



2012

PARLIAMENT OF TASMANIA

**REPORT OF THE
AUDITOR-GENERAL
No. 11 of 2011-12**

Updating the Motor Registry System

June 2012

Presented to both Houses of Parliament in accordance with the provisions of Audit Act 2008

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26 June 2012

President
Legislative Council
HOBART

Speaker
House of Assembly
HOBART

Dear Madam President
Dear Mr Speaker

REPORT OF THE AUDITOR-GENERAL

No. 11 of 2011–12

Updating the Motor Registry System

This report has been prepared consequent to examinations conducted under section 23 of the *Audit Act 2008*. The objective of the audit was to form an opinion on the efficiency and effectiveness of the project that implemented the new MRS, including management of the whole of government interests, securing the functions of the MRS and preparation to meet future requirements.

Yours sincerely

H M Blake
AUDITOR-GENERAL

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Foreword

Planning, scoping, designing, budgeting, and implementing large-scale and complex information technology projects is often a high risk exercise frequently resulting in cost and time over-runs and low user satisfaction. Implemented IT systems have ‘use-by’ dates as systems reach the end of their useful lives, are no longer supported by developers and circumstances under which they were implemented change.

Various circumstances occurring in the 1990s resulted in the need for government to implement a new Motor Registry System, a significant business system in the Tasmanian context. The Department of Infrastructure, Energy and Resources, the responsible agency, brought the need to replace MRS to the attention of the state’s high-level Inter Agency Steering Committee that saw an opportunity for whole of government business improvements based on modern system architecture.

MRS was successfully implemented over the period 2003 to 2008. I use the word ‘successfully’ with caution, because, as with most large-scale and complex IT implementations, some things could have been done better including completion of user testing prior to going live and better system documentation. A major recommendation relating to IT projects of this nature is the need for a whole of government approach to the development of methods, tools and skilled resources.

H M Blake

Auditor-General

26 June 2012

List of acronyms and abbreviations

DIER	Department of Infrastructure Energy and Resources
IASC	Inter Agency Steering Committee
MRS	Motor Registry System

Executive summary

Executive summary

Background

The Department of Infrastructure, Energy and Resources (DIER or 'the department') uses the Motor Registry System (MRS) to manage motor vehicle registrations and driver licensing. MRS is a major business system that raises approximately \$320m each year. Service Tasmania processes 62 per cent of the MRS payments. The MRS also provides an interface to other DIER branches as well as the Motor Accidents Insurance Board and Monetary Penalties Enforcement Services. In addition, the MRS supports activities of other government functions such as the courts and policing.

The need to upgrade or replace the previous MRS evolved in the 1990s. At that time, all states and territories committed to nationally consistent road transport laws that would enable instantaneous checking of driver licence and vehicle registration information between jurisdictions. Recognising the limitations of the existing MRS, which was becoming obsolete and had limited potential for further re-development, DIER approached the state's high-level Inter Agency Steering Committee (IASC). That body saw an opportunity to support whole of government enterprise architecture, meet the national obligations and prepare for future business developments.

A project to replace the old MRS was initiated, with Cabinet approval in 2003 when it was estimated that the task would take seven years to complete.

Implementation was subsequently completed in June 2009, at a cost of \$22.5m. As it stood at that time, further work was needed. In 2010, stakeholders reported that defects had been addressed and in November 2011 additional functionality was completed.

Our audit reflects the Tasmanian Audit Office's interest in management of major infrastructure projects and the topic was added to our Annual Plan of Work in 2009–10.

In undertaking the audit, we wanted to form an opinion on the efficiency and effectiveness of the project to implement the new MRS. The audit examined the project's planning and implementation from the business case in 2003 until the close in 2009. The audit primarily focused on DIER but also required some involvement with other departments.

Detailed audit conclusions

The following audit conclusions are based on audit criteria that we developed in support of the audit objective.

Was there an effective process to select the best approach?

We were satisfied that a thorough process had been used to outline system requirements for the new MRS and that the process used to select the best approach was effective.

Was project implementation and monitoring effective?

There were many satisfactory aspects of project implementation including:

- selection of an implementation partner
- regular monitoring of timelines, risk management and budget compliance
- overall financial success — notwithstanding a cost overrun of 15 percent that was met within the department's budget.

On the other hand, an additional nine months activity and \$2.9m (representing the 15 percent overrun included in the total cost of \$22.5m) was required after 'Go live'. In part that was due to trade-offs in application functionality driven by funding restraints.

Problems were also noted in the areas of governance, fine tuning of specifications and over optimistic quality reports.

Was the system thoroughly tested before 'Go live'?

In our opinion, system testing prior to 'Go live' was unsatisfactory. This led to considerable user dissatisfaction afterwards, exacerbated by deficiencies in training and information provided to operators. Subsequently, the outstanding matters were resolved as quickly as possible.

Was there a thorough post implementation review?

We were satisfied that a timely, appropriate post implementation review was performed and that identified deficiencies had received attention. Whilst a number of process matters were criticised, the review found that the objective had been achieved and that the project was a success.

List of recommendations

The following Table reproduces the recommendations contained in the body of this Report. Most of the recommendations are not aimed at a particular entity. Rather, the focus of the generic recommendations is on future developers of major IT projects.

Rec	Section	We recommend that ...
1	2.2	... the IASC develop project management capabilities to implement large-scale IT projects. This should include a whole of government approach to the development of methods, tools and skilled resources.
2	2.4	... large-scale IT projects should include an explicit stage aimed at ensuring that system developers fully understand user requirements.
3	2.5.1	... greater attention should be given to specifying objectively verifiable deliverables in IT contracts to ensure the new system meets user requirements at 'Go live'.
4	2.5.1	... allowance be made in IT projects for post 'Go live' adjustments.
5	2.6.3	... quality monitoring include clear indications as to whether a project is likely to meet user requirements at the scheduled completion date.
6	3.2	... 'Go live' on IT projects be delayed until testing has been completed with satisfactory results.
7	3.4	... priority be given to completion of system documentation before 'Go live' in future large-scale IT projects.
8	4.3	... the Department of Premier and Cabinet supplement its project management guidelines to encompass the 'adopt-adapt' approach in developing IT systems.

Audit Act 2008 section 30 — Submissions and comments received

Audit Act 2008 section 30 — Submissions and comments received

Introduction

In accordance with section 30(2) of the *Audit Act 2008*, a copy of this Report was provided to the state entities indicated in the Introduction to this Report. A summary of findings was also provided to the Treasurer, the Minister for Planning with a request for comment or submissions.

The comments and submissions provided are not subject to the audit nor the evidentiary standards required in reaching an audit conclusion. Responsibility for the accuracy, fairness and balance of those comments rests solely with those who provided a response or comment.

Submissions and comments received

Department of Infrastructure, Energy and Resources

Thank you for the opportunity to comment on the report and the recommendations. We note the recommendations and the future focus of these recommendations as they apply to future major IT developments. As you noted in the Executive Summary to this report, the Department has undertaken a detailed post-implementation review of the project. The Department has no further management comment to add to your report.

Norm McIlfatrick
Secretary

Department of Premier and Cabinet

By way of background, in mid-2010, the Tasmanian Government established the Information Communications Technology (ICT) Policy Board. Its role includes providing advice to the Premier on ICT strategies, policies and investment, and to develop and maintain the Government's ICT Strategy.

The ICT Strategy has five objectives covering improved productivity; improved service delivery; better access to information; leadership; and a common approach to commodity ICT services. The ICT Strategy was approved by Cabinet on 19 December 2011 and is available on the Department of Premier and Cabinet (DPAC)'s Office of eGovernment website at:
<http://www.egovernment.tas.gov.au/ict/strategy>

In the context of the draft report, and to address issues such as those associated with large-scale ICT projects, the ICT Strategy includes principles which cover issues related to the future investment in ICT; agency and whole-of-government models for the provision of ICT; and the planning, development and operation of ICT.

Management of all complex projects, including those with an ICT component, is an important and ongoing challenge for the Tasmanian Government. In July 2011, DPAC released version 7 of the Tasmanian Government Project Management Guidelines. This version incorporated learnings and practices from the MRS Project and other large projects.

In terms of the specific issues identified in the draft report, I will refer Recommendations 1 and 8 to the ICT Policy Board for appropriate action and in the context of implementation of the ICT Strategy and future development of project management resources.

Overall, I found the draft report to be a useful examination of the MRS Project. I also agree with the comment in Section 4.2 that, despite some negative findings, the objectives of securing existing Motor Registry System functionality and providing a system suitable to support future requirements have been achieved.

Greg Johannes

A/g Secretary

**Department of Primary Industries, Parks,
Water and Environment**

Thank you for your letter of 1 June 2012 requesting comment on the performance audit *Updating the Motor Registry System*.

The Department of Primary Industries, Parks, Water and Environment notes the report and recommendations. Thank you for the opportunity to provide comment.

Kim Evans

Secretary

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Introduction

Introduction

Background

Tasmania's Motor Registry System (MRS) is a major business system used by the Department of Infrastructure, Energy and Resources (DIER or 'the Department') to manage motor vehicle registrations and driver licensing. An important revenue source, these activities raise approximately \$320m per annum. Service Tasmania processes 62 per cent of the MRS payments. The MRS also provides an interface to other DIER branches as well as the Motor Accidents Insurance Board and Monetary Penalties Enforcement Services. In addition, the MRS supports activities of other government functions such as the courts and policing. Figure 1 depicts the interfaces with the MRS.

So far as the history of the MRS is concerned, in the early 1990s, Heads of Government signed agreements to introduce nationally consistent road transport laws. In the following years, as part of that initiative, Ministers for Transport agreed to develop and implement NEVDIS (National Exchange of Vehicle and Driver Information System) which provides access to and exchange of driver and vehicle information between states and territories in Australia. In 1996, Tasmania signalled its commitment to National Competition Policy transport reforms that locked the state into successive implementation stages. Tasmania met its Phase 1 obligations but Phase 2 required linking state and territory databases.

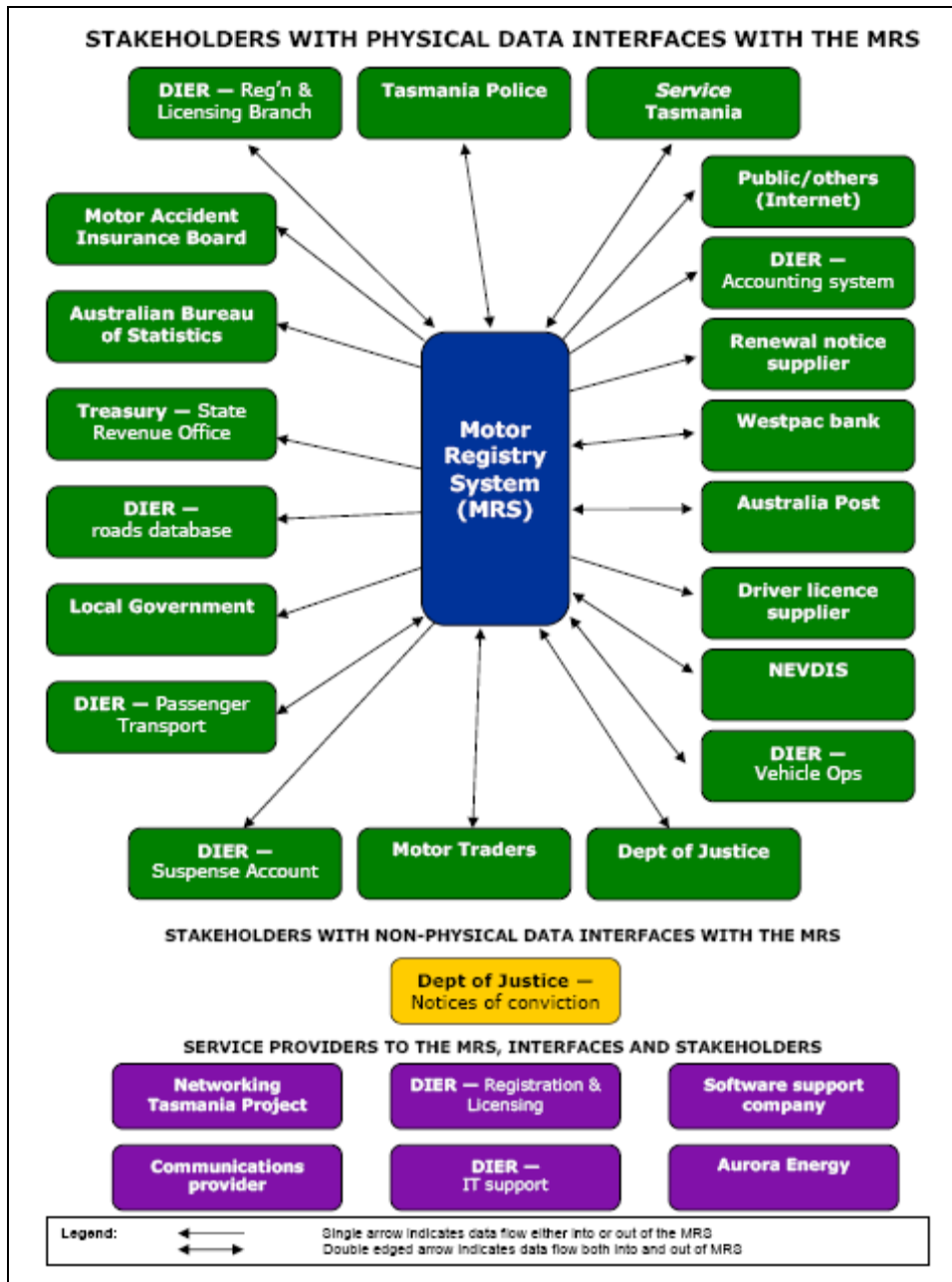
At around the same time, government had identified the need to replace the MRS because of system limitations such as suppliers no longer providing support for the software it was built on. Some initial work was done to change the computing platform that supported the MRS, but further work would be needed to continue the redevelopment and to achieve the goal of national linkage.

In 2001, maintenance reports identified further problems including key person dependencies, further highlighting the need for major redevelopment. DIER brought the need to replace MRS to the attention of the state's high-level Inter Agency Steering Committee (IASC) that saw an opportunity for whole of government business improvements based on modern system architecture¹.

¹ Deputy Secretaries from each department of government contribute to IASC, now called the ICT Reference Group, which has been meeting regularly since the late 1990s. IASC objectives included challenging the way IT solutions are developed, identifying commonality in government services and encouraging agencies to work together, e.g. sharing Corporate Services and IT solutions.

Figure 1 illustrates physical and non-physical data interfaces with the MRS as well as service providers to MRS, MRS interfaces and stakeholders.

Figure 1: Interfaces with MRS



Source TAO

A project to replace the old MRS was initiated, with Cabinet approving a business case in 2003. As well as upgrading existing functions, data storage and the user interface, the new MRS needed to support the introduction of future legislative changes and new requirements such as:

- updated Driver Test Booking System
- Novice Driver Licensing Reforms
- expanded NEVDIS.

Implementation was subsequently completed in 2009, at a cost of \$22.5m. In June 2009, the project transitioned from implementation to maintenance and improvement. As it stood at that time, the new system still had defects to be addressed and some further functionality requiring development. By 2010, stakeholders reported the faults had been addressed and in November 2011 the additional functionality was completed. A timeline depicting the milestone events in the life of the project and the costs at various points is shown in the Appendix.

Our audit has been on our publicly advised Annual Plan of Work since 2009–10 and reflects the Tasmanian Audit Office’s interest in management of major information technology (IT) infrastructure projects.

Audit objective

The objective of the audit was to form an opinion on the efficiency and effectiveness of the project that implemented the new MRS, including management of the whole of government interests, securing the functions of the MRS and preparation to meet future requirements.

Audit scope

The audit examined planning and implementation of the project, from the publication of the business case in 2003 until the close of the project in 2009. The audit primarily focused on DIER. However, our work also required involvement with other departments, namely:

- Primary Industries, Parks, Water and Environment
- Treasury and Finance
- Police and Emergency Management
- Justice
- Premier and Cabinet.

The audit also entailed ongoing contact with Service Tasmania.

Audit criteria

The audit criteria that we applied targeted the efficiency and effectiveness aspects of the above stated audit objective:

1. Was there an effective process for selecting the best approach?
2. Were project implementation and monitoring processes effective?
3. Was the system thoroughly tested before 'going live'?
4. Was there a thorough post implementation review?

Audit approach

To conduct the audit, we:

- examined documentation
- interviewed relevant persons.

Timing

Planning for this audit began in August 2011. Fieldwork began in December 2011. However, resource management meant most of the work was conducted between February and April 2012. The report was finalised in June 2012.

Resources

The audit plan recommended 825 hours and a budget, excluding production costs, of \$119 400. Total hours were 970 and actual costs, excluding production, were \$134 600, which represents an overrun of almost 13 percent.

Factors impacting on the conduct of the audit included most of the staff responsible for the Motor Registry Project having moved on. It was difficult to identify adequate project records which compromised the hours required to complete the audit fieldwork.

1 Was there an effective process to select the best approach?

1 Was there an effective process to select the best approach?

1.1 *Background*

Following Cabinet approval in 2003 to replace MRS, the IASC considered a range of options that included purchasing all or part of an existing MRS from another jurisdiction.

In this Chapter, we review the processes that led to the decision to use an ‘adopt and adapt’ strategy based on the Australian Capital Territories (ACT’s) motor registry system (*rego.act*). Our work covered:

- identification and analysis of business needs
- identification and management of project risks
- identification and selection of the best option.

1.2 *Were business needs identified and analysed?*

We were looking for a systematic approach to identifying the needs of major stakeholders and summarising them into a form that would assist the process of choosing the best solution.

As noted in the Introduction, considerable background and scoping work had been done by the IASC before the business case to replace the MRS was finalised. That process enabled a first cut on possible costs of the project.

We noted that the 2004 business plan covered development of a communication engagement strategy that listed the primary and secondary stakeholders, communication risks and issues, and plans to manage them.

A series of workshops explored inter-agency interests and whole of government IT applications. Business owners, such as the Department of Police and Emergency Management, the Department of Justice and Service Tasmania, were asked to define their business processes that interacted with the MRS.

Our view was that the process was thorough and effective in:

- identifying existing functionality (for example, driver licence management)
- making provision for future legislative and other changes (for example, NEVDIS)

- better meeting inter-agency requirements (for example, web-based interactions to support real-time access to information).

However, not all of the identified requirements were subsequently carried forward. An example was a proposed name and address register that was later taken up by DPAC as a separate project.

We were satisfied that there were effective processes to define and analyse business needs and that stakeholders were appropriately engaged. The only downside that we could see was that, as with any such process, it built up business owners' expectations.

1.3 *Were project risks identified and mitigation strategies outlined?*

We examined project management files that included risk and issue registers. Those registers prioritised risks and listed mitigating actions with responsibilities allocated to responsible parties. Some examples of major risks were that:

- Existing or future legislation that could impact on the MRS. The treatment strategy was to monitor the legislative program and cabinet submissions to identify any legislation that may impact upon the project.
- Stakeholders may not recognise the whole of government benefits of the new MRS. This risk was to be mitigated via a communication plan.
- Project activities could affect delivery of existing business services that relied on the MRS. A stakeholder management plan was developed to deal with that risk.
- The project was vulnerable to key personnel dependencies. Risk mitigation was to be addressed by appropriate standards of documentation together with recruitment and retention strategies.

We were satisfied that a risk management process had been put in place and that the risks identified aligned with our own expectations.

1.4 *Was there a thorough process for selecting the best option?*

We expected to find that all reasonable approaches to meeting the identified system need had been canvassed and sufficient information obtained to allow for assessment of competing options.

We noted that consultants were used to identify alternatives for the technical implementation. Three broad approaches were considered, namely:

- redeveloping the existing MRS with Java software wrapped around existing COBOL code
- building a new MRS with COBOL code replaced and augmented by Java code
- purchasing all or part of a system from another jurisdiction and adapting, as necessary (using an ‘adopt–adapt’ approach).

Initially, the IASC focused on the first two options. Substantial technical advice was obtained as to feasibility of these options. However, COBOL technicians were becoming increasingly scarce and expensive. Advice also indicated that COBOL software would not easily interact with the new functionality required.

In late 2005, momentum swung to the third option, namely to ‘adopt–adapt’ software from another jurisdiction. Advantages noted included:

- reducing risk by re-using established components
- reduced implementation time
- using an existing framework could limit scope creep.

The IASC investigated systems in other jurisdictions including Western Australia and South Australia. However, reports noted elements that made these systems unsuitable including cost, limitations on functionality, and substantial ongoing maintenance and support resources.

By 2005, ACT had developed *rego.act*, and was delivering it through a customer service model based on Service Tasmania. Other perceived benefits of using *rego.act* in a Tasmanian setting were that it used Java language and already complied with National Australian Road Rules.

Consultants facilitated additional workshops to compare the Tasmanian business requirements against the functionality of *rego.act*. The degree of fit was considered in four categories, namely strategic, legislative, business and technical. The project team, stakeholders and external providers evaluated more than 3000 requirements to assess the suitability of the ACT system. Additional consultants provided quality reviews of the evaluations, all of which concluded there were no major technical impediments to adopting components of *rego.act*.

While the level of fit for core business processes was rated at just 46 per cent, the IASC viewed *rego.act* as an acceptable foundation for

the new system. While acknowledging its limitations, *rego.act* could still reduce overall effort by 10 to 20 per cent.

We were satisfied that a wide range of options had been sought, considered and evaluated. We were also satisfied that an appropriate process had been followed to select the best option.

1.5 *Conclusion*

We were satisfied that a thorough process had been used to outline system requirements and that the process used to select the best approach was effective.

2 Was project implementation and monitoring effective?

2 Was project implementation and monitoring effective?

2.1 Background

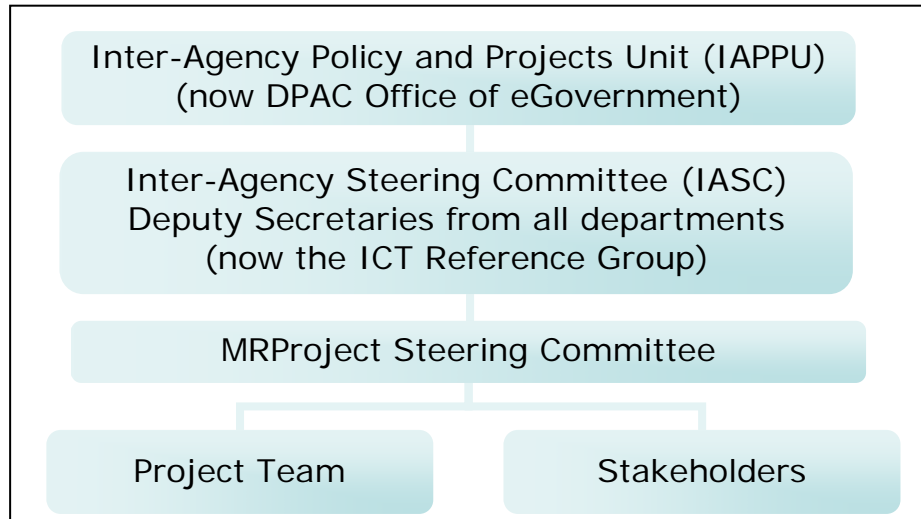
To determine whether implementation and monitoring were effective, we used these sub-criteria:

- Did project implementation have effective governance and oversight?
- Was selection of an implementation partner careful and logical?
- Was there a process for fine tuning the specification?
- Did the project stay within budget?
- Was there effective project monitoring and reporting?

2.2 *Did project implementation have effective governance and oversight?*

We were looking for governance arrangements that provided informed direction, clear lines of control and effective project management. Figure 2 outlines the governance arrangements for the project.

Figure 2: Governance arrangements for the MRS project



Source: TAO

The IASC is an on-going committee charged with challenging the way IT solutions are developed, identifying commonality in government services and encouraging agencies to work together. IASC formed the MRProject Steering Committee, which included DIER Deputy Secretaries appointed as the Project Sponsor and the Project Director. The Project team was comprised of the Project

Director, Project Manager, DIER branch resources and representatives from other departments with business associated with the MRS, such as:

- Police and Emergency Management
- Primary Industries, Parks, Water and Environment
- Justice.

The post implementation review commissioned by the Department (see Chapter 4) rated the project governance as poor and criticised a lack of technical expertise in the IASC. We support those criticisms but note that lack of technical experience in large projects may often present difficulties for a small jurisdiction such as Tasmania. The IASC endorsed the findings and subsequently revised its governance structure. Changes included defined interactions between the IASC and both the business owner or project team, and technical and business reference groups. Nevertheless, we agree with the consultant's recommendations, two of which are restated below:

Recommendation 1

We recommend that the IASC develop project management capabilities to implement large-scale IT projects.

This should include a whole of government approach to the development of methods, tools and skilled resources.

2.3 *Was selection of an implementation partner careful and logical?*

Our review of documentation indicated:

- The project team had advertised nationally for expressions of interest.
- Based on the responses, four requests for tender were issued requiring submission of a fixed-price structure.
- Two national companies made submissions, only one of which addressed all requirements.

External consultants evaluated the tenders with particular emphasis on criteria covering financial capability, understanding of the requirements and preparedness to use the 'adopt-adapt' approach.

After assessing written responses and a presentation by the developers, the IASC approved the decision to select the only vendor that fully met the requirements. The successful tenderer was an international company, with prior experience in developing *rego.act*.

Our opinion is that the process of selecting an implementation partner was careful and logical.

2.4 *Was there a process for fine tuning the specification?*

Following the decision to ‘adopt–adapt’ *rego.act*, the project team actively encouraged stakeholders to consider re-engineering their business processes in order to reel in the scope of the project. In a similar vein, initial negotiations with the software developer included pruning functionality from the scope in order to contain the cost of software redevelopment.

Whilst we conceded that the project team had actively engaged in fine tuning the specifications, the process led to some later problems:

- Some of these pruned adaptations were later found to be of more importance than had been envisaged and had to be delivered after ‘Go live.
- Primary users were concerned that insufficient effort had been put into ensuring that the developer understood users’ needs.

These shortcomings led to a degree of stakeholder disengagement and initial disappointment. This is further discussed in Section 3.4.

Recommendation 2

We recommend that large-scale IT projects include an explicit stage aimed at ensuring that system developers fully understand user requirements.

2.5 *Did the project stay within budget?*

2.5.1 Funding

We expected to find funding would be provided to enable a thorough identification of requirements and options as well as a ball park budget to enable the project to proceed. We also expected to find that the selected option had been costed including contractor fees, price to acquire rights to *rego.act* and costings for necessary supporting work, project work and governance. In relation to that funding, we expected to see budgetary compliance and a process for obtaining additional funds as the need arose.

There is no simple answer as to whether the project budget was exceeded since there were multiple budgets reflecting different stages of the project.

In March 2003, Cabinet agreed to provide \$6.5m to perform initial scoping and option development. As noted in Section 1.2, we were satisfied that the options were carefully and logically assessed.

Cabinet agreed to a total budget of \$24.8m in December 2003 (a sum that included the previous \$6.5m). That budget was based on a generic methodology prior to completion of the needs analysis, identification of options or selection of the decision to ‘adopt-adapt’ *rego.act*.

A year later, in December 2004, that budget was revised downwards to \$16.1m based on a consultant’s technical report. Again, that advice was prior to completion of the needs analysis, identification of options or selection of the decision to ‘adopt-adapt’ *rego.act*.

After deciding to ‘adopt-adapt’ *rego.act*, selection of the implementation partner and preparation of a contract, a \$3.5m increase in the budget was accepted by Treasury in July 2007, taking the total to \$19.6m (of which the implementation partner was paid \$6.2m).

We consider that the increase was reasonable given that it was the first budget prepared in the light of the actual implementation approach.

In August 2008, the work of the implementation partner was completed and the MRS went live. However, the department recognised that additional work would still be needed to:

- address defects under warranty
- provide functionality that had not been included in the original specification
- integrate Tasmanian business processes more fully with the new MRS.

That additional work was funded from within the department’s budget and costed at \$2.9m. In our view, this sum represented a failure to live within the project’s budget. That said, the cost overrun was not large by the standards of IT contracts and Treasury provided verbal advice to us that it ‘considered that the project had been a financial success notwithstanding the budget overruns’.

Recommendation 3

We recommend that greater attention should be given to specifying objectively verifiable deliverables in IT contracts to ensure the new system meets user requirements at ‘Go live’.

Recommendation 4

We recommend that allowance be made in IT projects for post ‘Go live’ adjustments.

2.5.2 Contract variations

During the implementation period, legislative requirements (for example, novice driver reforms) necessitated scope extension and delivery was subsequently deferred by 11 weeks. Costs associated with the delay, estimated at \$29 500 per week, were defrayed against revenue collected through the Road Safety Levy. The fixed-price software development contract was not varied other than the 11-week extension of the timeline. We consider the contract to have been successfully completed following correction of defects under warranty.

2.6 Was there effective project monitoring and reporting?

In considering the question of how well the project was monitored through its implementation, we looked for:

- monitoring and preparation of regular (at least quarterly) status reports by the project team
- reporting to the IASC
- regular review of timelines, budgets, quality and risk management.

We tested the period 2004–09 and found sufficient clear evidence that status reports had been submitted to the IASC monthly and included on its monthly agenda for discussion. The sighted reports invariably included updates on risk, budgetary performance, progress against deadlines, quality reviews and other general matters.

2.6.1 Timelines: monitoring and reporting

The timeline varied during the scoping phases of the project but the deadline was set to June 2008 following selection of the implementation partner. The software developer reported progress to the Project Director throughout the implementation contract. Project management records show timelines were monitored and that progress was regularly reported to the project steering committee. However, the process of delivering releases according to the developer’s schedule, rather than independent review of the deliverables, led to issues rolling over without effective resolution between releases.

We noted evidence of discussion of tight deadlines, particularly in the last six months of the contract and that the date for ‘Go live’ was subsequently delayed to August 2008. From that time, an additional nine months of intense activity was required to complete the system and correct defects. We found the additional work was also subject to regular reviews of progress.

2.6.2 Budget: monitoring and reporting

As noted in Section 2.5.1, a budget of \$19.6m was set following selection of the implementation partner. We noted that performance against budget was a standard feature of monthly reporting to the project steering committee. The reviews consistently found that work performed was in accordance with budget until ‘Go live’. Despite the monitoring and reporting, an additional nine months of activity and \$2.9m was subsequently required to complete the system. There was, therefore, an element of artificiality in the achievement of budget and its monitoring since further work was required to complete the system redevelopment.

2.6.3 Quality: monitoring and reporting

The Department engaged consultants to monitor quality assurance throughout the life of the project and their reports were reviewed monthly by the project steering committee. Those reports identified some emerging problems that required attention. One such example that we noted concerned likely staff shortages.

Quality reviews also provided regular feedback on the level of work completed and the various phases of testing. We were satisfied that monitoring of quality occurred throughout the life of the project. However, the new MRS was delivered with known errors in key areas and stakeholders noted problems at ‘Go live’ such as performance, unfamiliarity of operators with the system, data migration and system defects. The quality reports that we reviewed, including one dated two weeks before ‘Go live’, gave no indication that the system would be delivered with significant problems. This was despite a number of tests by users indicating faults and that further work would need to be undertaken (see Section 3.2).

Recommendation 5

We recommend that quality monitoring include clear indications as to whether a project is likely to meet user requirements at the scheduled completion date.

2.6.4 Risk management: monitoring and reporting

We were looking for regular monitoring and reporting that risks were being effectively managed. We found that risk was routinely addressed in the status reports.

Before ‘Go live’, a report identified that not all risks had been acquitted, including:

- poor network performance
- hardware limitations at some outlets.

We were satisfied that risk was effectively monitored and that the IASC was kept informed of risk management status.

2.7 Conclusion

There were many satisfactory aspects of project implementation including:

- selection of an implementation partner
- regular monitoring of timelines, risk management and budget compliance
- overall financial success — notwithstanding a cost overrun that was met within the department’s budget.

On the other hand, an additional nine months of activity and \$2.9m was required after ‘Go live’. In part that was due to trade-offs in application functionality driven by funding restraints.

Problems were also noted in the areas of governance, fine tuning of specifications and over optimistic quality reports.

3 Was the system thoroughly tested before 'Go live'?

3 Was the system thoroughly tested before 'Go live'?

3.1 Background

The new MRS was built and tested in a development environment. Historical records were archived when the new system went 'live' in August 2008. This Chapter examines the effectiveness of the preceding processes with respect to:

- prior testing
- prior review of risks
- transitional arrangements
- fixing subsequent problems.

3.2 *Was the system thoroughly tested prior to 'Go live'?*

We were expecting to find that there had been testing to ensure that:

- The contractor had complied with the contract specifications.
- Users were happy that their requirements, as amended, following the decision to use *rego.act* had been met.
- Performance was satisfactory, including to Service Tasmania and other outlets (and at a satisfactory speed).

We were further expecting that the Project Director would have provided formal notification that system testing had been completed with satisfactory results, prior to 'Go live'.

In practice, testing occurred but each test identified faults and further work that needed to be undertaken. It appears to us that the Department accepted that the contractor had sufficiently complied with its specifications other than defects subsequently fixed under warranty. However, we could find no satisfactory testing, acquittance of specifications or documented rationale to support that view.

There was no evidence of satisfactory testing by users that the system produced accurate data and met performance standards. Also, defects identified in progressive testing by the contractor remained unresolved at 'Go live'. The department's post implementation review noted 'data migration was delayed until too late in the implementation to test the system fully to the users' satisfaction.'

In addition, we found only limited evidence of operational testing; that is, the system worked at Glenorchy but other locations were not tested and found to have access problems after 'Go live'.

Finally, we could find no evidence of a sign-off that testing had been satisfactorily completed prior to 'Go live'. It was apparent that the project team was under considerable pressure to meet a very tight implementation deadline. Nonetheless, we consider the testing process to be too important to be compromised. In our opinion, system testing prior to 'Go live' was unsatisfactory.

Recommendation 6

We recommend that 'Go live' on IT projects be delayed until testing has been completed with satisfactory results.

3.3 *Was risk management reviewed prior to 'Go live'?*

Our expectation was that the project team would check that risks had been satisfactorily managed prior to 'Go live'. We found evidence that the risk register had been reviewed three weeks before 'Go live'. The majority of the risks were found to have been satisfactorily resolved, controlled or mitigated. However, a small number of risks remained including those related to system performance and gaps in user documentation.

3.4 *Were arrangements made to assist users' transition to the new system?*

We found that the project team had implemented a number of processes to assist users at transition including:

- general training to clients with diverse requirements such as the Department of Justice, Department of Treasury and Finance, Department of Police and Emergency Management and Service Tasmania
- information sheets and documentation of 'work arounds'
- a telephone help desk.

Despite these measures, we found evidence Service Tasmania operators were dissatisfied with the quality of training and information provided, especially since Service Tasmania operators wore the brunt of public dissatisfaction. For example, there was concern that users were still adapting to the new system at 'Go live' and struggling with the large number of new business rules. We also noted that user documentation was incomplete, unwieldy and found to be of limited use by Service Tasmania operators at 'Go live'.

Possibly, better and more timely user documentation would have avoided some of this dissatisfaction.

Recommendation 7

We recommend that priority be given to completion of system documentation before 'Go live' in future large-scale IT projects.

Notwithstanding the above recommendation, we consider a reasonable level of assistance to users was provided.

3.5 *Were problems systematically addressed after 'Go live'?*

As mentioned in Section 2.5.1, the new MRS was delivered in August 2008 with known defects in some areas. The Project Director rapidly deployed a program of stabilisation initiatives, followed by monthly releases to address defects in the system and deliver missing functionality.

In June 2009, the Project Director sought to formalise transition from project activities to maintenance and a program of further improvements. Sufficient development had been undertaken for implementation to be considered complete. While some work aimed to close gaps, other tasks supported updates to existing business processes. Service Tasmania reported that defects were fixed by 2010, and final change requests were addressed by November 2011.

We were satisfied that the problems experienced at 'Go live' were solved as quickly as possible. Problems affecting customer service were prioritised and a workable schedule of fixes was implemented.

3.6 *Conclusion*

In our opinion, system testing prior to 'Go live' was unsatisfactory. This led to considerable user dissatisfaction afterwards, exacerbated by deficiencies in training and information provided to operators. Subsequently, the outstanding matters were resolved as quickly as possible.

4 Was there a thorough post implementation review?

4 Was there a thorough post implementation review?

4.1 *Background*

A post implementation review is often conducted after completing a project. Its purpose is to evaluate whether project objectives were met, to determine how effectively the project was run, to learn lessons for the future, and to ensure that the organisation gets the greatest possible benefit from the project.

In this Chapter we look at:

- whether a post implementation review was performed and its findings
- response to any recommendations.

4.2 *Was a post-implementation review performed?*

DIER commissioned consultants to undertake an external review of the MRS and their report was delivered in June 2009. It found that the project had met its primary business objective of replacing MRS. The system had also delivered a number of improvements that included more secure data, improved customer interaction, prevention of revenue leakages and allowed remote access for police and other staff.

On the other hand, the report had a number of criticisms, noting that MRS:

- did not have sufficient functionality at ‘Go live’ that resulted in a further nine months of stabilisation works
- had suffered from ineffective budgeting, staff with project experience and unrealistic business expectations.

In addition to the post implementation review, DIER’s internal auditors were tasked with reviewing the revenue and integrity of MRS. The internal audit report found some risk exposures that were subsequently addressed.

The post implementation review included assessments by users of the full range of processes. The user assessments ranged from poor to good with strongest criticisms recorded for scope changes and progress reporting. The post implementation review did not explicitly disclose user assessments of the final outcome although the reviewers judged the project a success following their discussions with users.

Our own discussions with users throughout the course of the audit indicated that:

- Service Tasmania advised that the new system had reduced transaction times and improved access to online transactions. In turn, that had led to fewer telephone enquiries and in-person visits to Service Tasmania.
- DIER advised that the new system had prevented fraudulent claims through improved verification of concession holders.
- The new MRS provides an interface to the Department of Justice FIND database as well as the Monetary Penalties Enforcement Unit.
- The new MRS uses contemporary technology including stable online access, to provide Police with reliable real-time vehicle and driver information.
- Treasury noted improved reliability of stamp duty declarations on vehicle sales and other revenue-related information.

Our conclusion is that the review was competently performed. We also concluded that, despite negative findings about some processes, the project had delivered its objectives of securing existing MRS functionality and providing a system suitable to support future requirements.

4.3 *Were recommendations acted on?*

The consultant's report made three recommendations, namely that DIER should:

- undertake a program of process improvement (to allow prioritisation of 'fixes' to MRS)
- undertake a review of the requirements for business intelligence (to assess their suitability and capability)
- develop project management capability through improved guidelines.

We were satisfied that DIER have put in place processes to address the above concerns.

Responsibility for the project management guidelines lies outside of DIER and is vested in the Department of Premier and Cabinet. Accordingly, we direct Recommendation 8 to that department.

Recommendation 8

We recommend that the Department of Premier and Cabinet supplement its project management guidelines to encompass the ‘adopt–adapt’ approach in developing IT systems.

4.4 *Conclusion*

We were satisfied that timely, appropriate post implementation review was performed and that identified deficiencies had received attention. Whilst a number of process matters were criticised, the review found that the objective had been achieved and that the project was a success.

Independent auditor's conclusion

Independent auditor's conclusion

This independent conclusion is addressed to the President of the Legislative Council and to the Speaker of the House of Assembly.

Audit objective

This performance audit's objective was to assess the efficiency and effectiveness of the project that implemented the new Motor Registry System (MRS), including management of the whole of government interests, securing the functions of the MRS and preparation to meet future requirements.

Audit Scope

The audit examined planning and implementation of the MRS project, from the publication of the business case in 2003 until the close of the project in 2009. The audit primarily focused on the Department of Infrastructure, Energy and Resources (DIER). However, my work also required involvement with other departments, namely:

- Primary Industries, Parks, Water and Environment, in particular Service Tasmania
- Treasury and Finance
- Police and Emergency Management
- Justice
- Premier and Cabinet.

In developing the scope of this audit and completing my work, all of these state entities provided me with all of the information that I requested. There was no effort by any party to the audit to limit the scope of my work. This Report is a public document and its use is not restricted in any way by me or by any other person or party.

Responsibility of the Secretary of the Department of Infrastructure, Energy and Resources

The Secretary is responsible for establishing and maintaining efficient and effective project management systems to manage processes involved in implementing the new MRS. This includes the development of business cases, budgeting, tender, design and implementation processes.

Auditor-General's responsibility

In the context of this performance audit, my responsibility was to express an opinion on the efficiency and effectiveness of the project that implemented the new MRS.

I conducted my audit in accordance with Australian Auditing Standard ASAE 3500 *Performance engagements*, which required me to comply with relevant ethical requirements relating to audit engagements. I planned and performed the audit to obtain reasonable assurance whether the Department implemented the new MRS efficiently and effectively.

The audit criteria that I applied targeted the following efficiency and effectiveness aspects of the above stated audit objective:

- Was there an effective process for selecting the best approach?
- Were project implementation and monitoring processes effective?
- Was the system thoroughly tested before 'going live'?
- Was there a thorough post implementation review?

My work involved obtaining evidence based on examining documentation covering the whole period of the MRS project and interviewing responsible staff.

I believe that the evidence I have obtained was sufficient and appropriate to provide a basis for my conclusion.

Auditor-General's conclusion

Based on the audit objective, scope and criteria and for reasons outlined in the remainder of this Report, it is my overall conclusion that the MRS was implemented efficiently and effectively. A number of detailed conclusions, including matters that could have been better implemented, are noted in my Executive Summary.

This Report contains eight recommendations which are aimed at improving the implementation of large-scale IT projects.

H M Blake
Auditor-General
26 June 2012

Recent reports

Recent reports

	Tabled	No.	Title
Feb	2011	95	Fraud control
Apr	2011	96	Appointment of the Commissioner for Children
May	2011		Other State Entities 30 June 2010 and 31 December 2010, including University of Tasmania
May	2011	97	Follow of special reports 69–73
May	2011		Volume 5: Other State Entities 30 June 2010 and 31 December 2010, including University of Tasmania
Jun	2011	98	Premier's Sundry Grants Program and Urban Renewal and Heritage Fund
Jun	2011	99	Bushfire management
Jun	2011		Volume 4 Part 1: Local Government Authorities and Business Units 2009–10
Jun	2011		Volume 4 Part 2: Local Government Authorities and Business Units 2009–10
Jul	2011	100	Financial and economic performance of Forestry Tasmania
Sep	No. 1 of 2011–12		Tourism Tasmania: is it effective?
Sep	No. 2 of 2011–12		Children in out of home care
Nov	No. 3 of 2011–12		Financial Statements of State Entities: Volume 1 — Analysis of the Treasurer's Annual Financial Report 2010–11
Nov	No. 4 of 2011–12		Financial Statements of State Entities: Volume 2 — Executive and Legislature, Government Departments and other General Government Sector entities 2010–11
Nov	No. 5 of 2011–12		Financial Statements of State Entities: Volume 3 — Government Business Enterprises, State Owned Companies, Water Corporations and Superannuation Funds 2010–11
Nov	No. 6 of 2011–12		Financial Statements of State Entities: Volume 4 Part I — Local Government Authorities 2010–11
Dec	No. 7 of 2011–12		Financial Statements of State entities: Volume 5 — Other State Entities 30 June 2011 and 31 December 2010
Mar	No. 8 of 2011–12		The assessment of land-use planning applications
Jun	No. 9 of 2011–12		Financial Statements of State Entities: Volume 6 — Other State Entities 30 June 2011 and 31 December 2011
Jun	No. 10 of 2011–12		Public Trustee: Management of minor trusts

Current projects

Current projects

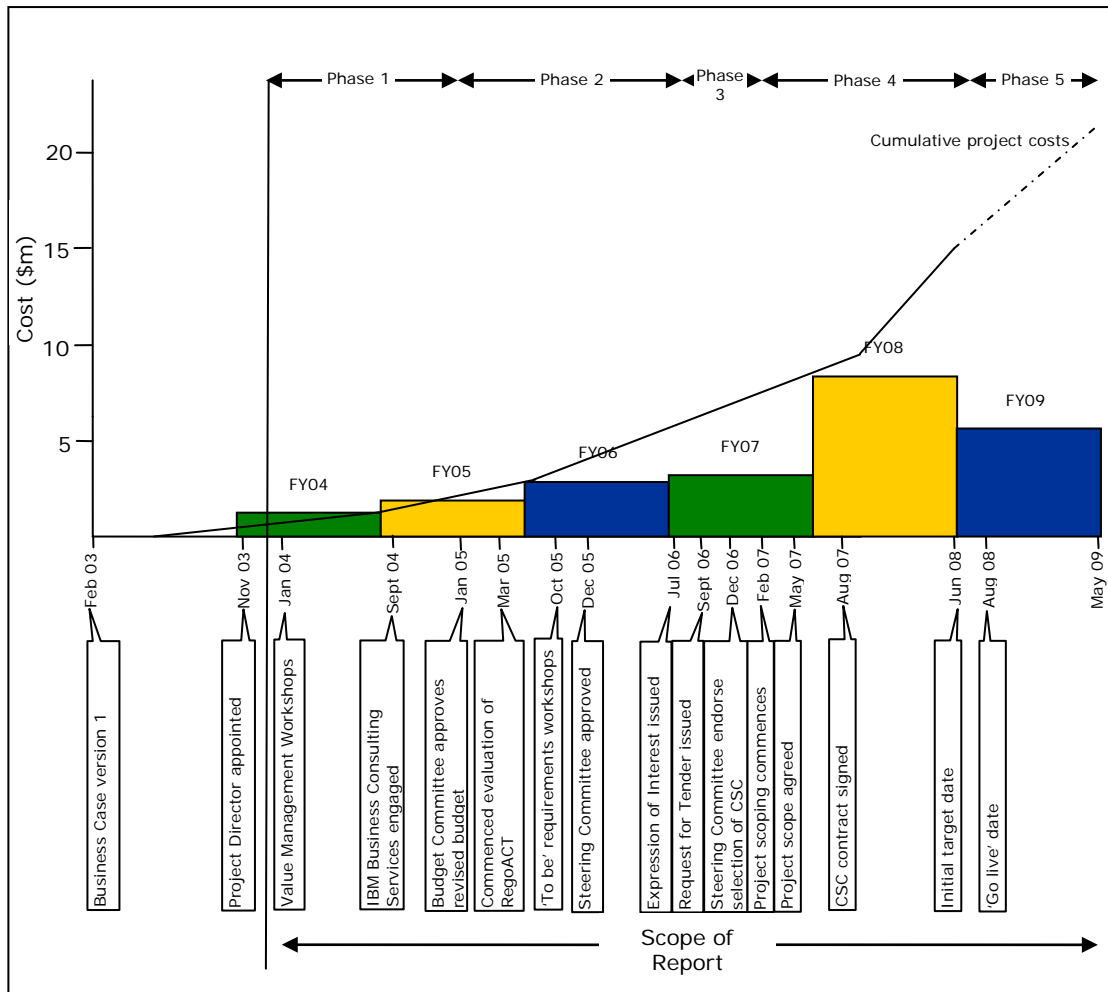
Performance and compliance audits that the Auditor-General is currently conducting:

Title	Subject
TasPorts amalgamation	Assesses whether the promised benefits of amalgamation have been achieved.
Managing hospital bed demand	Assesses the effectiveness of the Department of Health and Human Services' efforts to manage the demand for hospital beds through alternatives to hospital treatment.
National Partnership Agreement on Homelessness	Examines whether the state is effectively and efficiently meeting its obligations under the National Partnership Agreement on Homelessness. The audit will be done concurrently with other jurisdictions with oversight by the Australian Council of Auditors-General.
Auditor-General's review of TOTE sale	In accordance with the <i>TOTE Tasmania (Sale) Act 2009</i> , the audit examines whether Government achieved a fair and reasonable price for TOTE.
Fraud control in local government	Assesses whether local government Councils' fraud management strategies are effective to prevent, detect and respond to fraud.

Appendix

Appendix

Figure 3: Timeline for development of the new Motor Registry System



Source: TAO