VICTORIAN
ombudsman

Letter to the Legislative Council and the Legislative Assembly

To

The Honourable the President of the Legislative Council

and

The Honourable the Speaker of the Legislative Assembly

Pursuant to sections 25 and 25AA of the *Ombudsman Act 1973,* I present to Parliament my report of an own motion investigation into ICT-enabled projects.

G E Brouwer
OMBUDSMAN

22 November 2011

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Foreword

1. The management of information and communication technology enabled (ICT-enabled) projects at the state, national and international level, in both the private and public sectors, has been the subject of considerable research and debate over recent years. The consensus is that these projects are often poorly managed and failures are common.

2. In Victoria over the last few years, in our respective roles as Auditor-General and Ombudsman, we have tabled in Parliament a number of reports relating to ICT-enabled projects. These reports have identified significant shortcomings in the public sector's management of such projects and have included numerous recommendations about how such management can be improved.

3. Despite these reports, we see little sign of lessons learnt in the public sector. The evidence to date is that the public sector is not managing ICT-enabled projects effectively, as demonstrated by the current difficulties that Victoria is facing in this area and the increasingly adverse public comment about major ICT-enabled projects. A new and more disciplined approach is required if the government is to avoid being faced with continuing cost overruns and failures to deliver.

4. This investigation was conducted by the Victorian Ombudsman under the *Ombudsman Act 1973* and two of the Auditor-General's staff were seconded to the project.

5. The investigation has examined 10 major ICT-enabled projects in the Victorian public sector. It identified that despite the extensive guidance and literature available, agencies are making the same mistakes around planning, governance, project management and procurement that our offices have observed and reported on for some years. This includes the lack of accountability of those responsible for these project failures, especially senior agency executives and the Department of Treasury and Finance.

6. We recommend a strong and coherent framework for the development of future ICT-enabled projects. This report advises on how projects can be better managed in the future. Given the significant rate of change in ICT, it is also imperative that any management framework has sufficient flexibility to respond quickly and effectively to change.

7. The report makes 58 recommendations that if adopted will improve the way that current and future ICT-enabled projects are planned and delivered.

8. We both strongly support the conclusions and recommendations made in this report.

G E Brouwer
OMBUDSMAN

D D R Pearson
AUDITOR–GENERAL

Executive summary

9.   In the current technological environment, the government would be unable to function without efficient and effective information and communication technology (ICT). ICT systems store and communicate information about government business and in many cases are used to administer front line services to the public. Despite this, many government ICT systems are dated and lack the required functionality.

10. In Victoria over the last few years, government ICT projects have often been in the media for the wrong reasons. There have been a number of high profile cost and time blow-outs in ICT and both the Auditor-General and I have tabled reports in Parliament that relate to ICT-enabled projects. These reports have included numerous recommendations for the better management of ICT-enabled projects.

11. National and international research has concluded that ICT-enabled projects are poorly managed and failures are common. Research also indicates that the private sector and overseas institutions have their share of ICT project disasters with reports of cost overruns of 200 per cent, schedule overruns of 70 per cent and some 80-90 per cent failing to meet performance objectives.[1]

12. Despite the research and Ombudsman and Auditor-General reports, there are few signs that any lessons have been learnt in the public sector.

13. Each of the 10 projects I examined failed to meet expectations; most failed to meet delivery timeframes; and all ran over budget. The original budgets for these projects totalled $1.3 billion. The latest estimated cost is $2.74 billion – an additional $1.44 billion cost to government.

Each of the 10 projects I examined failed to meet expectations and all ran over budget.

14. On average, projects will have more than doubled in cost by the time they are finished. Two of the projects will have more than tripled their original budgets in order to reach completion: **CRIS**, originally budgeted at $22 million, has cost $70 million; and **Link**, originally budgeted at $59 million, would cost $187 million if it were to be completed. Together, the two largest projects will require almost $600 million more than originally planned: **myki**, originally costed at $999 million, will require at least an additional $350 million to complete and **HealthSMART**, originally budgeted at $323 million, will require an additional $243 million to complete.

On average, projects will have more than doubled in cost by the time they are finished.

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1   B. Flyvbjerg and A. Budzier, 'Why Your IT Project May Be Riskier Than You Think', *Harvard Business Review,* 2011; Dr R. Young, *Case Studies- How Boards and Senior Management Have Governed ICT Projects to Succeed (or Fail),* Standards Australia, Sydney, 2006.

15. There has also been abject waste. Victoria Police spent $59 million on **Link** over four years, only for it to be cancelled. VicRoads spent $52 million on **RandL** which has not yet made it past the design phase. There is also a cost attached to delay: in many of the projects I examined, delay was a significant cause of cost overruns.

16. The overall figures quoted above are significant. They represent many foregone hospital beds, trains, teachers, police and child protection workers. It is critical that government manages and reins in these costs if it is to achieve better outcomes.

Common themes

17. My investigation identified a number of common mistakes and problems with how ICT-enabled projects are managed. Generally, these issues are not new. They have been discussed in previous reports by the Auditor-General and me, as well as in other literature published nationally and internationally on ICT-enabled projects. In many ways, this makes my conclusions even more concerning as agencies should have been aware of the key issues in ICT-enabled projects and taken steps to address these.

1. Leadership, accountability and governance

18. Too often, there was muted acceptance that all ICT-enabled projects go wrong; responsibilities were so diffused that it was difficult to identify who was accountable; or there was a tendency to blame those previously involved. Leadership from the top is required if this is to change.

Key issues

- Roles and responsibilities for ICT-enabled projects were often not clearly defined, acknowledged and accepted.

- Senior officers appeared reluctant to make critical decisions about projects.

- Many of the project steering committees[2] did not have the requisite expertise.

- The Department of Treasury and Finance (DTF) could have taken a more pro-active role in many of the projects.

- The effectiveness of DTF's Gateway Review process was limited by its reliance on agencies engaging in and being supportive of the process, which often was not the case.

- The government announced its 'high-value and high-risk' process in December 2010; however, there is limited publicly available information about the process and some witnesses from DTF and departments remained unclear about it.

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2   The terms 'steering committee' and 'project board' are used interchangeably, but both refer to a governing body. I have used the term 'steering committee' throughout this report.

2. Planning

19.   None of the projects investigated was well planned. Agencies failed to commit the necessary time and effort into planning and business case development, which led to significant differences between the planned and actual time, costs and outcomes.

Key issues

- In some cases, optimism bias led to costs and timelines being based upon hope, rather than evidence or comparisons with similar projects and despite advice from experts and vendors.

- Agencies often gave the government no choice other than to invest in the agency's preferred option and failed to provide government with adequate advice to make an informed decision.

- Business cases for many of the projects were not updated throughout the life of the projects. In some cases, they were not read by key people.

- Insufficient attention was given to managing or mitigating risks.

3. Funding

20.   The current model for funding major ICT-enabled projects needs improvement. My investigation identified that it can lead to insufficient or inconsistent oversight of public expenditure and inadequate planning or confirmation of cost estimates. It can also encourage agencies to create 'big vision' projects, which are inherently complex and risky.

Key issues

- Agencies felt the need to create 'big vision' projects to capture the government's attention, which increased complexity and risk.

- In some cases the Cabinet budget committee[3] only partially funded projects, but agencies failed to revise the scope of the projects to fit within the allocated budget.

- Public announcement of major project funding decisions prior to business case development resulted in business cases being rushed and projects being 'shoe-horned' into the published funding ceiling.

- The costs and timelines of comparative projects were sometimes ignored.

- Projects funded internally have not been subject to the same level of scrutiny as projects funded by the Cabinet budget committee.

- Agencies were unable to identify the cost of significant projects with any accuracy.

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3   Following the 2010 Victorian State Election, the new government replaced the Expenditure Review Committee (ERC) of Cabinet with the Budget and Expenditure Review Committee (BERC). As these two committees both reviewed project funding requests, for ease of reading, I have referred to the 'Cabinet budget committee' throughout this report.

4. Probity and procurement

21. In large, complex ICT-enabled projects, it is particularly important that agencies adopt rigorous probity and procurement practices. However, my investigation identified a 'tick-the-box' approach to probity and procurement practices that failed to make the most of purchasing opportunities.

Key issues

> • Agencies appeared to pay limited regard and expended minimal funds on probity advice and audit.
>
> • Agency and probity practitioner responses to conflict of interest sometimes failed to recognise the importance of the perception of a conflict of interest.
>
> • Agencies tended to purchase off-the-shelf systems and customise them to such a degree that the benefits were lost to government.
>
> • Government should explore new procurement methods for ICT-enabled projects.
>
> • Large vendors are well-versed and experienced in contract negotiations, putting relatively inexperienced government staff at a disadvantage.

5. Project management

22. Many resources exist that can assist agencies to manage ICT-enabled projects well, including the Auditor-General's guide, *Investing Smarter in Public Sector ICT: Turning Principles into Practice.*[4] However, the public sector's lack of competence in ICT contributed to its inability to manage ICT-enabled projects and to project failures. It also led to a dependency on expensive, contracted staff who often do not share public sector values. More work is required to attract skilled ICT staff to government.

Key issues

> • Several agencies failed to act with enough urgency to address potential problems and in doing so allowed the issue to escalate.
>
> • There is a shortage of skilled senior project managers with relevant ICT experience in government. To compensate, agencies often appoint expensive contractors or inexperienced public sector staff.
>
> • Managing vendor and user relationships can be a complex exercise and agencies have adopted differing approaches to this problem with different degrees of success.
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> • Approaches to training staff were varied and not always effective.

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4   Victorian Auditor-General's Office, *Investing Smarter in Public Sector ICT: Turning Principles into Practice* (2008) <www.audit.vic.gov.au>.

Framework to better manage ICT-enabled projects

23. The framework within which agencies seek funds, manage and review projects needs to be improved. Many consider that ICT-enabled projects should be treated no differently than other significant business projects. However, the scale of the problem suggests that significant ICT-enabled projects should be treated as a special case at least until the bureaucracy is sufficiently experienced to handle these projects well.

24. It is in this light that I have developed a framework that builds on current guidance and advice from the Auditor-General and DTF and provides a practical solution to many of the problems commonly encountered. The framework contains 42 recommendations based around the following five common themes. I have also made 16 recommendations in relation to the 10 projects I investigated. The government may wish to consider establishing a sub-committee of Cabinet to oversee the ongoing delivery of ICT-enabled projects and the implementation of my recommendations, which I consider should be applied to such projects over $20 million.

Leadership, accountability and governance

- Agency executives are to show stronger leadership; robust governance practices are to be implemented; and project staff are to be held to account for the performance of ICT-enabled projects.

- The role of DTF in ICT-enabled projects is to be enhanced and the value of Gateway as a mechanism for external oversight and accountability is to be capitalised.

Planning

- Business cases for some of the projects I examined were not subjected to adequate scrutiny. I have made recommendations to improve the level of scrutiny applied. The government's 'high-value and high-risk' process introduced in 2010 also provides for increased scrutiny of business cases.

Funding

- Agencies are to adopt a whole of life approach to costing and funding major ICT systems and DTF is to assist by establishing a maintenance and replacement fund for these systems.

- The government is to consider refining how projects are funded to make agencies more accountable to government throughout the life of major ICT-enabled projects.

Probity and procurement

- Agencies are to adopt stricter probity practices.

- Agencies are to adopt robust approaches to purchasing ICT systems; DTF is to explore the potential to harness best practice procurement practices from other countries; and the Victorian Government Solicitor's Office is to examine and endorse all proposed contracts before they are signed to ensure the contract protects the interests of the state.

Project management

- Agencies are to adopt established project management methods.

- DTF and the State Services Authority (SSA) are to develop strategies to recruit and retain skilled ICT staff within government and better monitor the quality of work provided by contractors.

Background

What is ICT?

25.   ICT 'covers all forms of computer and communications equipment and software used to create, design, store, transmit, interpret and manipulate information in its various formats. Personal computers, laptops, tablets, mobile phones, transport systems, televisions, and network technologies are just some examples of the diverse array of ICT tools'.[5]

26.   ICT lies at the heart of all government operations. It provides the tools for day-to-day communications, as well as time and document management within the office. It holds the data related to the business of each government agency, which is increasingly being analysed and is providing essential information to government for planning and policy development. ICT plays a significant part in the lives of people in the community and provides the mechanism by which government is involving and informing the community about its activities.

27.   My investigation has examined ten ICT-enabled projects – these are projects seeking to transform government business and services, which are enabled by ICT. It is important to understand the difference between a 'technology' project (for example, the replacement of an item of communications equipment) and a business transformation project enabled by ICT. While the former may be the responsibility of ICT experts, the latter must be driven by the business to succeed.

History

28.   In 2005 I reported on significant problems with the Victoria Police Law Enforcement Assistance Program (LEAP) database system and recommended its replacement.[6] In 2005 and 2007 I recommended the development of a new system to manage VicRoads' registration and licensing processes.[7] It is now 2011 and despite the expenditure of many millions of dollars, little if any progress has been made to develop new systems.

29.   In 2008, the Auditor-General raised similar concerns regarding the disappointing results of ICT-enabled project developments in Victoria and published a guide, *Investing Smarter in Public Sector ICT: Turning Principles into Practice.*[8]

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5   University of Queensland, *What is ICT?* (2011) <http://www.uq.edu.au/ict/what-is-ict>.

6   Office of Police Integrity, *Investigation into the Victoria Police's Management of the Law Enforcement Assistance Program (LEAP)* (2005) <www.opi.vic.gov.au>. I tabled this report in my previous capacity as Director, Police Integrity.

7   Victorian Ombudsman, *Own motion investigation into VicRoads registration practices* (2005) and *Investigation into VicRoads Driver Licensing Arrangements* (2007) <www.ombudsman.vic.gov.au>.

8   Victorian Auditor-General's Office, *Investing Smarter in Public Sector ICT: Turning Principles into Practice* (2008) <www.audit.vic.gov.au>.

30.   In 2009 and 2010, I tabled in Parliament two reports into Child Protection, Department of Human Services (DHS) and I commented on the operation of the **Client Relationship Information System (CRIS)**.[9] I made recommendations for it to be reviewed; however, the **CRIS** system is still struggling to meet the needs of the department.

31.   There has also been wide media coverage over recent years of other government ICT-enabled projects, such as the new public transport ticketing system (**myki**) and **HealthSMART**, which have been criticised for not meeting budget and delivery deadlines and failing to meet expectations. The costs of these systems are significant and have spiralled to levels well beyond those estimated at the commencement of each project.

32.   These problems and issues are not confined to Australia or the public sector. Research indicates that the private sector and overseas institutions have their share of ICT project disasters. An article in the Harvard Business Review of September 2011[10] states that 'one in six of the projects [examined had] a cost overrun of 200% on average, and a schedule overrun of almost 70%'.

33.   In Australia, a Standards Australia publication in 2006[11] cited:

  • 15-28 per cent of ICT projects are abandoned before completion

  • 30-40 per cent of ICT projects experience some form of escalation with cost overruns averaging 43-189 per cent

  • 30-40 per cent of projects are implemented without perceptible benefits

  • 80-90 per cent of ICT investments fail to meet their performance objectives.

34.   These figures and cases are disturbing and led me to question the ability of government to efficiently and effectively manage the development and implementation of ICT-enabled projects. In examining this question, I have been mindful that at the Federal level, Sir Peter Gershon undertook the *Review of the Australian Government's Use of Information and Communication Technology* in 2008 and in March of this year, the United Kingdom's Cabinet Office released a paper on Government ICT Strategy aimed, among other things, at strengthening governance and reducing waste and project failure.

Investigation

35.   With the above in mind, I met with the Auditor-General and we agreed that it was timely to review Victorian government ICT-enabled projects. We agreed the investigation would best be undertaken under the provisions of section 14 of the *Ombudsman Act 1973* (the Ombudsman

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9   Victorian Ombudsman, *Investigation into the Department of Human Services Child Protection Program* (2009) and *Own motion investigation into Child Protection - Out of Home Care* (2010) <www.ombudsman.vic.gov.au>.

10   B, Flyvbjerg and A. Budzier, 'Why Your IT Project May Be Riskier Than You Think', *Harvard Business Review,* 2011.

11   Dr R. Young, *Case Studies- How Boards and Senior Management Have Governed ICT Projects to Succeed (or Fail),* Standards Australia, Sydney, 2006.

Act), with the assistance of performance and financial audit staff from the Victorian Auditor-General's Office (VAGO).

36. I would like to take this opportunity to express my appreciation to the Auditor-General for providing two experienced staff to assist with this investigation. Their contribution has been significant and has also been positive in fostering stronger working ties between the two offices.

37. On 13 April 2011, I informed the Premier of this investigation and on 21 April 2011, I informed the relevant Ministers and principal officers.

38. I decided to investigate 10 high-risk, high-dollar and complex projects across a range of departments and agencies in the Victorian public sector. In my view, these represent a significant sample of government ICT-enabled projects. These are:

    1. Link, Victoria Police

    2. HealthSMART, Department of Health (DOH)

    3. myki, Transport Ticketing Authority (TTA)

    4. Registration and Licensing – RandL, VicRoads

    5. Client Relationship Information System – CRIS, Department of Human Services (DHS)

    6. Ultranet, Department of Education and Early Childhood Development (DEECD)

    7. Integrated Courts Management System – ICMS, Department of Justice (DOJ)

    8. Property and Laboratory Management – PALM, Victoria Police

    9. HRAssist, Victoria Police

    10. Housing Integrated Information Program – HIIP, Office of Housing[12] (Housing), DHS).

39. This investigation was initiated to determine:

     • whether the projects were over-budget and/or delayed and the reasons for this

     • whether the ICT systems met the needs for which they were designed and if not, what went wrong

     • who should take responsibility for project failures

     • what are the lessons to be learned.

40. An objective of the investigation was to make recommendations for the future management of significant ICT-enabled projects in government.

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12   A division of the Department of Human Services.

41. My investigators met with or formally interviewed over 100 people, including public officers, contractors, private sector individuals, industry experts, Ministers and secretaries. Three parties requested legal representation and this was agreed to. My investigators also conducted site visits to two child protection offices (regarding **CRIS**), two housing offices (regarding **HIIP**), three hospitals (regarding **HealthSMART**), two regional education offices (regarding **Ultranet**) and the Supreme Court (regarding **ICMS**).

42. While there are many people involved in the management of these projects, my investigation concentrated on senior project staff, business owners and users of the systems who had a significant influence on, and interest in, the projects' outcomes.

Cabinet documents

43. In May 2011, I sought a range of Cabinet documents from the Department of Premier and Cabinet. As the documents concerned the current and former government, the Secretary, Department of Premier and Cabinet consulted with both the Premier and the Leader of the Opposition in relation to my access to the documents.

44. In September 2011, the Secretary, Department of Premier and Cabinet informed me that the current government's documents would not be provided as the Attorney-General had formed the view and certified that the requested documents relate to 'the deliberations of Ministers' for the purposes of section 19(1) of the Ombudsman Act. This is the first occasion of which I am aware of an Attorney exercising his power to certify under section 19, the effect of which is to make the facts certified conclusive.

45. The Leader of the Opposition also relied on section 19 to refuse my request for the former government's Cabinet documents basing his view, at least in part, on the current government's practice.

46. Section 19 provides that I may not compel the provision of such documents, but it does not prevent access being provided. I am concerned that the willingness to rely on section 19 as a basis for refusal unnecessarily impedes my investigation. In saying that, I accept that the security of Cabinet information is essential for the maintenance of effective government; but such security should not (and in the past did not) necessitate Cabinet documents being withheld when relevant to my investigations. While in the past, departments and Ministers generally provided access to Cabinet material when requested, it was on the basis that section 19 is discretionary, not obligatory.

47. I consider that this investigation was hampered by these section 19 decisions as my investigators were unable to review funding submissions to the Cabinet budget committee to assess the adequacy of advice provided to the government by the relevant agencies and central government. I was also unable to access a review conducted into **myki**

in 2011, which informed the government's decision of the project; and a review conducted into the VicRoads **RandL** project in 2011.

48. I note that the Victorian Auditor-General has a statutory entitlement to access Cabinet documents and I am unaware of any reason beneficial to good and open government for my office not to have similar access. I consider that the government should give consideration to the early repeal of section 19.

CenITex

49. In July 2011, I decided to add CenITex to the scope of my investigation. CenITex is an ICT shared services agency set up as a State Owned Enterprise by the Victorian Government to centralise ICT support to government departments and agencies.[13] I proposed to investigate whether CenITex was meeting its objectives in terms of value for money and delivery of services, owing to concerns raised with me about these issues.

50. In September 2011, the Hon. Gordon Rich-Phillips, Minister for Technology and Assistant Treasurer informed my office that he had requested the State Services Authority (SSA) to conduct a full review of CenITex. I obtained a copy of the terms of reference of the investigation, which indicated that there would be significant duplication of effort by my office and the SSA. As a result, I decided to remove CenITex from the scope of my investigation. I understand the SSA review is to be completed by February 2012.

Report structure

51. My report is divided into three sections:

   1. **Common themes**

      A discussion of the common concerns identified across the 10 projects I examined.

   2. **Framework to better manage ICT-enabled projects and recommendations**

      A list of 42 recommendations, which address the common concerns and provide a strong framework for the management of ICT-enabled projects in the future.

   3. **Case studies**

      A synopsis of the events, key issues and cost and delivery timelines for each of the 10 projects, as well as recommendations for each project.

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13   I have used the term 'agencies' to include government departments and statutory bodies, for ease of reference throughout this report.

Common themes

52.   My investigation of Victorian government information and communication technology-enabled (ICT-enabled) projects identified a number of common concerns around:

- leadership, accountability and governance

- planning

- funding

- probity and procurement

- project management.

53.   Generally, the issues that I have identified are not new. They have been discussed in previous reports by the Auditor-General and me, as well as in other literature published nationally and internationally on ICT-enabled projects. In many ways, this makes my conclusions even more concerning as agencies should have been aware of the key issues in ICT-enabled projects and taken steps to mitigate these.

1. Leadership, accountability and governance

Key issues

- Roles and responsibilities for ICT-enabled projects were often not clearly defined, acknowledged and accepted.

- Senior officers appeared reluctant to make critical decisions about projects.

- Many of the project steering committees did not have the requisite expertise.

- DTF could have taken a more pro-active role in many of the projects.

- The effectiveness of DTF's Gateway Review process was limited by its reliance on agencies engaging in and being supportive of the process, which often was not the case.

- The government announced its 'high-value and high-risk' process in December 2010; however, there is limited publicly available information about the process and some witnesses from DTF and departments remained unclear about the process.

Who is accountable for the project?

54. My investigators found that roles and responsibilities for ICT-enabled projects were often not clearly defined, acknowledged and accepted. Key documentation such as business cases, contracts or terms of reference often do not clearly identify roles and responsibilities.

55. In some projects agencies prepared formal statements of responsibility, particularly relating to the role of steering committees. However, even where it was clear who was responsible for project shortcomings, agencies seemed reluctant to hold them to account and I saw very little evidence of staff movements as a result of poor project performance. Of all the projects examined, only two instances illustrated that the failure to achieve a significant project delivery led to the departure of a senior officer, and both these related to the same project - **myki**. Even in these circumstances, there was no official confirmation that their departures were linked with project failure, and at least one of the individuals was moved on to another opportunity in the public sector. Ultimately, accountability for these projects rests with the principal officer of the agency. If the project runs over budget and time, and fails to deliver, then they should be held to account.

56. At a lower level, I saw evidence that project staff were rewarded for their part in projects that ran over budgets and timelines. Agencies need to be wary of the external impressions created where staff are seen to be rewarded for their participation in such projects. Working hard in itself is not a justification for reward, which should be tied to high levels of performance and achievement of defined goals.

57. Some witnesses displayed a lack of understanding of the principles of accountability and often responsibilities were so diffused (among

steering committees and the like), that no one individual could be or was held to account.

58. At interview, witnesses stated that projects need experienced, committed business users to take responsibility and control of projects, having a strong vested interest in seeing the project through to completion effectively and quickly. However, my investigators found that given the length of time some projects ran, staff would move on, making it difficult to hold the right people to account for the project delays and overruns. The longer a project runs, the greater the opportunity to lay blame on predecessors. Agencies need to think carefully about whom they assign to projects and how to achieve continuity throughout the project.

A lack of leadership

59. Senior officers in agencies were often reluctant to make critical decisions about projects such as placing them on hold or terminating contracts. Projects seemed to develop a momentum once they were started and good money was often thrown after bad.

60. One project manager explained that senior officers have their careers vested in the success of these projects and are therefore reluctant to admit defeat. There was also an often unfounded optimism that success was just around the corner and that renewed commitments would see outcomes delivered. Against this backdrop there was a tendency to continue rather than terminate a project or contract, which brought public scrutiny and criticism – not to mention significant wasted expenditure.

61. In a number of projects I examined – **myki**, **HRAssist** and the **Integrated Courts Management System (ICMS)** for example – serious consideration was given to cancelling the contracts and re-evaluating the projects. Such decisions were not taken. In contrast, the initial contract for the **Housing Integrated Information Package (HIIP)** project was terminated by the Office of Housing (Housing) owing to poor vendor performance and it was later re tendered: some have suggested that the subsequent contract should also have been terminated. A decision, albeit tardy, was also made recently by Victoria Police to cancel the **Link** project.

62. Where a project is no longer viable, desirable or achievable, leaders need to step up and make tough decisions. There needs to be a shift away from seeing cancelling projects as a sign of failure. Rather, it is often an indication of the high risks associated with ICT-enabled projects and the rate of change in technology and the public sector.

63. It is important that secretaries and Ministers provide more critical oversight of ICT-enabled projects. I identified few examples of departmental secretaries becoming actively involved in failing projects or holding their executives to account for failures. The Secretary, Department of Health (DOH) became actively involved in the **HealthSMART** project after ongoing, poor vendor performance. She held teleconferences with the vendor's chief executive in the United

States and demanded better resources be placed on the project. Her intervention was successful. In response to my draft report, the Secretary, DOJ stated that she was 'personally involved in discussions with vendor's executives at critical points during the [**ICMS**] project delivery'.

64. In contrast, the **HIIP** project was allowed to run three years behind schedule before the Secretary, Department of Human Services (DHS) became directly involved by initiating an independent review and subsequently engaging an independent Project Director. In my view, the Secretary should have become more actively involved much sooner.

Poor governance

65. I identified differing arrangements for the governance of major ICT-enabled projects. While all had project managers, in some cases more than one, some had:

   • steering committees (sometimes referred to as project boards), of which some had executive responsibility while others performed an advisory role only

   • executive sponsors or senior responsible officers

   • a project management office[14] to support the project.

   These resources were often public sector employees but in many cases, contractors were employed in these roles.

66. In my view, the nature of the arrangements an agency has in place to govern such projects are less important than having a clear understanding of:

   • what and where responsibilities lie

   • how decisions can be best made to expeditiously and effectively progress the project

   • how accountability is measured and effected.

67. It is also important that those charged with the responsibility have the appropriate level of authority. For example, the **myki** board had regulated responsibility to deliver the **myki** system yet it did not have the authority to agree to or expedite policy changes. This impacted on project delivery.

68. Having a well functioning steering committee (the committee) is integral to the success of a project and should include a committee chairperson who is ultimately responsible for the project with the advice of the committee. The committee must have people with relevant experience to provide advice. In this regard, some of the projects I examined did not have IT and business experts, users or independent members. Some also invited vendors to meetings, while others did not. I consider vendors should have a direct line of communication to the agency executive responsible for the project or the chairperson of the steering committee to ensure the executive or chairperson are fully informed about the project.

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14 A project management office should assist the project team by maintaining organisational standards for project management and advising on methods and processes.

69.	The steering committee must not only have relevant experience, it must challenge the project manager about failure to meet milestones and ask the hard questions in order to drive the project to success. In this regard, the initial **myki** board lacked the experience to challenge the Transport Ticketing Authority (TTA) about the project; the **Property and Laboratory Management (PALM)** project steering committee 'seemed quite happy to accept excuses and promises' according to one witness and failed to take timely action to address delays.

Role of the Department of Treasury and Finance

70.	Historically, it has been optional to have a DTF representative on a steering committee. This was generally at the request of the agency and not at the instigation of DTF. Most of the projects I investigated did not have a DTF representative and of those projects that did, there was little clarity about their role. Nothing was documented. It is also unclear how DTF selected individuals to be on committees – one DTF representative self nominated. In response to my draft report, the Secretary, DTF advised that DTF targeted its representation on steering committees on more complex and/or higher risk projects. I note that DTF was represented on less than half of the 10 high-risk, high-dollar and complex projects I investigated.

71.	Two DTF steering committee representatives told my investigators that their role on the committee was not considered as part of their performance review and they were not accountable to anyone at DTF in relation to this role. The representatives said they did not report back to DTF about the project's performance, overspends or delay: they saw their responsibility as advising the agency, not DTF. Some agency staff stated that they saw the role of the DTF representative to support the project in discussions at DTF. In response to my draft report, the Secretary, DTF confirmed that performance plans may not necessarily specify individual tasks, such as representing DTF on steering committees. He stated they would be clear about their accountabilities. However, this is contrary to evidence received from DTF officers.

72.	DTF has a vested interest in protecting the state's financial interests, and as such it has an interest in making sure that projects are delivered on time, on budget and that they meet objectives. DTF has been involved in most of the projects in some way, whether that be through advising the Cabinet budget committee on a funding submission or through membership on steering committees.

73.	In my view, DTF needs to play a stronger role in ICT-enabled projects. While it is ultimately the agency that is the owner of the project and is accountable for the project's success, DTF should be responsible for ensuring the expenditure on these projects is in the public interest.

74.	The government has signalled a move in this direction through its 'high-value and high-risk' process. This process institutes a number of changes

for projects that are considered high-risk (for example, some ICT-enabled projects) or high-value (over $100 million total estimated investment) including greater oversight and continuing involvement of the Treasurer. While this process was instigated by the government in December 2010, there is limited publicly available information about the process and some witnesses from DTF and departments remained unclear about the details of the process.

75.   In response to my draft report, the Secretary, DTF stated that DTF had exercised accountability in relation to the key projects that have been the subject of this review. He further stated that the 'high-value and high-risk' framework has been implemented.

The Gateway Review process

76.   DTF's Gateway Review process (Gateway) should provide an independent assessment of government projects at six key points (gates) in the project. The process requires a team of four independent reviewers to assess the project against pre-determined criteria. Each review is conducted over four days and results are reported to the senior responsible officer (SRO) only. I identified the following concerns about the effectiveness of Gateway in relation to the projects investigated:

- **Participation in Gateway is not mandatory**
  There was no consistency about whether reviews were undertaken, or what gates were completed. The ability of agencies to opt-in and out of specific gates undermines the effectiveness of the program.

- **Addressing recommendations arising out of Gateway is not mandatory**
  Some recommendations were addressed; others were ignored. The documentation I sighted suggested some agencies regularly continued to progress projects despite receiving red or precautionary amber lights. The lack of accountability for addressing Gateway recommendations undermines the value of Gateway as a mechanism for external oversight.

- **There is no reporting to the agency executive**
  Gateway reports were only provided by the Gateway team to the SRO of the project and there was no onus on that person to report concerns to more senior agency staff or to the steering committee. In one case, the SRO was also the project manager, which again diminished the level of scrutiny on the project. It was only when a project received two consecutive red lights that the departmental secretary was notified.

- **There were concerns about the qualifications and appropriateness of reviewers**
  At interview, some agency staff questioned the ability of reviewers to understand the complexities of their projects. They also expressed concerns about reviewers who were too focused on process and who were unable to provide practical advice or assistance.

- **There was insufficient focus on Gate Six, Benefits Realisation**
  Gate Six examines whether the benefits in the business case
  have been realised. Only one of the projects I investigated
  engaged in Gate Six, another is scheduled for November 2011.
  DTF representatives interviewed did not place great emphasis on
  Gate Six as the opportunity to influence the project has passed
  by this stage. Post implementation reviews are important to
  measure whether the project has achieved its benefits and to
  identify learnings for the agency and government regarding project
  successes and failures.

77. The 'high-value and high-risk' process has resulted in key changes to
     Gateway, including a requirement that Gates One to Six be completed
     for 'high-value and high-risk' projects and that any red lights for Gates
     One to Four be reported to the Treasurer. While I note the government's
     renewed focus on external oversight and accountability, in its historical
     form, Gateway has relied heavily on agencies engaging in and being
     supportive of the process, which often is not the case. DTF seems to
     have viewed its role as making the Gateway process available, but has
     not previously capitalised on the value of Gateway as a mechanism
     for external oversight and accountability. I consider DTF's changes to
     Gateway are necessary and that they would have been of benefit to
     the projects examined by my office. In response to my draft report, the
     Secretary, DTF stated:

     > The Gateway process was not intended as a mechanism for ensuring
     > the external accountability of project owners ... [Gateway] was
     > designed to encourage departments to undertake Gateway reviews
     > and to actively and openly participate in the review process (rather
     > than treating such reviews as a compliance exercise) and to learn
     > from review findings. We believe that this approach has been largely
     > successful.

78. I consider that there was an earlier opportunity to bring further rigour
     to the management and oversight of complex and high-risk projects by
     enhancing the Gateway process. Agencies did not universally adopt the
     process for projects that would have benefited from Gateway Reviews.

79. I have made a number of recommendations in relation to Gateway later
     in my report, including that Gateway be mandatory for all ICT-enabled
     projects over $20 million. This should apply not only to future projects,
     but to current projects, such as the VicRoads Registration and Licensing
     (**RandL**) project and **HealthSMART**, in order to minimise the problems
     with these projects. In this regard, the Secretary, Department of Health
     advised that **HealthSMART** is already subject to Gateway Reviews. The
     Chief Executive Officer, VicRoads also noted that the **RandL** project has
     been subject to Gateways 1-4.

2. Planning

Key issues

- Agencies failed to commit the necessary time and effort to develop business cases, which led to significant differences between the planned and actual time, cost and outcomes.

- In some cases, optimism bias led to costs and timelines being based upon hope, rather than evidence or comparisons with similar projects and despite advice from experts and vendors.

- Agencies often gave the government no choice other than to invest in the agency's preferred option and failed to provide government with adequate advice to make an informed decision.

- Business cases for many of the projects were not updated throughout the life of the projects. In some cases, they were not read by key people.

- Insufficient attention was given to managing or mitigating risks.

Poorly developed business cases and optimism bias

80.   My investigation identified that agencies failed to commit the necessary time and effort in business case development, which led to significant differences between the planned and actual time, cost and outcomes. This is a clear failure to recognise that the early stages of a project provide the greatest opportunity to influence project outcomes and costs.[15]

81.   The importance of a sound business case was not well understood. Business cases appear to have been viewed only as a mechanism to obtain funding and some agencies have approached them with a 'tick-the-box' mentality. In at least one project, the business case was not read by the project's executive sponsor or DTF representative.

82.   A business case provides the government with the information required to make a fully informed decision whether to fund a new investment. It also should provide a compelling, evidence-based argument for the preferred option as well as discussing the viability of other options. It is the vehicle for the agency to articulate all elements of a project – options, timeframes, costs, objectives, milestones, risks and resources. It is the roadmap for the project.

83.   Many of the business cases that I examined failed to satisfy these requirements. For example, the **Link** business case was rushed to meet government budget deadlines. As a result, the business case significantly underestimated the costs and complexity of the project, which was suspended four years later when the true costs and complexity were identified. This ultimately contributed to the failure of the project.

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15   Department of Treasury and Finance, *Business Case Guidelines,* Victorian Government, Melbourne, 2006 cited in Victorian Auditor-General's Office, *Investing Smarter in Public Sector ICT: Turning Principles into Practice* (2008) <www.audit.vic.gov.au>.

84.   **HealthSMART** had no business case, despite seeking over $300 million in funding. Instead the funding submission was based on a high-level strategy document and a 14-page implementation plan.

85.   In most cases, I also identified a level of optimism bias, which is a well recognised 'tendency for project appraisers to be overly optimistic'[16]. In the ICT-enabled projects that I examined, this manifested as a propensity to be over-optimistic about timelines; to overestimate benefits; and to underestimate costs and complexity. In some cases, costs and timelines appeared to be based upon hope, rather than evidence or comparisons with similar projects conducted elsewhere nationally or internationally, and in spite of advice from experts and vendors. It may also be a reflection of a perceived need to present best case scenarios to have any success in achieving project funding. Optimism bias led to significant delays, cost overruns and unachieved benefits in several projects, including:

- The **Ultranet** project suffered from inadequate upfront planning and a general disregard for industry and Gateway advice, which indicated the project could not be delivered within the budget and timelines. Ignoring this advice resulted in a failed tender that cost around $5 million. It also set the project back by a year and damaged the reputation of **Ultranet**.

- The revised **HIIP** business case indicated the project would be completed by December 2008. All the vendors who responded to the tender said achieving completion by this time was 'virtually impossible'. It appears the aggressive timeline was driven by the previous failure of the **HIIP** project and a desire to push the people involved. The project is yet to be completed.

- The **myki** business case indicated the project would be delivered within two years – this was when the contract for the existing ticketing system expired. No other project of this type had been completed in less than five years. Unsurprisingly, the two-year timeline was not achieved.

- In the case of **HealthSMART**, it was assumed the project would be partially funded by partner agencies, which later proved incorrect.

- Many of the benefits in the **Link** business case were not measurable, but were written to confirm government support. For example, the business case stated that the project would lead to a reduction in crime of five per cent. However, this was later revealed to be a 'big statement', 'pretty rough' and 'never measurable'.

86.   Optimism bias has also had a human impact. It affected the morale of staff working on the projects, who had to deal with the perception that they had failed – although some expectations were clearly unrealistic. It resulted in a need for project managers and sponsors to raise more funding for the project and to deal with media 'fires' caused by the

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16   Her Majesty's Treasury, *Optimism Bias* (2011) <www.hm-treasury.gov.uk>.

political concerns of the project going over budget or being delayed – instead of focusing on delivering or driving the project. In the case of **myki**, optimism bias in relation to delivery timelines contributed to the public's poor perception of the project and its continuing unwillingness to use the new ticketing system.

87. There is an onus not only on agencies to ensure the business case is sound and evidence-based, but also on DTF to challenge assumptions in the business case in order to inform government decision-making. The **myki** project timelines, in my view, should have rung alarm bells for DTF. So too should the independent advice informing the **Ultranet** business case and the Gateway Review, which indicated the project was underfunded and had unrealistic timelines. I received evidence that DTF has not been in a position to validate the cost estimates in ICT-enabled project business cases. In my view, this is unacceptable and is of particular concern given agencies' apparent lack of attention to preparing business cases.

88. I question whether DTF sufficiently and critically challenged the business cases, given many projects appeared to be suffering from optimism bias and failed to substantiate assumptions about costs and timelines. In response to my draft report, the Secretary, DTF stated:

> We are confident that DTF did rigorously challenge and test assumptions in the business cases ... [but] DTF does not have access to the Gateway Review reports. Such reports could therefore not be used to inform DTF's advice.

89. It is not clear how DTF can make a rigorous assessment of the business case without access to this information.

90. To use an analogy, the business case is the road map for the project. If an agency has an unreliable road map, it is unlikely to reach its destination – that is, to achieve the required benefits within the budget and timeline. While agencies may be anxious to commence a project, my investigation has highlighted that they would be better served spending more time in the planning phase to avoid the crises caused by poor planning later on. When issues that could have been anticipated in planning are realised later during the life of the project, a crisis is triggered, rather than a planned response. This is particularly evident in the **Link** project.

91. I also note the reliance placed by agencies on private sector consultants to develop their business cases. The agency has the best understanding of its own business and the rigor associated with the preparation of the business case is an essential part of developing a greater understanding of the project, its dimensions, the options and particularly the risks. Relying on consultants to undertake this work, with little or no oversight from the agency, can lead to a lack of ownership, commitment and understanding by the agency of critical aspects of the project. This is a recipe for failure.

Failure to provide government with a wide range of options

92. Agencies often gave the government only two choices when proposing an ICT-enabled project: a choice to do nothing or to invest in the agency's preferred option. The government should be provided with a wide range of possibilities, including delivery options, policy changes and non-technological solutions, so that it can make an informed decision about which option represents best value for government.

93. For example, VicRoads requested $156 million for the **RandL** project, but was allocated only $114.7 million. It prepared a revised business case and identified two options: cease the project or reduce the scope to fit within the funding. Both were described as 'not viable' and not meeting community expectations. VicRoads did not present a viable option within the allocated budget.

94. Only two options were provided to government for **HealthSMART** and option one was to 'do nothing'. The funding submission indicated that this option was not viable and detailed many disadvantages and risks, but did not discuss opportunities or strengths. It went as far as to state that following this option could be assessed as 'negligent'. Option two (the preferred option) was to build a consistent ICT foundation across half the Victorian public health service. This option was considered to have many strengths and to provide many opportunities. The only disadvantage or risk identified was the cost of the project.

Failure to understand business processes and old systems

95. In a number of cases, insufficient planning led to a failure by agencies to understand their existing business processes, the old system and what they needed the new system to do. This in turn led to increased costs and delays.

96. There was often a lack of documentation or understanding among staff about the old systems, including business rules, the meaning of the data collected and any interfaces with other applications:

   - **Link**: insufficient planning resulted in a failure by Victoria Police to identify the number and complexity of the existing LEAP interfaces with other applications. The costs associated with interfaces were significantly underestimated.

   - **HIIP**: data migration proved more complex than expected as the project team did not anticipate that data in the old system would be inaccurate or that the business would be unaware of the purpose of capturing some data. This led to increased costs and delays. The data issues with the old system should have been identified prior to going to market. An informed decision could then have been made about whether it was cost-effective to transfer 20-years of data from the old system.

97. In a number of cases, business rules had to be reverse-engineered out of old systems. This is a complex and costly exercise, the need for which should have been identified in early project planning.

98.   Inadequate time and attention was given by some agencies to identifying what the new system needed to do. This resulted in increases to the scope of projects, which had a significant impact on project costs. In the case of **HIIP**, a significant number of mandatory requirements were not included in the request for tender or identified during workshops with the vendors, including 312 reports which were identified throughout the project at an extra cost of over $3.2 million. Fifty additional rent and rebate reports delayed one aspect of the project by six months.

99.   Evidence in relation to a number of the projects suggested more time should have been allowed for working with the vendor early on to develop the requirements for the system. Instead, I received evidence that some agencies were more concerned with 'getting early wins on the board'.

Failure to update the business case

100. If the project is approved, the business case 'becomes the core governance document for managing and measuring the project'[17]. However, many business cases were not updated throughout their life. This was despite the projects continuing over several years or more, during which time assumptions, risks, costs, timelines and technology changed significantly.

101. For example, the **ICMS** business case costs, timeframes and risks were based upon the assumption that a particular proprietary system would be used. However, the vendor responsible for that system did not bid for the project. The Department of Justice (DOJ) proceeded with a procurement decision and did not update its business case until after the 2009 VAGO audit. DOJ advised my office that it will re-consider the business case again after a review of **ICMS** has been completed.

102. Good practice requires that the business case is:

- reviewed at key decision points by the steering committee to ensure that the project remains desirable, viable and achievable[18]

- used as a benchmark against which to measure project performance

- 'continually updated with current information on costs, risks and benefits'[19].

103. Regular reviews of the business case also force a decision about whether the project should continue on its current path. For example, do the benefits of the project still outweigh the costs if project costs have increased? My investigation identified a reluctance to consider these issues once the project has started. Instead, I have observed a lack of leadership and a lack of willingness to make hard decisions.

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17   Department of Treasury and Finance, *Investment Lifecycle Guidelines - Business Case* (2008) <www.dtf.vic.gov.au>.

18   Office of Government Commerce, *Managing successful projects with PRINCE2*™, 5th edn, The Stationery Office, United Kingdom, 2009, p 21.

19   Ibid.

'Tick-the-box' approach to risk management

104. While the projects I examined had risk registers and risk was generally a standing agenda item for steering committee meetings, insufficient attention was actually given to managing or mitigating risks. Rather, some agencies appear to have approached risk management with a 'tick-the-box' mentality – that is, the risk register is in place, risk is on the agenda and this is sufficient. This is particularly concerning given the high-risk nature of ICT-enabled projects.

105. The risk register, like the business case, must be a living document, which is regularly reviewed throughout the project to ensure risks – new and existing – are managed. One risk register for a project had not been updated since its creation and risks were assigned to individuals no longer involved in the project.

106. Other projects detailed specific risks in their risk registers, but failed to manage them throughout the project.

107. In this regard, the March 2008 **Link** risk register included a high risk that the level of effort required for systems integration (ensuring that **Link** and other applications could communicate) would be greater than expected. However, it was not until late 2009 that the project team examined in detail the level of integration needed. In February 2010, they estimated $50 million and an additional year of effort was required to complete this task. Earlier attention should have been paid to this issue. The risk could have been reduced by utilising more of the functionality of the LEAP replacement product and reducing the number of applications with which **Link** would need to communicate.

108. The **Link** business case also identified project management as a project risk and a major contributor to the failure of 60-70 per cent of ICT-enabled projects. Despite this, Victoria Police failed to appoint a single, qualified project manager to run the project.

3. Funding

Key issues

- Agencies felt the need to create 'big vision' projects to capture the government's attention, which increased complexity and risk.

- In some cases the Cabinet budget committee only partially funded projects, but agencies failed to revise the scope of the projects to fit within the allocated budget.

- Public announcement of major project funding decisions prior to business case development resulted in business cases being rushed and projects being 'shoe-horned' into the published funding ceiling.

- The costs and timelines of comparative projects were sometimes ignored.

- Projects funded internally have not been subject to the same level of scrutiny as projects funded by the Cabinet budget committee.

- Agencies were unable to identify the cost of significant projects with any accuracy.

Concerns about the Cabinet budget committee process

109.   From my investigation, it is clear that agencies have concerns about the Cabinet budget committee funding process:

- Firstly, those concerns relate to a belief that total funding should be sought up front: otherwise agencies feel they run the risk that subsequent funding will not be received following changes to government priorities, leaving them with a partially completed project.

- Secondly, agencies also are mindful that the Cabinet budget committee process is generally an annual event and one which demands considerable negotiation and discussion throughout the process and this introduces timing issues.

110.   These two concerns can lead to agencies avoiding a staged implementation that is dependent upon Cabinet budget committee funding, preferring to avoid a revisit to the uncertainties of the committee. This is disappointing as staged implementation may reduce project risk and increase the likelihood the expected functionality will be delivered at the expected cost.

111.   Additionally, agencies are aware that the competition for funding from the Cabinet budget committee is intense. In these circumstances, agencies face stark realities in terms of determining the benefits of a project in the context of other more 'attractive' projects, such as hospital beds or police numbers. An unfortunate consequence of this is that it encourages agency staff (as some witnesses attested) to create 'big vision' projects, such as **HealthSMART** and **ICMS**, which are designed to create interest and capture the government's attention. While this

approach could help secure the funding for the project, it increases complexity and introduces a new set of risks associated with larger projects.

Difficulties seeking funding to replace old systems

112. Some agencies have retained old systems beyond their time, including the VicRoads, Victoria Police and Housing systems, which are all around 20 years old.

113. In cases where funding is sought to replace old systems, the benefits may not be significant and may, in the most part, be to mitigate the costs of system failure. Such projects are often presented to the Cabinet budget committee by agencies on the basis that the old system is no longer viable and must be replaced. However, history tells us this is not always the case. For example, in 1999, Housing argued that its system was no longer viable and a replacement was needed. It is now 2011 and **HIIP** is still not totally implemented. Given this, it is not surprising that government affords lower priority to such projects.

114. Unfortunately, to contain cost estimates and to rein in expectations, agencies have proposed high risk strategies such as little or no parallel system running and reduced delivery timescales. If they receive approval, their prospects of success are limited: often, they fail to gain funding. In these latter circumstances agencies are left to manage as best they can, often spending increasingly large sums to maintain existing systems with no identifiable benefit.

Partial funding for projects contribute to poor outcomes

115. There are some examples where the Cabinet budget committee's decision was to only partially fund a project, leaving the agency to determine how to deliver the project against an expectation that the total project will still be implemented. This has led to agencies making seemingly arbitrary decisions, such as bringing in delivery dates contrary to well founded statements in the business case. It may also lead to an agency delivering the project with reduced functionality or progressing with the project as planned with the hope that additional funding will be provided later on.

116. When VicRoads requested $156 million for the **RandL** project, the Cabinet budget committee allocated only $114.7 million. VicRoads continued with the project as planned, but I was not provided with any evidence by VicRoads or DTF to suggest that this project could be delivered for $114.7 million.

117. In response to my draft report, the Secretary, DTF stated that 'the amount of funding provided [to VicRoads] was not intended to fully fund the project. Rather the project was funded in a staged approach'. While VicRoads was provided with staged funding from the total approved budget of $114.7 million, I was provided with no evidence to suggest that further funding beyond this would be available.

Early funding announcements lead to poor planning

118. Associated with the issue of funding levels has been the public announcement of major project funding decisions, at times, prior to the development of a business case and on other occasions later in the process. In the former cases, this has resulted in business case and project development being 'shoe-horned' into the published funding ceiling, almost inevitably leading to a failure to meet the published deadline and/or budget. For example, the **Link** business case was developed to fit within the funding already announced by the government. Years later it was identified that the funding was insufficient.

119. Even where announcements are made after the business case or following a public tender evaluation, the evidence suggests that project changes will occur and costs will rise. In these situations, my investigation has identified that project managers and agency staff are spending considerable effort defending their position rather than getting on with the project.

120. Announcing funding for a project prior to a procurement process may also limit the market's response to the tender; drive up vendor bids; or result in vendors reducing the real costs of their bid – potentially leading to an inferior product or rising costs post-contract.

Inadequate costing comparisons

121. Despite the fact that it is often the case that ICT-enabled projects of a similar nature have been undertaken elsewhere nationally or internationally, such comparative projects have sometimes either been ignored in the business case or have been discounted or underplayed.

122. In the **myki** project, no other ticketing project of a similar complexity to the one in Victoria had been completed successfully in less than four or five years, yet the business case for **myki** was adamant that a two year delivery was achievable. An increase in the delivery time for the project had a significant impact upon project costs.

123. Agencies have not been able to accurately estimate project costs, often underestimating the complexity of the whole or significant parts of a project, and DTF has not been in a position to validate the cost estimates.

124. Such poor practices have led to overly optimistic estimates of the benefits to be accrued from projects and to an unjustifiable level of support and commitment to a project by an agency's executive. They have also led to significant project re-costings and approaches for additional funding. My investigation suggests that agencies are reluctant to face the consequences of cancelling a project and make every endeavour to source additional funds, particularly from within their own budgets, thereby avoiding external scrutiny. The **HRAssist** project, for example, went from an indicative budget of some $18 million to a final budget of over $42 million with the gap sourced from reprioritised agency funds.

Differing funding sources and subsequent lack of oversight

125. Some projects have been funded through the Cabinet budget committee process, whereas others have been funded internally. Some of these latter cases were funded from the State Administered Unit (SAU),[20] which is managed by the Treasurer who considers requests from individual Ministers for allocations from the SAU. Hence, while these funds have some degree of external oversight prior to allocation to a project, they do not automatically receive the same level of initial or ongoing external oversight that projects funded by the Cabinet budget committee receive. Victoria Police's **HRAssist** project is an example of this, where government has not seen this project as part of the Cabinet budget committee process and approximately $40 million has so far been expended from government funds.

126. Some agencies use funds from deferred or delayed projects, for example, where delays in recruiting staff to commence another project result in unallocated moneys being available to an agency. The DHS **Client Relationship Information System (CRIS)** project is one example of a project funded in this way.

127. All significant ICT-enabled projects should be subject to consideration by government through the Cabinet budget committee process so that the committee can make an informed decision whether the project is a government priority. All such projects should also be subject to the same level of ongoing external scrutiny.

128. I am also concerned that some agencies appear to have sufficient flexibility in their appropriations to find significant funds to allocate to projects and potentially cover-up cost blow-outs. For example, DHS was able to fund both the **CRIS** and **HIIP** (through Housing) projects from its normal appropriations at a total cost of almost $200 million.

129. In response to my draft report, the Secretary, DHS stated:

> DHS allocated $70m for CRIS over five years. In that period, the department's budget ranged from $8.5b to $12.4b. In respect of HiiP, Housing operates as a public non-financial corporation and meets all of its operating expenses through its own revenue streams and not from government appropriation. Its budget is required to be approved each year by the Treasurer.

Inconsistent funding categorisation and recording of costs

130. Expenditures on major ICT-enabled projects have been treated inconsistently. This results in varied oversight arrangements for these projects. It also means it is impossible to gain an accurate appreciation of total expenditure against a project or against ICT-enabled projects across government.

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20 The SAU is a centrally managed repository of funds comprising depreciation and surpluses from previous years' allocations.

131.   Spending related to developing ICT systems is generally categorised as asset or capital expenditure.[21] As such, it is subject to the Quarterly Asset Investment Reporting requirements of DTF. My investigation has, however, identified that this was not always the case and that in some instances major ICT systems were funded from operating expenditure.[22] It would appear that in these cases, software and hardware acquisitions are leased, rather than purchased, prompting the decision to allocate to operating expenditure.

132.   Victoria Police funded **HRAssist** entirely from operating expenditure and the project was therefore not subject to the same reporting or oversight by DTF. In my view, it should have been.

133.   ICT-enabled projects often include a component of ongoing operating expenditure to run and maintain the ICT systems or to provide training and support to users of the system. However, these costs are not always clearly articulated and can become lost in ongoing departmental operating costs. For example, the DOH website refers to **HealthSMART** as a $360 million project, yet when you include operating expenditure, the predicted expenditure is $471 million. In response to my draft report, the Secretary, DOH stated that 'actual project expenditure would not normally be presented as a combined total that includes operating expenditure'.

134.   Agencies record project expenditure in different ways. Apart from the distinction between operating and capital expenses which I have discussed above, there is also significant variation between the extent and nature of project cost recording. In some cases, agencies recorded:

- full costs against a project, including indirect costs such as time spent by the executive on project oversight and other overheads

- only direct costs attributable to the project

- only direct costs for goods and services specifically procured for the project, with other direct in-house costs, such as project management staff costs, not counted.

135.   In the case of **HealthSMART**, DOH did not attempt to accurately predict or account for the costs to be borne by health services. In the case of **Ultranet**, at least $12 million in training costs was not recorded against the project. Additionally, costs such as Gateway Reviews, currently borne by the DTF, are not recorded by the agency.

136.   For these reasons, currently there exists not only an inconsistency in the manner of recording project costs but also an acceptance that not all costs will be captured. As a result, it is impossible for an agency or for government to identify with any accuracy the total cost of significant projects. In my view, this is untenable: government should expect that when funds are allocated against a project, agencies should accurately

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21   In relation to ICT expenditure, capital expenditure (or CAPEX) is the cost of building or purchasing an ICT-enabled system that is expected to generate future economic benefits. For example, CAPEX includes the cost of purchasing software or the proportion of a software developer's cost which is attributable directly to developing an ICT-enabled system.

22   Operating expenditure (OPEX) is the cost of running or maintaining an ICT-enabled system, eg. training costs.

and comprehensively report expenses and commitments against the budget. Without a full understanding of the costs of a project, it is also difficult for government to determine if the project represents value for money. i.e. whether the benefits outweigh the full costs.

Inconsistent understanding and use of contingency funding

137. Contingency funding is another item within the project budget where there is no consistent understanding or use of funds. Generally speaking, an amount is included in the project budget to cater for unexpected, future events which are likely to impact on the cost of the project – contingency amount. The contingency should provide a buffer for the project and also act as an early warning signal to the agency executive, DTF and the Cabinet budget committee that the project is potentially going off-track.

138. A DTF official considered that access to contingency funding should be closely monitored as using it indicates that the project is moving outside its budget. Some witnesses were concerned that an amount forecast for contingency funding was likely to be cut from the budget estimate to reduce project costs, as was the case with the **HRAssist** project, leaving the project with no flexibility to manage even minor project changes. In the **myki** project, a witness stated that available contingency funding was used to pay for equipment to be installed on the public transport system, including new rolling stock and at stations/stops, depleting the contingency fund on items outside of the Transport Ticketing Authority's control.

139. Some view contingency funds as approved funding that can be spent freely. In the case of the VicRoads **RandL** project, some witnesses indicated VicRoads intended to spend the contingency funding allocated on change requests, 100 of which had already been identified.

140. In my view, there is a place for an amount to be set aside for contingency funding for each major project. However, it is important that there is a clear understanding as to the basis for the funding and how those funds are to be accessed and used.

4. Probity and procurement

Key issues

- Agencies appeared to pay limited regard and expended minimal funds on probity advice and audit.

- Agency and probity practitioner responses to conflict of interest sometimes failed to recognise the importance of the perception of a conflict of interest.

- The tendency appeared to be to purchase an off-the-shelf system and then to customise the system to such a degree that the benefits were lost to government.

- The evidence suggests government should explore new procurement methods for ICT-enabled projects.

- Large vendors are well-versed and experienced in contract negotiations and government is generally at a disadvantage for that very reason.

'Tick-the-box' approach to probity

141. Not all the projects examined had probity practitioners assigned to the project. Also, separate probity advisers and auditors were not always appointed.

142. Agencies continue to fail to recognise the necessity and benefits of engaging experienced probity advisers and separate probity auditors for major projects. For such a critical activity, particularly around the tender and procurement processes, agencies appear to pay limited regard and expend minimal funds on probity advice and audit. Small amounts are spent on probity practitioners in comparison with the costs of other outside specialists. This reflects a 'tick-the-box' approach to probity rather than a commitment to this important activity. In the **myki** project, the Transport Ticketing Authority engaged only a probity auditor, who also provided probity advice. While I note that this was consistent with the DTF guidance at the time, instances such as this may lead to situations where the probity auditor is auditing their own advice. This is in itself a conflict.

143. In my report, *Ombudsman Investigation into the Probity of the Kew and St Kilda Triangle Developments*[23] (the Kew and St Kilda report), I commented on the lack of information in the probity reports required by agencies and my investigation of these projects confirms this view. I am surprised that agencies can be confident about the probity of the project procurement phase as the reports generally provide little information about the work undertaken to support the auditor's view that probity principles were upheld.

144. In the case of one of the tenders for Victoria Police's **Property and Laboratory Management (PALM)** project, a probity adviser was

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23 Victorian Ombudsman, *Ombudsman Investigation into the Probity of the Kew and St Kilda Triangle Developments* (2010) <www.ombudsman.vic.gov.au>.

engaged; however, Victoria Police did not commission a probity auditor's report at the end of the tender process. This left Victoria Police at risk of being challenged by an unsuccessful bidder. It is particularly concerning given the steering committee's decision to ignore probity advice in relation to the make-up of the tender evaluation panel.

145.   I am also not confident that current probity engagement and reporting arrangements provide probity practitioners with sufficient separation and independence from the project team to maintain the integrity of the project. In my view, the probity practitioner should have a direct line to the principal officer to report any concerns.

146.   In my Kew and St Kilda report, I also recommended:

- separate probity advisers and auditors be engaged
- auditors endorse the probity plan and conflict of interest register at the completion of the procurement exercise
- a probity report be provided that details the work undertaken to support the auditor's conclusions.

147.   DTF accepted my recommendations and has amended its *Good Practice Guidelines – Conduct of Commercial Engagement*s. I consider that further work is required by DTF to communicate the effects of the revised guidelines to agencies and probity practitioners to ensure compliance with the guidelines.

Failure to manage the perception of a conflict of interest

148.   The investigation has again highlighted the distinction between actual and perceived conflicts of interest.[24] Probity practitioners and agencies should have plans and processes in place to identify, record and make arrangements to deal with actual conflicts of interest. For example, where public sector employees have previously worked with employees of tendering firms, these should be recorded and arrangements instituted to prevent or minimise any official dealings between the parties during the tender process. Generally, such associations should also be made transparent so that all competing interests are aware of the circumstances and probity practitioners attend meetings and discussions between the agency and tenderers to keep an independent eye on proceedings.

149.   Generally, contractors previously engaged by an agency (where they may have had some insight into the tender processes and/or procurement strategy) should not be allowed to bid for the project. However, on occasions such contractors do bid for the relevant projects. In such cases, it is important for probity practitioners and agencies to consider the impact on the project of the perception of a conflict of interest. Two examples of agencies failing to do so involve **Ultranet** and **myki**. In relation to **Ultranet**, one vendor developed the pilot of the system at the request of the department. That same vendor was a bidder

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24   This issue is also discussed my reports, *Conflict of Interest in the Public Sector* and *Conflict of Interest in Local Government* (2008) <www.ombudsman.vic.gov.au>.

at the request for tender phase and was chosen as the preferred vendor. In **myki**, the winning bidder had been engaged by the Transport Ticketing Authority prior to the tender process to assist with the design philosophy for the project. These issues raised concerns (perceived or real) about the probity of both projects.

Reluctance to change business processes to fit off-the-shelf products

150. Agencies appear reluctant to acquire and make the most of commercial off-the-shelf (COTS)[25] systems.

151. In the case of **Link**, a COTS system was purchased and over 100 changes were made to the base package, which was customised to make it look and feel like the existing LEAP system. Had this approach continued, Victoria Police would have had its own version of the COTS system, which is likely to have been unmaintainable through standard upgrades. The approach also compromised Victoria Police's ability to take advantage of the inherent benefits of the COTS system and increased project costs. The executive sponsor and chair of the **Link** steering committee stated that one of the learnings from the project was that Victoria Police should have re-engineered its business processes to fit the new system, rather than trying to make the system fit Victoria Police's processes.

152. Another example is the requirement that **myki** embrace all the business rules associated with the metcard system, for example – multiple zones and fares. **myki** was delayed during both the specification and development phases as the contractor tried to come to grips with the complexities that the business rules created.

153. The reluctance to change business processes appears to be driven by a desire not to inconvenience users, even in the short term, by a change in approach or the look and feel of the product. The approach is also seen to reduce training and change management costs.

154. However, the approach inevitably leads to increased project costs and fails to capitalise on the advancements in technology since the old system was developed. An over-emphasis on replication of existing processes can result in lost opportunities in terms of making changes to improve processes, making the most of what the system itself – particularly the benefits offered by COTS systems – has to offer and minimising immediate and optimising ongoing development costs.

155. It is inevitable when developing and implementing new ICT-enabled systems that changes to proven products will be necessary to meet the requirements of the agency. It is essential when considering and implementing these changes that the risks are clearly identified and articulated and strategies are put in place to mitigate or at least minimise those risks.

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25   A product that already exists and can be readily procured. Such products are generally cheaper and less risky than developing a new, untested system.

Preference to be on the leading edge, rather than a fast follower

156. These are reasonably emotive and undefined terms used to describe the status of ICT systems procured by organisations worldwide. Generally speaking, the accepted preference of government is to avoid the risks and costs associated with the acquisition of systems not developed or used elsewhere (leading edge). The philosophy has been and should continue to be to acquire tried systems which make the most of current technology (fast follower).

157. The philosophy of the **myki** project was to use proven software yet it pursued an 'open architecture' solution which had not been undertaken in the ticketing environment in the past. This led to problems for the project.

Opportunity for new tendering approaches

158. My investigation has identified numerous approaches to tendering for ICT-enabled projects:

    • market testing

    • limited tendering

    • traditional request for tender processes against pre-prepared specifications

    • interactive vendor engagement (**RandL** and **myki**).

159. 'Competitive dialogue' (also known as 'interactive vendor engagement') has been used by government in the United Kingdom and is the preferred method for vendor engagement in complex and high-value projects. In essence, this approach requires the agency and tendering vendors to work closely together during the tender period for both parties to gain a better understanding and appreciation of what is required and what the vendor can offer. This entails ongoing dialogue and exchange of views and information between the parties so that once the tender process is complete there is a very clear understanding of what is required and what will be provided. Sometimes this process includes demonstrations and modelling to 'prove' the product. It should maintain a high degree of competitive tension between all tendering parties with the aim of achieving the most cost-effective result for government. The evidence available to me suggests that there is benefit in further exploration of this concept.

160. In the case of the **RandL** project, the exercise appears to have resulted in confidence about the system to be developed and the costs surrounding it. The **myki** example proved successful in establishing a consortium of preferred vendors but specification issues were not well understood.

161. The examples also highlighted the significant probity issues associated with this approach, with a heightened need to oversight the regular and ongoing dialogue between all parties. It is critical that no one tenderer is, or is seen to be, favoured by the agency: this can be difficult to manage.

Difficulties and inconsistencies in contracting

162. A number of witnesses stated that the large vendors are well-versed and experienced in contract negotiations and that government is generally at a disadvantage for that very reason.

163. From the documentation I have sighted and witnesses I have spoken to, it is clear that under the terms of the contract agencies seek to:

    • transfer risk to the vendor

    • have adequate abatement and penalty clauses in place

    • have fixed costs established for the product and services to be provided

    • have a single prime contractor responsible for project achievement.

164. However, this is not always the case. In the case of **HRAssist**, the contract initially failed to include abatement clauses and included time and materials based elements: this resulted in cost and delivery overruns. In the case of the **HealthSMART** clinical application contract, there were limited penalty clauses. In the case of the **CRIS** project, the government contracted to five separate vendors for the project. This was difficult to manage and introduced compatibility and timing issues.

165. Witnesses commented that it is very difficult for risk to be transferred to the contractor, despite the availability of penalty clauses. Nothing is clear cut and delivery delays become a dispute about specification changes, communication delays, poor advice and misunderstandings, making it difficult to exercise penalty clauses without a significant risk of litigation and associated problems.

166. In several of the projects I examined, there was a risk the vendor would walk away from the contract, leaving the agency in the undesirable position of starting afresh or conceding ground to the vendor. Inevitably, the latter course was taken. Witnesses asserted that projects are best achieved where the relationship with the vendor is more a partnership where both parties are willing to work together to address issues, problems and changes as they arise in a cooperative environment.

167. There is seemingly also reluctance by government to exercise the penalty option, preferring to negotiate through difficulties with the vendor. For example, the **HRAssist**, **myki**, **HIIP** and **ICMS** projects all experienced significant difficulties in their relationships with the vendors.

168. I also note that in the case of these significant ICT-enabled projects, the primary contractor is generally overseas based with local representation in Australia and Victoria. While these projects are large by Victorian terms, they are not necessarily so for the vendor. In these circumstances, the size of the project and access to the vendor's executive have limited the influence the government can exert to expedite project deliverables. In the **myki** case, the TTA spoke on numerous occasions to the vendor's executive in the United States with limited success: this was exacerbated by the sale of the US parent company twice during the contract period and liquidity problems for the local company.

169.   In response to my draft report, the Victorian Government Solicitor stated that the experience of the Victorian Government Solicitor's Office (VGSO) 'does accord with the Ombudsman's reflections on the difficulties and inconsistencies in ICT procurement in the public sector'. He further stated that VGSO has observed a 'fragmented approach to ICT procurement and to ensuring that government harnesses the lessons learnt from ICT projects'. He stated, 'Government agencies tend to operate independently and there is difficulty in capturing and implementing learnings from ICT projects. Private law firms do not necessarily share this information'.

170.   When negotiating contracts with vendors, agencies should be mindful of the issues outlined above and institute measures and strategies to address these as part of the contract and of the formal ongoing contract management arrangements. I have recommended that VGSO be briefed early in projects and sign-off on all ICT-enabled project contracts over $20 million. In addition, use of standard ICT contracts should be encouraged. I consider these measures will ensure consistency and protection of the state's interests.

5. Project management

Key issues

- Several agencies failed to act with enough urgency to address potential problems and in doing so allowed the issue to escalate.

- There is a shortage of skilled senior project managers with relevant ICT experience in government. To compensate, agencies often appoint expensive contractors or inexperienced public sector staff.

- Managing vendor and user relationships can be a complex exercise and agencies have adopted differing approaches to this problem with varying success.

- Approaches to training staff were varied and not always effective.

Lack of timely intervention

171.   When a project is identified as being at risk of serious delay or budget problems, it is important that the agency acts quickly and decisively to address the problem. The agency should have identified triggers and escalation strategies in its risk management and project planning documentation and should apply these judiciously. This was not always done and several agencies failed to act with enough urgency to address potential problems and in doing so allowed the issue to escalate.

172.   For example, Victoria Police did not act quickly enough to address issues that arose in both the **Link** and **PALM** projects and it was slow to act on advice that the projects were going off track. Although project staff identified in 2009 that budget estimates for **Link** were about $80 million short, the project was allowed to run for a further two years before the decision was made to terminate. Similarly, while the original schedule provided that **PALM** would go-live in February 2010, the steering committee did not address the delays until May of that year. Later that month, a remediation plan was implemented in an attempt to get the program back on track.

Lack of ICT skills in the public sector and dependence on contractors

173.   It is apparent from witnesses and the documentation I have sighted that there is a shortage of highly skilled senior project managers with relevant ICT experience in government. As a result agencies had difficulties recruiting and retaining project staff. As well as increasing costs and impacting timelines, critical project knowledge can be lost if staff changes are not managed carefully. One department took up to four months to replace key project staff at a crucial time in the project and all three Victoria Police projects were hit by key staff leaving mid project.

174.   When unable to identify or recruit suitable staff, agencies often rely on contract staff who are generally more expensive than their public sector equivalents and do not necessarily operate in accordance with Victorian

Public Service values. An over reliance on contract staff can also increase the risk that the software solution will not meet the needs of the business and can make the business slower to react to problems that arise.

175. A theoretical benefit of using contract staff is that if they do not perform, they are easy to remove. However, this may be something of a false economy as when they leave they take their accumulated project knowledge with them.

176. Other agencies have resorted to using relatively inexperienced staff to manage large and complex ICT-enabled projects with often disastrous consequences. Victoria Police in particular, have appointed staff with limited project management experience and almost no relevant ICT experience to manage large complex ICT projects such as replacing the LEAP database.

177. DTF provide staff to support steering committees but it does not appear to provide proactive support to agencies at a project management level. One DTF witness suggested the Commercial Division provides practical assistance and was the first point of contact for agencies when there are project issues but the availability of this support does not appear to be highly visible. I found no reference to this on the DTF website and I was not provided with any documentation from DTF to suggest the division provided such support in relation to the projects examined.

178. It is clear that agencies are struggling to attract and retain high quality project managers of their own. Both the Auditor-General and I have identified a wide range of poor project management practices over a number of ICT and non-ICT projects in recent years. This remains a serious ongoing problem across government that requires central agencies such as DTF to provide more than just guidelines and advice.

179. Years of outsourcing ICT and project management expertise have drained the government of the skills and knowledge it needs to deliver large complex ICT projects efficiently and effectively. This, in turn, has increased the need to outsource key roles to the private sector. To break this cycle the government will have to find a way to attract skilled ICT professionals to the public service which will be a challenge considering the significant fees charged by ICT professionals.

Differing project management, software delivery and release strategies

180. My investigators identified a number of project management, software delivery and release strategies in use which were generally adopted on a case-by-case basis. Problems were more likely to occur in projects where agencies and vendors did not use the same project management or software development methods.

181. A software development method known as 'Agile' was selected to deliver **myki**. This approach can shorten delivery times and reduce risk by breaking large complex projects into smaller discrete projects that can be developed in parallel. This approach was chosen for **myki** to help

meet the short planned timeframes, but one witness advised that this approach was not appropriate for such a complex project with such a significant number of inter-related systems and a large number of sub-contractors. In terms of meeting the planned milestones and delivering the system efficiently and effectively this approach failed and was eventually replaced by a more traditional sequential approach.

182. It is important that agency project managers have a sound understanding of the various approaches to managing projects and developing software and are able to articulate the risks associated with each and make appropriate decisions based on those risks. There is no 'one size fits all' solution and methodologies should be chosen on their merits.

Differing approaches to vendor management

183. Managing vendor and user relationships can be a complex exercise and agencies have adopted differing approaches to this problem with varying success. For example, when one agency contracted vendors to develop a system, it attempted to devolve almost all of the responsibility and accountability for the delivery of the project to the vendors. The project director stated that this 'tended' to result in the agency finding out 'late in the piece that something [had] gone wrong'.

184. The PRINCE2[26] project management standard advocates including business user and vendor representatives on steering committees to assist communication and help the committee to make informed and timely decisions. PRINCE2 also requires detailed role descriptions for the project management team. While vendor contracts set out the agency's requirements, they rarely encompass the entire relationship which has led to confusion around who is responsible for aspects of project management. This risk increases with the number of agencies or vendors involved.

185. Delivery of the **HealthSMART** clinical application was made difficult by a complex three-way relationship between the vendor who was developing a system to DOH specifications and requirements but delivering it into hospitals operated independently by other health service providers (health services).

186. Another aspect of vendor management that agencies have identified as problematic is in making sure that vendors retain adequately skilled staff on the projects. This can be particularly problematic when projects become drawn out or face budget constraints. **HealthSMART**, **myki** and **ICMS** experienced problems with the quality of project staff provided by overseas-based vendors. In the case of both **HealthSMART** and **myki**, the respective secretary and chief executive officer regularly engaged with the relevant vendor executive in the United States. While I commend their commitment to resolve this issue, few other agencies were able to demonstrate the same level of intervention from their executive.

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26   PRINCE2 is a widely regarded project management methodology developed by the United Kingdom government. It has been widely adopted as a standard practice throughout Australian and Victorian governments.

Varied and ineffective change management and training

187.   ICT-enabled projects do not just involve developing software or delivering new equipment. Indeed it could be argued that if the ICT component of the product does not introduce or support new ways of working, be they efficiencies, quality assurance or some other element, there is little point in implementing it.

188.   Although many ICT-enabled projects are designed to replace existing systems, these are rarely 'like for like'. Therefore, implementing new ICT often requires staff to work in different ways and learn to use new systems. The scope of change required can also vary significantly. For example, if ICT systems have been well maintained and developed over time, only minor changes may be required to working practices and staff will be used to adapting to change. However, if you are replacing a 20-year-old system which has had little ongoing investment such as VicRoads' registration and licensing systems or Victoria Police's LEAP database, then the change process will be significant and will need to be planned for and addressed adequately. A former Victorian Chief Information Officer suggested that as a rule of thumb, for every dollar you spend on the technology, you should spend two dollars on change management.

189.   Approaches to training staff were varied and not always effective, for example:

- Health services developed comprehensive training programs for hospital staff for the **HealthSMART** clinical application which include a combination of classroom based and on-the-job training, supported by 'super users'[27] and system sponsors. However, the complexity of the system and the constant stream of new and rotating staff coming through hospitals have generated a significant ongoing training requirement. Until the majority of health services adopt the clinical application, it will be challenging for participating health services to meet these ongoing training requirements.

- The Department of Education and Early Childhood Development (DEECD) employed more than 40 full time staff, at a cost of $12 million, to work closely with schools and make sure that staff and students understand and are equipped to use **Ultranet**.

- In contrast, while DHS employed a team of 15 trainers for the roll out of **CRIS**, DHS currently only employs one person to provide ongoing training for over 2,000 users of its **CRIS** system. As a consequence the **CRIS** users my investigators interviewed were unable to use the system effectively.

- Housing planned training in its **HIIP** system before it was fully developed. Unfortunately, it took so long to complete the system that staff then had to be retrained.

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27   'Super users' are members of health services who use HealthSMART on a regular basis. They were provided with advanced training in HealthSMART so that they could return to their health service and assist others in their day-to-day use of the system.

Framework to better manage ICT-enabled projects and recommendations

190.   In arriving at my recommendations for a framework to improve the management of information and communication technology-enabled (ICT-enabled) projects in the Victorian public sector, I initially considered that ICT-enabled projects should be treated no differently to other significant business projects. This would appear to be the model adopted by DTF as part of the Cabinet budget committee approval process, although I do note that ICT-enabled projects are provided as examples of projects which often fall within the 'high-value and high-risk' category.

191.   However, based on the experience of the case studies examined in this report, other anecdotal evidence and the strategies adopted both at the federal level and by governments overseas, I am of the view that significant ICT-enabled projects should be treated as a special case at least until the government bureaucracy is of sufficient maturity to handle these projects well.

192.   There is a clear need for a strong framework for the management of ICT-enabled projects to improve:

> 1) Leadership, accountability and governance
>
> 2) Planning
>
> 3) Funding
>
> 4) Probity and procurement
>
> 5) Project management.

193.   It is in this light that I have developed a framework that builds on current guidance and advice from the Auditor-General and DTF and provides a practical solution to many of the problems commonly encountered. The framework contains 42 recommendations based around the five common themes listed above.

194.   The government may wish to consider establishing a sub-committee of Cabinet to oversee the ongoing delivery of ICT-enabled projects and the implementation of my recommendations.

195.   I recommend that the framework be applied to all ICT-enabled projects with an estimated value of $20 million or more. In view of the projects that I investigated, I consider that the $20 million threshold is appropriate. Such a threshold would have captured each of the projects I investigated.

196.   DTF is of the view that central oversight should be based on the risk profile of projects, rather than an 'arbitrarily low financial threshold'. On this basis DTF has also rejected a number of my recommendations, either fully or in part.

197.   As this report identifies, there are significant problems in the delivery of major ICT-enabled projects. ICT-enabled projects are inherently high risk, particularly given the current state of immaturity of public sector ICT

management. I remain concerned that some potentially problematic ICT projects would not meet DTF's 'high risk' criterion.

198. If the government wishes to avoid repetition of the mistakes identified in my report, a high level of scrutiny needs to be applied to ICT-enabled projects. Until government has developed a proven ability to adequately identify high-risk projects and deliver these on time and on budget, in my view a monetary threshold of $20 million and associated increased scrutiny is a necessary early discipline, notwithstanding that implementing my recommendations may be initially challenging.

199. There is no panacea for the difficulties which face governments in the management of ICT-enabled projects. Many strategies have been tried with varying degrees of success. What the research shows is that this is an evolving and changing environment and as such, the strategies adopted to tackle the issues equally need to be flexible and adaptable to meet these changing circumstances. Any arrangements put in place would benefit from a review in two years time to ensure their effectiveness, ongoing relevance and practicability.

1. Leadership, accountability and governance

Leadership

200. My investigation and much other research have shown a correlation between strong, direct and purposeful leadership and the success of ICT-enabled projects. The demand for clear articulation of deliverables and measures of success and failure, for regular reporting against these measures and for reports of any anticipated variation against targets sets the scene for a regime of accountability. Such leadership from the top sets the example throughout the agency.

Recommendation

201. I recommend that:

1. Agencies formally brief departmental secretaries and responsible Ministers on the progress of the project at key stages and, at a minimum, every two months. Departmental secretaries and responsible Ministers need to know the status of a major ICT-enabled project and when and on what basis their intervention is required.

DTF's response

DTF accepts this recommendation in principle.

Accountability

202. My investigation highlighted a lack of understanding of accountability in the public sector. My proposals outline an accountability framework: these must be reinforced by a general improvement in the attitude in the Victorian public sector towards responsibility and accountability.

Recommendation

203.   I recommend that:

    2.   Agencies identify responsible executives and senior project staff in project business cases and their personal performance agreements reflect their accountability for successful project delivery.

DTF's response

        DTF accepts this recommendation.

Governance

Steering committees

204.   Steering committees[28] are recommended practice for all major projects. ICT-enabled projects are no different and committees with relevant expertise and experience should be established.

Recommendations

205.   I recommend that:

    3.   Agencies ensure that steering committees include business owners, senior officers, users and independent members with specialist expertise (from the ICT group discussed below or private industry) to increase independent scrutiny of the project.

DTF's response

        DTF accepts this recommendation.

    4.   Agencies ensure steering committee terms of reference include details of the role to be played by each person on a committee.

DTF's response

        DTF accepts this recommendation.

    5.   Agencies ensure that vendors have direct access to the senior agency executive responsible for the project or the chairperson of the steering committee. This should provide an opportunity for the executive or chairperson to quiz the vendor direct on issues associated with the project and for the vendor to present their views.

DTF's response

        The Secretary, DTF stated, 'DTF accepts that it is important that vendors contracted to deliver a project, have direct access to the senior agency executive responsible for the project.'.

    6.   Agency Senior Responsible Officers (SRO) for projects provide Gateway reports to the project steering committee.

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28   The terms 'steering committee' and 'project board' are used interchangeably, but both refer to a governing body.

DTF's response

The Secretary, DTF stated, 'DTF will amend its Gateway guidance material to recommend that the SRO provide the Gateway review report to the project steering committee'.

DTF oversight

206. Projects are the responsibility of the sponsoring department or agency; however, I consider that they should be managed in concert with DTF. To facilitate this, DTF should further develop the capacity and capabilities of the Commercial Division and its specialist ICT group within the Government Services Division. Capabilities should include project management, procurement and risk management. This would assist DTF in implementing my recommendations.

Recommendations

207. I recommend that:

7. DTF further develop the capacity and capabilities of the Commercial Division and its specialist ICT group within the Government Services Division. Capabilities should include project management, procurement and risk management. This would assist DTF in implementing my recommendations.

DTF's response

DTF accepts this recommendation. The Secretary, DTF stated, 'DTF is consistently seeking to improve the capability of staff across the department, including in its Commercial and Government Services Divisions. As part of the implementation of the Government's High Value/High Risk framework, DTF is developing further guidance and building further capability in relation to effective design and management of ICT projects'.

8. DTF be formally represented on all steering committees and formally document representatives' roles and accountabilities. There should be an onus and responsibility on the representatives to not only provide professional and specialist advice to the agency but also to be accountable to DTF for the effective delivery of the project. In effect they should provide early warnings to DTF, as well as the agency. Representatives should be held accountable for their role through performance reviews. They should also provide advice to DTF on any funding submissions prior to presentation to the Cabinet budget committee.

DTF's response

The Secretary, DTF stated, 'DTF accepts in part this recommendation. Project delivery is an accountability of the Department or Agency implementing the project. It would be impractical for DTF to be represented on all steering committees. DTF representation on project steering committees

> *is targeted to projects which are more complex and/or have a higher risk profile'.*

9. DTF have formal arrangements in place to ensure communication between its ICT group, representatives on steering committees and the Budget and Financial Management Division to ensure that there is a common understanding and informed view within DTF about each ICT-enabled project.

DTF's response

> *DTF accepts this recommendation.*

10. DTF staff be available to provide advice and guidance to agencies, both at the executive level as a source of independent expert advice and at the strategic and operational levels to agency chief information officers (CIOs).

DTF's response

> *DTF accepts this recommendation.*

Gateway Reviews

208. The Gateway Review process is an important part of DTF's project assurance process. As well as assisting agencies to manage their projects, Gateway Reviews should also inform DTF's advice to Ministers and Cabinet. I believe that all ICT-enabled projects over $20 million should be subject to, and be required to clear, all six Gateway gates. In clearing a gate, the secretary of the department or chief executive officer of the agency should sign-off that recommendations have been satisfactorily addressed. My recommendations in relation to Gateway should apply not only to future projects, but to current projects, such as **RandL** and **HealthSMART**, in order to minimise the problems with these projects. In this regard, the Secretary, Department of Health advised that **HealthSMART** is already subject to Gateway Reviews.

Recommendations

209. I recommend that:

11. The Gateway Review team report Red-light Gateway outcomes to the agency's Secretary/CEO who in turn should assure their respective Ministers and the Treasurer in writing that the concerns have been addressed before the project progresses further.

DTF's response

> *DTF accepts this recommendation in part. The Secretary, DTF stated, 'DTF does not own Gateway Review Reports. These reports are independent reports commissioned for the Senior Responsible Owner (SRO) of the project in the relevant Agency. However, DTF will amend its Gateway guidance material to recommend that the SRO provide the Gateway review report,*

> *including red ratings, to the agency's Secretary/CEO. Under the HVHR ['high-value and high-risk'] framework, red ratings received on HVHR projects must be escalated to the Treasurer'.*

210. It is difficult to accept DTF's advice that it 'does not own Gateway Review Reports' as:

- DTF's Gateway Unit 'assemble[s] an appropriate review team'

- DTF pays for the Gateway reviews

- The Gateway reports are each reviewed by the Head of Gateway (a senior DTF officer)

- DTF retains a copy of each Gateway report 'so it can create generic lessons learned'[29].

211. I recommend that:

12. DTF ensure Gateway Review teams include senior ICT executives or chief information officers from other agencies (in addition to the external professionals already on the Gateway teams). This would provide a broader insight into the Gateway process, increase in-house skills in government and provide continuity and practical assistance to the agency.

DTF's response

> *DTF accepts this recommendation in principle. The Secretary, DTF stated, 'DTF seeks to ensure that independent Gateway review teams include appropriate specialist skills. However, the inclusion of senior public sector ICT executives or CIOs on review teams is subject to their availability'.*

13. Agencies fund Gateway Reviews from project costs. The cost of the Gateway Review is a project (not DTF) expense and as such should be funded from within the project. DTF should prepare guidelines to assist agencies to estimate the costs for each gate.

2. Planning

Business cases

212. The standard of the business cases I reviewed was poor. Many business cases appear to have been viewed only as a mechanism to obtain funding rather than a tool to plan and manage the project. Few business cases provided a compelling, evidence-based argument for the preferred option as well as canvassing other options. Agencies need to spend more time preparing business cases and DTF needs to take greater responsibility for making sure that business cases are adequately prepared prior to presenting funding submissions to the Cabinet budget committee.

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29   Department of Treasury and Finance, *Gateway Review Process* (2011), <www.dtf.vic.gov.au>.

Recommendations

213. I recommend that:

14. The Treasurer endorse project business cases prior to presentation to a sub-committee of Cabinet. DTF needs to take greater accountability for the successful and timely delivery of major ICT-enabled projects. The current practice of devolved responsibility for these types of projects is not working, therefore greater commitment from DTF is required.

DTF's response

The Secretary, DTF stated that DTF accepts this recommendation 'with respect to higher risk projects only and notes that this is already part of the HVHR process'.

15. DTF require agencies to successfully complete Gateway Review One and Two prior to presentation to a sub-committee of Cabinet.[30] In order to successfully complete Gateway Two, the business case must discuss comparative projects in other jurisdictions, including the costs and any risks that eventuated. Risk and risk management strategies must be enunciated as triggers for continuation or discontinuation of the project.

DTF's response

The Secretary, DTF stated that DTF accepts this recommendation 'with respect to higher risk projects only and notes that this is already part of the HVHR process'.

16. DTF require business cases for ICT-enabled projects to present a minimum of two viable options, in addition to the option of doing nothing, prior to presentation to a sub-committee of Cabinet. Agencies should be prepared to deliver both of those options.

DTF's response

DTF accepts this recommendation. The Secretary, DTF stated, 'DTF business case guidance material already requires business cases to include a number of strategic and project options'.

17. DTF require business cases for ICT-enabled projects to identify how and when the business case will be reviewed during the project, prior to presentation to a sub-committee of Cabinet, including as a minimum immediately prior to signing the contract and on completion of the detailed design phase.

DTF's response

DTF accepts this recommendation.

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30 Gate One: Strategic Assessment; Gate Two: Business Case

3. Funding

Project lifecycle funding

214. In most cases, agencies have sought funding for their ICT projects from government via a one-off capital allocation authorised by the Cabinet budget committee. However, this is a limited approach that does not support the ongoing maintenance and development of the system. It would be beneficial to government for agencies to adopt a whole-of-life approach to funding the maintenance, upgrade and eventual replacement of these systems, to be managed and oversighted by DTF and the Treasurer.

Recommendations

215. I recommend that:

18. Agencies develop multi-year strategies to maintain, upgrade and replace their major ICT systems. DTF is to scrutinise these plans and assess the likely financial impact on government over upcoming years as part of a whole-of-government ICT strategy and opportunities for collaboration.

   ### DTF's response

   DTF accepts this recommendation in principle. The Secretary, DTF stated, 'maintenance and replacement of assets (including ICT systems) is the responsibility of individual departments'.

19. DTF establish a fund for every major ICT system made up of the depreciation for capital projects and/or the equivalent amount for operational expenditure. This money should be set aside for all ICT-enabled projects to facilitate the replacement or upgrade of the system once it reaches its end-of-life cycle and not made available for allocation to other priorities or projects without the Treasurer's approval. The Treasurer's approval to use the funds for another priority or project should be contingent upon the agency having an alternative strategy in place to replace the ICT system.

   ### DTF's response

   DTF does not accept this recommendation. The Secretary, DTF stated, 'this is inconsistent with standards for the prudent management of cash reserves and significantly reduces the government's budgetary flexibility'.

216. The Auditor-General and I disagree with the Secretary's response. The establishment of the fund will assist in ensuring that funding is available to replace and upgrade ICT systems, which in some cases have been left in place so long they have been at significant risk of failure. It also introduces a mechanism to ensure that agencies review the ongoing relevance of each system when it reaches its end-of-life from a financial perspective, to reflect on the status of ICT systems and plan for future

upgrades or replacements. I note the importance of flexibility in the budget. In this regard, my recommendation provides that in the event that the money attached to an ICT system is required for another purpose, the Treasurer may decide to reallocate the money, provided the agency has an alternative strategy in place to replace the ICT-enabled system.

217.   I recommend that:

20. DTF develop a robust model to assist agencies to better estimate and verify ICT project costs. The model should be made available to agencies and Gateway reviewers to assist in the confirmation of project cost estimates.

DTF's response

DTF accepts this recommendation.

Government funding practices

218.   There are opportunities to enhance the Cabinet budget committee process to ensure the government is aware of and agrees with significant financial resources being committed to ICT-enabled projects. I have suggested that the government may wish to consider establishing a sub-committee of Cabinet to implement my recommendations. The DTF ICT group could also assist in implementing the following recommendations.

Recommendations

219.   I recommend that:

21.   The government consider requiring that a sub-committee of Cabinet approve all ICT-enabled projects over $20 million, whether they are to be funded internally by the agency or through the committee.

22.   The government consider requiring that agencies seek funding and undertake projects in stages with clear deliverables, measurable benefits and a review at the end of each stage to inform the project's next stage. This will increase the likelihood that they will deliver the expected functionality at the expected cost. This recommendation could be implemented by:

- A sub-committee of Cabinet providing in principle approval to funding the whole project, but releasing funds at successful completion of documented stages. This will allow the committee to make a decision, at any stage, whether to continue funding the project and will provide another mechanism to hold the agency to account for the successful delivery of the project.

- Projects being provided with funding to prepare a preliminary business case, then a full business case and then to complete the procurement process. Seeking responses from the market through the procurement process will enable agencies to test their

assumptions about project costs, timeframes and deliverables. A staged approach may also open up opportunities for smaller, local companies to tender for parts of the project and also increase the competitiveness of the market.

- After the procurement process, the project team submit a revised business case to the committee, which will be better informed at this stage to make a decision about whether the project represents a priority and value for money.

- Requiring that, where a staged approach is not considered possible, reasons for this are documented in the business case.

23. The government consider requiring that agencies review the business case and re-submit it to a sub-committee of Cabinet where there is any significant variation to project costs (threshold to be identified in the business case, for example, 20 per cent) or deliverables so that the committee can determine if the project still represents value for money and a priority for government at the increased cost.

24. The government consider requiring that agencies review the business case and re-submit it to a sub-committee of Cabinet for approval if the committee partially funds a project (i.e. an agency requests $100 million and is provided with $90 million). The revised business case should clearly detail what can be achieved within the allocated funding.

25. DTF require ICT-enabled projects to be subject to quarterly asset investment reports to DTF whether categorised as capital or operating expenditure. As one witness put it: 'If it looks and feels like an ICT project, it should be treated like one'.

DTF's response

DTF accepts this recommendation.

Contingency funding

220. Contingency funds are used to cover incidental or unforeseen expenses. However, they are not used consistently. Better management and oversight of these funds is essential for the success of ICT projects.

Recommendation

221. I recommend that:

26. Agencies identify in the business case a contingency based on the requirements identified. As the contingency amount is only to be accessed as a last resort and is an indication that additional project funding may be necessary, a proportion should be immediately available to the agency for ongoing expenses with the remainder subject to approval by the Treasurer.

DTF's response

DTF accepts this recommendation.

Public announcements

222.   The progress and achievement of ICT-enabled projects are not aided by early public announcements of funding and delivery dates which can lead to unrealistic community expectations; ill-considered business cases; and unnecessary effort directed at trying to defend the indefensible.

Recommendation

223.   I recommend that:

27. The government consider waiting until the completion of the planning and procurement phases before announcing funding and project timelines.

4. Probity and procurement

Probity

224.   Probity is integral to ICT-enabled projects. The principles must be understood and embraced by agencies, not just be considered as a tick the-box exercise.

Recommendations

225.   I recommend that:

28. Agencies appoint both a probity adviser and probity auditor. The nature of the engagement and the detail and extent of reporting is to be sufficient for the agency's executive and the probity practitioner to have confidence in the ethical management of the project.

DTF's response

> The Secretary, DTF stated, 'DTF does not agree with this recommendation as a universal requirement ... the appointment of probity services should be based on the risk profile and complexity of individual projects'.

226.   Both the Auditor-General and I have raised this issue in a number of previous reports. I remain of the view that the highest standards of probity are fundamental to all government projects and as such separate probity advisers and auditors should be appointed in every ICT-enabled project over $20 million.

227.   I recommend that:

29. Agencies ensure that probity practitioners have direct access to the agency's principal officer and audit committee and that a copy of the final probity report is also provided to the principal officer and audit committee. The probity practitioner generally reports to the responsible executive for the project but it is important that the practitioner has direct access to the principal officer of the agency where considered necessary for the ethical management of the project. Where the report highlights any probity concerns, these be

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addressed to the satisfaction of the principal officer of the agency before the project progresses.

DTF's response

DTF accepts this recommendation; however, the Secretary, DTF stated that 'this is an operational matter for departments'.

30. The Treasurer sign-off on the appointment of the probity auditor and probity adviser to ensure they are have the appropriate level of skill and experience for a complex ICT project.

DTF's response

DTF does not accept this recommendation. The Secretary, DTF stated, 'The current arrangement of a prequalified panel of both probity auditors and probity advisors ensures that there is an appropriate pool of practitioners with the necessary skills for departments to choose from'.

228. In my experience, the level of skill and experience of practitioners on the panel varies. Not all practitioners would be suitable to provide probity advice or auditing on large, highly complex ICT projects. My reports have previously highlighted the importance of maintaining a high standard of probity and the need to appoint separate probity auditors and probity advisers in complex procurements.[31]

Tendering and contracts

229. More innovative ways of tendering for major ICT-enabled projects should be explored to better accommodate the changing technological environment and to achieve quicker and more effective outcomes.

Recommendations

230. I recommend that:

31. DTF examine the 'competitive dialogue' process used in the United Kingdom[32] and as necessary, produce associated policies and guidelines, with particular attention to probity. This process has been used overseas and in some recent ICT-enabled projects and might prove beneficial to the Victorian environment.

DTF's response

DTF accepts this recommendation.

32. Agencies ensure that contracts are structured to manage risk and contractor performance (including penalty and escalation clauses) while maintaining sufficient flexibility to optimise potential benefits while achieving outcomes on time and budget. It is important that these principles be established early in the contract relationship

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31 See for example, Victorian Ombudsman, *Ombudsman investigation into the Probity of the Kew Residential Services and St Kilda Triangle developments* (2010) <www.ombudsman.vic.gov.au>.

32   Also referred to by VicRoads as 'interactive vendor engagement'.

because a project's success or failure is dependent upon the vendor sharing the commitment to and responsibility for project achievement.

DTF's response

DTF accepts this recommendation.

33. The Victorian Government Solicitor's Office (VGSO) be briefed at an early stage of the project and endorse all proposed contracts prior to signing to ensure the contract protects the interests of the state. Greater use should also be made of standard contracts and standard provisions, such as those dealing with intellectual property rights and penalty clauses.

VGSO's response

The Victorian Government Solicitor stated VGSO 'is happy to support the recommendation … and can see clear benefits to government in establishing an effective process to review and endorse ICT contracts'. He further stated that VGSO has provided legal services in significant ICT projects for government clients and has a whole of government perspective and a diverse skills base to draw upon. He stated that, 'by being involved at an early stage we consider that the right legal resources can be contributed at the relevant stages of the projects'. The Victorian Government Solicitor also stated that there would be a benefit in VGSO having input into the Gateway Review process for complex procurements so that lessons learnt on legal issues across ICT-enabled projects could be collated and provided to Cabinet. In addition, he stated that VGSO is required to operate on a cost recovery model and as such, VGSO would need to charge for this work and costs would need to be included in the projects' budgets. VGSO further proposes to share its knowledge by hosting seminars for government agencies in ICT procurement. I support the additional suggestions made by the Victorian Government Solicitor.

34. DTF amend its Good Practice Guidelines to provide clearer probity advice on the engagement of vendors pre-tender. Where an agency decides to engage one particular vendor (or a restricted number of vendors) in relation to the project pre-tender, the vendor/s should be advised that they will be excluded from any subsequent tender process. In relation to market sounding and piloting pre-tender, agencies should provide an open invitation for vendors to respond so that no one vendor is provided with an advantage in the subsequent tender.

DTF's response

DTF accepts this recommendation in principle. The Secretary, DTF stated, 'DTF will review its Good Practice Guidelines and

consider whether amendments are necessary to provide greater clarity'.

Leading edge versus fast follower

231.   Agencies should be conservative in relation to ICT products, rather than exploratory. They should look to valid and relevant examples nationally and overseas. Wherever possible, commercial off-the-shelf (COTS) products should be selected and used rather than bespoke systems. COTS products should not be over-customised such that built-in options and updated versions cannot be accessed without cost and on-going support becomes unavailable.

Recommendations

232.   I recommend that:

35.   Agencies avoid undertaking leading edge or untried products or services, unless the risks of such an approach have been identified in the business case and mitigated: they should learn from the example of others, not pay for others to learn from it. Risks should be clearly discussed and actions proposed to mitigate any downside.

DTF's response

DTF accepts this recommendation.

36.   Agencies look to the opportunities presented by commercial off-the-shelf products to change, simplify and improve business practices with commensurate benefits.

DTF's response

DTF accepts this recommendation.

5. Project management

Project management methodology

233.   Using an appropriate project management methodology can give greater assurance that the project will be delivered efficiently and effectively. Whatever methodology an agency uses, it must have a structured approach to ensure that all elements of a project are considered and the agency must be confident that it is best suited to the development strategy in place.

Recommendation

234.   I recommend that:

37.   DTF require agencies to identify their project management methodology in project business cases and funding submissions.

DTF's response

DTF accepts this recommendation.

Skilled ICT staff

235. Many witnesses emphasised the need for skilled and capable people in government to deliver ICT-enabled projects. Some also spoke of the need to enhance the ICT skills mix and career structure for ICT staff in government. ICT skills come at a premium and for this reason, many witnesses argued that we have to, and should, rely on the private sector to provide specialist ICT skills as and when needed through consultancy and contractor engagements.

236. While I consider there are and always will be circumstances when it is necessary to engage ICT consultants and contractors, I also consider government should look to initiatives to attract and retain more ICT skills. I have recommended developing the capacity and capability of DTF's Commercial Division and specialist ICT group to provide ICT, project management, procurement and risk management expertise. That in itself may provide a better career structure and the type of work to continue to interest and challenge ICT staff. DTF should develop a long term strategy to recruit and maintain skilled ICT staff across the whole of government.

Recommendations

237. I recommend that:

38. The Premier consider requesting that the State Services Authority and DTF develop a strategy, in consultation, to recruit specialist ICT skills through the Victorian Government Graduate Program and provide them with a structured career path. Such an arrangement would enhance the transfer and ongoing development of the government's ICT skills base and reduce its reliance on contract staff. Each graduate should be exposed to a number of different agencies and share collaborative workshops together as part of a structured program over the first twelve months.

DTF's response

The Secretary, DTF stated that DTF accepts this recommendation in principle 'subject to a full assessment of the viability of such an approach'.

39. The Premier request that the State Services Authority examine the need to pay a skills allowance for ICT staff in addition to the standard public sector pay scales to address the government's inability to attract skilled staff.

40. DTF develop and maintain a list of individuals working in government with particular ICT-based skills and facilitate the availability of these individuals to other agencies to provide advice and/or assistance based on ad-hoc or more formal arrangements for longer-term

assignments. This will share specialist skills across government and give the individual an opportunity to become involved in relevant and challenging projects.

DTF's response

> *DTF does not accept this recommendation. The Secretary, DTF stated, 'Departments are accountable for staff recruitment and development'.*

238.   Government has a lack of skilled ICT staff. Therefore it is essential that those that it currently employs are utilised effectively across all government agencies and not siloed within individual departments. I consider that it is important, in the absence of a whole-of-government Chief Information Officer, that these resources are coordinated and shared. In my view, DTF is the agency best placed to fulfil this role.

Engagement of ICT contractors and consultants

239.   Agency use of outside consultants and contractors should be carefully monitored and such costs must be separately accounted for and regularly reviewed. I note that at the Federal level, the government targeted a reduction of 50 per cent over a two year period in the use of outside engagements. This was expected to result in significant cost savings in addition to the employment of more in-house ICT resources.

Recommendations

240.   I recommend that:

   41.   DTF develop and implement a whole-of-government strategy to reduce the government's reliance on consultants and contractors.

DTF's response

> *DTF does not accept this recommendation. The Secretary, DTF stated, 'Subject to Government policy, departments are accountable for determining the appropriate mix of resources required to deliver projects. The parts of the draft report given to DTF for comment provide no specific evidence that over reliance on consultants and contractors has contributed to adverse ICT project outcomes'.*

241.   As discussed earlier in my report, contract staff are generally more expensive than their public sector equivalents and do not necessarily operate in accordance with Victorian Public Service values. An over reliance on contract staff can also increase the risk that the software solution will not meet the needs of the business and can make the business slower to react to problems that arise. In my view, there is therefore a need to reduce the government's reliance on contractors and consultants. Such a need has also been identified at the Federal level.

242. I note DTF advised my office that the government 'implemented a policy to reduce the use of consultants and this was reflected in savings announced [in] the 2011-12 budget'.

243. I recommend that:

42. DTF hold and update details of contractors and consultants used by government on projects; the nature of the services provided; an evaluation of those services; and the costs involved. This information should be available to agencies considering the engagement of ICT contractors and consultants.

DTF's response

DTF accepts this recommendation. The Secretary, DTF stated, 'Under the mandatory e-services panel, DTF does publish details of all contracts with panel members on the panel website, including the broad nature of the services provided and costs. Agencies engaging contractors under the panel are encouraged to prepare an evaluation of the services at the conclusion of the engagement. These evaluations are also published on the e-services panel website'.

244. This is limited, however, to instances where agencies engage e-services panel members. I remain concerned that there is no central, coordinated mechanism to ensure that underperforming contractors and consultants outside of the panel are not re-engaged by agencies.

Conclusion

245. By applying the principles and recommendations I have outlined above, I am confident that government will be better positioned to successfully manage ICT-enabled projects in future. However, it is also important in this constantly evolving and changing industry that these principles are regularly reviewed to ensure their ongoing relevance and usefulness.

Case studies

246. My investigation has examined 10 major information and communication technology-enabled (ICT-enabled) projects in the Victorian public sector. Below, I have provided a case study in relation to each ICT-enabled project, providing a synopsis of the events, key issues and cost and delivery timelines. The information I have received in examining these case studies forms the basis of my conclusions and recommendations. I have also suggested a way forward for each project, although in the case of the myki project, the government has already made decisions on its future.

247. The projects examined in my investigation are as follows:

1. Link, Victoria Police

2. HealthSMART, Department of Health (DOH)

3. myki, Transport Ticketing Authority (TTA)

4. Registration and Licensing – RandL, VicRoads

5. Client Relationship Information System – CRIS, Department of Human Services (DHS)

6. Ultranet, Department of Education and Early Childhood Development (DEECD)

7. Integrated Courts Management System – ICMS, Department of Justice (DOJ)

8. Property and Laboratory Management – PALM, Victoria Police

9. HRAssist, Victoria Police

10. Housing Integrated Information Program – HIIP, Office of Housing (Housing), DHS.

1. Link

Key issues

- The project was 'fatally hampered by a poorly constructed business case that grossly underestimated the cost and complexity'[33] of the project.

- The business case was rushed to meet budget timelines and to fit within the funding already allocated by the government. It failed to identify measurable benefits. Instead, benefits were written to obtain government support.

- There were several early warning signs that the business case cost estimates were significantly deficient. However, it took almost four years for the project team to identify that the project was around $80 million under-funded.

- Victoria Police failed to appoint a single, qualified project manager to run the project, notwithstanding that project management was identified as a project risk in the business case and a major contributor to the failure of 60-70 per cent of ICT-related projects.

- The 'like-for-like' implementation strategy resulted in the commercial off-the-shelf product being excessively customised, eroding the inherent benefits offered by the LEAP replacement product and increasing costs.

- Another business case was prepared in 2011. The project went through Gateway Review One and the review team made a number of critical/urgent recommendations. Victoria Police concluded that further time was required to prepare a submission to the Cabinet budget committee. Replacing LEAP was again put on hold.

Graph - Projected and actual cost/timeline

Legend: ●— Original Budget Allocated (2006)   ●— Preliminary Business Case (2011)

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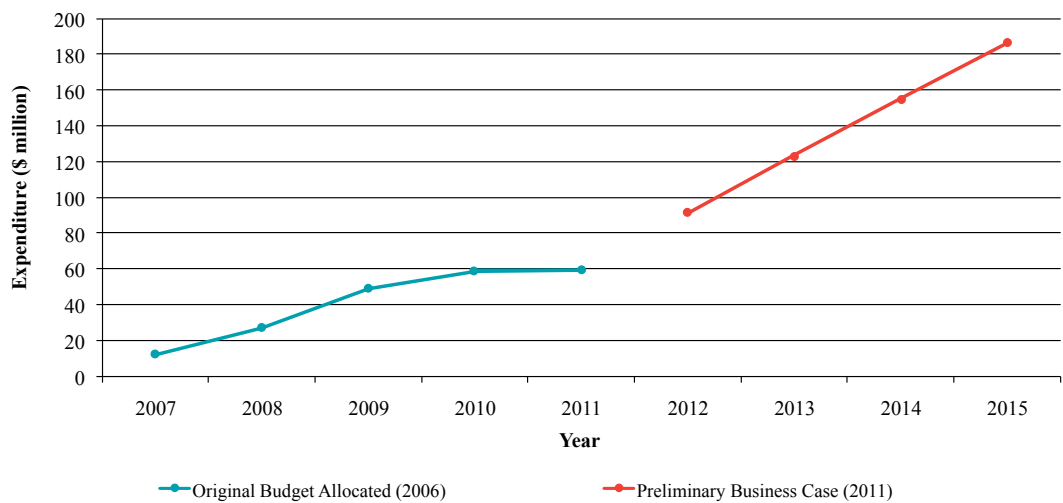
33   Victoria Police, *Preliminary Business Case,* Victoria Police, Melbourne, July 2011.

Project overview

248. The Link project was initiated to replace Victoria Police's LEAP database – the primary central information system used by Victoria Police since 1992 to record crime incidents and personal particulars.

249. The decision to replace LEAP followed my report, *Investigation into Victoria Police's management of the Law Enforcement Assistance Program (LEAP)*[34] tabled in Parliament in March 2005, which identified serious weaknesses of LEAP and recommended its immediate replacement.

250. In August 2005, the then Premier announced $50 million funding for the replacement of LEAP, to be rolled out over three years. A business case was prepared in February 2006, which indicated the project would cost $59.48 million over four years. After a procurement process, Victoria Police entered into a contract with a vendor in February 2009 to provide a commercial off-the-shelf[35] records management system. Victoria Police also purchased an Enterprise Service Bus (ESB), which would provide a mechanism for the new system and other applications that interface with LEAP (such as the VicRoads database) to exchange information.

251. The Link project was closed in June 2011, after Victoria Police identified the project was significantly underfunded. A second preliminary business case prepared in 2011 indicated a further $127.7 million was required to complete the project. However, Victoria Police decided not to submit the business case to the Cabinet budget committee. Instead, it intends to spend further time planning and taking a holistic view of its needs. A business case will be submitted to the Cabinet budget committee in 2014-15 to replace LEAP. In the meantime, Victoria Police members continue to use an out-dated 'green-screen' system developed in 1992.

Summary of issues

Business case

252. The project to replace LEAP was 'fatally hampered by a poorly constructed business case that grossly underestimated the cost and complexity'[36] of the project. Adequate planning and a detailed business case could have better identified the overall cost of this project in 2006, as well as the number and complexity of the interfaces with which the new system would need to communicate. Instead, the business case appears to have been rushed to meet budget timelines and to fit within the funding already allocated by the government. The project costs appear to have been based on a 7-10 day review, which considered the cost of redeveloping LEAP – not replacing LEAP (as the allocated time did not allow for investigating a replacement system).

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34 Office of Police Integrity, *Investigation into the Victoria Police's Management of the Law Enforcement Assistance Program (LEAP)* (2005) <www.opi.vic.gov.au>. I tabled this report in my previous capacity as Director, Police Integrity.

35 A product that already exists and can be readily procured. Such products are generally cheaper and less risky than developing a new, untested system.

36 Victoria Police, *Preliminary Business Case*, Victoria Police, Melbourne, July 2011.

253. The business case, prepared by an independent consultant, also failed to identify measurable benefits to be achieved by the project. Victoria Police notes from a meeting with the consultant in September 2006 indicated 'many of the benefits are not measurable but were written to confirm government support'. For example, the business case stated that the project would lead to a reduction in crime of five per cent. However, the consultant later stated this was a 'big statement', 'pretty rough' and 'never measurable'.

Costs

254. It was not until late 2009 that the project team realised the business case cost estimates were significantly deficient and in March 2010, the team identified the project was $80 million under-funded. By this time, the project had been running for almost four years. While some costs may not have been identifiable until after a vendor was selected, the requirement for additional funding should have been identified much earlier by the project team. There were several early warning signs which, in my view, should have caused the project team to review the business case:

- The consultant had advised that the scope of the business case was written to fit the budget, rather than a bottom-up requirements analysis of the system, and it was written over a short period of time (September 2006)

- Concerns were raised during Gateway Two and Three about the adequacy of funding for the project (December 2006 and March 2008). Gateway Two recommended the steering committee 'finalise scope and budget adequacy'. Gateway Three suggested the project budget could 'be validated on receipt of tender responses'.

- The steering committee did not endorse the business case until May 2007. Even then, its endorsement was qualified by stating that the adequacy of funding could not be ascertained until more information was available on the cost of a replacement system; and that the scope of LEAP replacement had not been specified in detail within the business case.

- 2008 media reports (prior to Victoria Police signing a contract with the vendor) indicated the Queensland police force spent twice as much as the Link budget implementing the same system.

255. There appears to have been a lack of leadership in that once the project started, there was no stopping it – despite clearly inadequate funding. While the decision to suspend, and subsequently close the project, was made too late – it was appropriate in the circumstances. In my view, it was also courageous given agencies' reluctance to make the difficult decision to stop projects as such a decision is seen by many as a sign of failure.

Project management

256.   Victoria Police did not appoint a single project manager to lead the project, instead appointing a Business Project Manager (a sworn officer) and a Technical Project Manager with joint responsibility. In my view, a single, qualified project manager should have been appointed to take overall responsibility for the delivery of the project and reporting to the steering committee.

257.   One sworn officer fulfilled the role of Business Project Manager from the beginning of 2008 until project closure. While he had policing experience and knowledge of the business, he had not managed a large, complex ICT-enabled project before. He said he 'attended the basic 'Prince2' Project management course in either 2006 or 2007' and believed he was selected for the position as he had 'successfully implemented' a multi-agency project involving Victoria Police. However, I note he did not lead that project. The Business Project Manager said he came to the conclusion after reading a review of the project in 2011 'that maybe it needed someone with more skills' than he had. In my view, he did not have the requisite project management experience or qualifications to manage the Link project.

258.   Victoria Police's appointment of the officer to such a significant role suggests a failure to understand the need for the project manager to have project management experience and preferably, experience with projects of the size and complexity of the project.[37]

259.   I note that project management was identified as a project risk in the 2006 business case, which stated, 'Inadequate project management is a ... major contributor to the fact that 60-70% of IT related projects fail to deliver'.

260.   The Business Project Manager was also the senior responsible officer (SRO) for the project. The SRO is the project owner, sponsor and champion—with personal accountability and overall responsibility for the delivery of benefits.[38] The SRO also receives the Gateway Review reports. Combining the roles of Project Manager and SRO may have diminished the level of scrutiny on the project. In my view, the appropriate person to fulfil the role of SRO was the executive sponsor for the project, who was also the chair of the steering committee.

Implementation strategy

261.   The project's failure was further contributed to by the implementation strategy, which was to replace LEAP with a 'like-for-like'[39] replacement. The 'like-for-like' strategy was contrary to the business case which stated, to 'replace LEAP on a like-for-like basis using modern technologies and architecture would ignore the major changes in police roles and practices

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37   Victorian Auditor-General's Office, *Investing Smarter in Public Sector ICT: Turning Principles into Practice* (2008) <www.audit.vic.gov.au>.

38   Ibid.

39   In terms of the information stored and the collection method there would be very little change between LEAP as it currently operates and LINK. It was determined that a 'like-for-like' approach would create the smallest scope and make specification more straight forward.

that have occurred and are likely to occur in the future. A new LEAP must be forward looking and flexible enough to meet current and future needs'.

262. The 'like-for-like' strategy resulted in the commercial off-the-shelf product being excessively customised, eroding the inherent benefits[40] offered by the LEAP replacement product and increasing costs. Evidence obtained by my office indicates the system had not been implemented as a 'like-for-like' replacement before and the vendor had indicated to Victoria Police that the volume and complexity of implementing a 'like-for-like' replacement would be the largest development effort it had undertaken. At interview, the then Executive Director, Information Technology, Victoria Police stated that the 'like-for-like' approach did not cause the project's problems, but the approach 'turned into a mistake' and resulted in a 'huge opportunity loss'.

263. The executive sponsor and chair of the steering committee stated that one of the learnings from the project was that Victoria Police should have re-engineered its business processes to fit the new system, rather than trying to make the system fit Victoria Police's processes.

2011 business case

264. From January to June 2011, Victoria Police engaged a consultant to prepare a new business case for what was now referred to as the 'Policing Information Management System' (PIMS). The preliminary business case, dated July 2011, indicated Victoria Police would seek approximately $127.7 million funding in the 2012-13 budget to complete the LEAP replacement project over three years. This was in addition to the original budget of $59.48 million.

265. As a result of DTF's 'high-value and high-risk' process, the PIMS project was required to go through Gateway Review One: Strategic Assessment in June 2011. The Gateway Review made three critical/ urgent recommendations including that the project team 'ensure budget estimates ... reflect a detailed scope'. The review also identified that Victoria Police had not 'defined and set a clear vision for modern policing out to 2030', established clear business requirements, adequately planned for organisational transformation from a paper-based organisation to an electronic organisation or established clear ownership and accountability for organisational transformation.

266. On 23 August 2011, Victoria Police decided not to continue with the PIMS project. Instead, Victoria Police intends to seek $12 million from the Cabinet budget committee in 2012-13 to develop a business case that will address the replacement of LEAP, as well as focussing on transforming Victoria Police into a modern policing organisation.

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40 Victoria Police made over 100 requests for changes to the base package. The Commonwealth review of ICT by Sir Peter Gershon found that there is often unnecessary and excessive customisation of commercial off-the-shelf products by agencies, which erodes the inherent benefits offered by such products, and increases costs.

267. In this regard, it has been five years since the original business case was prepared. During this time, policing practices, the expectations of members around technology, and technology itself have changed. Any new business case needs to consider these issues to ensure LEAP is replaced with a system that addresses current needs and is flexible enough to accommodate emerging business practices and the strategic needs of Victoria Police in the foreseeable future.

268. For example, I note that mobile data entry technology was not included in previous scope of the project (although the new system has the capability). In October 2007, the Link Project Sponsor Report noted that the 'major operational benefits flowing from LEAP replacement are unlikely to be realised ... without some method for entering data from the field without imposing greater clerical workloads on operational staff'.

Where to from here?

269. The Link project was set up to fail by a business case rushed to meet budget timelines and to fit within the funding already allocated by the government. The failure of the project was perpetuated by Victoria Police's lack of experience in managing such a complex project. This led to a failure to allocate adequate project management resources; a lack of decision-making and leadership in that once the project started, there was no stopping it – despite clearly inadequate funding; and the selection of an implementation strategy that eroded the new system's inherent benefits.

270. I am disappointed that the replacement of LEAP has again been put on hold and the $59.48 Link budget appears to have been wasted. Victoria Police has had 18 months since the project was suspended to seek advice about how best to progress the project and yet it was unable to prepare a thorough business case in that time to replace LEAP.

271. Victoria Police acknowledged in its 2011 business case that LEAP is 'outdated and inefficient and in need of major overhaul or replacement'. It is unclear when LEAP will be replaced, but it is unlikely this will now occur for another six or seven years. In the meantime, Victoria Police members continue to use an out-dated 'green-screen' system developed in 1992.

Recommendations

272. I recommend that:

43. As a matter of urgency, Victoria Police replace LEAP with a force-wide computer based information system that provides an information technology platform that has the flexibility to accommodate emerging business practices and strategic needs of Victoria Police and applications that interface with the force system. (I note that Victoria Police accepted this recommendation in 2005).

44. Victoria Police prepare the business case (to replace LEAP and transform Victoria Police into a modern policing organisation) with the assistance of DTF. While consultants may be engaged to review the business case, Victoria Police is best placed to understand its processes and future needs. Victoria Police must also take ownership of the business case. The business case should propose staged implementation and funding of the proposed project, in accordance with my recommendation earlier in this report.

Victoria Police's response

> The Chief Commissioner, Victoria Police stated, 'I support the recommendations that you propose'.

2. Healthsmart

Key issues

- Poor planning has handicapped the HealthSMART program. The project costing and timelines were ambitious and the Department of Health (DOH)[41] seriously underestimated the size of the task. The project inevitably ran over budget by about 35 per cent and has taken more than seven years to deliver only a partial implementation of the core clinical application.

- The HealthSMART clinical application, which had the potential to deliver the most benefit, still has not been delivered as planned and is facing strong resistance among user groups. Instead of being the focus of the project from the beginning, DOH focused more on scoring easy wins with the less complex, but less important financial and patient management systems.

- DOH had an opportunity to develop a sustainable, integrated health ICT foundation for the state but there is a real danger that this opportunity may not be fully realised.

Graph - Projected and actual cost/timeline
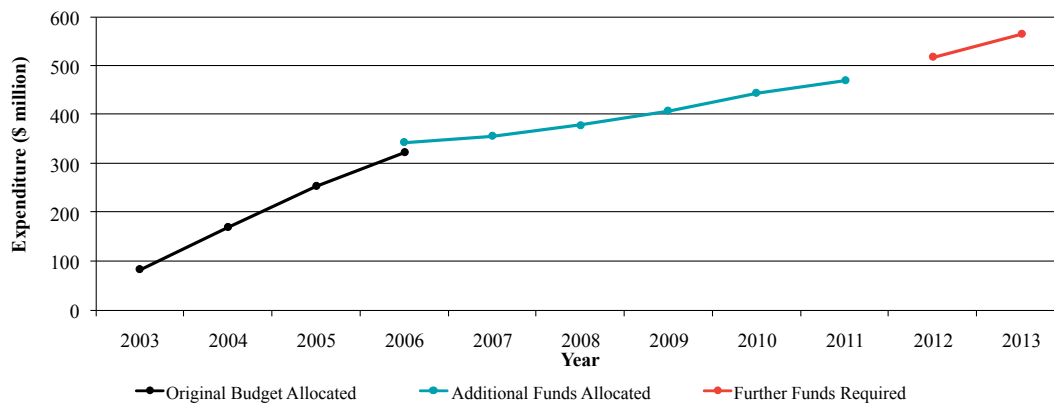
Project overview

273. The HealthSMART program commenced in 2003 as a $323 million program to build a consistent ICT foundation across half of the Victorian public health service.

274. HealthSMART was supposed to coordinate and consolidate health service ICT systems and improve patient safety. HealthSMART included:

- a finance application: supports health services to manage their finances

- a patient management application: stores patients' personal details and appointments

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41 In August 2009, the Department of Health was separated out of the Department of Human Services. For ease of reading, we have referred only to the Department of Health throughout this report.

- a clinical application: replaces paper based patient records in hospitals and includes electronic prescribing and patient discharge summaries

- HealthSMART Services: new organisation that plans, builds, runs and supports the infrastructure on which the HealthSMART applications are delivered.

275. The finance and patient applications were completed late, but on budget and HealthSMART Services has been established. However, while DOH planned to roll out the clinical application to 10 health services, it has only been able to deliver it into four health services within the allocated budget.

276. My investigation focused on the implementation of the clinical application given DOH's failure to complete it on time or within budget. This does not mean that the other applications are trouble free and DOH needs to continue to thoroughly review these applications before rolling out to any further health services.

Summary of issues

Poor project planning

277. The impact of many of the HealthSMART time, cost and functionality problems encountered could have been avoided or minimised had DOH adequately planned the project. The Auditor-General identified a number of planning issues in his 2008 audit report Delivering *HealthSMART— Victoria's whole-of-health ICT strategy,*[42] including:

- the original milestones were too ambitious

- DOH did not have a reliable basis for estimating agency expenses

- DOH did not seek to identify whether agencies were able to meet their anticipated contributions

- DOH overestimated the standard of technology infrastructure across the health sector and the capability of the sector to implement technological change.

- the lack of a whole-of program business case was a key flaw in planning the program

- due to the absence of a state-wide clinical systems business case, health services are having difficulty committing to additional ICT investment.

278. By 2011, the Auditor-General's concerns were realised, with significant delays, cost overruns and functionality problems, particularly relating to the clinical application.

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42   Victorian Auditor-General's Office, *Investing Smarter in Public Sector ICT: Turning Principles into Practice* (2008) <www.audit.vic.gov.au>.

Delays

279. HealthSMART was originally scheduled for completion by the end of 2007. The timelines were later extended to the end of 2009.

280. The finance and patient management applications were finally completed during 2010. Delays and budget overruns compromised the planned release of the clinical application and DOH estimated that it will take up to two years to finish the remaining six health services. This means that by the time the original specification is delivered, the system will be over ten years old.

281. DOH planning failed to fully recognise that each health service would require a separate, board approved, business case prior to implementing any HealthSMART application. This delayed the roll out of the clinical application. DOH also underestimated how significantly health service ICT systems would need to be upgraded to run the clinical application and how long it would take to do this.

282. The deployment of the clinical application was further delayed by the vendor. The main delays related to adopting Australian terminology and medications content for electronic prescribing and these problems have persisted post-release. Pharmacists and doctors interviewed complained that the medications data is up to 18 months out of date.

283. In response to my draft report, the Secretary, DOH stated:

> Medications data is not 18 months out-of-date. Requests from health services for additions and modifications... are processed every week. PBS [Pharmaceutical Benefits Scheme] information is updated monthly ... Hospitals' local system administrators (such as a pharmacist) can ... locally prevent access to a medication in the event of a product alert being issued by a manufacturer). Doctors are free to use the system to manually prescribe any medication or dose (just as with a paper script) ... Victoria is the inaugural project in the country to introduce new national medicines terminology into clinical use ... an independent review is in the process of being commissioned to seek advice as to whether any additional actions or activities should be undertaken.

284. I note the different perceptions on whether medications data is up to 18 months out of date. This is an issue that needs to be dealt with to ensure that any inefficiencies do not have the potential to put patient safety at risk.

285. DOH also experienced significant problems with the expertise and quantity of staff provided by the vendor of the clinical system. However, timely intervention from the DOH Secretary to the Chief Executive Officer of the vendor in the United States resulted in more senior staff being attached to the project for extended periods.

286. DOH also had difficulties recruiting skilled staff to the project team, which delayed the project at crucial stages.

Funding issues

287.   The original HealthSMART budget was $323 million. In the 2008-09 state budget the government allocated a further $104 million in operating costs. This means that by the end of 2011-12, the government expected to have spent $427 million implementing HealthSMART.

288.   DOH estimates that total spend on the project by the end of 2011-12 will actually be $437 million. However, it also advised that a further $34 million to support HealthSMART Services was not recorded against the project. This brings the total estimated project expenditure to $471 million compared to the expected $427 million.

289.   By the end of 2011-12, the HealthSMART program will have been running for nine years and will only have delivered the clinical application into four of the ten planned health services. DOH estimates that it will cost up to $95 million to complete the remaining six health services. This would place the final project cost at around $566 million, 33 per cent over the planned budget.

290.   Finishing the clinical application has been more complicated and expensive than DOH estimated. When questioned on the increased costs, the HealthSMART Program Director advised that DOH:

    •   overestimated the standard of local infrastructure and the skills of local ICT staff

    •   underestimated the full costs associated with training doctors and nurses, including backfilling their roles.

291.   DOH does not fund health services to renew and upgrade computer infrastructure but has assisted health services participating in HealthSMART to upgrade technology infrastructure to meet minimum standards. Health services will need to find between $0.7-2.0 million a year to keep the clinical application running. The CEO Austin Health stated that other services will have to be re-prioritised to find these funds. He also advised that the implementation costs were a significant barrier to Austin Health's participation in HealthSMART.

292.   When questioned on why HealthSMART was such a big project, the Executive Director of Financial and Corporate Services at DOH advised that small, back room projects do not get any traction in the Budget and Expenditure Review Committee. Therefore, there is a tendency to lump things together to try to create mega projects that will grab the attention of the decision-makers. This is especially important in the health field where agencies are competing for funds against hospital beds, nurses, doctors etc.

Functionality

293.   The HealthSMART functionality issues that have been brought to my attention can be categorised into two themes: minor irritants that can be remedied and major functional problems. Most of the negative feedback I received about the clinical application could be classified as minor

irritants. While these can mostly be addressed through system updates, I understand that some of these problems are hard coded into the system and cannot be changed. Health services have little autonomy to deal directly with the vendor and must process change requests through DOH. This process was described as overly bureaucratic and slow.

294.   Of greater concern is that several senior doctors and pharmacists interviewed felt that the clinical application may have a negative impact on patient safety by:

- forcing doctors to adopt a model of practice based around the functionality of an ICT system rather than best medical practice

- requiring doctors to jump between multiple systems to access patient data

- the overly complex, unfriendly user interface that is encouraging doctors to take shortcuts and in some instances refuse to use the system at all.

295.   One of the stated aims of HealthSMART was to introduce systems that will reduce the incidence of adverse events in hospitals. While prescribing errors have reduced in Eastern Health since the clinical application was introduced, reporting and audit functions are limited and it will be difficult to determine the full extent of derived benefits.

296.   Royal Victorian Eye and Ear Hospital is the only health service that has fully evaluated its implementation of the clinical application and the results were poor. Issues included:

- it does not perform all required tasks

- it is difficult to use

- not all parts of the system are operational.

297.   The problems encountered by system users have been magnified by the fact that the releases that have been made available do not have all of the planned functionality. Until the full application is rolled out in each health service it will be difficult to fully realise the planned benefits.

298.   Health services have had to put in place exhaustive training programs to ensure medical staff can use the system properly. Given the high turnover of staff, particularly in teaching hospitals, there will be significant ongoing training demands that could be reduced if the system were more user-friendly.

299.   In response to my draft report, the Secretary, DOH stated:

> There are systems in place to report any impact on patient safety ... The clinical system does not change a doctor's capacity, or indeed obligation, to undertake best medical practice ... The health services have also been encouraged to, and have been, establishing internal health informatics committees to discuss ongoing system changes ... DH [Department of Health] staff continue to attend all clinical sites. The vast majority of feedback is positive with reduced administrative workloads to order tests (pathology and radiology)

and retrieve results. Senior staff are reporting increased access to data about clinical activity that has been previously unavailable. Initial data around medication error rates are promising ... Overseas experience suggests that it is during this transition phase from paper to electronic medical records and during which there are mixed workflows, that user feedback will be varied ... Post implementation reviews will be conducted at all 4 sites once the in-scope project work has been completed next year ... Royal Victorian Eye and Ear Hospital (RVEEH) is a highly specialised hospital that has some very specific issues. DH is working with RVEEH to address these issues.

Where to from here?

300. By the end of the 2011-12 financial year, DOH will have spent approximately $471 million on HealthSMART. It has delivered the finance and patient management applications as planned, but has only delivered the clinical application to 40 per cent of the intended health services.

301. A fully funded, coordinated approach to health ICT is essential, but the current iteration of HealthSMART does not deliver this. The HealthSMART brand has been damaged by delays, budget overruns and perceptions of poor functionality.

302. DOH should complete the clinical applications it has commenced. A huge amount of time, money and effort has gone into getting it up and running in four health services. Equally it would not be appropriate, at this time, for DOH to make any further investment in implementing the clinical application in other health services.

303. DOH should test all of the HealthSMART applications to identify whether they are fit for purpose and to determine the full costs and benefits for each. It is essential that the participating health services are fully involved in this process. This information should inform a review of the program to determine how or whether the applications can be further developed and deployed.

304. Thus informed, DOH should develop a detailed strategy and plan for the future of health ICT in Victoria. Hard decisions will be required to be made on the future of HealthSMART applications, but these must be made on a fully informed basis once the dust has settled from the current implementations.

305. DOH should also develop a strategy to fund and support health services to maintain ICT systems and ensure they remain functional. This should be based on individual health service multi-year ICT strategies and should establish minimum standards for health ICT in hospitals.

306. I also note that the project is now part of the 'high-value and high-risk' project process.

Recommendations

307. I recommend that:

45. DOH complete the four HealthSMART clinical applications that it has commenced.

46. DOH review the functionality and usefulness of all of the HealthSMART applications prior to committing any new funding to the project.

47. DOH develop a strategy and plan for the future of health ICT in Victoria.

Department of Health's response

> *The Secretary stated that the 'report findings in relation to the HealthSMART project are reasonable and I support the draft recommendations'*

3. myki

Key issues

- The project is at least $350 million over budget and at least four years behind schedule.

- The Transport Ticketing Authority (TTA) was overly optimistic in believing it could achieve a two-year delivery of the system: less than half that achieved elsewhere in the world.

- The project proposed an 'open architecture'[43] solution: an approach not previously undertaken, heightening associated risk.

- The 'outcomes-based'[44] agreement proved problematic to manage and led to ambiguities and specification 'creep'.

- Two Chief Executive Officers departed the TTA shortly following failure by the TTA to meet key delivery dates.

- Initially, the TTA board did not have the requisite number of appointees with relevant experience when needed.

- The Department of Transport (DOT)[45] had responsibility for ticketing policy issues, but did not have a representative on the board. In my view, it should have.

- The TTA was highly critical of the quality of the project managers employed by the vendor.

Graph - Projected and actual cost/timeline
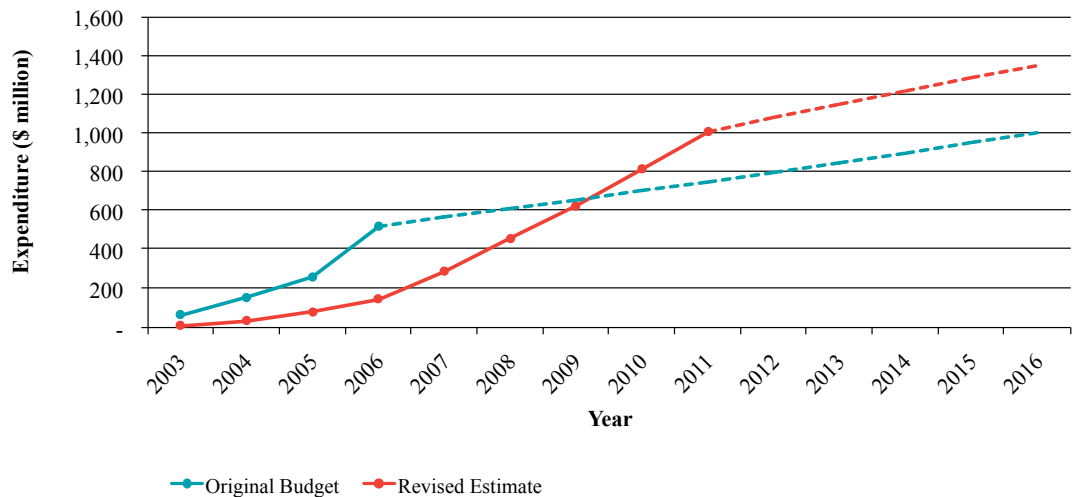
Note: Dotted lines represent ongoing funding to maintain and manage the system

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43 'Open architecture' enables each element of the system (for example the card or vending machines) to be replaced by a different brand of product which will operate in and integrate with the other elements of the system.

44 An 'outcomes-based' agreement only defines the overall objectives of the project: it does not include detailed specifications. For example, one outcome was 'a damaged or defective Smartcard may be replaced'. It does not define what is defective or damaged, or how it is to be replaced.

45 Previously known as the Department of Infrastructure. Referred to as the Department of Transport for ease of reference.

Project overview

308.   The Victorian Government's 2002 *Linking Victoria Policy* committed to developing a new smartcard[46] ticketing system to replace the existing Metcard ticketing system when the Metcard contract expired in 2007.

309.   The Transport Ticketing Authority (TTA) was established in April 2003 to manage the replacement of Metcard and implement the new ticketing system. It completed a business case on 27 April 2004, which forecast total expenditure of $741.9 million over the life of the project (2004-17).

310.   In July 2005, a vendor was appointed to develop the new ticketing system, which became known as 'myki'. The total budget[47] estimate in 2005 was $999 million. In April 2008, the budget was increased to $1.35 billion.

311.   Costs have increased by at least 35 per cent since the award of the contract and it is likely that additional costs will ensue prior to project completion and total replacement of Metcard.

312.   myki involves over 20,000 physical devices including vending machines, readers, driver consoles and back-office hardware deployed over a wide area and covering different modes of transport – metropolitan and regional bus lines, regional and metropolitan rail lines and metropolitan trams. The vendor included 17 sub-contractors in its consortium. By any measure, the system is a complex one.

313.   Under the terms of the original contract, the system was to be fully operational by July 2007. Full implementation is yet to be achieved and the project is some four years behind schedule.

314.   On 21 June 2011 the Premier announced that myki is to be retained in a modified form.

Summary of issues

The board and project accountability

315.   The TTA was established under the *State Owned Enterprises Act 1992* on 17 June 2003.

316.   The TTA board is responsible and directly accountable to the Minister and Treasurer for delivering myki. I have been provided with no evidence that the board was held accountable for the failure of the TTA to meet the system deliverables.

317.   I also question whether the board had enough members with the requisite skills and experience over the course of the project. The initial board did not include an appointee who had previously managed the development and implementation of such a significant ICT-enabled system or had a detailed knowledge of the transport ticketing environment. It was not until the project failed to meet its two year delivery deadline that a member with strong ICT experience was

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46   A smart card is a reusable plastic card that you store value on to pay for your fare on public transport.

47   Includes capital funding and ongoing funding to maintain and manage the system.

appointed. Until then, all the available knowledge and skills would appear to reside with the CEO and his staff. In these circumstances, it would be difficult for a board member without any relevant experience to question details of the project.

318. In my view, it is imperative that a sufficient number of individuals are appointed to the board and bring with them adequate and relevant knowledge, skills and experience to drive and direct the management of the project, particularly when board accountability arrangements are used, as in this case.

319. DOT had policy responsibility for ticketing issues and as such the TTA was reliant on DOT responding quickly and effectively to requests for policy changes. In my view, a senior executive of the DOT should have been a member of the TTA board throughout the project. The Secretary, DOT was provided with an opportunity to respond to the conclusions in my draft report. However, he chose not to respond.

320. A representative of DTF had observer status at board meetings but had no responsibility for the project or to report back to DTF.

Conflict of interest

321. The vendor was engaged by the TTA prior to the tender process to assist with the design philosophy for the project. There were numerous examples of TTA individuals having had a working relationship with individuals in one or more of the tendering entities. The smart card ticketing development industry is a small one worldwide and previous working relationships between individuals were reported as being inevitable. This had the potential to compromise the probity of the project.

322. These issues were handled to the probity auditor's satisfaction and I understand that the vendor's eligibility to be accepted as a tenderer was the subject of some considerable debate within the TTA which had not foreseen that they would be a bidder.

323. In my view, it is especially important for probity issues to be well managed and that no actual or perceived conflict of interest or bias exists. It is sound probity management practice for pre-tender contractors to be excluded from tendering for contracts as there will likely exist a perception that they may have an advantage in the tender process. This should be clearly expressed to all contractors both before and at the time of the tender.

Proven vendors and products

324. In the initial evaluation of the six tenderers, only the successful bidder was unable to evidence a proven solution: all others nominated sites where their solutions were in place.

325. The 'open architecture' solution required by the TTA was new to the ticketing environment. Generally, other smart card ticketing systems

in the world were proprietary systems. The open architecture solution, which was being considered within DOT prior to the establishment of the TTA, enables each element of the system (for example the card or vending machines) to be replaced by a different brand of product which will integrate with the other elements of the system. This approach was to ensure that government was not committed to any one vendor – as in the case of a proprietary system – and was able to benefit from technical advances in any aspect of the system.

326. While there are obvious benefits for government in this approach, it is concerning that TTA elected to spend considerable public funds contracting an unproven vendor to deliver a significant product in an unproven operating environment. This decision entailed a higher level of risk and was a contributing factor to the delays. In this regard, one witness stated that the vendor was 'learning as they were going, which is problematic'.

327. In my view, government should look to state of the art, tried and proven systems and vendors, not conceptual, untried products or vendors.

Complexity

328. The request for tender (RFT) documentation was extensive, comprising four volumes of information. The tender process was an interactive and complex one involving significant ongoing negotiations where tenderers were encouraged and requested to work with different sub-contractors (sometimes from rival bids) to achieve what was regarded the best outcome for government in terms of price, delivery and deliverables.

329. The agreement (contract) and associated contractual documents include:

- over 13,000 pages
- over 40 schedules
- four exhibits made up of more than 370 separate documents
- over 3,000 outcomes.

330. In addition, the vendor stated that the TTA required in excess of 350 specification changes during the development process. In a submission to DOT in December 2010, the vendor stated that 'the TTA has continued to develop new requirements which have added complexity, cost and time to the project'. In response to my draft report, the Chief Executive Officer, TTA stated 'the Requirements Specification phase provided additional clarity around many requirements, as had been foreshadowed in the contract award process, but it did not <u>change</u> requirements (with the exception of a few matters which were dealt with as contract variations)'.

331. The outcomes-based contract which included all documentation exchanged between the TTA and the vendor during the tender process was problematic. Its lack of specificity and misunderstandings of what document took precedence over others in the contractual

documentation led to uncertainties and ambiguities whether some functional requirements were within or outside contractual arrangements, leading to disputes about costs and priorities.

Relationships

332. The relationship between the TTA and the vendor was a fractured one, based on mistrust and misgivings. In such an environment, the prospects of success are not great.

333. In its December 2010 review of myki, DOT stated that 'the project continues to be affected by ongoing technical difficulties, changing specifications and management/relationship issues between [the vendor], its sub-contractors and the TTA'. The vendor commented that 'in the early stages of the Project, the TTA's approach was proactive and confident... When public perception of the Project waned, the TTA withdrew from sufficient engagement'.

334. The TTA had asked the vendor to demonstrate its ongoing commitment to the project on more than one occasion and the senior executive of the vendor was replaced to respond to these demands. The TTA board meeting minutes recorded the board's concern and frustration that deliverables and milestones had not been met. On at least one occasion it considered the ramifications of embarking on legal action for what it saw as the failure by the vendor to meet its contractual obligations. For its part, a witness from the vendor expressed the view that the TTA 'kept changing the goalposts' and also stated that the TTA was adversarial rather than conciliatory in its dealings with them, being very operationally focused and intruding into their dealings with its sub-contractors.

335. In a briefing paper to the Secretary, DOT in 2010, the vendor stated that 'the State's and TTA's key personnel have changed several times, three Ministers for transport and five CEOs'. The TTA was also highly critical of the quality of the project managers employed by the vendor. Without high quality project management staff and their continuity of employment, the risks of project overruns significantly increase.

Costs

336. Costs have increased by at least 35 per cent since the award of the contract - from $999 million to $1.35 billion - and it is likely that additional costs will ensue prior to project completion and total replacement of Metcard.

337. The TTA business case dated 27 April 2004 had forecast total expenditure of $741.9 million over the life of the project (2004-17). Following the award of the contract in 2005, the budget was revised to $999 million, consisting of:

- project cost (including 10 years operation) - $751 million
- cost to retain Metcard - $41 million
- TTA operations - $207 million.

338. In April 2008, the budget was increased to $1. 35 billion, consisting of:

    • project cost (including 10 years operation to 2019) - $903 million

    • cost to retain Metcard - $204 million

    • TTA operations - $244 million.

339. As the above figures show, some $163 million or 46 per cent of the increase can be attributed to keeping the Metcard arrangement in place over the extended implementation period.

340. The budget will need to increase to cover anticipated additional expenditure resulting from current negotiations between the vendor and the TTA to revise the contract to account for further scope variations; and from the extended reliance on Metcard for parallel services until end-December 2012.

341. The cost of consultants engaged by the TTA to assist with the project has to date also totalled more than $37 million. This is a considerable sum. In my view, more consideration should be given to the employment of public sector staff to ensure that requisite skills are not lost and there is continuity in the advice and services provided. For example, more than $8 million was expended on legal advice and services.

Delays

342. Under the terms of the contract, the system was to be fully operational by July 2007. Full implementation is yet to be achieved. This is a significant departure from the contracted delivery date of 2007 – some four years behind schedule.

343. In its submission to the DOT review of myki, the vendor stated that 'the original estimate to build the system and start rolling it out in two years was overly optimistic. Based on the current delivery schedule, the system has been delivered at a rate comparable to other smart card projects around the world'. The view of one witness from the vendor was that 'had a realistic timeframe for the project been set [no other project of this type been produced in less than five years], had the TTA not become so operationally focused and had the original scope not been so altered with subsequent specifications from the TTA, then we would not be sitting here discussing cost and delivery overruns'. Witnesses from the TTA also agreed that the original timeframes were unrealistic.

344. In its Business Plan (April 2004), the TTA stated it believed 'that the timeframes as set out are aggressive but achievable as they are based on a number of deliberate strategies'. One of these strategies was to recruit experienced staff to the TTA. I understand that another strategy was to use the 'agile'[48] software development methodology to expedite the development process. This strategy was unsuccessful in reducing project timeframes and as one witness stated: 'The agile methodology was

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48 'Agile' is a project development/management methodology which breaks up the development task into smaller parcels enabling development, testing and acceptance activities to be held concurrently. This contrasts with the more traditional, sequential approach which requires the development work to be completed, prior to commencement of the testing phase, and then prior to the acceptance phase. This latter approach is also termed 'cascading'.

never going to work in an environment where development was being undertaken across many countries by numerous developers ... I did bring this to the attention of TTA management at the time but my advice was ignored'.

345.   Clearly, the TTA was overly optimistic in its view that the system would be operational within two years. Equally, the vendor contracted to achieve this deadline. In a draft submission to the Legislative Council Select Committee on Train Services in July 2010, it was stated that 'the myki project has not taken an unusually long time to deliver by international standards. With hindsight, the original delivery timeframes were over ambitious'.

346.   The overly optimistic timeframes have undoubtedly affected public perception of myki. Had a timeframe consistent with the implementation of a similar project elsewhere in the world been set from day one, the public perception of the system may have been less contentious.

347.   I also note the comment by the vendor in its submission to DOT in December 2010 that 'in April 2010 in a meeting with the TTA, [we were] asked to present options to "slow" the project down and delay the removal of the Metcard equipment until after November 2010'. The state election was held in November 2010. When questioned, a witness from the TTA stated that 'the choice of words by [the vendor] was poor... a new CEO, a new Chair and a new Minister had recently been appointed and the message to [the vendor] was not to present any further releases which were not fully tested and robust... they did not wish to be on the front pages of the newspapers again'. The witness also stated the vendor's 'opinion was self-serving in that they were not in a position to safely undertake the removal of Metcard equipment in any event'.

Failure to match expectations

348.   The project as it currently stands has failed to deliver in terms of providing coverage of V/Line services; short-term ticketing; and vending machines on trams.

Where to from here?

349.   In June 2011, the Premier decided to continue with myki in a modified form. The Premier's decision followed an independent review of myki on behalf of DTF. Unfortunately, the government has decided not to provide me with a copy of this review. I also note that the project is part of the 'high-value and high-risk' process.

350.   In my view, the TTA focus in the short-term must be to ensure the operational efficacy of myki as soon as possible and replace Metcard. I can see no reason why the TTA cannot immediately commence planned transition from Metcard to myki on a station by station, line by line basis. This will minimise the significant costs associated with running parallel systems.

351.   If the independent review has not done so, the TTA should undertake a post-implementation review of the project against its business case.

Recommendation

352.   I recommend that:

48. If the independent review commissioned by DTF has not done so, an independent post-implementation review of the project against its business case should be conducted to assess:

- what and to what extent identified benefits have been achieved

- what further benefits are possible, at what cost and when

- whether further development of and investment in the product is justified.

### Transport Ticketing Authority's response

The TTA agreed that a post-implementation review should be conducted in the future and noted that such a review should be conducted independently of the TTA.

4. RandL

Key issues

- The RandL (Registration and Licensing) project sought to replace VicRoads' driver licensing and vehicle registration systems, which are up to 23 years old and at risk of serious failure within five to eight years.

- The government approved VicRoads spending $52 million on RandL over three years while the Cabinet budget committee was apparently uncertain about the project and there was a risk that the project would not receive the required funding. This risk eventuated.

- RandL project officers were concerned about the level and quality of feedback and advice they received from the Cabinet budget committee process and could not explain why the project was not funded.

- The procurement process was sound and arguably represents best practice in government ICT procurement.

- The longer it takes to fund the project, the longer it will take for the outdated systems to be replaced, the more likely it is the costs will be increased and the more likely it is that the project will need to be re-designed.

- VicRoads has already spent $1.5 million engaging consultants to review the project, largely at the Cabinet budget committee's request. Despite being represented on the RandL project board, which initiated these reviews at committee's request, DTF have commissioned yet another review of the project.

Graph - Projected and actual cost/timeline

Legend: ● Original Business Case (2008) ● Budget Allocation (2008) ● Revised Business Case (2011)
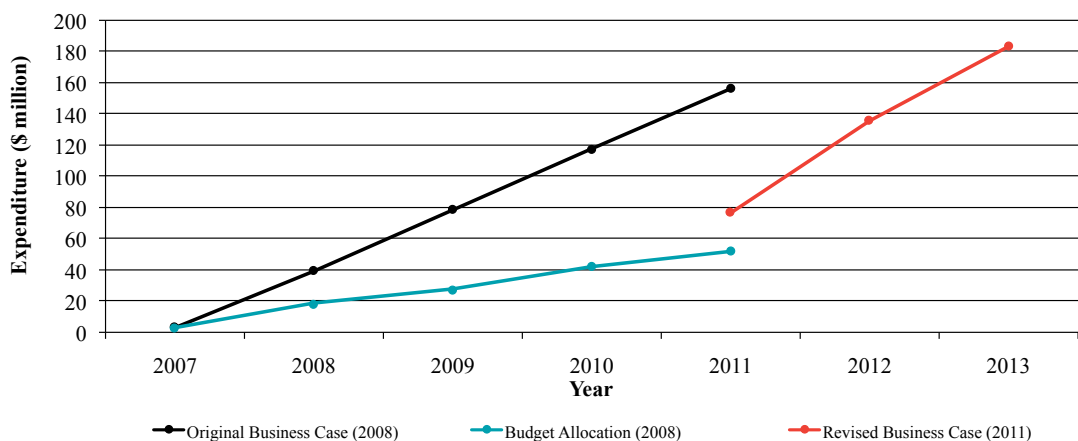
Project overview

353.   The VicRoads RandL (Registration and Licensing) project sought to replace VicRoads' driver licensing and vehicle registration systems, which are up to 23 years old. VicRoads estimates that these systems are at risk of serious failure within five to eight years.

354. I recommended that VicRoads upgrade or replace its vehicle registration system in my 2005 report *Own Motion Investigation into VicRoads registration practices,* which concluded that the system was outdated. In my 2007 report *Investigation into VicRoads driver licensing arrangements* I also identified significant security concerns with the issue and use of Victorian Driver Licences. I recommended that the licensing system be replaced with one that also incorporates vehicle registration.

355. Subsequently, in the 2007-08 budget, the government allocated VicRoads $3 million to investigate and develop a business case to replace its registration and licensing systems.

356. In total, VicRoads has spent $52 million on an extended procurement and detailed design process and entered into a contract with a vendor to develop the system. However, in 2011 the government rejected VicRoads' request for $123 million additional funding to complete the project. Consequently, VicRoads has largely disbanded its project team.

357. VicRoads estimates that if the government had provided the requested funding in the 2011 budget, RandL would have cost $17 million (11 per cent) more than the original budget and would have been delayed by around a year. However, the longer it takes to fund the project, the longer it will take for the outdated systems to be replaced, the more likely it is that the project costs will increase, and the more likely it is that the project will need to be re designed. If the latter occurs, the $52 million already spent will most likely be wasted.

Summary of issues

Project funding

358. The government allowed VicRoads to spend $52 million on RandL over a three year period while apparently uncertain about the project and when there was a risk that the project would not receive the required funding. This risk eventuated.

359. The 2008 VicRoads business case for RandL requested $156 million in capital funding and estimated that the new system would be fully deployed by the first quarter of 2012. The Cabinet budget committee did not fully fund the project. Instead it allocated $115 million to the project and released $49 million to VicRoads over three years to procure and design RandL.

360. I have not been provided with any evidence by VicRoads or DTF that suggests that this project could be delivered for $115 million. I have also not been provided with the Cabinet budget committee documentation relating to this decision, as discussed earlier in the report.

361. VicRoads continued with the project as planned after the 2008 budget allocation. It was not until 2010 that the business case was reviewed. This review failed to provide a viable solution that met the $115 million budget. The 2010 revised business case described both the cease project and the $115 million options as 'not viable' and stated that they would neither meet community expectations nor address my concerns.

362.   RandL project team and board members interviewed were concerned about the level and quality of feedback and advice they received from the Cabinet budget committee process over the project's life, with one describing it as containing a lot of 'one way communication'.

363.   The repeated failure by VicRoads and the Department of Transport (DOT) to develop an acceptable business case and funding solution for RandL after four years and $52 million expenditure is a poor outcome. VicRoads prepared the business case and funding submissions and should be held to account for these. However, DTF and DOT were represented on the RandL board and played a role in evaluating and promoting the business case and funding submission to government:

    •   DOT evaluated and presented the funding submission to the Cabinet budget committee

    •   DTF provided advice on the project to the Cabinet budget committee.

364.   As such all of these agencies carry a shared responsibility for the project.

365.   The Secretary, Department of Transport was provided with an opportunity to respond to the conclusions in my draft report. However, he chose not to respond.

Spend on reviews and consultants

366.   The funds spent to date include $3 million spent by VicRoads to develop a business case, followed by $1.5 million engaging consultants to:

    •   refresh its strategy (March 2009)

    •   revise the business case (February 2010)

    •   further update the business case (January 2011)

    •   review its registration and licensing business model (March 2011).

367.   The latter three reviews were initiated upon requests from the Cabinet budget committee. In spite of the money spent on these, VicRoads failed to secure the funds required to complete RandL.

Alternative funding models

368.   In March 2011, VicRoads completed a review of its registration and licensing business model, which concluded that it does not receive sufficient funding to fulfil its registration and licensing functions. The report recommended that VicRoads increase registration and licensing fees and use the increase to complete RandL.

369.   Given that RandL had been in train since 2007, and that the Cabinet budget committee was apparently uncertain about funding the project, it is surprising that VicRoads did not consider this funding model until asked to do so by the Cabinet budget committee in early 2011. The former RandL project director stated that it was considered when VicRoads completed the strategy refresh in 2009, but was not pursued because VicRoads thought the Cabinet budget committee would fund

the project. He also confirmed that in his opinion, had this funding model been adopted earlier, the project probably would have been funded by now.

370. In response to my draft report, the Chief Executive Officer of VicRoads stated:

> While I cannot dispute what may have been said by a "VicRoads officer", VicRoads first considered a funding model for the project in the second half of 2010 ... it remains an option VicRoads is pursuing.

Procurement

371. A review of relevant documentation and interviews with project staff and vendors indicates the procurement process was sound and arguably represents best practice in Victorian government ICT procurement. VicRoads developed an interactive vendor engagement process based on the European Union model for complex procurements called Competitive Dialogue.

372. Using this process, VicRoads obtained a fixed price contract for RandL. The detailed design phase has now been completed and VicRoads obtained independent advice that the detailed design is fit-for-purpose and that the time and budget are achievable. The apparent ability to deliver the project on time and on budget makes RandL unique among the ICT-enabled projects I am investigating.

Where to from here

373. In 2011, VicRoads prepared a new funding submission which included a revised capital funding request of $173 million[49] to complete RandL by early 2013, as per VicRoads' contract with the vendor. This funding submission was not successful and RandL has been placed on hold.

374. In May 2011, the Cabinet budget committee requested that DTF conduct another 'independent' review of the business case. Unfortunately, the government has decided not to provide me with a copy of this review. VicRoads advised that the report was broadly supportive of the RandL project and that it was preparing a new funding submission for the Cabinet budget committee on this basis.

375. Despite $52 million being spent, RandL has not been funded and the concerns I raised in 2005 and 2007 have not been addressed. I am also disappointed that yet another review of the project was commissioned.

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49 Including the $52 million already spent.

Recommendation

376. I recommend that:

49. VicRoads and DTF work together to agree on a suitable approach to fund and deliver a new registration and licensing solution as soon as possible.

VicRoads' response

VicRoads accepts the recommendation. The Chief Executive Officer, VicRoads stated that 'The RandL Board continues to have representatives from the Department of Premier and Cabinet and Department of Transport, as well as three senior representatives from VicRoads'.

5. Client Relationship Information System (CRIS)

Key issues

- The Client Relationship Information System (CRIS) was completed nearly three years behind schedule and costs rose by over 218 per cent or $47 million.

- The increased costs are of particular concern given that CRIS was funded entirely by the Department of Human Services (DHS), not through the Cabinet budget committee.

- Better initial specifications for Child Protection could have avoided some cost increases and delay.

- Despite being introduced in July 2008, CRIS continues to suffer from inadequate training, poor help-desk support, and slow responses to functionality change requests.

Graph - Projected and actual cost/timeline
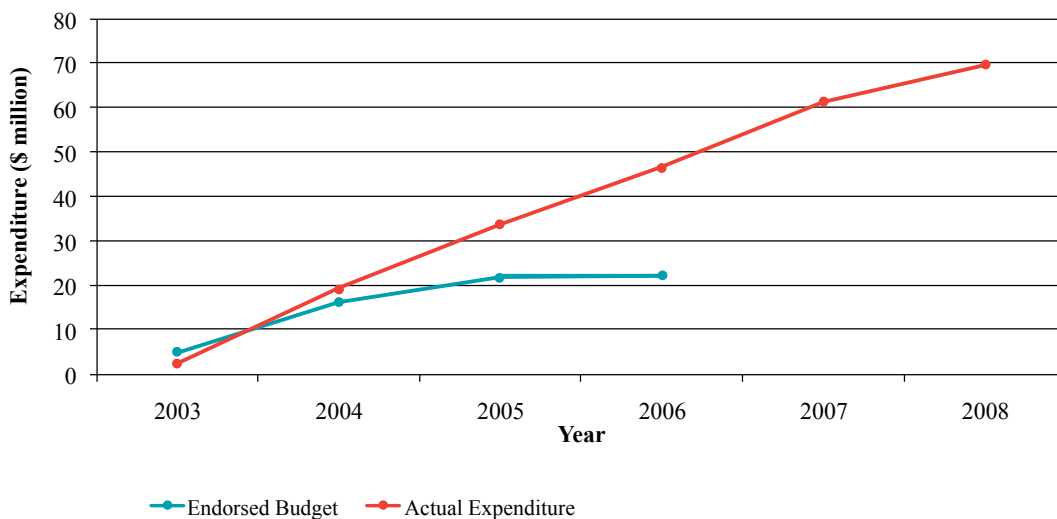
Project overview

377. The Client Relationship Information System (CRIS) project commenced in October 2001. DHS designed CRIS to replace, enhance and create client information systems for Child Protection, Juvenile Justice, Disability Services and Specialist Children's Services. The initial approved budget for CRIS was $22 million.

378. In May 2002, DHS started a Client Services Model Strategy Project (CSMSP), which was designed to simplify how DHS manages its clients across a number of different program areas.

379. CRIS became a key component of CSMSP, which was expected to be completed by 2005. However, it was not completed until July 2008.

380. CRIS has been in place for three years, and yet it remains plagued by the concerns of Child Protection workers interviewed who state the system

has caused stress, frustration and an increased desk-based workload. My primary focus has therefore been on the Child Protection component of CRIS, to identify the current issues and understand how these can be addressed.

381. In response to my draft report, the Secretary, DHS stated CRIS 'is used extensively across the organisation in the undertaking of child protection and it is effective'.

Summary of issues

Delays and cost overruns

382. The original budget for CRIS was $22 million. However, actual expenditure on CRIS increased by 218 per cent to $70 million.

383. The project was not funded by the Cabinet budget committee, rather it was entirely funded by DHS. As such, the additional costs were covered by diverting funds from program areas, including Child Protection, and there was no requirement to obtain government approval. I have tabled two reports in Parliament detailing significant concerns about Child Protection,[50] including that it is struggling to meet its operational responsibilities in relation to responding to reports of child abuse. In this context, it is concerning that DHS removed an additional $48 million from program area budgets to fund the cost overrun.

384. In response to my draft report, the Secretary, DHS stated that it was her understanding that historically:

> the government expected these projects to be funded by the Department from its own budget. Further, the CRIS project was essential to support the Child Protection case management service and that of the other programs.

385. The overall project, CSMSP, was significantly delayed. It did not start until May 2005 and was not completed until July 2008, three years later than planned. CRIS implementation was halted for ten months after its introduction into the first three regions of the state because it did not meet the needs of Child Protection and there were flaws in the functionality of the system. There were also delays after the second roll out, owing to further flaws with the system. These delays, in turn, led to increased costs. In response to my draft report, the Secretary, DHS stated that the time and cost overruns for CRIS were 'affected by all of the relevant programs across the life of the project', not just Child Protection.

386. The former Project Director for CRIS stated despite Child Protection signing off on its business requirements for CRIS, the former Director Child Protection and Juvenile Justice (the current Secretary of DHS) later requested changes because:

- Child Protection's needs would not be met by the indicated scope

- the *Children Youth and Families Act 2005* was to be introduced, resulting in significant changes.

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50 Victorian Ombudsman, *Investigation into the Department of Human Services Child Protection Program* (2009) and *Own motion investigation into Child Protection - Out of Home Care* (2010) <www.ombudsman.vic.gov.au>.

387.   These changes were made, additional costs were met by Child Protection and significant delays resulted. The former Project Director for CRIS stated that many changes requested could have been avoided had Child Protection properly advised the project of its original requirements.

388.   In response to my draft report, the Secretary, DHS stated that 'at times in the project the translation of system specification to system solution between the project staff and vendor resulted in system design faults … these faults then required correction through the change control process'.

389.   In addition, the Secretary stated:

> Many of these problems were because CRIS did not have the same or better functionality than the existing CASIS system, which meant its implementation without further work was unsafe.

390.   The significant delays and cost overruns experienced by CRIS highlight the need to accurately identify business requirements prior to system development. While ICT-enabled projects are inherently complex and changes may be necessary, particularly in projects that continue over a number of years, many of the changes to the CRIS project could have been avoided through better planning.

Post-implementation support

391.   Following its release in 2008, DHS experienced significant problems with the Child Protection application of CRIS. DHS advised that this application is more difficult than other parts of CRIS because of the complex streams and phases clients pass through in Child Protection.

392.   In my 2009 report, *Own motion investigation into the Department of Human Services Child Protection Program*, I identified that CRIS had not only failed to provide the child protection system with a more effective tool than its predecessor, it had also impaired the department's efficiency without providing adequate functionality. I concluded that these issues had been compounded by inadequate planning and post-implementation support and I recommended a comprehensive and independent review be commissioned.

393.   In February 2010, DHS engaged a consultant to carry out a fit-for-purpose review of CRIS, Child Protection. The review found that while there were a range of technology recommendations to be addressed, CRIS was fit-for-purpose. The review stated, 'whilst the CRIS IT system could and should be dramatically improved, it is activities surrounding and related to the IT system that are threshold issues to higher performance in Child Protection'. The report recommended:

- efficient and effective business processes be developed

- holistic training and support for existing staff be undertaken

- a platform for new staff to rapidly skill in how they should work be established

- system support teams be put in place to understand and respond to program and operation priorities.

394. The report said that, 'At the core, it has been the lack of coordinated and integrated planning and delivery of these components that have contributed to the performance issues DHS is experiencing around CRIS'.

395. In response to this report, DHS established the CRIS board to address the issues raised in the consultant's report. The board relies on funding from each program area within DHS, which has limited its effectiveness because it does not have the resources to provide adequate post-implementation support. At the time of writing this report:

- the CRIS Business Support Team had just one CRIS trainer for 2,000 staff

- there are 130 items on the CRIS Child Protection issues register, which require changes to CRIS, that are yet to be approved

- the help-desk is slow to respond to Child Protection worker issues.

396. My investigators visited Child Protection offices to speak with workers and observe CRIS. It was reported that using CRIS causes stress, frustration and an increased desk-based workload for Child Protection workers.

Where to from here?

397. At present, Child Protection is experiencing difficulties with CRIS because DHS's support for the system is inadequate. In my view, DHS has failed to take adequate action to address the recommendations of the fit-for-purpose report.

398. It is clear that the success of CRIS requires strong, ongoing post-implementation support, including thorough training for users, an adequately staffed expert help-desk and prompt addressing of system issues. DHS should direct adequate funds to the post-implementation support of CRIS to ensure it works to its full potential and to support Child Protection workers.

Recommendation

399. I recommend that:

50. DHS review its strategy to support and fund CRIS, including how it resources the support team and resolves system issues.

### *Department of Human Services' response*

> *The Secretary, DHS advised that the department requested in August 2011 additional funding to address some of the recommendations in the CRIS fit for purpose report. The department advised that there has not been an outcome to this request as yet.*

6. Ultranet

Key issues

- Inadequate up-front planning and a general disregard for industry and Gateway advice resulted in a failed tender that cost around $5 million, set the project back by a year and damaged the reputation of Ultranet.

- As a result the Department of Education and Early Childhood Development (DEECD) was forced to de-scope the business case and in doing so, lost functionality and lowered the level of system support available to users.

- By June 2013, Ultranet will have cost up to $38 million more than the $60.5 million announced by the then government in 2006 and it will have delivered less functionality than originally planned. However, despite its early problems, Ultranet is working in schools and there is widespread support for the concept.

- Training costs have not been fully calculated or recorded against the project. The original business case indicated training would cost $23 million.

Graph – Projected and actual cost/timeline
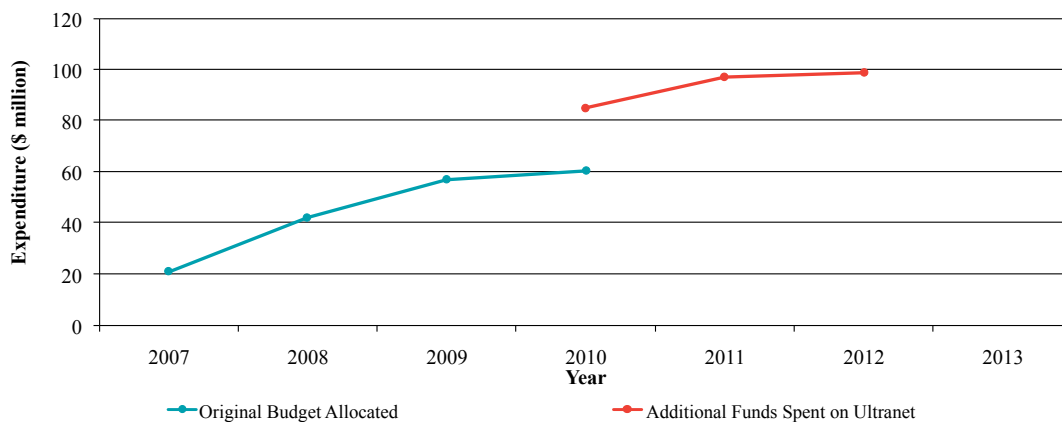
Project overview

400. Ultranet is an online education network that aimed to connect Victorian public school students, teachers and parents. It enables:

- students to access online learning materials that use the latest computer technologies

- teachers to easily access learning tools, resources and student information in one place

- parents to access information about their children's performance at school more easily and timely.

401.   DEECD first went to market in August 2007, but after several months of evaluation and negotiation abandoned the request for tender (RFT) having failed to attract any tenderers that could respond within the budget.

402.   In September 2008, DEECD contracted a consultant to test the market and subsequently reduced the scope of the project to a level that it felt could be achieved within the original budget.

403.   A second RFT was issued in November 2008 requiring Ultranet be finished by term 3, 2010 – the same deadline as the original request for tender issued more than a year earlier. A preferred vendor was selected and the first release of Ultranet was made available to schools by term 3, 2010. Since going live, DEECD has been working to finish the remaining components and to resolve ongoing system capacity problems.

Summary of issues

Inadequate planning

404.   Inadequate up-front planning and a general disregard for industry and Gateway advice resulted in a failed tender that cost around $5 million and set the project back by a year. It is concerning that such a flawed business case was presented to the Cabinet budget committee.

405.   The project budget was announced as part of a government election commitment and DEECD then developed a business case around this budget. DTF's Gateway Review team gave the business case a red light and expressed concerns about:

- the high degree of uncertainty over the scope and supporting costs for the project
- the disconnect between the benefits expected and the scope of the project
- the benefits of the project not being properly documented and managed.

406.   Before finalising the request for tender, DEECD sought industry feedback on its proposition. They received feedback from 18 companies, which included the following criticisms:

- the timeline was too aggressive
- the budget was insufficient
- the scope of the project was not clearly defined
- integration with third-party applications could be problematic
- the size and bandwidth requirements to accommodate the state wide Ultranet could be unmanageable
- the vendor that developed the pilot at the request of DEECD had an advantage in the RFT process.

407. In its advice to the Minister in June 2007, DEECD advised that these risks were considered manageable and that 'the Project Board is aware of these risks and has determined that the feedback is not dissimilar to that which would be received by other significant ICT initiatives'. Scope, timelines and budget issues in particular are common to almost every failed project I have examined and these results should have triggered serious concerns about the project. To suggest that they were manageable underplayed the risks which were realised when the tender failed to attract a single bidder that could deliver the project for under $100 million.

408. As a result DEECD was forced to revise its business case to reduce the scope to fit the allocated budget. In doing so, DEECD reduced the 1,260 detailed business requirements down to 131 high level requirements. As a result, functionality was lost and the level of system support was lowered.

409. Having re-tested the market, DEECD then issued a second, successful, request for tender in November 2008 based on the revised business case.

Costs

410. DEECD's website identifies Ultranet as a $60.5 million project. DEECD advised that by the end of June 2011, it had spent $63 million on Ultranet. My analysis of DEECD's financial information suggests that by June 2013, Ultranet will actually have cost $99 million. Over the last four years, the projected costs associated with Ultranet have been revised and reconfigured to the extent that it is difficult to know whether it has actually been delivered on budget:

   • In a 2006 Labor election commitment, the Victorian Schools Plan included $60.5 million to develop Ultranet and for it to be available in every school.

   • Subsequently in 2007, DEECD developed a supporting business case that estimated the cost of the project at $82.9 million, with $22.4 million to be provided from reprioritised DEECD funds. The estimated cost included $23 million for training and a contingency of $12.5 million. This business case led to the failed tender.

   • In 2008, DEECD revised the business case and reduced the scope, estimating that the project would now cost $69 million. Significantly, the revised business case included only $750,000 for training and a contingency of $4 million. Neither the original nor the revised business case incorporated ongoing hosting and maintenance costs.

411. The project was funded by the government and DEECD to a total of $99 million, as follows:

   • 2007-08 state budget - $60.5 million to develop Ultranet

   • 2007-08 state budget - $19.5 million to host and maintain Ultranet until the end of 2012-13

- 2009-10 state budget—$12 million for Ultranet Coaches
- DEECD reprioritised funds of $7 million to transition the project to a business as usual state.

412.   Neither the cost for Ultranet Coaches ($12 million), nor the cost of the whole school professional development day ($8 million[51]) was included in the costs recorded against the project.

System implementation

413.   Interviewees have stated that there was significant pressure from the government to deliver Ultranet by the original deadline (term 3, 2010) despite DEECD losing more than a year through the failed initial tender. As a result, Ultranet was released to schools on time but not fully functional.

414.   The initial performance of Ultranet was poor. The focus on meeting the timeline required DEECD to delay or bypass vital system testing before its roll out.

415.   A survey by Education Services Australia in 2010 indicated that more than two-thirds of principals agreed Ultranet would have positive effects on student learning, teachers' practices, school culture, the school's ability to communicate with parents and supporting school improvement. However, the same survey identified that only 37 per cent of principals felt that implementation of Ultranet at their school had been successful during the early periods of its roll out.

416.   I have observed some positive aspects from the delivery of the project including:

- the system was operational in schools by the planned delivery date despite the failed request for tender
- there was a minimal turnover of project team members
- activities were measured against a 'readiness to go live' benchmark
- there was high level leadership and support for the project from departmental deputy secretaries.

Where to from here?

417.   Despite its early problems, Ultranet has been delivered and is working in schools and there is widespread support for the concept. Ultranet is scheduled to go through Gateway Six in November 2011. This review will be important to determine if Ultranet is achieving planned benefits and what future development of the system is required. This is particularly important given that the costs of hosting and maintaining the system over the next 10 years could be as much as $100 million.

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51   Cost estimated in the June 2007 Ultranet Business Case.

418.   Users' resistance and reluctance to change are the biggest potential barriers to Ultranet and uptake and ongoing usage will have to be monitored carefully. Ultimately, Ultranet's success will be dependent on whether students, teachers and parents are able to access and use the system and whether they feel that it is having a positive impact on teaching and learning. It is therefore important that DEECD develop a detailed strategy and plans to further develop Ultranet so that it does not become stale and dated.

Recommendation

419.   I recommend that:

51.   DEECD develop a rolling five year maintenance and upgrade strategy for Ultranet.

### Department of Education and Early Childhood Development's response

> *DEECD stated it supports this recommendation and also 'sees benefit from the Framework to better manage ICT-enabled projects'.*

7. Integrated Courts Management System (ICMS)

Key issues

- The Integrated Courts Management System (ICMS) is over three years behind schedule and is expected to cost an additional $21 million to complete. However, its future is uncertain.

- The Cabinet budget committee did not fully fund the project, which led to the project delivery timeframe being reduced from five years to four years. However, the project deliverables were not reduced.

- The Department of Justice (DOJ) selected a high-risk solution, contrary to the solution proposed in its business case.

- A change in vendor ownership and concerns of vendor withdrawal led to DOJ making contractual concessions.

- DOJ should have developed a case management system for one court, conducted a benefits analysis of the system and then rolled the system out to the remaining courts and tribunals if the first roll out was considered a success.

- According to the Supreme Court, ICMS's case management system (CourtView) fails to meet the court's needs. The Supreme Court has ultimately resolved to pilot its own system to provide case management.

Graph – Projected and actual cost/timeline
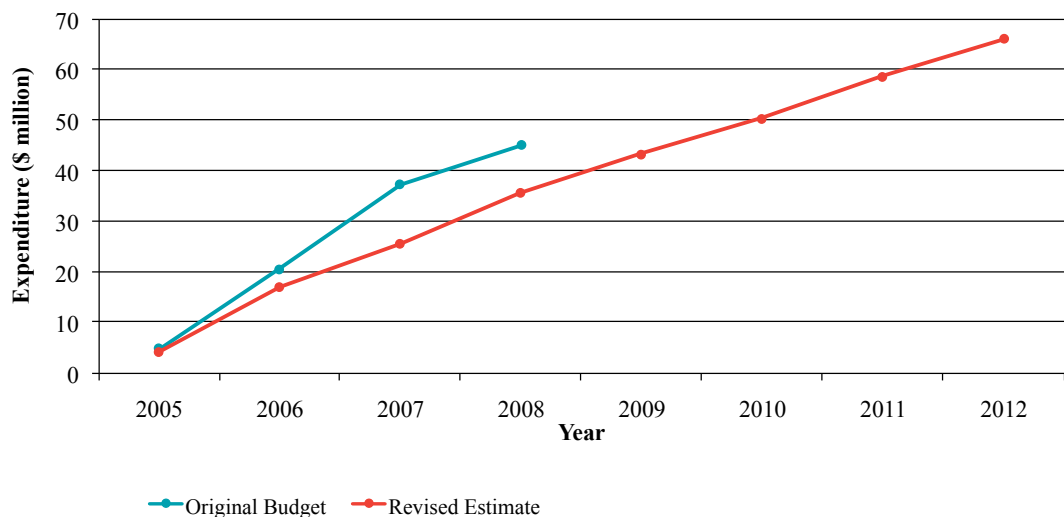
Project overview

420. The Integrated Courts Management System (ICMS) is designed to integrate DOJ's technology for all Victorian courts and tribunals. There are five components to ICMS:

- CourtView (a system to manage cases from start to finish)

- Smart Courts (video conferencing and in-court technologies)

- Judicial Officers Information Network (on-line resource for judicial officers and their staff)

- Courts Data Warehouse System (extraction of data from the case management system for DOJ analysis)

- eServices (on-line information services).

421. ICMS commenced in January 2005 and was scheduled for completion in June 2009. In September 2006, the Judicial Officers Information Network was delivered and in June 2008, Smart Courts was delivered.

422. In September 2009, CourtView was rolled out in the Supreme Court. According to the Supreme Court, 'the system was at best 60% complete'. The module required to enable the court to produce 'Orders' was not provided due to vendor delivery failure and the Supreme Court states this module 'remains defective and unusable'. Full roll out of CourtView to all courts and tribunals has now been put on hold pending a review of CourtView.

423. Full roll out of the Courts Data Warehouse and eServices has been delayed as it is dependent on the successful implementation of CourtView.

424. The Cabinet budget committee approved total funding of $45.1 million to build the ICMS. However, the current total budget is now $66 million. DOJ intends to review ICMS before considering whether to roll out to the other courts and tribunals.

Summary of issues

Funding

425. The 2004 business case requested $55 million (operating and capital expenditure) to complete ICMS across all Victorian courts and tribunals. However, the Cabinet budget committee only approved $45.1 million. A witness told my investigators that ICMS's schedule was reduced from five to four years to fit within the approved funding. Another DOJ representative told my investigators that the project budget and timelines were ambitious, noting that a comparable project in Massachusetts, USA was developed over ten years at a budget of $100 million. I have commented earlier about the risks of the Cabinet budget committee only partially funding projects.

Procurement

426. The case management system is the largest component of ICMS and the predominant cause of delay and cost increase. The 2004 business case was based on the assumption that the County Court's Case and List Management System (CLMS) (a proprietary system) would be used as the case management system component of the project. DOJ considered CLMS was cost effective and adaptable to all jurisdictions.

427. In November 2004, ICMS's business case received a green light for Gateway Two. The Gateway Review concluded that the business case was well founded, sound and achievable. The Cabinet budget committee approved funding of $32.3 million (capital expenditure) based on the 2004 business case. In September 2005, the project was again reviewed at Gateway Three (procurement strategy) and received a green light.

428. DOJ proceeded to procurement and did not receive a submission from the vendor responsible for CLMS. However, DOJ proceeded with the tender and selected an alternative system, CourtView. CourtView was a higher risk solution as it required products from multiple sources to be integrated into a working solution, rather than enhancing an existing system, as was intended with CLMS.

429. DOJ employed a systems integrator to assess the tender responses. A witness told my investigators that DOJ relied on the system integrator's advice and accepted their recommendation of CourtView, as no-one within government had the capability to assess the tender responses. This is concerning.

430. In June 2009, VAGO audited ICMS and determined that, while DOJ followed an appropriate procurement process, its assessment of the consequences of selecting the alternative case management system was not robust.

431. In my view, DOJ should have re-assessed its business case after the vendor responsible for CLMS failed to bid for the project. This is because the costs, timeframes and risks identified in the business case were based upon enhancing CLMS. DOJ should also have notified the Cabinet budget committee of the changed circumstances because the funding was being used for a higher risk solution. A witness told my investigators that DOJ continued with the procurement process because it feared losing the approved funding.

Project scope

432. Senior DOJ representatives advised that in hindsight, the project should have been broken down into smaller phases to minimise risk. DOJ representatives agreed that it should have developed a case management system for one court, conducted a benefits analysis of the system and then rolled the system out to the remaining courts and tribunals if the first roll out was considered a success.

433. Such an approach would have satisfied DOJ's vision for a streamlined court system and increased the likelihood that the expected functionality was actually delivered at the expected cost to each court and tribunal.

434. Senior DOJ representatives stated that the budget process has historically been fraught as agencies have had to create large, high profile projects in order to gain traction with the Cabinet budget committee.

Vendor performance

435.   A significant reason for the delay in delivering a case management system has been inadequate vendor performance. While DOJ made attempts to address the vendor's performance, the vendor continually failed to meet promised timeframes.

436.   Vendor performance was also affected by a change in ownership of the vendor in September 2008. Consequently, DOJ was forced to re-negotiate the contract, which was not finalised until February 2010. This resulted in revised delivery dates and a one-off payment of $2.4 million by the vendor to DOJ in exchange for the exclusion of the compensation agreement of $10,000 per day for delay against contract delivery dates. Despite the compensation agreement being a tool to manage delivery timelines against the contractor, DOJ feared that the vendor would surrender the contract if the compensation and liability clauses were not relaxed.

Policy changes

437.   In 2010, DOJ prepared a revised business case, which stated that the previous government pursued an aggressive reform agenda and ICMS was expanded to accommodate this. In this regard, I note that the former Attorney-General released Justice Statements in 2004 and 2008 outlining reforms to the justice system. A witness told my investigators that these reforms left no area of the courts untouched and they included the establishment of a neighbourhood justice centre, Drug Court, Koori Court and new legislation. These changes led to alterations to the ICMS project, in turn leading to increased costs and delays.

Supreme Court dissatisfaction with CourtView

438.   Since the roll out of CourtView to the Supreme Court, the Chief Justice has written to DOJ on numerous occasions outlining issues with CourtView. The court remains dissatisfied with CourtView's performance. The court has worked to resolve the issues with CourtView, including conducting reviews of it at its own expense. However, the court believes CourtView is fundamentally flawed. In response to my draft report, the Chief Justice stated:

> ultimately [the court] was dissatisfied with the complete ICMS project. The Supreme Court has encountered difficulty with its processes caused by a system which is failing to meet the needs of the Court, the legal profession and the public. Excessive delay in development has led to failure to achieve a workable level of functionality by present day standards.

439.   As a result, the court has explored alternative systems. Justice Vickery demonstrated to my investigators a system called Red Crest that the court recently developed at a fraction of the cost of CourtView.[52]

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52   Justice Vickery stated Red Crest has so far cost the Supreme Court $24,900. IT consultants also provided free programming services to the value of $40,000. The system is being piloted in the Supreme Court's Technology, Engineering and Construction list.

Justice Vickery told my investigators that the system had been tailored specifically for the court's requirements and is adaptable to other jurisdictions. In response to my draft report, the Secretary, DOJ stated, 'Red Crest complements ICMS and the department proposes to interface it with CourtView, subject to the outcomes of the pilot'.

440.   Red Crest has been developed through a direct relationship between the user (the Supreme Court) and the developer. Such a relationship is beneficial in ensuring the system meets the users' needs. CourtView, on the other hand, was developed by DOJ and the vendor, with DOJ representing each of the courts and tribunals.

441.   The court's feedback about CourtView was that DOJ should have involved the court's judicial officers, as users of the system, during the planning phase of the project. In this regard, the court stated it was not provided with an opportunity to view the business case. While DOJ did establish a Judicial Advisory Committee to provide advice and input into the development of the system, no judicial officers were included on the steering committee. In response to my draft report, DOJ acknowledged that judicial officers will use CourtView, but stated that registry staff are the major users of the system and for this reason, senior court staff represented the courts on the steering committee. DOJ expected these staff to consult with the relevant areas of their respective court, including judicial officers.

442.   It is clear that CourtView is a department–initiated project, which is at risk of losing the support of the courts, its users. DOJ has advised that the Courts Executive Service may be established in either 2013 or 2014 to provide executive support for all Victorian courts and tribunals. This will remove DOJ's responsibility for court registries and leave the future of ICMS uncertain. In response to my draft report, the Chief Justice stated that, 'the courts have not agreed to the inclusion of ICMS within the Courts Executive Service at this stage'.

443.   The Secretary, DOJ also stated, 'the department continues to work with the Supreme Court to address its needs and will continue to work closely with the court on the current review of CourtView'.

Where to from here?

444.   DOJ told my investigators that owing to significant quality issues with CourtView, and as funding for the project has run out, it will not be implemented across all Victorian courts and tribunals next year as planned. Instead, DOJ intends to review CourtView to determine whether it should in fact be rolled out in all Victorian courts and tribunals and to predict with more certainty the cost and time required to complete the project. The Supreme Court and DOJ are engaging in discussions. However, the Supreme Court states it may not wish to continue with ICMS and it expects to make a decision on this issue in late November 2011.

445. I agree with the need for a thorough review as roll out into any further courts, particularly the high case-load Magistrates' and County Courts, could cause disruption and inefficiency within the justice system.

446. It is clear that the courts and DOJ do not agree on the future direction of ICMS. Consequently, I would have preferred for CourtView to be put on hold until the Courts Executive Service comes into place. However, given this is now not expected until 2013 or 2014, this is unfeasible.

Recommendation

447. I recommend that:

    52. All planned expenditure on, and development of, CourtView be put on hold until it has been independently reviewed.

Department of Justice's response

> *DOJ supports this recommendation.*

8. Property and Laboratory Management (PALM)

Key issues

- The probity of the Forensic Information Management System (FIMS) and Seized Property Management Project (SPMP)[53] tenders was compromised by a decision to ignore probity advice that the tender evaluation panels for each project should not comprise the same people.

- The governance structure of the Property and Laboratory Management (PALM) program was 'messy', 'inefficient' and 'flawed from the start'. The risk that the 'flat' structure would cause delays to the program eventuated.

- The steering committee failed to adequately hold the project management team to account for delays.

- Disunity existed among the PALM program team which was counteractive to successful program delivery.

- The program is approximately 18 months behind schedule and 27 per cent over the delivery budget.

Graph - Projected and actual cost/timeline
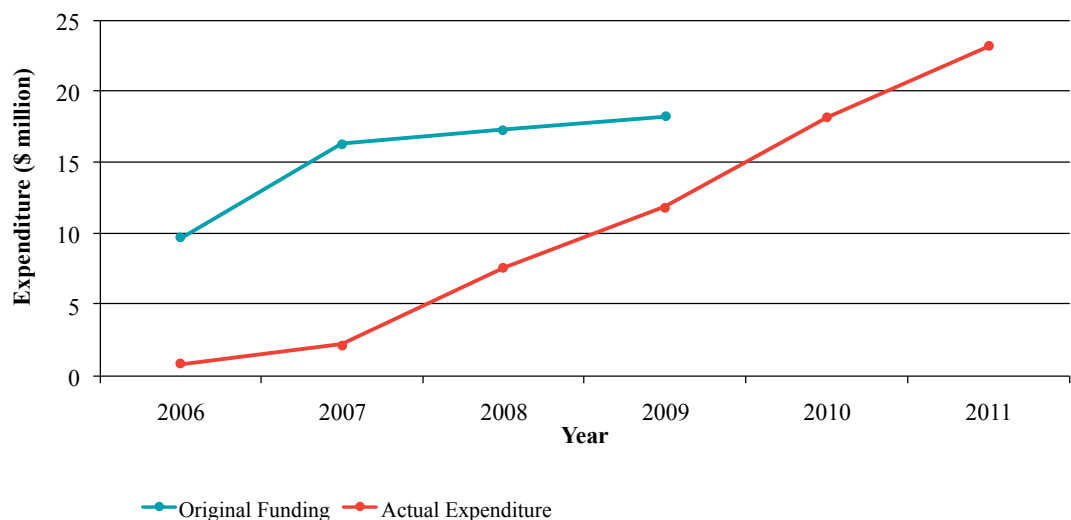
Project overview

448. The PALM program resulted from the merging in 2008 of two Victoria Police projects: the Forensic Information Management System (FIMS) project and the Seized Property Management Project (SPMP).

449. FIMS was funded by the Expenditure Review Committee in 2006-07 to deliver a laboratory information management system for the Forensic Services Department. This would replace a 'fragmented set of IT and paper-based forensic casework data recording systems'. The urgent need

53   These two projects later merged into the Property and Laboratory Management (PALM) program.

for a laboratory information management system was highlighted in my 2009 report, *Whistleblowers Protection Act 2001 Investigation into the handling of drug exhibits at the Victoria Police Forensic Services Centre,*[54] which identified significant deficiencies in the management of drug exhibits.

450. SPMP was funded by Victoria Police in 2006 to improve the management of seized and found property. The project intended to move Victoria Police from paper based processes and stand alone IT systems to a single networked, state-wide IT system.

451. It was expected that the SPMP and FIMS systems would be highly integrated owing to common business processes.

452. While the funding, initiation and procurement processes were independently conducted, both project teams selected the same vendor and application. In addition, the two projects were to be implemented concurrently. As a result, the projects were merged in 2008 to form a single 'program of works' – PALM, to implement a single IT system to manage forensic evidence, case notes, scientific reports, photographs and seized and found property items.

453. The PALM program is approximately 18 months behind schedule and 27 per cent over the delivery budget.

Summary of issues

Probity and procurement

454. The probity of the FIMS and SPMP projects was compromised by a decision to use three shared resources on the tender evaluation panels for both projects.

455. FIMS wanted a representative on the SPMP panel as they were concerned the SPMP tender specifications were not as detailed as FIMS and may have resulted in the selection of a property solution that did not meet all of FIMS needs. The FIMS representative on the SPMP evaluation panel was 'to ensure that the FIMS requirements are covered off'.

456. Probity advice provided to Victoria Police during the two procurement processes stated that persons previously involved in the FIMS evaluation should be excluded from further SPMP evaluation phases. The SPMP committee ignored this advice owing to 'limited resources with the appropriate knowledge to use for evaluations' and decided to 'ensure any conflict of interest is declared and managed appropriately'. One member of the committee stated 'we can't let probity advice restrict us too much'. None of the evaluation panel members declared a conflict of interest.

457. The decision to use shared SPMP and FIMS resources on the evaluation panels gives rise to a perception that issues, other than those documented in the evaluation criteria, were considered in reaching a decision to select the vendor for each project (for example, that FIMS

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54   Victorian Ombudsman, *Whistleblowers Protection Act 2001 Investigation into the handling of drug exhibits at the Victoria Police Forensic Services Centre* (2010) <www.ombudsman.vic.gov.au>.

requirements were considered in the SPMP tender); and that the tender decisions for each project were not made independently.

458. The possibility of a joint FIMS/SPMP tender was discussed at the first SPMP committee meeting in June 2007. However, the proposition was rejected as SPMP was six months ahead of FIMS. A joint tender would have negated the probity issues discussed above and removed the need to negotiate two separate contracts – possibly resulting in a more timely procurement decision and better value for money for the government.

Project management

459. The governance structure of PALM was described by the project management team (the team) as 'messy', 'inefficient' and 'flawed from the start'. While the SPMP and FIMS projects were merged to form PALM in 2008, evidence indicates SPMP and FIMS continued to operate largely as separate projects. There were two separate Business Project Managers – property and forensic – and two IT managers (reduced to one after a few months). The SPMP and FIMS projects also maintained separate budgets, owing to the different sources of funding, and the budgets were not centrally controlled.

460. The original PALM governance structure also included a Program Delivery Lead who was to be a single point of contact for escalation of all decisions that were not the responsibility of an individual project manager and a point of reference for advice or assistance. However, the project managers did not report to the Program Delivery Lead who was seen as a facilitator, rather than decision-maker and was not aware of the details of the projects.

461. In May 2010, a Program Director was introduced to address continuing delays and to expedite decision-making on the program. However, the Program Director lacked sufficient authority as:

- they were a lower rank than two of the three project managers
- only one of the project managers reported to them
- they did not control the overall program budget.

462. A majority of the team also had no project management qualifications and little, if any, project management experience.

463. Witnesses gave evidence that the governance structure caused delays, owing to 'fights' between project managers over requirements, the allocation of resources and control of the budgets. One witness gave evidence that things may have fallen between the gaps owing to the number of people involved and the lack of clarity around responsibilities. The PALM Risk Register included this as a risk of the 'flat' PALM governance structure; however, this risk was not adequately mitigated.

464. It was not until March 2011, that a single, qualified PALM program manager was appointed. Prior to this, there was no one person responsible for directing and coordinating the effort of the three project managers on a day-to-day basis, reporting to the steering committee,

ensuring that interdependencies between SPMP and FIMS were closely managed, prioritising day-to-day effort and ensuring timely decision-making. Witnesses suggested Victoria Police took the 'path of least resistance' when it decided against instituting a single program manager role at the time of the SPMP and FIMS merger. In my view, this decision indicates a lack of leadership and has had a significant effect on the success of the PALM program.

Steering committee

465.   The PALM steering committee was responsible for holding the PALM project management team (the team) accountable for the successful delivery of the program. However, the evidence suggests the committee did not adequately fulfil this role.

466.   One member of the team stated that the committee 'weren't as tough as they should have been on the project in terms of questioning why things weren't delivered when they were going to be' and stated that the committee 'seemed quite happy to accept excuses and promises'. Another member of the team stated as the committee was not comprised of project professionals, it was often incumbent on the team to ensure they were providing the appropriate information as it was not always drawn out by the committee.

467.   The above views appear consistent with the minutes of PALM steering committee meetings, which provide limited evidence of the committee challenging the team in relation to delays. For example, the original schedule provided that PALM would go-live in February 2010. In January 2010, the go-live date for PALM was deferred to 28 June 2010. Over the next few months, the schedule was further delayed and in May 2010, the team reported that PALM would not go-live until late October 2010. It was not until this time that the committee initiated action to address these delays. Later that month, a remediation plan was implemented in an attempt to get the program back on track.

468.   There were no members independent of Victoria Police on the steering committee to constructively challenge steering committee members and the PALM team.

Disunity

469.   I received evidence from witnesses that members of the team and the steering committee were biased towards the property aspect of the project and that the needs of the Forensic Services Department were often side-lined. Other witnesses disagreed. Whether any real bias existed is unclear; however, it is evident that there was disunity among the PALM project management team and that this was counteractive to successful program delivery.

Delay and costs

SPMP and FIMS

470. The original business cases for SPMP and FIMS indicated the projects would be completed in late 2008 and mid 2007 respectively. The projects experienced delays in their individual procurement phases, with a contract signed with the vendor six months behind schedule.

471. The market's response to the SPMP tender indicated the project was underfunded by more than $4 million and SPMP was held up while it sought additional internal funding. It is concerning that the SPMP original budget was half of that required to complete the project. I note that the steering committee accepted advice (prior to issuing the request for tender) that the work used to determine the project costs included in the business case could not be relied upon.

472. Victoria Police management also requested that FIMS delay its procurement process until the SPMP funding issues were resolved. The FIMS project stated that such a delay would result in cost overruns and consequently applied for and received $900,000 additional funding.

473. Delays were also experienced in obtaining Accredited Purchasing Unit (Victoria Police), Victorian Government Purchasing Board and Ministerial approval for a single contract. The delays led to concerns that the vendor may increase their costs; however, this did not eventuate.

PALM

474. The business case for the PALM program indicated the program was to be completed in November 2010. It is now expected to be completed in June 2012 – some 18 months behind schedule. The delays have resulted in increased project costs of $5 million. These have been covered to date by spending ongoing maintenance funding and additional internal funding.

475. Victoria Police documents indicate that during project implementation, it became 'apparent that there are issues with the capacity of the vendor... to deliver both projects together and this has delayed the project significantly'. Documents further state that the vendor appeared 'to have good experience in building and running LIMS [Laboratory Information Management Systems] but they have limited experience when it comes to property'.

476. Documents also indicate that Victoria Police discussed whether an intervention with the vendor 'was necessary to enforce deadlines'. However, Victoria Police stated 'the delays to the delivery program appear to be equally the responsibility of Victoria Police and [the vendor]'.

477. Witnesses also gave evidence that the timeframe was overly optimistic. In this regard, Victoria Police also stated that 'implementation has taken longer than anticipated, because the scope and complexity of the amalgamated PALM is quite different to the individual scopes of the two

original projects'. Witnesses provided mixed views whether the SPMP and FIMS projects should have been implemented separately. Some, including the vendor, stated the SPMP and FIMS projects would have been completed by now if the projects had been kept separate.

478. In my view, Victoria Police underestimated the complexity of merging the projects. Prior to the merge, project team members recommended independent advice be sought in relation to the proposed merger to ascertain the status of the two projects and to provide recommendations on schedules, risk management, communication, resourcing and budget management. I have not been provided with any evidence that such advice was sought, or that the risks and complexities of merging the two projects were understood.

Where to from here?

479. Phase one of PALM is to be rolled-out in October 2011. This phase largely provides property functionality, with only 30 per cent of the forensic functionality to be delivered. The remainder of the PALM functionality is scheduled to be rolled-out in June 2012 – five years behind the schedule set out in the original FIMS business case.

480. The PALM Risk Register notes that 'as a result of the strong focus on Phase 1 testing and Go-Live, there is a risk that Forensic Phase 2 functionality is delayed, is poor quality or is incomplete'. It is imperative that this risk is monitored closely. It is also unclear if the project can be delivered within the current budget, particularly if there are further delays.

Recommendations

481. I recommend that:

53. Victoria Police closely monitor PALM project costs (to ensure the project can be delivered within the available budget) and the risk that 'Forensic Phase 2 functionality is delayed, is poor quality or is incomplete' and report at least monthly to the Chief Commissioner on the status of these issues. The Chief Commissioner should also keep the Minister for Police and Emergency Services informed of the status of the project.

54. Victoria Police conduct a post-implementation review at the completion of the project to identify if the project has met the benefits identified in the business case, learnings and opportunities for future enhancement of the system.

Victoria Police's response

The Chief Commissioner, Victoria Police stated, 'I support the recommendations that you propose'.

9. HRAssist

Key issues

- Costs for the project were poorly estimated. They rose from an estimate of $18.345 million in the business case to $42.083 million in late 2009.

- The project ran some six months behind schedule.

- Victoria Police had insufficient experience and expertise to undertake a project of this size and nature.

- A poorly structured contract led to delays and cost overruns.

- A project of this value should have been subject to approval by the Cabinet budget committee and oversight by the Department of Treasury and Finance.

- Bonuses were paid to Victoria Police staff as recompense for long hours worked. This led to media criticism. I do not consider this an appropriate use of bonus payments.

- As the system is now operational, a full post-implementation review should now be undertaken to assess operational performance to date, any outstanding issues, and possible improvements (including what other opportunities the software might bring).

Graph - Projected and actual cost/timeline
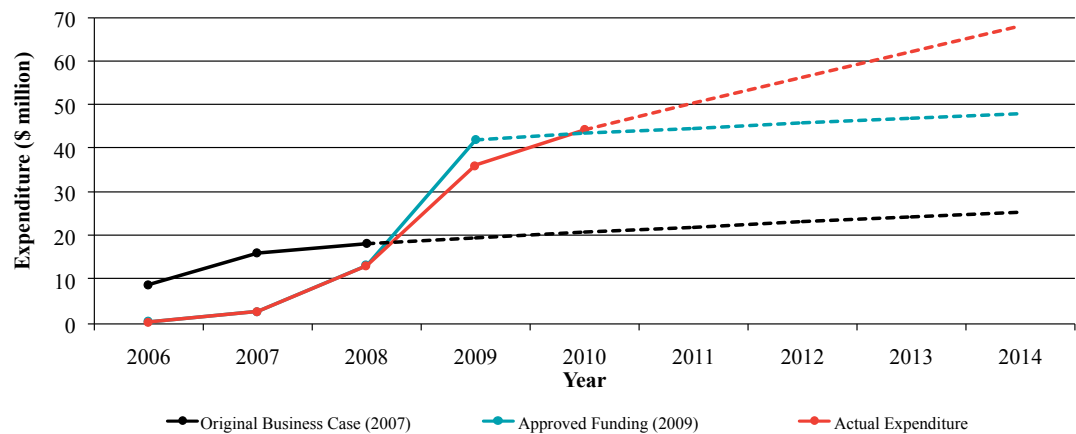
Note: Dotted lines represent ongoing funding to maintain and manage the system

Project overview

482. The HRAssist project aimed to deliver an integrated human resource/payroll system which addressed existing system inefficiencies and had the capacity to meet the changing needs of Victoria Police.

483. The business case was prepared in October 2005 with a budget of $18.4 million to be paid from Victoria Police's accumulated surplus. The business case indicated that the procurement would be completed

by 14 July 2007 and the implementation completed by 23 October 2009. The business case was not endorsed until August 2007, after the planned procurement date.

484. Following the tender process, the budget was revised in June 2008 to $28.4 million. Subsequently, in August 2008, Victoria Police entered into three contracts:

- to license the use of a Human Resource Management System (HRMS) package

- to implement that package by 7 August 2009

- to license the use of a rostering package.

485. In March 2009, following the project design phase, an additional $3.5 million was added for project contingency and the total budget reached $31.8 million.

486. By October 2009, the budget had increased again to $42.1 million, more than double the 2007 budget. The project was implemented in April 2010 – some six months behind schedule.

Summary of issues

Planning

487. The business case failed to identify how complex the project would be, such as the system interface requirements, data migration issues and ongoing training needs. Victoria Police also failed to correctly schedule testing contracts, meaning that contractors had to be rescheduled and re-engaged. The hardware to support the system was leased well in advance of need.

488. A 'Risk Review of [the] HRMS Project' in May 2009 made seven 'urgent' and eight 'less urgent' recommendations. The recommendations requiring urgent attention included a need for a detailed implementation schedule and a complete analysis of the impact of the HRMS on other system interfaces. The report also stated that functional and test specifications had not been delivered principally due to a lack of focus by Victoria Police in the early stages of the development process. Witnesses stated that while the interfaces were known, it was very difficult in the early stages of the project to determine the technical complexity of these given the poor documentation associated with the old system and the decision by Victoria Police to use an Enterprise Services Bus as the technical solution for its system interfaces. This was new technology for Victoria Police with limited expertise available in-house and contractors difficult and costly to engage.

489. In my view, the better the business case – one which articulates solution requirements, deliverables and risks, and defines interfaces, training, implementation and operational requirements – the better the outcome.

Contractual issues

490. In October 2009, having identified that the project would be delayed, Victoria Police asked the Victorian Government Solicitor's Office (VGSO) to advise on its rights in relation to delays to the HRMS project. The VGSO recommended 'the Renegotiation Option [the option to renegotiate the contract rather than do nothing to address development delays or attempt to cancel the contract] on the basis that it represents the best prospect of the Project being delivered within an agreed budget and timeline'.

491. A Victoria Police *Independent Diagnostic Review of ICT-enabled Projects* (the independent diagnostic review) in May 2010 found that delays occurred due to Victoria Police having difficulty managing a delivery schedule under a time and materials contract. The review also found that the original contract failed to include abatement and 'time of essence' clauses – clauses which would have given Victoria Police the ability to impose penalties for poor performance by the contractor. This placed Victoria Police in a position where it was unable to place sufficient pressure on the contractor to provide timely outputs. As one interviewee stated, 'it was a licence [for the vendor] to print money'. Given this, it was appropriate for Victoria Police to renegotiate the contract.

Relationships

492. In its advice to Victoria Police, the VGSO also noted that the vendor claims 'that the delays in the progress of the Project has (sic) been caused by the non-co-operation of VicPol [Victoria Police]. Based on the information made available to us there are some facts to support this assertion. However, it is clear that [the vendor] has failed to proactively manage the project'. Witnesses agreed that the fault was with both sides with issues and reviews within Victoria Police's information technology area leading to delays and uncertainties with this and other projects.

493. Clearly, the absence of any penalties for the contractor and the failure of Victoria Police to clearly define its requirements have led to some souring of the relationship between the parties, with Victoria Police at one stage considering the abandonment of the project. Such poor relationships are adverse to good project delivery.

Project management

494. There was a significant turnover of staff at all levels in the project. The composition of the steering committee went through numerous changes including the executive sponsor as well as three project managers. There was also some suggestion that the initial steering committee lacked the strong ICT development and implementation experience to drive a project of this nature.

495. Witnesses also stated that:

- there was limited funding to engage experienced contractors
- contingency funding was cut from the project
- unrealistic deadlines were set.

Delays

496. The independent diagnostic review in May 2010 also found that the project was behind schedule by 10 months and delays were caused by:

- contract negotiation/signing taking longer than originally planned
- constant challenges recruiting high quality project staff
- security requirements of Victoria Police
- late completion of solution configuration
- large volume of testing defects
- unplanned data migration complexities
- no schedule or budget contingency in the project plan.

497. Witnesses supported these views, citing a lack of maturity in Victoria Police in the management of significant ICT-enabled projects.

Costs

498. Costs have been poorly estimated. They have risen from an estimate of $18.4 million in the business case to $42.1 million in late 2009.

499. I note that all funds have been made available from Victoria Police's accumulated surplus (the State Administered Unit). While approvals from this fund require Ministerial and Treasurer's approval, it was not subject to approval by the Cabinet budget committee and the testing and scrutiny associated with that process.

500. All expenditure has been classified as an operating expense: normally expenditure for a project such as this would have been capital expenditure and subject to the oversight of the DTF.

Project management and Gateway Reviews

501. Increasingly, the project documentation contained more detail about project progress as I understand Victoria Police adopted project management methodologies and structures. However, I also note that the documentation refers to the project going through a number of 'Gateway Reviews'. These reviews were internal to Victoria Police and as such did not provide external scrutiny of the project.

Bonuses

502. There were reports in the media concerning bonuses paid to Victoria Police staff engaged on the HRAssist project and questioning the wisdom of this given the project ran over budget and timelines.

503. Bonuses were paid: in all cases to recompense staff who had worked long hours, in excess of normal requirements to meet the demands of achieving the system implementation deadline. All bonuses were documented and approved.

504. Agencies need to be wary of the external impressions created where staff are seen to be rewarded for their participation in such projects. Working hard in itself is not a justification for reward, which should be tied to high levels of performance and achievement of defined goals.

505. Victoria Police failed to recognise the negative criticism the decision to provide bonuses would engender in the public domain or if it did, it decided to ignore this.

Where to from here?

506. HRAssist is now operational. I note that in late 2010, the Police Association of Victoria wrote to the Chief Commissioner 'requesting urgent action to fix a raft of problems' with HRAssist. Witnesses have also expressed concern with the system. A post-implementation review would allow Victoria Police to:

- assess operational performance and determine whether benefits have been achieved (or costs averted)

- identify improvements (including what other opportunities the software might bring) and resolve outstanding issues

- assess its ongoing operational/maintenance arrangements and set in place a plan and program for upgrade/replacement.

Recommendation

507. I recommend that Victoria Police:

55. Conduct a post-implementation review of HRAssist.

Victoria Police's response

The Chief Commissioner, Victoria Police stated, 'I support the recommendations that you propose'.

10. Housing Integrated Information Program (HIIP)

Key issues

- The Housing Integrated Information Program (HIIP) project is seven years behind its original schedule and has exceeded its original budget by over $30 million. Additional funds are likely to be needed to complete the project.

- The revised timelines for completion of HIIP were overly optimistic. All of the vendors who responded to the tender said achieving completion by December 2008 was 'virtually impossible'.

- A decision was made to transfer 20-years of data from the old system to HIIP. Transferring the data proved more complex than anticipated and resulted in increased project costs.

- Poor planning led to delays in completing functional requirements for the system and changes in scope. These in turn led to increased costs and delays.

- There were performance issues with vendors from 2008, which continued to 2011.

Graph - Projected and actual cost/timeline
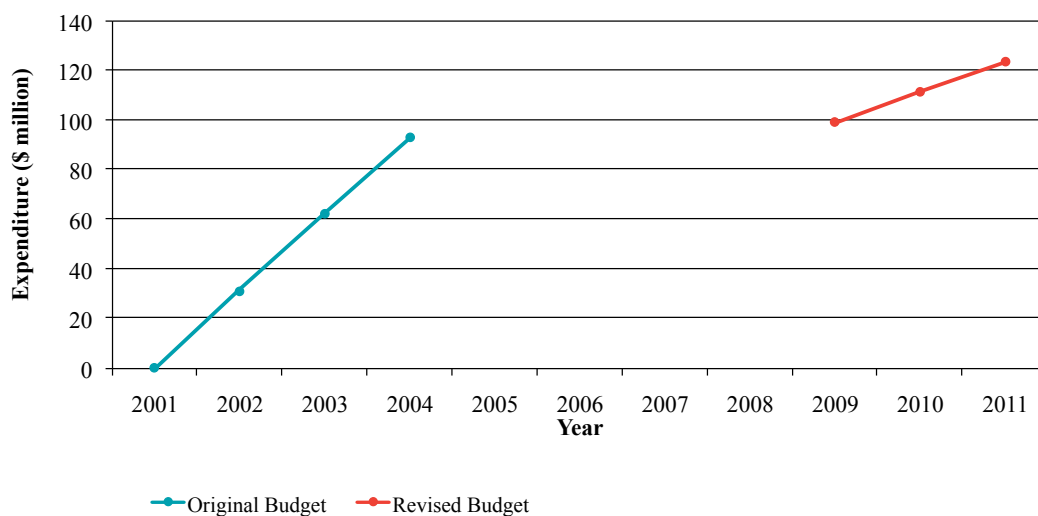
Project overview

508. The Housing Integrated Information Program (HIIP) was planned to replace the 20-year-old Integrated System for Information Processing (ISIP), which was used to manage client, property, financial and lending information.

509. In 1999, Housing identified a number of limitations with ISIP, which meant it was no longer viable to continue using the system. The HIIP project commenced in late 2002, with DTF approving a business case to replace ISIP and improve the way Housing manages its properties. The budget

for the project was $93 million (funded internally) and it was to be completed in 2004.

510. Housing entered into a contract with a vendor in 2002, but settled the contract in June 2006 after experiencing extensive delays in system development. Housing subsequently received $26 million from the vendor in refunded payments and compensation. In 2007 and 2008, Housing entered into further contracts with two new vendors to provide the following modules for HIIP:

- Vendor one: to provide the Client; Tenancy Management; Bond; Property Management; Asset Planning; Project Management; and Contract Management modules for HIIP.

- Vendor two: to provide the financial module for HIIP.

511. The Auditor-General considered HIIP in 2004 and 2007 audits. In the latter audit, the Auditor-General identified a number of issues that impacted upon the success of the project: project governance, project management, contract management and risk management.

512. At the time of the Auditor-General's 2007 audit, Housing still planned to complete the project by December 2008 within the original budget. However, HIIP (which is being released in seven stages, each of which provides different functionality) is yet to be completed. The final and largest stage of HIIP – Tenancy Management – is yet to be piloted and, based on the vendors' product readiness, is not expected to be released across the state until March to June 2012. The delays in implementing HIIP are of particular concern given that ISIP was considered to be no longer viable in 1999.

513. My investigation of HIIP has focused on the project's progress since the Auditor-General's 2007 audit.

Summary of issues

Delays and costs

514. In the Auditor-General's 2007 audit report, Housing stated that it would implement the project by 2008 within the budget of $93 million. The current approved budget is $123.5 million. However, this is under review. One witness estimated another $7-8 million will be required to complete the project.

515. Witnesses stated that the timelines for completion of HIIP were overly optimistic and the HIIP program board minutes indicate that all of the vendors who responded to the tender said achieving completion by December 2008 was 'virtually impossible'. The optimistic timeline assumed that data cleansing was complete, that there would be no delays in completing functional requirements[55] for the system and that there were no significant changes to project scope. Each of these assumptions proved incorrect. In addition, vendor performance caused significant delays and the contractual framework gave Housing limited control over timelines.

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55 Functional requirements – what the system would need to do – were determined after entering into a contract with the vendors through workshops and consultation between Housing and the vendors.

Data

516.   It was proposed that ISIP be locked down as a 'read only' database to enable Housing officers to access historical data: ISIP would communicate with HIIP so that the end-user would only need to access one system. This proposal was rejected by Housing owing to the business's purported need to access this data in their day-to-day work. In this regard, in response to my draft report, the Secretary, DHS stated 'historical data is required to respond to VCAT [Victorian Civil and Administrative Tribunal] matters and to manage clients with complex histories'.

517.   As a result, the decision was made to transfer all ISIP data to HIIP. This was included as a requirement in the requests for tender and vendor one was contracted to deliver this requirement.

518.   Converting data from ISIP required significantly more data cleansing than original projections and cost an additional $526,000. One witness stated that while Housing knew it would be difficult, it did not anticipate that data would be inaccurate or that the business would be unaware of the purpose of capturing some data. In my view, adequate planning prior to going to market would have identified these issues.

519.   Owing to the significant cost and risks associated with transferring the data, I would have expected the HIIP program board to have documented its need for the data to be transferred to HIIP and an assessment of the costs, benefits and risks of transferring the data versus maintaining the data on ISIP. However, Housing has been unable to provide me with evidence of such or of any reference to discussions at HIIP program board meetings.

520.   I also question Housing's advice that there is a demonstrated need for the data to be available in HIIP, as opposed to in another repository. The Director of Public Housing Client Services stated that the data did not need to be in HIIP, but it needed to be accessible in real time. Housing managers with whom my investigators met were unclear about why 20-years of data would need to be transferred to HIIP.

Completing functional requirements and changes to project scope

521.   Poor planning led to delays in completing functional requirements for the system and to changes in scope.

522.   All requirements were not identified prior to the tenders or during requirements workshops with the vendors, and workshops were cancelled, delayed or took longer than planned. Witnesses and documents indicated these issues were caused by people not being prepared for workshops and having a poor understanding of the business rules and processes; and as processes were not well documented. Witnesses stated that it was difficult to obtain knowledgeable people for requirements workshops owing to competing business priorities. One witness noted that there were stages[56] of the project where the business placed an executive on the project, who was supported by 'high calibre

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56   HIIP is being released in seven stages. Each stage provides different functionality.

resources' able to communicate what was required by a new system. He stated that these stages were more successful than those where achieving business buy-in was more challenging.

523. Delays capturing the requirements for stages one, two and three meant that vendor two was unable to commence its work for stage four on time.

524. Delays confirming the requirements also led to a reduction in the time available for system development, which is likely to have impacted on quality.

525. Mandatory requirements that were not included in the request for tender or identified during workshops include 120 finance reports, 142 corporate services reports and 50 additional reports in relation to rents and rebates. The latter 50 reports delayed the Tenancy Management pilot by six months. The cost of the above additional requirements exceeded $3.2 million.

The vendors

526. Housing had quality problems with the vendor one product from 2008, which contributed to delays. While the issues were discussed with the vendor numerous times, it was not until May 2010 that the issues were formally managed through a memorandum of understanding (MOU). While the quality of the product improved after the MOU, the quality then regressed and in May 2011 there were over 1,000 defects outstanding. This is significant.

527. One witness believed Housing should have terminated the HIIP project early on. Others thought Housing did everything it could to manage vendor performance issues. Cancelling the project would not have been an easy decision; particularly given the project had already been cancelled once before. Witnesses were also confident that to persevere with the project would result in a modern Housing system that achieved the HIIP vision. In this regard, Housing staff and managers that my investigators met with were generally positive about the parts of HIIP that have been released.

528. According to witnesses, the vendors also underestimated the effort required to complete the project, despite having access to the existing ISIP system and technical documentation. In this regard, the HIIP Tender Selection Report for tender one[57] stated, 'The extremely low price from [vendor one] raises a major concern that they have significantly underestimated the level of effort required'. Despite this concern, Housing entered into a fixed-price contract with vendor one for approximately $9.5 million – less than half the cost of the nearest bidder. A fixed-price contract may provide certainty about the cost of a project; however, if the vendor has underestimated the level of effort required they may, as one witness stated, 'minimise their input to a project to

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57 Tender one related to the client, bonds, tenancy management, property and asset management, business transaction management and technology foundation components of the project. Tender two related to the project and contract management components. Tender one and two were awarded to vendor one. A third contract for the financial management components of the project was awarded to vendor two.

maximise their return'. The witness stated that this can put pressure on the quality of the system and the timelines.

529.   In response to my draft report, the Secretary, DHS stated:

> First, it is not reasonable to criticise the department for negotiating a favourable commercial arrangement for the State. Indeed, the department's probity and procurement obligations (to obtain value for money) in the process supported that outcome. It was the right decision at the time. It would not have been appropriate for the department to suggest [vendor one] increased its contracted price if the department had formed the view that it had underestimated the price. Also, it is very common to enter into fixed price contracts for projects of this kind – often it is the vendor and not the customer who is best placed to manage the contractor's individual resources and therefore the risk of the cost of those resources is often best allocated to the vendor.

530.   In my view, 'value for money' is not achieved by contracting with a party where the department is not confident the vendor has understood 'the level of effort required'.

Leadership

531.   At the time of the Auditor-General's 2007 audit, Housing planned to complete the project by December 2008. However, HIIP was allowed to run over two and a half years behind schedule before the Secretary, Department of Human Services (DHS) became directly involved mid-2011 and it was only after my investigators interviewed the Secretary in October 2011 that she communicated direct with a vendor regarding performance issues. In my view, the Secretary should have become more actively involved much sooner.

532.   In response to my draft report, the Secretary, DHS stated:

> On at least two occasions, in May and November 2010, concerns were raised with me about the project being able to meet its timeframe and budget. In response, on each occasion I required a project update and briefing from the Executive Sponsor, the Chief Information Officer and the Project Director to be given to me. These updates included how the project was progressing, the challenges being experienced and how these were being addressed. On each occasion, assurances were provided such that I was satisfied that issues in the project were being managed appropriately. Significant issues around the delivery of Release [stage] 6 Tenancy Management only became apparent in June 2011. My immediate response was to initiate an independent review ... assign delivery accountability of the project from Housing to the Executive Director Corporate Services, and implement weekly reporting to monitor the progress of the project.

Training

533.	Housing staff and managers complained to my investigators that Housing conducted training for the different HIIP stages, long before the system became ready for use. For example, training for the Tenancy Management stage was conducted early in 2011; however, Tenancy Management has not yet been released to Housing staff. The delays have resulted in staff having to attend further training, which has impacted upon the Housing office's operations.

Where to from here?

534.	HIIP is seven years behind its original schedule and Housing staff are currently using two systems – HIIP and ISIP – in their day-to-day work. ISIP is an out-dated, green screen system that is difficult to use – it requires that staff recall numerical codes in order to use the system.

535.	Housing staff expressed dissatisfaction with ongoing delays and a lack of communication about the status of the project. However, they were generally positive about the parts of HIIP that have been released and stated it was user-friendly and intuitive. In this regard, it appears Housing has spent time ensuring that components of the system have been of good quality before they have been released.

536.	The final and largest stage of HIIP – Tenancy Management – is yet to be piloted and, based on the vendors' product readiness, is not expected to be released across the state until March to June 2012. It is imperative that further delays are avoided, while also ensuring the system meets the needs of users before being rolled out. In my view, if vendor performance issues continue, the Secretary, DHS must actively manage these issues to ensure timely completion of this project. Housing must also ensure sufficient post-implementation support is provided to staff.

Recommendations

537.	I recommend that:

56.	The Secretary, DHS actively manage vendor performance issues, should these continue.

Department of Human Service's response

> *The Secretary, DHS stated, 'The department accepts this recommendation and I note that I am communicating with the CEO of [vendor one] concerning delivery of HiiP project'.*

57. Housing review its training strategy to provide adequate training and post-implementation support.

Department of Human Service's response

> The Secretary, DHS accepts this recommendation. She stated, 'The HIIP project existing training strategy provides for refresher training of regional staff closer to the go live date for Release [stage] 6'.

58. Housing conduct a post-implementation review at the completion of the project to identify if the project has met the benefits identified in the business case, learnings and opportunities for future enhancement of the system.

Department of Human Service's response

> The Secretary, DHS stated, 'The department accepts this recommendation and notes that part of the new governance framework I have implemented includes post implementation reviews of all medium, and large ICT projects'.

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Investigation regarding the Department of
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SafeStreets Documents - Investigations into Victoria
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Investigation into prisoner access to health care
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Investigation into an allegation about Victoria Police
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The Brotherhood – Risks associated with secretive
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Ombudsman investigation into the probity of The
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Whistleblowers Protection Act 2001 Investigation
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Own motion investigation into Child Protection – out
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Report of an investigation into Local Government
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Whistleblowers Protection Act 2001 Investigation into
the disclosure of information by a councillor of the
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Investigation into the handling of drug exhibits at the
Victoria Police Forensic Services Centre
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contracting of information and technology services
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A report of investigations into the City of Port Phillip
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An investigation into the Transport Accident
Commission's and the Victorian WorkCover Authority's
administrative processes for medical practitioner
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Whistleblowers Protection Act 2001 Conflict of
interest and abuse of power by a building inspector at
Brimbank City Council
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Whistleblowers Protection Act 2001 Investigation
into the alleged improper conduct of councillors at
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Investigation into corporate governance at Moorabool Shire Council
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Whistleblowers Protection Act 2001 Report of an investigation into issues at Bayside Health
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Conflict of interest in local government
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Conflict of interest in the public sector
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2007

Investigation into VicRoads' driver licensing arrangements
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Investigation into the disclosure of electronic communications addressed to the Member for Evelyn and related matters
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Investigation into the use of excessive force at the Melbourne Custody Centre
November 2007

Investigation into the Office of Housing's tender process for the cleaning and gardening maintenance contract – CNG 2007
October 2007

Investigation into a disclosure about WorkSafe's and Victoria Police's handling of a bullying and harassment complaint
April 2007

Own motion investigation into the policies and procedures of the planning department at the City of Greater Geelong
February 2007

2006

Conditions for persons in custody
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Review of the Freedom of Information Act 1982
June 2006

Investigation into parking infringement notices issued by Melbourne City Council
April 2006

Improving responses to allegations involving sexual assault
March 2006

2005

Investigation into the handling, storage and transfer of prisoner property in Victorian prisons
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Whistleblowers Protection Act 2001 Ombudsman's guidelines
October 2005

Own motion investigation into VicRoads registration practices
June 2005

Complaint handling guide for the Victorian Public Sector 2005
May 2005

Review of the Freedom of Information Act 1982 Discussion paper
May 2005

Review of complaint handling in Victorian universities
May 2005

Investigation into the conduct of council officers in the administration of the Shire of Melton
March 2005

Discussion paper on improving responses to sexual abuse allegations
February 2005

2004

Essendon Rental Housing Co-operative (ERHC)
December 2004

Complaint about the Medical Practitioners Board of Victoria
December 2004

Ceja task force drug related corruption – second interim report of Ombudsman Victoria
June 2004