figure 5.1**  
**PMKeyS Project history**



Note: (a) Phase 4 was to include website enablement and employee self-service functionality.

Source: ANAO analysis of Defence records

## System remediation

5.37 Defence have reported that since October 1999 there have been 46 enhancements, known as releases, of PMKeyS. Of these, 15 have been implemented since Project closure in December 2002.

5.38 In August 2002, the Defence Committee met to consider the proposal to extend the Project to upgrade PMKeyS from Version 7 to Version 8. Notwithstanding that the Project reported expenditure of \$59.2 million to the end of June 2002, Defence records show that this was the first time that the Defence Committee had considered a specific funding submission from the Project.<sup>58</sup> Prior consideration was given by the Defence Management Committee in September and December 1997, when initial funding to the Project of \$4.0 million and \$4.5 million was allocated (see paras 2.14 and 2.15).

<sup>58</sup> Defence provided evidence to the ANAO in May 2005 that the Defence Committee was briefed on the progress of the Project in November 2000, but has not been able to provide the content of that briefing for ANAO review. Defence also advised that the Defence Committee would have been informed annually of PMKeyS progress as part of the annual budget process.

**5.39** The Defence Committee was advised that the estimated additional cost of adopting the preferred approach and implementing ADF Payroll with the upgrade to Version 8 was \$31.1 million. While the Defence Committee endorsed the need to upgrade PMKeyS, it requested that a detailed business case be prepared to include a redevelopment timetable and detailed governance arrangements. This business case was to be submitted for consideration by the Defence Committee in October 2002.

**5.40** In its advice to the Defence Committee in December 2002 that a decision had been taken to delay the upgrade of PMKeyS by 12 to 18 months, the PMKeyS Program Board advised that the intervening time would be used to correct system deficiencies and enhance system utility through a number of targeted development and remedial activities. In May 2005, Defence reported that the total cost of these activities was \$6.0 million.

**5.41** The ANAO has been advised by Defence that system utility and performance has been improved as result of these remediation activities however, Defence is unable to quantify the extent of these improvements and is not tracking progress using a measurable set of key performance indicators. Defence has also advised that system utility has also been improved through the progressive rollout of Employee Self Service functionality since Project closure.

## **Future system upgrade**

**5.42** Late in 2003–04, Defence received an unsolicited proposal from PeopleSoft to provide additional software modules in the form of an Enterprise Licence for Human Capital Management (EL-HCM) and the right to receive Support Services, at an additional cost to Defence, over a period of seven years.

**5.43** The proposal was reported by Defence to have been heavily discounted (from \$14.3 million to \$5.7 million) and was made available by PeopleSoft until 30 September 2004. As Defence had already paid for two of the modules provided under the EL-HCM (at a cost of \$1.115 million), it received an equal credit for the related payments. Defence also negotiated prices to receive additional services such that the additional funding required was \$5.248 million. Final acceptance required that this amount became payable in full by 30 June 2004 and was stated to be non-cancellable, non-refundable and non-contingent. Defence agreed to these conditions.

**5.44** In June 2004, Defence stated that funding remained available within the DPE Group's capital budget for 2003–04 for the purchase. Defence further noted that such funding was appropriate as the EL-HCM purchase constituted capital expenditure.

**5.45** In respect of the EL-HCM purchase, the ANAO did not observe any Defence analysis of the timing and extent of its intended utility of each of the modules provided under the EL-HCM. Notwithstanding, Defence stated that it was satisfied that the EL-HCM purchase represented value for money.

## **Project JP 2080: Phase 2B**

**5.46** Project JP 2080 Phase 2B received Government First Pass approval in July 2005. Defence has reported that this Project will be targeted to facilitate upgrades of ROMAN and PMKeyS to accommodate changes in user requirements, technical platforms and the commercial applications on which they are based.

**5.47** In December 2004, the Defence Capability Committee considered the First Pass<sup>59</sup> Initial Business Case for the PMKeyS element of JP 2080 Phase 2B. The Upgrade Project identified three broad capability options for the development and maintenance of PMKeyS:

- (a) maintain PMKeyS on PeopleSoft Version 7 and the Legacy Systems;
- (b) upgrade PMKeyS to PeopleSoft Version 8 and introduce ADF Payroll functionality; or
- (c) transition to a new system based on an alternate software platform.

**5.48** The Upgrade Project rejected Option (a) on the basis that it would not meet Defence's original capability goal of having a single HR and payroll system; and that support costs for the existing systems would increase over time. Option (c) was rejected on the basis that starting over would be a higher cost strategy; and may not result in a system that would be any more effective than the equivalent PeopleSoft application.

**5.49** The Upgrade Project put forward Option (b) as the lowest risk approach to meeting Defence's requirements for improved efficiency, accuracy, flexibility, archiving and deployability. The Defence Capability Committee agreed with the Upgrade Project's strategy of sole sourcing of the PeopleSoft Version 8 application.<sup>60</sup>

**5.50** The DPE did not consider the impact that this purchase decision would have on the subsequent evaluation of PMKeyS Upgrade Project options.

---

<sup>59</sup> In March 2004 the Government agreed to implement a new two-pass approval process for the approval of Defence major capital equipment projects. This process is designed to provide Government with improved visibility of the analysis of major capital equipment procurement projects, the viable options and their associated risks.

<sup>60</sup> Defence argued against moving to an alternative vendor through a competitive tender process on the basis of, inter alia, the: (a) significant disruption to business processes and higher training costs associated with the introduction of an alternate system; (b) the likely (but not determined) expectation of higher costs for an alternate system; (c) anticipated Upgrade Project delays; and (d) Defence's intention to maximise its to date investment in the PeopleSoft product.

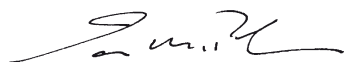
## Recommendation No.3

5.51 ANAO recommends that, when contemplating long-term contractual arrangements, Defence should explicitly consider the value for money implications for future project upgrades.

### *Defence Response*

5.52 Agreed.

---



Ian McPhee  
Auditor-General

Canberra ACT  
26 August 2005

# Appendix



## Appendix 1: Agency Response



Australian Government  
Department of Defence  
Inspector-General Group

2004/1058940/2  
IG 371/05

9 August 05

Mr Colin Cronin  
Executive Director  
Performance Audit Services Group  
Australian National Audit Office  
GPO Box 707  
Canberra ACT 2601



Dear Mr Cronin,

### ANAO PERFORMANCE AUDIT ON DEFENCE'S MANAGEMENT OF THE PMKEYS IMPLEMENTATION PROJECT

1. On 5 July 2005 you sought a Defence response to the Draft Section 19 Report on Defence's Management of the PMKeyS Implementation Project. This represents the culmination of Defence responses to the ANAO's Five Issues Papers provided to Defence in April 2005 and your Discussion Paper in May 2005. I now provide you with the whole of Defence response to the draft report at Annex A.
2. Defence notes that some of the responses provided to the ANAO discussion paper in June 2005 have been placed in the notes section of the relevant part of the report. These comments, as identified in the attached textual amendments, should be elevated into the body of the document; see Annex B.
3. My point of contact in this matter is Mr Daniel Huby (Tel: (02) 6266 4255, Fax: (02) 6266 4592 or email: [daniel.huby@defence.gov.au](mailto:daniel.huby@defence.gov.au)).

Yours sincerely,

*C Neumann*

Claude Neumann  
Inspector General

#### Annexes:

- A. Defence comments and response to Recommendations
- B. Amendments to the Draft Section 19 Report on Defence's Management of the PMKeyS Implementation Project

Defending Australia and its National Interest

## DEFENCE COMMENTS AND RESPONSE TO RECOMMENDATIONS

Defence accepts the thrust of the ANAO report and agrees with the recommendations and ANAO's lessons to be learnt from the project.

PMKeyS was a major HR business process change. The report does not acknowledge the significance and complexity of that change given it has involved moving the Services and the Department off purpose-built long running HR legacy systems to a common platform delivering HR business processes.

As acknowledged in the audit report, the PMKeyS version upgrade and integration of military payroll into PMKeyS is being managed through the Defence Capability Process under JP2080 Ph2B "Defence Management Systems Improvement Project". This will ensure that all major Information and Communication Technology (ICT) business system projects, including the PMKeyS Upgrade project, comply with government and departmental requirements in accordance with the Kinnard reforms, including the strengthened 1<sup>st</sup> and 2<sup>nd</sup> Pass approval process. This Project management arrangement reflects acceptance of recommendations from an independent Portfolio Evaluation report published in April 2002.

With implementation of PMKeyS, notable business process improvements include for leave administration (a single leave form is a part), tracking of ADF personnel in and out of the ADO, common recording of ADF individual readiness status, and organisation structure management. In addition major improvements in the availability of management information have been realised.

**Recommendation No. 1**  
**Para 2.30** ANAO recommends that the Defence Personnel Executive complete a stock take of the approvals of all existing material contracts to ensure administrative and legislative compliance.

*Defence response: Agree*

**Recommendation No. 2**  
**Para 3.22** ANAO recommends that the Defence Personnel Executive review its contract deliverable acceptance and payment processes to accord with Defence's Chief Executive Instruction for Payment of Accounts.

*Defence response: Agree*

**Recommendation No. 3**  
**Para 5.51** ANAO recommends that, when contemplating long-term contractual arrangements, Defence should explicitly consider the value for money implications for future project upgrades.

*Defence response: Agree*



# Index

---

## A

ADF Payroll, 19, 49, 57, 65, 70, 71, 72, 74, 75

## C

Certificate of Acceptance, 17, 47, 48, 52  
Compliance, 14, 21, 22, 36, 38, 43, 47  
Cost, 13, 14, 15, 16, 17, 18, 19, 20, 21, 28, 31, 33, 35, 37, 38, 39, 40, 45, 46, 50, 53, 55, 57, 58, 61, 64, 66, 71, 72, 74, 75

## D

Data quality, 19, 29, 63  
Deficiencies, 11, 19, 30, 31, 32, 62, 68, 74  
De-scoped, 55, 64, 65, 72

## F

Financial Management, 12, 14, 21, 36, 40  
Financial Statement Audit, 11, 29, 30, 63, 68  
Fixed price, 13, 15, 45, 47, 51  
Funding, 14, 15, 18, 20, 30, 31, 34, 37, 38, 39, 40, 41, 42, 43, 55, 60, 66, 72, 73, 74

## L

Lessons learnt, 20, 29

## M

Milestone, 17, 49, 50, 64, 69  
Minor Capital Submission, 14, 34

## N

Notional budget funding, 13, 18, 28, 42, 45, 57, 58

## P

Performance indicators, 21, 50, 74

Project Director, 16, 54  
Project JP 2080, 30, 31, 75  
Project Manager, 16, 17, 18, 53, 54, 59

## R

Real Cost Increase, 42, 43  
Rebates, 17, 50  
Remediation, 19, 21, 27, 30, 33, 64, 71, 73, 74  
Review Partner, 15, 29, 34, 44

## S

Schedule, 12, 14, 17, 19, 20, 21, 27, 29, 33, 46, 49, 53, 55, 61, 62, 64, 65, 72  
Scope, 11, 12, 14, 19, 27, 33, 38, 40, 50, 51, 52, 55, 58, 64, 65, 66, 68, 70, 71, 72  
SDSS Upgrade Project, 13, 27, 41  
Slippage (delays), 12, 13, 17, 36, 50, 55, 64, 66, 71, 75  
Software Vendor, 13, 15, 16, 17, 18, 20, 37, 44, 45, 46, 47, 48, 50, 51, 52, 53, 58, 59, 62, 64, 66, 70, 72  
Sole source, 19, 20  
Standard Defence Supply System (SDSS), 7, 13, 25, 26, 27, 37, 41  
Statement of Service, 48, 52, 53  
System performance, 51, 68, 70

## T

Time and material, 15, 16, 17, 53, 61  
Training, 11, 12, 13, 16, 18, 21, 26, 29, 33, 36, 46, 49, 55, 58, 61, 62, 63, 64, 69, 70, 71, 75  
Training Contractor, 16, 61, 63

## U

Unsolicited proposal, 74

## V

Value for money, 20, 22, 27, 75, 76



# Series Titles

---

Audit Report No.7 Performance Audit  
*Regulation by the Office of the Gene Technology Regulator*  
Department of Health and Ageing

Audit Report No.6 Performance Audit  
*Implementation of Job Network Employment Services Contract 3*  
Department of Employment and Workplace Relations

Audit Report No.5 Performance Audit  
*A Financial Management Framework to support Managers in the Department of Health and Ageing*

Audit Report No.4 Performance Audit  
*Post Sale Management of Privatised Rail Business Contractual Rights and Obligations*

Audit Report No.3 Performance Audit  
*Management of the M113 Armoured Personnel Carrier Upgrade Project*  
Department of Defence

Audit Report No.2 Performance Audit  
*Bank Prudential Supervision Follow-up Audit*  
Australian Prudential Regulation Authority

Audit Report No.1 Performance Audit  
*Management of Detention Centre Contracts—Part B*  
Department of Immigration and Multicultural and Indigenous Affairs

# Better Practice Guides

---

Public Sector Audit Committees	Feb 2005
Fraud Control in Australian Government Agencies	Aug 2004
Security and Control Update for SAP R/3	June 2004
AMODEL Illustrative Financial Statements 2004	May 2004
Better Practice in Annual Performance Reporting	Apr 2004
Management of Scientific Research and Development Projects in Commonwealth Agencies	Dec 2003
Public Sector Governance	July 2003
Goods and Services Tax (GST) Administration	May 2003
Managing Parliamentary Workflow	Apr 2003
Building Capability—A framework for managing learning and development in the APS	Apr 2003
Internal Budgeting	Feb 2003
Administration of Grants	May 2002
Performance Information in Portfolio Budget Statements	May 2002
Life-Cycle Costing	Dec 2001
Some Better Practice Principles for Developing Policy Advice	Nov 2001
Rehabilitation: Managing Return to Work	June 2001
Internet Delivery Decisions	Apr 2001
Planning for the Workforce of the Future	Mar 2001
Contract Management	Feb 2001
Business Continuity Management	Jan 2000
Building a Better Financial Management Framework	Nov 1999
Building Better Financial Management Support	Nov 1999
Managing APS Staff Reductions (in Audit Report No.49 1998–99)	June 1999
Commonwealth Agency Energy Management	June 1999

Cash Management	Mar 1999
Security and Control for SAP R/3	Oct 1998
Selecting Suppliers: Managing the Risk	Oct 1998
New Directions in Internal Audit	July 1998
Controlling Performance and Outcomes	Dec 1997
Management of Accounts Receivable	Dec 1997
Protective Security Principles (in Audit Report No.21 1997–98)	Dec 1997
Public Sector Travel	Dec 1997
Audit Committees	July 1997
Management of Corporate Sponsorship	Apr 1997
Telephone Call Centres Handbook	Dec 1996
Paying Accounts	Nov 1996
Asset Management Handbook	June 1996





