

ACT Auditor-General's Office

Performance Audit Report

The FireLink Project
Department of Justice and Community Safety

August 2007



ACT AUDITOR-GENERAL'S OFFICE



PA 07/11

The Speaker
ACT Legislative Assembly
Civic Square, London Circuit
CANBERRA ACT 2601

Dear Mr Speaker

I am pleased to forward to you a Performance Audit Report titled '**The FireLink Project**', conducted under the authority contained in the *Auditor-General Act 1996*.

I would appreciate if you could arrange for the tabling of the Report in the Legislative Assembly pursuant to Section 17(4) of the *Auditor-General Act 1996*.

Yours sincerely

A handwritten signature in black ink, appearing to read 'T. Pham'.

Tu Pham
Auditor-General
27 August 2007

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LIST OF ABBREVIATIONS

ACT	Australian Capital Territory
ACTAS	ACT Ambulance Service
ACTFB	ACT Fire Brigade
Agency	Emergency Services Agency (commenced 1 July 2006)
ANAO	Australian National Audit Office
APU	Approved Procurement Unit
ATI	Australian Technology Information Pty Limited
Authority	Emergency Services Authority (1 July 2004 to 30 June 2006)
BAZ	Bushfire Abatement Zone
CAD	Computer Aided Dispatch
CAG	Commissioner's Advisory Group
CEO	Chief Executive Officer
CMD	Chief Minister's Department
CMG	Communications Management Group
COTS	Commercial Off The Shelf
ESB	Emergency Services Bureau (pre-July 2004)
GSO	Government Solicitor's Office
ICT	Information and Communication Technology
IM	Information Management
IM&C ³ Group	Information Management and Command, Control, Communications Group
IT	Information Technology
JACS	Department of Justice and Community Safety
MAC ²	Mobile Asset Command and Control
PMBOK	Project Management Body of Knowledge
RFS	Rural Fire Service
SES	State Emergency Service

1. REPORT SUMMARY AND AUDIT OPINION

INTRODUCTION

1.1 This report presents the results of a performance audit that reviewed the FireLink Project, an Information and Communication Technology (ICT) project undertaken by the Emergency Services Authority (the Authority).

1.2 At the time the FireLink technology was first brought to the attention of the Government, emergency management and response services were provided by the Emergency Services Bureau (ESB), which was part of the Department of Justice and Community Safety (JACS). Following the bushfires in January 2003, and the McLeod Report on the fires, Commissioner Peter Dunn was appointed as head of ESB and later of the Emergency Services Authority when it was established on 1 July 2004, reporting directly to the Minister responsible for Emergency Services. The Authority ceased to exist as an independent statutory body on 30 June 2006. From 1 July 2006, emergency services functions were integrated into JACS with the formation of the Emergency Services Agency (the Agency).

BACKGROUND

1.3 FireLink is an information and communication system that was procured by the Emergency Services Authority from Australian Technology Information Pty Limited¹ (ATI) in October 2004, following a brief trial of FireLink in May 2004. FireLink consists of mobile data units installed in vehicles that are intended to transmit their location and send and receive general-purpose messages. The FireLink technology was described by the Authority as:

... a capability for the provision of a strategic planning, monitoring and support of emergency services operations; a capability to 'see' its assets, particularly in rural areas, short messaging and 'collect' other environmental information in order to establish a real time comprehensive operating picture for the ESA.

1.4 The approved procurement plan for the FireLink technology showed the Authority intended FireLink to support emergency services operations, as a cost effective means to provide location and environmental data that could then be input to the Authority's Computer Aided Dispatch (CAD) system. This would allow FireLink-equipped vehicles to be dispatched by the CAD system. The procurement plan also makes clear the Authority's aim to integrate the FireLink technology with existing systems, including the CAD system and those of other agencies involved in the provision of emergency services to the community. The procurement plan noted that the goods and services to be obtained included 'product customisation including the development of any interfaces with existing internal and external systems'.

¹ Australian Technology Information Pty Limited (ATI) is a wholly Australian-owned systems engineering company. Established in 1990 and based in the ACT, ATI primarily develops industrial communication systems for military and civilian use; see ATI's homepage at <http://www.austechinfo.com.au/>

1.5 In response to the audit report, ATI emphasised that FireLink was not a CAD system, and was not 'intended to support dispatch operations'.

1.6 The FireLink Project has attracted considerable interest from the ACT Legislative Assembly, and other key stakeholders. It has been discussed several times in the Legislative Assembly and there were concerns that this project had not, at the time of the audit, been delivered within budget, on time, and to the quality of performance expected. Phase 1 of the FireLink Project - delivery of the core system - has been completed. Phase 2 of the Project - improving coverage and further customisation of the system - was still under way when the audit was conducted.

1.7 The FireLink Project was selected for audit, in part, because of persistent perceptions that the project was experiencing difficulty. This was noted in an environment where research indicated that most projects fail to deliver on time, on budget and to the quality of performance expected.² Indeed, a review of studies conducted by IT Cortex (2003) found that IT projects are more likely to fail than succeed and that the larger the project the more likely it is to fail.³ The key to getting the most out of IT project investments is a sound procurement process and project management.

1.8 Although this audit focussed on a particular ICT project undertaken by one agency, Audit considers that the lessons learnt from the FireLink Project can be applied to all major projects undertaken by ACT public sector agencies.

1.9 Prior to the finalisation of this Audit Report, the Commissioner for Emergency Services, Mr Gregor Manson, announced on 13 July 2007 that the FireLink system had been withdrawn from operations, as a 'fresh review' had identified that the program was 'unsuitable for the Agency's on-going operations'. Commissioner Manson reported that the external cost of the FireLink system was \$4.5 million, although this did not include related costs such as Authority and Agency staff time spent on the project over three years.

AUDIT SCOPE AND OBJECTIVE

1.10 The objective of this audit was to provide an independent opinion to the Legislative Assembly on the efficiency, effectiveness and accountability of the former Emergency Services Authority (and more recently, the Emergency Services Agency) in managing the FireLink Project.

1.11 This audit focussed on the procurement and management processes, in particular the importance of quality project management, which is critical to the delivery, within timeframe and budget, of the defined outcomes and intended benefits.

² Roberts, JP & Furlonger, J (2000) *Successful IS Project Management*, Gartner, p.2. Also refer *Tasmania Government Management Guidelines Version 6 March 2005* p.3.

³ Tasmanian Government, *Project Management Fact Sheet: Why Project Management, Version 1.0 June 2004*. The Fact Sheet refers to several studies including IT Cortex, (2003), *Failure Rate - Statistics over IT projects failure rate*, which can be accessed at: http://www.it-cortex.com/Stat_Failure_Rate.htm

The audit did not assess the technical suitability or otherwise of FireLink, nor seek to make recommendations on technical solutions to meet the Agency's operational needs. These matters were assessed separately by the Agency.

AUDIT PROCESS

1.12 A number of matters complicated the conduct of this audit.

1.13 At the time the audit was undertaken, many of the key personnel associated with the implementation and management of the FireLink Project had left the Agency, and those within the Agency often had differing views and recollections regarding aspects of the project.

1.14 Movement of personnel is typical within any dynamic organisation, but it is often accompanied by a loss of 'corporate memory', which reinforces the importance of sound documentation and records management. Unfortunately, during the fieldwork stage of the audit, limited documentation was available to Audit to assess the project management practices for the FireLink Project. Official files on the FireLink Project effectively ceased between November 2004 and November 2006, notwithstanding the significant development of the project within these first two years. Although Audit was provided a quantity of information through electronic files and email correspondence, it was not possible to determine the status of many of these documents (e.g. whether they were draft, finalised, approved or otherwise authoritative), and as such this information did not necessarily constitute reliable audit evidence.

1.15 At a late stage of the audit process, further documentation, which had not been previously identified by the Agency, was made available to Audit. The additional documents subsequently provided included briefings, agenda and minutes for a number of meetings of various committees and groups, a further ten monthly status reports from ATI detailing various technical aspects of work on the project (taking the total to 29), and various policies and guidelines, some of unknown formal status. The existence of some of these documents was brought to Audit's attention by third parties.

1.16 The additional documents were thoroughly considered by Audit in preparing the final audit report. Consequently, Audit is of the view that sufficient appropriate evidence has been obtained and examined to base the audit opinions.

AUDIT OPINIONS

1.17 The audit opinions drawn against the audit objective are set out below.

- There were deficiencies in the scoping, planning, procurement and management of the FireLink Project.
- As a result, the overall management of the FireLink Project was neither efficient nor effective in delivering the intended outcomes to meet Authority and Agency operational needs.

KEY FINDINGS

1.18 The audit opinions are supported by the following findings:

Project initiation and planning

- In May 2003, following the January bushfires in the ACT, the Government approved overall funding of \$26.7m to upgrade the communication systems of the Emergency Services Bureau (the New Radio Project). There was no documentary evidence that a detailed business case supporting this funding decision was prepared and considered by Cabinet.
- The Authority subsequently allocated \$3.255m of the funding to the FireLink Project for the three-year period up to 2005-06, with funding for later years to be subject to Government approval.
- Although the need for an automatic vehicle location and mobile data system such as FireLink was identified by the Authority, there was no business case prepared to support the FireLink Project. There was no cost-benefit analysis of FireLink against alternative solutions.
- In the case of FireLink, the Authority identified an available product and then developed an accelerated procurement process around the identified product, with the knowledge that further customisation was required to satisfy the Statement of User Requirements.
- The procurement process failed to demonstrate clearly that the project would achieve a value for money outcome for the Territory. The consideration to support a local and innovative company and the urgency of the proposal appeared to outweigh other considerations including 'value for money'.
- The Authority's consideration of risk for the FireLink Project was inadequate. In particular, the Authority generally underestimated the level of risk associated with delivering a complex ICT project, especially given the developmental nature of the proposed system.
- The Statement of User Requirements included in the FireLink contract did not include specific and measurable performance standards against which the system could be assessed, or by which the performance of the contractors could be monitored. There was insufficient consultation with end users in the development of the Statement of User Requirements.

- The Authority prepared and issued various comprehensive policies and plans and set up several groups and committees to support a governance structure for managing ICT projects. However, these plans were not implemented as intended in practice, and as a result, accountability for the FireLink Project was unclear and the overall project governance was not effective.
- The Authority did not follow the ACT Public Sector Management Standards and guidelines to ensure that the principles of merit and procedural fairness were adopted in the employment of temporary contracted staff to lead the new ICT projects, including the FireLink Project.

Project implementation and management

- Performance requirements for the system and the supplier were not adequately specified prior to execution of the contract, and continuous changes to the scope of the Project were not managed well.
- The FireLink technology required the Authority to adopt new business practices and processes. However, attention given to change management to facilitate implementation of the new system was insufficient to ensure the support of various operational services, particularly the Rural Fire Service.
- The lack of strong support and commitment from some key users created implementation difficulties, particularly because FireLink, as a developmental system, was expected to evolve over the course of the project as the Authority better defined users' needs and expectations.
- The FireLink system had several significant unresolved problems related to operational performance, reliability of coverage and delays in communication. These problems led users to express a lack of confidence in the system. Further, there was a lack of action to follow-up on these unresolved issues since December 2006, while the ACT Government and the Agency commissioned two consultants' reports on the Agency's ICT projects.
- An external consultant's report commissioned in December 2006 by JACS (and overseen by a committee comprising Treasury, InTACT, SES and JACS representatives) was critical of the Authority's governance and management of ICT projects, including the FireLink Project.
- A second external consultant's report, commissioned by the Agency in June 2007, recommended that the FireLink Project should cease, leading to the announcement by Commissioner Manson on 13 July 2007 to withdraw the FireLink system from operations.
- At the time of the Commissioner's announcement to withdraw FireLink from operations, the FireLink Project did not achieve a number of the objectives stated in the procurement plan or meet the expected timeline.
- The Agency advised Audit that it has been implementing new governance and project management systems since December 2006, and that it was in the process of looking at alternative and more cost effective solutions to replace FireLink.

RECOMMENDATIONS AND RESPONSE TO THE REPORT

1.19 The audit made six recommendations to address the audit findings detailed in this report.

1.20 In accordance with section 18 of the *Auditor-General Act 1996*, a final draft of this report was provided to the Chief Executives of JACS and the Department of Treasury for consideration and comment.

1.21 Audit also sought formal response to the Report from the former Commissioner and the supplier of FireLink, ATI.

1.22 The Chief Executive of JACS provided the overall response below:

I welcome the Audit report as it confirms matters identified in two expert independent reports conducted by JACS and the current Agency in late 2006 and early 2007 in respect of the Authority's ICT projects and justifies further the actions that JACS and the Emergency Services Agency have implemented over the last seven months in response to the recommendations of those reports.

The shortcomings of the management of the FireLink Project as outlined in this Audit report are accepted. There is considerable distance between the situation described in the report and what is expected in governance and management by JACS for all of its reporting departments including the Agency.

Since the Agency has been included in JACS' corporate structure, significant changes have been made and the Agency Commissioner has finalised the ICT and Agency Business Plans and implemented processes and project management so as to ensure consistency with ACT government policies and guidelines that address the issues raised in the report.

Issues discovered in this report were generally observed by a JACS informal due diligence review in July 2006 on the formation of the Agency. JACS and the Agency commissioned two independent reviews that have provided significant guidance for implementing appropriate governance systems to meet government standards.

With respect to the availability of documents relating to the Audit process, it is clear that some materials were not discovered until late in the process. However all documents, whether in paper or electronic form, that have been discovered have been made available without hesitation. It is the very lack of proper process for document management identified by this audit, that resulted in late discovery.

1.23 The response from the former Commissioner of the Emergency Services Authority was also considered in finalising this report. The key comments made by the former Commissioner were:

The Proposed Performance Audit Report forwarded to me by the Auditor General under cover of a letter dated 10 August 2007 is both disappointing and superficial in its examination of the development of the FireLink Project. Even though I resigned from the appointment of Commissioner of the former Authority some 14 months ago, it appears that only partial information on the project has been considered.

There is no debate that the FireLink system works and that it is a sophisticated system. This point has been made repeatedly by the Minister for Emergency Services, the new Commissioner of the ESA and me in public statements. Such a system does not come into being without reasonable processes being in place.

...

All of the staff in the Authority, contractors and ATI personnel involved in this project did an outstanding job and delivered a system under pressure and extreme difficulty. The system met the objectives that accompanied the Cabinet decision approving the capital funding for the overall new communications project – in particular the ‘provision of mobile data and automatic vehicle location equipment for front line bushfire and emergency service response vehicles’.

...

The Audit Report’s reference to the lack of a business case for the system fails to acknowledge the detail of the McLeod Report into the operational response to the January 2003 bushfires. Communications totally collapsed in the ESB HQ at Curtin on 18 January 2003. The need for replacement systems was well overdue and the catastrophe of that day and the subsequent analysis of the communications failures and the failure of coordination between the ACT Bushfire Service (now ACT RFS), the ACTFB and the ACT SES provided that business case.

...

Having criticised the Audit Report I will conclude by saying that the introduction of FireLink was not a perfect process. Clearly there were improvements that could have been made. None of the project management issues that were, with hindsight, capable of improvement however, would lead to the decision to scrap \$4.5m worth of equipment and effort because FireLink is too sophisticated for the ACT.

1.24 The former Commissioner’s response is published at Appendix C. However, one paragraph of the response, and the email of 31 July 2007 referred to in the former Commissioner’s response, have been omitted. Audit considers their inclusion would be inappropriate as the former Commissioner included comments that relate to individuals who may not have been afforded an opportunity to respond in accordance

with procedural fairness. All matters raised by the former Commissioner have been given full regard in the conduct of the audit and finalisation of this report.

1.25 Audit also considered the response provided by ATI, the FireLink supplier, in finalising this report. The key overall comments from ATI were:

The findings presented in the report make it clear that ...ATI and FireLink met the contracted obligations and delivered a working system on time and budget, with the system accepted into service and proven in the field.

...

Over the past 12 months ATI has been delivering upgrades and enhancements to the FireLink system based on user requirements and the approval process agreed by ESA for developing changes. Each of the upgrades has been delivered on time; however, ESA have not been providing these valuable requested enhancements to the users.

...

The findings are clear in highlighting that it was not documented evidence of any FireLink system failure that resulted in the decision to 'remove FireLink from service', but inadequate procedural processes and management capabilities on the part of the ACT Government.

1.26 Other matters raised by ATI have been incorporated as appropriate in the body of the report.

Further Audit comment

1.27 In their response to the audit report, the former Authority Commissioner and ATI have expressed concerns regarding the lack of documentation available to the audit, and formed the view that the audit delivered its findings based on only a proportion of the factual evidence available. Further, the former Commissioner raised the possibility of bias in the provision of information to the audit team.

1.28 These views are unfounded. Although not all relevant documentation was available in the fieldwork stage of the audit, the Agency subsequently provided further documentation to Audit. All relevant documentation has been fully examined by Audit and considered prior to finalisation of this audit report. In addition, audit procedures are well established and sufficiently robust to ensure the Audit team can identify and deal with the risks of bias or 'misleading' information, should these occur.

1.29 Audit is satisfied the findings and opinions of the audit are fully supported by sufficient appropriate evidence.

Recommendations

1.30 The Chief Executive of JACS and the Chief Executive of the Department of Treasury provided responses to the recommendation, as shown below.

Recommendation 1 (page 24)

The Agency should continue to develop and document a governance structure for each project, appropriate for the expected size, scope, complexity, risk and cost of the project. The governance structure should include, for all significant projects, establishment of a project-specific Steering Committee.

JACS' response: Agreed

It became clear that the Authority had ICT governance problems during the review of the Agency on transfer to JACS.

JACS and the Agency commissioned a comprehensive independent expert review of the Authority's and the Agency's ICT in late 2006. A comprehensive implementation plan addressing the review recommendations, received in February 2007, is being implemented. The review recommendations have a high correlation with recommendations of this Audit.

Cognisant of the independent expert review recommendations, the Agency Commissioner publicly released the Agency's first Three Year Business Plan in March 2007 (available at www.esa.gov.au).

The Agency Commissioner placed ICT projects on standby in December 2006, subject to project by project review, and sought and has endorsed an ICT Business Plan that is consistent with the Agency's Three Year Business Plan. The ICT Business Plan provides for comprehensive ICT management and governance consistent with ACT Government Policy and Guidelines for 'Management of Projects with an IT Component Policy' and seeks to meet best practice that addresses the recommendations of the independent expert review.

Recommendation 2 (page 28)

- The Agency should ensure that all major ICT and other projects are supported by a rigorous business case, including cost-benefit analysis of alternative solutions; and
- Treasury should review such business cases before the proposed projects are submitted for endorsement by Cabinet.

JACS' response: Agreed

Treasury's response: Agreed

Budget processes have been incrementally improved over the past four years, and in particular over the past two Budgets. All requests for funding are required to be accompanied by an appropriate level of documentation. For IT and other capital investment, this routinely includes a full business case, which should include alternative solutions and a detailed cost benefit analysis. Information Technology proposals are reviewed by Treasury, from a financial, policy and business alignment basis, as well as from a technical perspective taking account of InTACT's role as the government's IT service provider.

Recommendation 3 (page 36)

Agency heads should seek advice and obtain clearance from the Government Solicitor's Office prior to executing all major contracts.

JACS' response: Agreed

The ACT Government Solicitor's early advice should be sought by Chief Executives in relation to legal risks and issues for all procurements or other transactions of a high value and/or that are considered to be of high risk or sensitivity. This includes procurements that are of a complex or highly technical nature, such as ICT matters. The contracts should be in a form approved by the ACTGS and settled, or in appropriate cases drafted, by the ACTGS.

It remains a matter for each agency to evaluate the commercial and operational benefits and risks of proceeding with a transaction, informed by the ACTGS's advice.

Recommendation 4 (page 38)

The Agency should ensure that its project plans adequately take into consideration the associated risks of the project to the Agency, and implement risk management strategies as appropriate.

JACS' response: Agreed

Recommendation 5 (page 39)

The Agency should ensure that Statements of Requirement are developed in consultation with key stakeholders, including end users, and include specific and measurable performance standards against which the delivery of goods or services can be assessed.

JACS' response: Agreed

Recommendation 6 (page 45)

The Agency should ensure that it complies with the *Territory Records Act 2002* and maintains adequate supporting documentation for its ICT and other projects, including a documented and approved project management method for each project.

JACS' response: Agreed

2. PROJECT PLANNING AND INITIATION

INTRODUCTION

2.1 This chapter describes the planning and initiation phases of the FireLink Project. This stage of the project is important in specifying user needs, setting performance indicators for contractors and subsequently assisting the effective delivery of the intended outcome.

KEY FINDINGS

- In May 2003, following the January bushfire in the ACT, the Government approved overall funding of \$26.7m to upgrade the communication systems of the Emergency Services Bureau (the New Radio Project). There was no documentary evidence that a detailed business case supporting this funding decision was prepared and considered by Cabinet.
- The Authority subsequently allocated \$3.255m of the funding to the FireLink Project for the 3 year period up to 2005-06, with funding for later years to be subject to Government approval.
- Although the need for an automatic vehicle location and mobile data system such as FireLink was identified by the Authority, there was no business case prepared to support the FireLink Project. There was no cost-benefit analysis of FireLink against alternative solutions.
- In the case of FireLink, the Authority identified an available product and then developed an accelerated procurement process around the identified product, with the knowledge that further customisation was required to satisfy the Statement of User Requirements.
- The procurement process failed to demonstrate clearly that the project would achieve a value for money outcome for the Territory. The consideration to support a local and innovative company and the urgency of the proposal appeared to outweigh other considerations including 'value for money'.
- The Authority's consideration of risk for the FireLink Project was inadequate. In particular, the Authority generally underestimated the level of risk associated with delivering a complex ICT project, especially given the developmental nature of the proposed system.
- The Statement of User Requirements included in the FireLink contract did not include specific and measurable performance standards against which the system could be assessed, or by which the performance of the contractors could be monitored. There was insufficient consultation with end users in the development of the Statement of User Requirements.

- The Authority prepared and issued various comprehensive policies and plans and set up several groups and committees to support a governance structure for managing ICT projects. However, these plans were not implemented as intended in practice, and as a result, accountability for the FireLink Project was unclear and the overall project governance was not effective.
- The Authority did not follow the ACT Public Sector Management Standards and guidelines to ensure that the principles of merit and procedural fairness were adopted in the employment of temporary contracted staff to lead the new ICT projects, including the FireLink Project.

BACKGROUND

2.2 FireLink is an information and communication system that was procured by the Emergency Services Authority in 2004. The Authority's objective was to procure a capability to support emergency services operations, which could be used as a cost effective means to provide location and environmental data that could then be input to the Authority's Computer Aided Dispatch (CAD) system. This would allow FireLink-equipped vehicles to be dispatched by the CAD system. Requirements would include the ability to operate in rural environments as well as collect environmental information, which would allow emergency service workers to view a current, common image of the operating environment. The Authority's contract with ATI states that the FireLink system 'must have the ability to interface with a wide range of complementary applications and systems'.

2.3 FireLink consists of mobile and fixed data units installed in or on assets that transmit vehicle location and general-purpose messages via a digital radio modem to a command console.

2.4 A key attribute of FireLink is that it does not necessarily require fixed infrastructure to operate, as communications are relayed from vehicle to vehicle via radio link, generally by line-of-sight. This was considered by the Authority to be particularly relevant to the Rural Fire Service (RFS) and the State Emergency Service (SES), as these two services often operate in rural or mountainous areas of the ACT, where radio black spots are common.

2.5 In comparison, the Computer Aided Dispatch (CAD) system used by the ACT Fire Brigade (ACTFB) and the ACT Ambulance Service (ACTAS) uses fixed communications towers, which currently provide limited radio coverage in remote areas of the ACT.

2.6 As detailed in the procurement plan, the Authority sought to integrate the FireLink technology with existing systems, including the CAD system and those of other agencies involved in the provision of emergency services to the community. The procurement plan noted that the goods and services to be obtained included 'product customisation including the development of any interfaces with existing internal and external systems'.

TIMELINE

2.7 The timeline below (Table 2.1) describes the planning and initiation phases of the FireLink Project.

Table 2.1: FireLink Project – Timeline for planning and initiation phases

Month	Event
May 1999	The Emergency Services Bureau (ESB) developed a Strategic IT Plan that identified a need for the introduction of a mobile data and automatic vehicle location system.
May 2003	ESB’s New Radio Project (\$26.782 million), which included the provision of mobile data and automatic vehicle location equipment, was approved as part of the 2003-04 Budget. This funding decision was made soon after the ACT bushfire in January 2003.
December 2003	Australian Technology Information Pty Limited (ATI) provided a sales demonstration of FireLink to ESB’s technical staff and other interested parties. The report to ESB management indicated that FireLink was only a concept at this stage.
March 2004	The Information Management and Command, Control, Communications Group (IM&C ³ Group) was established to manage all of ESB’s ICT projects. At ESB’s request, ATI provided a demonstration of FireLink at Curtin Oval to representatives of ESB, including the Commissioner. Following the demonstration, the Commissioner expressed considerable interest in FireLink.
April 2004	ATI provided a response to ESB’s request for quote for the provision of a strategic monitoring, support and planning capability, which suggested a two-stage approach, including a trial of up to four months for FireLink prior to implementation of the system. ESB prepared a procurement plan for the FireLink pilot, which proposed a single-select methodology.
May 2004	ESB entered into a contract for a four-month trial of FireLink, at a fixed price of \$97,900. Following FireLink’s use during a fire in the Namadgi National Park, the IM&C ³ Group recommended the trial be declared ‘a success,’ after eight days into the trial. The four month trial was in effect reduced to eight days.
July 2004	The Authority drafted a Request for Quotation to procure FireLink. The user requirements were identical to those used as validation criteria for the trial.
September 2004	The Authority prepared a procurement plan for FireLink; the estimated cost of the project was \$4.5 million over a period of five years. On 3 September 2004, the procurement plan was endorsed by the ACT Government Procurement Board, subject to a number of amendments. ATI provided its Best and Final Offer to the Authority.
October 2004	The Authority and ATI entered into contract negotiations based on ATI’s Best and Final Offer. On 11 October 2004, the Authority instructed the ACT Government Solicitor’s Office (GSO) to draft a contract based on ATI’s Best and Final Offer.

Month	Event
	<p>The GSO’s advice of 20 October 2004 raised a number of matters that remained for the parties to negotiate.</p> <p>On 25 October 2004, the Authority responded to several of the issues raised by the GSO, and sought the GSO’s urgent assistance in drafting new and revised clauses to the contract. The Authority advised that the contract was to be executed the following day.</p> <p>On 27 October 2004, the Authority advised the GSO that the contract with ATI had been executed on 26 October 2004, without further input or inclusion of all advice from the GSO.</p>

GOVERNANCE AND ACCOUNTABILITY

IT Project Management Policy and IT Project Governance Guidelines

2.8 In 2004, the Chief Minister’s Department (CMD) issued a policy on Information Technology (IT) project management, i.e. *Management of Projects with an IT Component Policy* (the policy),⁴ and a set of guidelines for IT project governance, i.e. *Guidelines for development of a Governance Structure for projects with a significant IT component* (the guidelines).⁵ The policy and guidelines are applicable to all projects with a component of IT and with a risk level of medium or above. The guidelines provide a series of principles for projects:

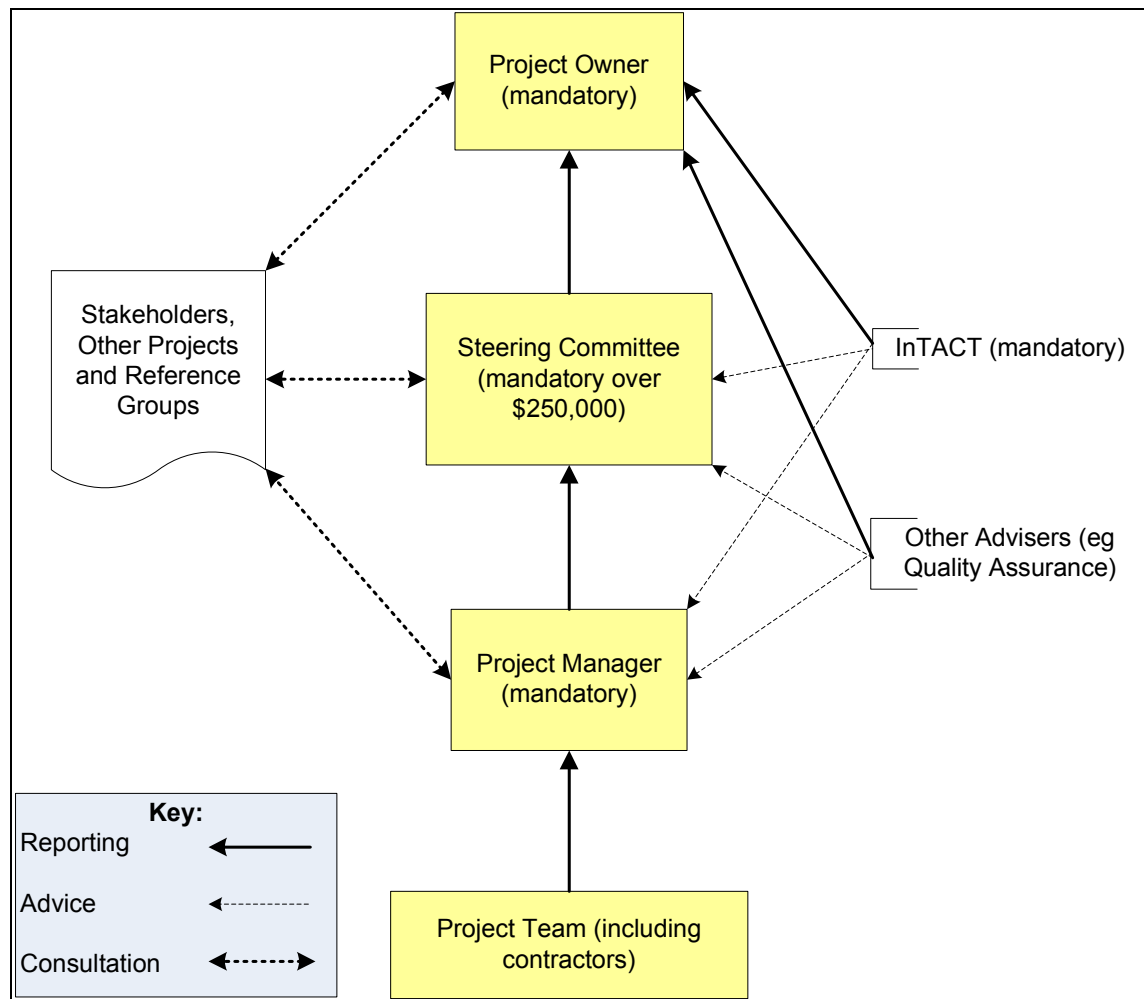
- all projects to have a ‘Project Owner,’ who is accountable for all aspects of the project from the commencement of the project until completion;
- all projects to have a Business Case;
- all projects to have a Governance Structure;
- all projects to have an approved Project Management Method;
- adoption of the Project Management Body of Knowledge (PMBOK) as the basic Standard which Project Management Methods are measured;
- all projects to be managed and governed by appropriately skilled personnel;
- all projects to adopt a standard project reporting arrangement; and
- procurement legislation and policy to be followed.

2.9 The policy requires a documented governance structure and a documented set of reporting procedures for all projects. Figure 2.1 below details the suggested project governance structure for a large project, indicating the mandatory roles specified in the policy.

⁴ ACT IM Policy No. 24, Available from the InTACT Knowledge Portal - http://intact/WofG/Services/ICT_D&P/polstdgls.htm

⁵ ACT IM Guideline No. 7, Available from the InTACT Knowledge Portal - http://intact/WofG/Services/ICT_D&P/polstdgls.htm

Figure 2.1: Suggested Project Governance Structure for a Large Project



Source: Chief Minister's Department, *Guidelines for development of a Governance Structure for projects with a significant IT component*, November 2004.

Project governance within ESA

2.10 The Authority set up a number of committees and groups to assist with the management of projects, including ICT projects such as the New Radio Project (which consisted of nine separate projects, including FireLink). These committees and groups are outlined in the Table 2.2, and illustrated at Figure 2.2, below.

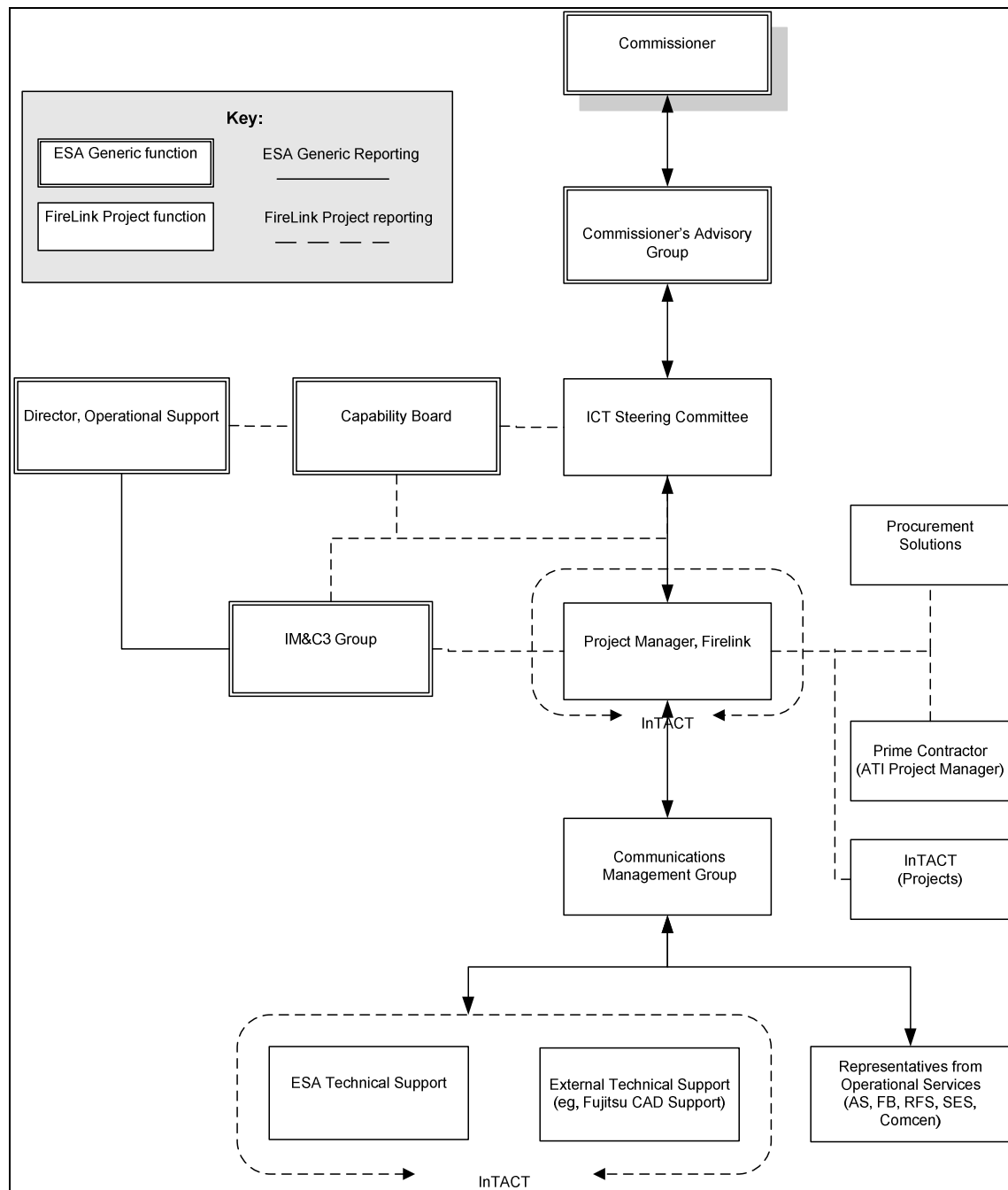
Table 2.2: Governance Committees

Name	Formation	Membership	Role and functions
Commissioner's Advisory Group	March 2004	Commissioner, Chief Officers of RFS, SES, ACTAS, ACTFB	To provide advice to the Commissioner on matters important to the Services and the ongoing management of ESB.

Name	Formation	Membership	Role and functions
Capability Board	August 2004	Assistant Commissioner, Chief Finance Officer, Deputy Chief Officers of Services, Manager HR, other senior managers	To adopt an integrated and transparent approach to providing ESB with the capability to provide emergency and consequence management services. This includes research and development opportunities.
Information Management and Communications, Command and Control Group (IM&C ³)	March 2004	8-10 contractors and consultants were bought in to form this group.	To manage and implement a range of major projects including, FireLink and TRN.
Various positions including project director and project manager	March 2004		To manage the project according to the agreed Project Plan, including project scope, cost and timing.
Steering Committee	May 2005	Assistant Commissioner, Chief Finance Officer, Deputy Chief Officers of Services, Manager HR, other senior managers	The role and responsibilities of Steering Committee for all projects was taken on by the Capability Board.
Communications Management Group	May 2005	Operation Managers of the Services, CAD trainer, Facilities Manager and Spatial Data Coordinator.	To ensure that effective communications are provided for current and Future operations.
ICT Steering Committee (re-established by the Agency)	December 2006	Deputy Chief Officers from the four services, Director Emergency Management Operations, Director ICT Government Business, ICT Manager, ICT Project Director and InTACT Managers as required. ⁶	To plan and assess the information management and ICT needs of the Agency in line with its operational priorities, budget initiatives and projects to ensure the effective delivery of ICT services.

⁶ The membership of this committee has varied over time; the membership listed above is the latest committee membership.

Figure 2.2: The Governance Structure for the FireLink Project



Source: Emergency Services Agency

Note: This figure represents the governance structure during 2005 and 2006. Not all groups existed concurrently.

2.11 Audit assessed the governance arrangements for the FireLink Project against the previously outlined government policy and guidelines as shown below.

Project Owner

2.12 The project owner is accountable for the overall success of the project.

Policy guideline criteria for Project Owners	Audit Findings
<ul style="list-style-type: none"> • setting objectives • acting as the finance and procurement delegate • approving the project governance model • assigning individuals to governance roles • appointing the project manager and key staff 	<p>Documentation contemporaneous to the commencement of the FireLink Project did not clearly identify the ‘project owner’, although it could be concluded that this role fell to the Commissioner.</p> <p>In effect, the Authority Commissioner and the project manager shared the responsibilities of the project owner as described in the CMD policy (and from May 2005, in the Authority policy). For example, the project manager acted as the financial delegate for the project; however, this role should have resided with the nominated project owner.</p>

Steering Committee

2.13 The role of the steering committee is to oversee the project. It should comprise the project owner (or delegate) and representatives of major stakeholders in the project. For example, in the case of the FireLink Project, the committee could have included representatives of the RFS and SES.

Policy guideline criteria for Steering Committee	Audit Findings
<ul style="list-style-type: none"> • approving major plans, e.g. project plan, risk management plan, communications plan, quality assurance plan (including acceptance plan) and budget • setting tolerances for the project manager • regularly monitoring progress against the schedule and budget • regularly monitoring the way the project team deals with issues, risks and consultation • approving major changes to the project • approving the project’s deliverables, including confirming that the requirements documentation aligns with the business needs, and signing off on acceptance that the project products are fit for purpose 	<p>Several committees and groups within ESA had assumed a role similar to that of a steering committee at various times over the life of the FireLink Project. These groups included:</p> <ul style="list-style-type: none"> • Information Management and Command, Control, Communications Group (IM&C³ Group); • Capability Board (including Steering Committee role); and • Communications Management Group. <p>It appears, therefore, that the project manager accepted many of the responsibilities of the steering committee. For example, the project manager approved changes to the system through the use of ‘tasking orders.’</p> <p>Audit also notes that there was no steering committee at the time the project commenced, October 2004, until May 2005, when the Capability Board expanded its terms of reference to include the role.</p>

Project Manager and Project Team

2.14 The role of the project manager is to deliver all project deliverables.

Policy guideline criteria for the Project Manager and Project Team	Audit Findings
<ul style="list-style-type: none"> • developing and maintaining project plans • managing project resources and monitoring project activity through the use of detailed plans and schedules • ensuring that appropriate record keeping is maintained • liaising and consulting with stakeholders • negotiating resolution of technical issues • completing the project on time and within budget • ensuring the quality of the deliverables 	<p>From November 2004 to November 2006, the project manager for the FireLink Project was contracted.</p> <p>Audit has been advised that the project manager and the project team reported directly to the Authority’s Commissioner, but there is no clear documentation of such reports.</p> <p>Minutes of meetings of the Commissioner's Advisory Group (an important forum to inform the Commissioner of progress on key Authority projects) indicate that the FireLink Project was discussed on occasions, although it is not clear that discussions were in detail.</p>

The role of InTACT

2.15 Following ACT Government initiatives in the 2005–06 budget, InTACT undertook the unITy project to merge ICT services into a single organisation. The project ran from May to December 2005. Transition Agreements were created with all agencies which identified ICT positions and associated staff to be transferred to the new organisation. InTACT was responsible for the delivery of merged ICT services. Ownership of business systems and projects remained with agencies.

2.16 InTACT staff existed within the Authority under three scenarios:

- contractors (including one FireLink Project manager) were brought into the Authority through InTACT;
- existing Authority staff holding IT positions were employed through InTACT; and
- some existing InTACT staff were embedded within the Authority.

2.17 The role of InTACT staff within ESA was typically on an operational support level rather than a project management level. Capability projects were driven by the Authority’s IM&C³ Group, which was directed by an Authority staff member. It is noted that InTACT contributed to a ‘FireLink Commissioning Project’, although assistance appears to be limited to the supply of computing equipment (servers and PCs) and licenses, as well as implementing a ‘back-up solution’.

Audit Comments

2.18 Audit examined minutes of meetings of the Commissioner's Advisory Group (CAG) – which includes the Chief Officers of the Services and other key Authority managers. These minutes indicated that FireLink was not frequently raised in this Group in any detail. Although Authority policy indicates that the Steering Committee will report on projects to the CAG, the minutes record only occasional references to the FireLink Project or briefings by the project manager to this Group.

2.19 The Capability Board was established in August 2004 with the role to receive budget updates on capability matters, report on capability options to improve the Authority's operations and administration and develop project management systems and skills, among other activities. In May 2005, the Capability Board expanded its Terms of Reference to include the responsibilities of a Steering Committee. The Steering Committee was responsible for a number of large projects within the Authority. This meant there was no steering committee directly responsible for the oversight of the FireLink Project from project initiation and planning through to implementation and review.

2.20 The IM&C³ Group was established in March 2004 to operationally manage all of the ESB/Authority's ICT projects. The Group comprised eight to ten contractors and consultants but did not have representatives from each of the Services (RFS, SES, ACTAS and the ACTFB). This may have been a factor leading to the formation of the Capability Board (whose members did include representatives from the RFS, SES, ACTAS and ACTFB).

2.21 The Communications Management Group (CMG), from February 2006, assumed responsibility as the 'working group' for most of the Authority's projects, including FireLink. Although typically a 'working group' would deal with lower level issues than a steering committee, it appears from minutes of CMG meetings that some of the Group's activities were analogous to the role of the steering committee.

2.22 The project manager was either a full member of several of the ICT committees or groups within the Authority or attended meetings to provide briefings on the progress of the project. It is evident, for example, that FireLink was a regular matter raised at the Communications Management Group meetings, and this Group – which included the project manager - has provided direction (and directives) regarding the project.

2.23 Overall, Audit noted that the Authority referred to appropriate governance structures in a policy document issued in July 2004 entitled *Project Problem and Issue Management Policy*, which also referred to relevant ICT policies issued by CMD. Other relevant policies have been developed by the Authority, including *The Role and Responsibilities of a Steering Committee* (May 2005). However, the Authority did not have a governance model specific to the FireLink Project.

2.24 It is unclear to Audit whether the project governance structures dictated by Authority policy operated as intended. Minutes of the meetings of the various

committees and groups did not record detailed reporting on the FireLink Project between groups, and indeed, only infrequently offered detailed comment on the discussions within the committee or group on issues concerning FireLink. For example, there was little evidence that indicated whether the committee that assumed the role of Project Steering Committee (variously the IM&C³ Group, the ICT Steering Committee, the Capability Board and the Communications Management Group) actually reported to the Commissioner's Advisory Group, as intended by the policy.

2.25 ICT projects in the Authority were managed and monitored through a number of committees and groups, several of which appeared to overlap in terms of responsibilities or roles. These committees and groups had various responsibilities for all the Authority's projects, of which there were many. They may not have had the capacity to devote the attention to each project necessary to ensure the successful and efficient delivery of the project. There may be added risk with such a governance structure for a 'developmental' project like FireLink, that is, a product that was expected to evolve over the course of the project as the Authority better defined its needs and expectations.

2.26 Audit notes, as a further example of the unclear project management arrangements, that the project plan for the FireLink Project was developed by the supplier, ATI. The development of the project plan by ATI was a contractual obligation, but it only specified the project responsibilities within ATI itself. Although it is not unusual for the supplier to prepare a document such as the project plan as part of the initial deliverables of a project, Audit considers the Authority should have had a project management plan that adequately addressed, from the Authority's perspective, the scope, quality and user acceptance risks for the project.

2.27 The Agency's recently revised governance framework (January 2007) provides for an ICT Steering Committee, which reports to the Commissioner's Advisory Group. The ICT Steering Committee had been re-established in December 2006. The Capability Board was disbanded in January 2007.

Recommendation 1

The Agency should continue to develop and document a governance structure for each project, appropriate for the expected size, scope, complexity, risk and cost of the project. The governance structure should include, for all significant projects, establishment of a project-specific Steering Committee.

RECRUITMENT PRACTICES

2.28 Audit notes that, upon the implementation of the New Radio Project in February 2004, the Authority had employed ten new temporary staff, eight of whom were on contract for periods of 6 - 18 months. The contract positions included:

- Program Manager – IM&C³;
- Manager – Governance and Process Improvement;

- Manager – Business Implementation;
- Manager – Admin support;
- Senior Analyst – Infrastructure & Security;
- Senior Analyst – Information Management; and
- FireLink Project Manager (specialist contractor).

2.29 Most of these new positions formed the IM&C³ group, which operationally managed all of the ESB/Authority's ICT projects. Most positions were classified within the Authority as senior officers (Grade A, B or C).

2.30 Audit understands that these contract/consultant positions were not publicly advertised.

2.31 Audit noted that temporary staff were contracted because of the perceived need to recruit personnel with specialist skills in ICT project management within a short time frame and that that five of these contracted senior staff had previous working experience with the Commonwealth Department of Defence.⁷

2.32 The *Public Sector Management Act 1994* (PSM Act) establishes a foundation for human resource management in the ACT Public Sector. Being a Territory public entity, the Authority was required to comply with the PSM Act in recruitment and other human resource management practices.

2.33 The merit principle embedded in the recruitment processes requires that all persons eligible for the relevant appointment have a reasonable opportunity to apply, and selection is made based on an assessment of relative efficiency, having regard to the nature of the duties to be performed and the abilities of applicants. A recruitment guide issued by CMD states that engagement of temporary employees should occur in a similar manner to that of permanent staff.⁸ Although it is not necessary to involve all stages of the competitive selection process for temporary employment for less than 12 months, the recruitment guide notes that engagement of temporary staff must be based on merit.

2.34 While recognising the need for efficiency and effectiveness in recruitment, to minimise excessive bureaucracy, Audit considers it important to follow the proper process and that attention is given to accountability and procedural fairness.

2.35 Relevant files examined by Audit did not include interview records or similar documentation to support the recruitment decisions of these contractors. Audit noted that the contracts for some of these personnel included an outline of services and deliverables required. Many contracts were subsequently extended; Audit was not aware of any performance assessments against specified deliverables prior to these

⁷ Question on Notice No 372.

⁸ Chief Minister's Department, *Recruitment in the ACT Public Service*, October 2005

extensions. In February 2005, the former Commissioner approved a six-month extension for four of the contracted personnel, stating:

Although it is normal practice to advertise temporary positions longer than 6 months, in this case the staff are highly qualified and experienced and are needed for a further 6 months to complete the projects they were originally employed to undertake.

In the interests of organisational requirements and the efficient completion of IM&C³ projects, I have made an assessment that there are no other applicants available that would be able to continue and complete the work as effectively as the current incumbents.

2.36 In August 2005, these contracted positions were advertised internally in the ACT Government gazette as permanent positions (most at Senior Officer levels), and most contracted incumbents applied and were subsequently appointed as permanent staff.

2.37 The engagement of staff under contract at daily rates is often an expensive means to obtain the services required, especially over an extended period. For example, Audit noted that the fees for the contractors ranged from \$780 to \$1,100 per day – the equivalent of an annual salary of \$203 000 to \$286 000. At that time, the annual salary for a Senior Officer in the ACT Public Service ranged from around \$72 500 (Senior Officer Grade C) to \$92 200 (Senior Officer Grade A).

2.38 Overall, Audit found that the Authority did not follow the ACT Public Sector Management Standards and guidelines to ensure that the principles of merit and procedural fairness were adopted in the employment of temporary contracted staff to lead the new ICT projects, including the FireLink Project.

PROCUREMENT PROCESSES

Identification of a Need

2.39 The need for an automatic vehicle location and mobile data system was identified in a number of documents including the ESB's Strategic IT Plan, which was first developed in May 1999 after a number of business analysis reviews had been conducted.

2.40 The Strategic IT Plan identified a need for a new IT environment to be created through a series of activities, including:

- introduction of formal project management practices;
- implementation of a new computer aided dispatch (CAD) system;
- introduction of a new radio communication system that is 'capable of supporting mobile data... and automatic vehicle location for integration into the computer aided dispatch system'; and
- introduction of a mobile data and automatic vehicle location system to 'enhance the dispatcher's ability [to] make rapid and efficient decisions.'

2.41 The ESB had commenced a program to upgrade its communication and information systems in 1997.

Business Case

2.42 The CMD's *Management of Projects with an IT Component Policy* (the policy) states that:

All projects must have a business case of appropriate detail relative to the expected size, scope, complexity, risk and cost of the project. Funding... should not be released for any part of the project until the Project Owner has signed off on the Business Case.

2.43 The need for an automatic vehicle location and mobile data system was identified in a number of documents, including a Budget Cabinet Submission in November 2002 (which sought funding for several infrastructure upgrades as components of the ESB's 'New Radio Project') and the ESB's Strategic IT Plan. However, no specific business case was prepared to support the FireLink Project. This was also the case with a number of other ICT projects undertaken by the Authority.

2.44 Audit notes the Budget Cabinet Submission stated that a detailed business case would be available to support the 'New Radio Project' proposal by January 2003. Although a partly completed draft of the business case was provided to Audit, the document was not finalised for Cabinet consideration.

2.45 The former Authority Commissioner advised Audit that he had not considered it necessary to prepare a further business case specifically for the FireLink Project because the need was covered in the Submission in 2003. Further, the former Commissioner said:

The Audit Report's reference to the lack of a business case for the system fails to acknowledge the detail of the McLeod Report into the operational response to the January 2003 bushfires. Communications totally collapsed in the ESB HQ at Curtin on 18 January 2003. The need for replacement systems was well overdue and the catastrophe of that day and the subsequent analysis of the communications failures and the failure of coordination between the ACT Bushfire Service (now ACT RFS), the ACTFB and the ACT SES provided that business case.

2.46 Audit considers that, had a business case been prepared for the FireLink Project, it should have identified and objectively considered alternative systems as a possible solution to meet the needs of the RFS and SES, and highlighted a need to conduct a cost-benefit analysis of the various options. It has been suggested to Audit, for example, that enhancement of the mobile data system used by the ACTFB and ACTAS may have adequately met these needs. However, there was no cost-benefit analysis of FireLink against alternative solutions.

2.47 Both the former Authority Commissioner and ATI have rejected the mobile data system used by the ACTFB and ACTAS as a suitable and cost-effective alternative technology. Given the divergent views, Audit considers this highlights the

importance of a sound business case and rigorous cost-benefit analysis which, had it existed, could have drawn out and objectively quantified the economic and technical merits of the various potential solutions.

Recommendation 2

- The Agency should ensure that all major ICT and other projects are supported by a rigorous business case, including cost-benefit analysis of alternative solutions; and
- Treasury should review such business cases before the proposed projects are submitted for endorsement by Cabinet.

Funding

2.48 In November 2002, ESB prepared a Budget Cabinet Submission that requested \$26.782m from 2003-04 to 2006-07 for the upgrade of the Bureau's communications infrastructure. This communications upgrade project (the New Radio Project) had four objectives:

- the provision of a new emergency radio communications system and associated equipment used by front line ambulance, fire and emergency service response vehicles, and appropriate front line land management agencies' response vehicles;
- the provision of new portable emergency radio communications equipment for use by front line personnel of the ambulance, fire and emergency service;
- the provision of mobile data and automatic vehicle location equipment for front line bushfire and emergency service response vehicles; and
- the provision of emergency radio relay equipment that supports front line field personnel involved with specialist tasks, deployable field command units and ground to air capabilities.

2.49 In May 2003, the New Radio Project was approved as part of the 2003-04 Budget. As noted above, although the Budget Cabinet Submission stated that a detailed business case would be available to support the proposal by January 2003, the business case was not completed.

2.50 The approval for funding was granted shortly after the January 2003 Canberra bushfires. The fires caused more property damage than any single recorded Australian fire except that at Mount Macedon in Victoria on 'Ash Wednesday' (16 February 1983). In addition to the loss of four lives, 501 properties were destroyed. The circumstances caused public outrage, leading to enormous pressure on the Territory Government to act quickly.

2.51 Notwithstanding the circumstances, it would have been more prudent for the Government to approve this large amount of funding (\$26.782m) 'in principle', but subject to the provision of more detailed business cases for the individual projects that were to be undertaken. This would have provided the opportunity for Treasury, and

as necessary Cabinet, to ensure the proposals were rigorously assessed and only approved if the business case was sound.

2.52 The ESB’s communication systems were found to be inadequate during the January 2003 bushfires, and the Authority subsequently allocated \$4.5m in funding from the New Radio Project to the FireLink Project up to 2005-06. Funding for 2006-07, 2007-08 and 2008-09 was to be subject to Government approval.

2.53 The FireLink Project addressed the objective of providing ‘mobile data and automatic vehicle location equipment for front line bushfire and emergency service response vehicles’.

2.54 The Authority entered arrangements with ATI for:

- the trial of the FireLink and MAC² technology on 7 May 2004 (\$97,900);
- the provision of FireLink and MAC² technology for two years from 26 October 2004 (\$3.199m); and
- a variation of the FireLink contract for additional licences and follow-on support to 30 June 2009 (\$0.974m), raising the total value of the ATI contracts to \$4.174 m.

2.55 The total estimated cost of the procurement was \$4.5m over a period of five years as detailed in Table 2.3 below. This did not include \$594 000 spent on contractors to manage the ICT projects (including the FireLink Project) for the Authority, or internal staff and other expenses associated with the FireLink Project.

Table 2.3: Funding for the FireLink Project

Description	Estimated Cost
Equipment (software and hardware)	\$2,420,000
Installation and transition into service	\$350,911
Ongoing support and maintenance	\$1,320,000
<i>Subtotal</i>	<i>\$4,090,911</i>
Contingency (10%)	\$409,091
Total	\$4,500,002

Source: FireLink Procurement Plan

2.56 Audit considers that the approval of a large pool of funding for various projects without a detailed business case may have created a perception within the Authority that justification was not required for each of the sub-projects within the New Radio Project, such as the FireLink Project, as the overall project was already approved. It also may have created a relaxed attitude within the Authority regarding the management of project costs, provided that adequate funding remained in the allocation pool.

2.57 The former Authority Commissioner commented that:

... the ACT Government Cabinet, on a recommendation from the ACT Treasury, approved \$23.668m in *capital funding* for the ESB's New Radio Project in 2003-04. The ESB's bid for *recurrent funding* to also be appropriated was removed. The impact of this decision was to stall the project completely as no software licences could be acquired, equipment hired or project management staff employed. This fundamental flaw in the appropriation decision meant that only activities that could be "capitalised" could be undertaken.

2.58 The Department of Treasury advised that:

No recurrent funding was provided initially for the project. This decision was made in the context of the Budget process, and was in a large part due to the assumption that there was capacity in the Authority's base for the ongoing costs of the old systems, and that this funding should provide a source of funding for the replacement systems.

There is an expectation with any major project that after the completion of the final scoping and then tendering of a project has occurred, the responsible agency should re-assess the project against its budget capacity and to internally manage any cost pressures. Alternatively it is open to an agency to request additional funding through a Budget process, at which point in time each agency would need to demonstrate why the funding is necessary, unavoidable and can not be accommodated within existing resources.

It should also be noted that the 2005-06 Budget provided additional ongoing capacity for operating costs.

Compliance with Procurement Guidelines

Single select procurement – the FireLink trial

2.59 The Government Procurement Board issued *Government Procurement (Principles) Guideline 2002 (No 2)* and *Government Procurement (Quotation and Tender Thresholds) Guideline 2003 (No 1)* (the Procurement Guidelines) under the *Government Procurement Act 2001*. The Procurement Guidelines apply to Territory entities, including ESA.

2.60 The Procurement Guidelines state that:

A Territory entity must invite public tenders for the procurement of goods, services or works with a total estimated value of \$100 000 or more.

2.61 However, the responsible Chief Executive may exempt the entity from the quotation and tender requirements if satisfied, on reasonable grounds, that the benefit in giving the exemption outweighs the benefit in requiring compliance.

2.62 The procurement of FireLink was undertaken using a single-select methodology. An exemption from public tendering for the trial of FireLink was approved by the then CEO of JACS in April 2004 on the recommendation of the

recently appointed Emergency Services Commissioner.⁹ The procurement of the FireLink system was later approved by the Authority Commissioner on 7 September 2004.

2.63 To support the single-select methodology, the procurement plan for the FireLink pilot stated that:

This will not only afford us the opportunity to pilot local innovation with a view to assisting local business but will give the ESB a chance to test the system in the field in order to fully develop a user requirement... Given the need to implement a system before the next fire season and the fact that only one (local) supplier can provide the capability as listed, ATI is the preferred supplier. This was determined after completing some market research where it was demonstrated ATI were able to offer ESB a product that is innovative, unique and demonstrates value for money.

2.64 In its endorsement of the procurement plan for the FireLink trial, the Approved Procurement Unit (APU) made a number of comments:

The APU is aware of the 'operational' nature of ESB and the desire to move through the procurement process quickly; however the APU notes that this procurement (and other recent ESB procurements) evidences a lack of understanding of appropriate procurement processes... In this instance ESB has tested the market and selected a product type then engaged in the procurement process... [T]he testing of the market place and product selection should take place after obtaining CEO and APU endorsement of the proposed procurement process.

2.65 The APU concluded, in its assessment and endorsement of the procurement plan for the trial of FireLink, that the project team did not demonstrate a good understanding of ACT Government procurement processes.

2.66 Contrary to the advice from the APU, ESB and the Authority only considered one supplier (ATI), before obtaining endorsement of the procurement process. Nevertheless, during discussions with current Agency staff, Audit was advised that there were numerous mobile data system solutions available in the market place during 2001-2004. During 2003, another project (NewCAD) also requiring a mobile data system was under open tender. Industry offered eight alternative solutions. This suggests that if other options were tested for the purpose of meeting the Authority's operational needs, industry may have offered a wider choice of solutions, potentially offering better value for money.

2.67 Audit acknowledges that FireLink offers a technology for a Command, Control and Communications system to cover the more remote areas of the ACT that is not comparable to a CAD system. Although alternative solutions may not have offered the full range of capabilities sought by the Authority, they should have been formally considered by the Authority during the procurement process to ensure an informed procurement decision.

⁹ The Commissioner did not have the necessary financial or administrative delegation until after 1 July 2004, when the Emergency Services Authority was formally established.

2.68 The Procurement Guidelines state that a Territory entity must:
... give consideration to maximising opportunities for local industry development, including the need to maximise the opportunity for local suppliers to compete for the provision of goods, services or works.

2.69 Audit notes that the requirement to consider local industry development does not override the principles of value for money, and of open and effective competition. In particular, the Procurement Guidelines state that:

A Territory entity must –

... avoid specifications for goods, services or works that favour a particular supplier or group of suppliers unless the requirements of the entity cannot be reasonably met without such specifications.

2.70 In the case of FireLink, it was apparent that ESB and the Authority limited their consideration to local (Canberra-based) suppliers only, of which only one supplier could meet its requirements. A number of other Australian-based suppliers of mobile data systems were known to ESB and the Authority; however, there was no documented assessment of these alternative solutions. Procurement Solutions had also raised concerns about the ‘uniqueness of the product’ and advised that the responsible Chief Executive (in this case, the CEO of JACS) would need to exempt ESB from the Government Procurement Guidelines in order for it to use a single-select procurement process for the FireLink pilot.

2.71 In addition, as the Authority had not fully developed the Statement of User Requirements prior to the trial of FireLink, it developed the specifications in accordance with the FireLink system, and consequently it would have been difficult for any other suppliers to meet those specifications without considerable development effort.

Single select procurement – acquisition of the FireLink system

2.72 ESB accelerated the procurement process when the proposed ‘four-month’ trial of FireLink was terminated after eight days following an apparently successful ‘live’ test. Two days into the proposed trial, a bushfire started in Namadgi National Park (the ‘Lone Pine’ fire). ESB used this incident as an opportunity to test FireLink. In its report on the trial, the FireLink Project team noted that during the six days of the Lone Pine fire, 89 (77%) of the 116 validation criteria were assessed as having been passed. Of the remaining criteria, 14 were agreed to by ATI and would be delivered in the next version of the product, the tests for three criteria required further investigation, and one criterion was no longer required. There is no reference in the project team’s report to the remaining nine validation criteria.

2.73 The FireLink Project team recommended the trial be declared ‘a success’ and that ‘appropriate action be taken to acquire this capability for a five year contract.’ The report also indicated that ‘[FireLink] will provide an immediate mobile data solution for the Rural Fire Service and the State Emergency Service.’ The decision, if any, to downgrade the mandatory nature of several of the validation criteria was not documented. This recommendation was considered at the Commissioner’s Advisory

Group meeting on 31 August 2004, and it was agreed to proceed with the FireLink procurement, 'with the condition that government was made aware of all issues, and to make sure the contract contains and provides for all the necessary deliverables'.

2.74 Audit noted that during the 'Lone Pine' fire, the FireLink system demonstrated that it operated well in the circumstances of that fire, including when the other communication systems used by the Authority failed.¹⁰ Nevertheless, the contract to trial the FireLink system specified that testing would occur across three operational scenarios. Audit acknowledges that the trial was conducted in a 'real' fire (not a simulated event), but considers that ESB's decision to terminate the trial after one successful test (instead of three), and on the assumption that the unmet requirements would or could be fixed later, lacked prudence and exposed the project to significant risk. Further, Audit found no documentation to indicate that the government was informed of the relevant issues as agreed at the Commissioner's Advisory Group meeting.

2.75 With the trial declared 'a success', ESB proceeded to procure the FireLink system. In the procurement plan for the implementation of the FireLink system, ESB stated that the FireLink technology 'resembles a Commercial Off The Shelf (COTS) product with a potential for restricted customisation to accommodate integration requirements'. Presumably, this meant the proposed system already existed and could be adapted in a limited way to meet the requirements of all the Authority's users. Of the 139 requirements listed in the Authority's request for Best and Final Offer, ATI reported that FireLink complied with 98 (71%), partially complied with 21 (15%) and did not comply with 20 (14%).

2.76 In its analysis of the supply market, the Authority stated:

ESA has undertaken some market research that has concluded that ATI is the only local company that could meet the ESA requirements in its entirety.

Due to the specialist nature of the capability that caters for a niche market, the suppliers within the marketplace are very limited...

A number of companies (2)... that could provide 'parts' of the functionality were identified, however no single company could supply all of the ESA's requirements. The (2) products... would require extensive development effort, hence escalation of cost, schedule and risks.

[FireLink] is proven technology, which is at the leading edge of its type. A number of interstate and overseas emergency response agencies have expressed an interest in using this technology, and are keen to leverage on ESA's experience.

2.77 Justification by ESB and the Authority for the single-select methodology was essentially four-fold:

- ATI was a local supplier that had been proven capable during a four month trial (the procurement plan states this; however, the trial lasted only 8 days);

¹⁰ The Trunk Radio Network (TRN) could not be used as there was no coverage in the area. The next means of communications was the VHS which solar and battery operated, the batteries were not functional as temperatures were below zero degrees.

- the limited timescale for planning and delivery of the required capability, prior to the commencement of the 2004-05 bush fire season;
- the capability was of a specialist nature; and
- the suppliers within the market place were very limited and known, and the invitation of public tenders would neither improve the delivery or the outcomes of adhering to the single select process.

2.78 The Authority had identified in its Procurement Plan that the capabilities listed in the Statement of User Requirements were mandatory. Audit noted that:

- not all of the mandatory requirements were met;
- the assessment trial was cut short after little more than a week; and
- criteria that were not met were not further tested.

2.79 In the case of FireLink, ESB and the Authority identified a product and then developed an accelerated procurement process around the identified product. Such a practice is contrary to the principle of open and effective competition and is unlikely to achieve a value for money outcome for the Territory. Audit also observed that the consideration of support provided to a local and innovative company was given strong focus in this project, and may have outweighed other considerations.

2.80 Further, the Government Procurement Board (GPB) endorsed the Procurement Plan on 9 September 2004 subject to the completion of a list of required actions. These key actions included:

- including a review of the contract 18 months into the timetable for managing the initial two-year contract, with a view to market testing if the outcomes are not satisfactory;
- developing a negotiation plan with specific Key Performance Indicators (KPIs);
- including additional information on the remaining 27 out of the 116 mandatory tests.
- including a discussion on the evaluation of the FireLink system; and
- including information on available suppliers or equivalent and the status of similar systems in other jurisdictions.

2.81 The Authority was requested by the GPB to complete the actions and report back to the Board. Although the project manager advised that the actions would be attended to as a matter of priority, Audit was unable to find documentation to substantiate that the Authority had undertaken the required actions, nor could Audit find evidence to confirm whether the GPB had followed-up the requirements with the Authority.

2.82 Audit acknowledges that, on efficiency and timeliness grounds, it may have been appropriate for the GPB to endorse the Procurement Plan, subject to conditions.

It was, however, a concern to Audit that there were apparently no effective actions from the GPB in this case to ensure important conditions were met by the agency.

Accelerated procurement process

2.83 Audit found that the Authority adopted an accelerated procurement process, and did not give sufficient consideration to advice provided by various sources, including the GPB and the GSO. An unnecessarily accelerated procurement process could compromise due process and expose the Authority and the Territory to significant risks.

2.84 Prior to contract negotiations, an Authority Program Manager expressed concerns in an internal e-mail about ATI's comment that 'the system does not guarantee delivery of the current vehicle location'. ATI issued a formal amendment to the proposal, mainly taking into account the Authority's concerns regarding maintenance and support and financial issues. The amendment did not take into account concerns regarding compliance against the Statement of User Requirements.

2.85 Another Authority manager noted that ATI's response to the request for quotation described a system that 'seems to have major areas of dysfunction', and that 'the system has no performance indicators [or] penalties or sanctions open to ESA in the event of poor performance ...'. The manager advised senior Authority managers that 'all the risk of this project lies with ESA and none with ATI – I would caution against proceeding against this contract in its present form'.

2.86 On 11 October 2004, the Authority instructed the GSO to draft a contract based on ATI's Best and Final Offer. The GSO noted:

It appears that a high level of customisation is required to the System in order for it to meet the requirements of the Authority. As such, the project will need to be carefully managed to ensure that it remains within the specified timeframes and budget, and such management mechanisms should be reflected in the Contract ...

ATI proposes not to execute a financial undertaking or performance guarantee ... [You] note that, in the event that ATI were to cease its business during the term of the Contract, the Authority would be exposed to considerable risk, having regard to the unique nature of the product provided by ATI. ...

Whether to require such protections from the Contractor is a commercial matter for the Authority, having regard to the risks. An alternative or additional protection that the Authority may wish to consider is retaining a percentage of the charges payable to ATI until a particular milestone is achieved.

2.87 The GSO also advised that its review of the specifications for the system had 'focussed upon matters of grammar and consistency of language only' noting that it assumed that 'the Authority has satisfied itself that the specification is acceptable to it from a technical and commercial perspective'.

2.88 On 25 October 2004, the Authority advised the GSO that the contract was to be executed on 26 October 2004. The solicitor responded, noting that:

I will not be able to indicate a timeframe for provision of my advice... until I have received your further instructions... and have had an opportunity to consider the extent of the further advice I may need to provide. In my original advice I identified a number of significant issues that need to be addressed. Having regard to the high value and risk attached to the contract, careful consideration will need to be given to these issues ...

... I will not be in a position to provide advice within the timeframes that you seek. I suggest that you consider delaying arrangements for execution of the contract until such time as the parties are satisfied that all issues between the parties have been resolved.

2.89 The Authority promptly sent the draft contract and further instructions in an email to the GSO, which addressed selected issues raised in the original advice.

2.90 On 27 October 2004, the Authority advised the GSO that the contract with ATI had been executed on 26 October 2004, without further input from the GSO.

2.91 In November 2004, following a brief review of the final version of the FireLink contract, the GSO advised that it was unacceptable to include GSO's details on the front cover unless the contract had been finalised by GSO, which it had not.

2.92 As a general comment, Audit observed that it is by no means unusual for Chief Executives or their delegates to enter contracts with external suppliers for goods and services that commit the Territory to a wide range of contractual obligations. Such contracts often expose the Territory to significant on-going financial commitments, long after the departure from the ACT Public Service of the Chief Executives.

2.93 Under current arrangements, Chief Executives, while seeking advice from the Government Solicitor's Office, have the flexibility to enter into contracts, without the ACT Government Solicitor's Office's clearance of the final contract. To protect the long term interest of the Territory, it would be appropriate for the Government to consider the merit of making it mandatory that contracts above certain financial threshold levels, and/or with high risks, be cleared and endorsed by the GSO.

Recommendation 3

Agency heads should seek advice and obtain clearance from the Government Solicitor's Office prior to executing all major contracts.

Risk Management

2.94 The Procurement Guidelines state that:

A Territory entity must, in the procurement of goods, services or works -

- (a) carry out an identification, analysis and evaluation of likely risks; and
- (b) implement sound risk management strategies.

2.95 Audit considers that the Authority's assessment of risk for the FireLink Project was inadequate. In particular, Audit considers that the Authority generally underestimated the level of risk associated with a complex ICT project such as the FireLink Project. For example, the Authority originally classified the procurement of the FireLink system as a 'moderate' risk and the risk management plan for the trial of FireLink indicated that the procurement was of 'low' risk. However, the APU endorsed the procurement plan subject to a revision of the overall risk rating of the project to 'high', as Approved Procurement Units Circular 2001/04 stipulated that all IT procurements should be treated as high risk.

2.96 Both the APU and the GPB also advised the Authority to conduct a review of outcomes during the initial two year contract period (after 18 months), prior to extending the contract for a further three years. This review, which constituted a key risk mitigation strategy, was not implemented by the Authority.

2.97 Furthermore, the project management plan for the FireLink Project, which was prepared by ATI, did not adequately address scope, quality and user acceptance risks from an the Authority's perspective. The risk register attached to the project management plan only identified four risks for the project, ranging from a level of low to moderate.

2.98 The Authority obtained a financial viability report on the supplier in mid-October 2004 (Audit notes that the contract was executed on 26 October 2004). The financial viability report contained limited information on ATI, including that the supplier was a small proprietary company that was not required to lodge financial reports with the Australian Securities and Investments Commission (ASIC), and that the report was based on unaudited financial information provided by the company. Given that the Authority was aware the Authority would be ATI's first major client for the FireLink system, and the financial significance of the proposed contract, Audit considers that, consistent with better practices, the Authority should have sought further information regarding the company's ability to fulfil their contractual obligations including information on:¹¹

- the history and development of the supplier's business;
- the supplier's legal background and capital structure;
- whether the supplier has the critical elements to perform the contract such as technology and capital equipment;
- the experience of management and employees; and
- contingent liabilities and outstanding litigation which may affect the supplier's ability to fulfil the contract.

2.99 Audit considers the information collected by the Authority insufficient to make a sound judgment on the associated risk of contracting the supplier (ATI).

¹¹ Australian National Audit Office Better Practice Guide, *Selecting Suppliers, Managing Risk*, October 1998

Recommendation 4

The Agency should ensure that its project plans adequately take into consideration the associated risks of the project to the Agency, and implement risk management strategies as appropriate.

CONTRACTUAL ARRANGEMENTS

Statement of User Requirements

2.100 The Statement of User Requirements included in the FireLink contract did not include specific and measurable performance standards against which the system could be assessed. For example, items listed in the Statement of User Requirements included:

- the network must have a very low running cost [maximum running cost not specified];
- the network must have a very low power consumption [maximum power consumption not specified]; and
- the System must be able to display the 'track' of an asset and the track must remain visible for a length of time [length of time not specified].

2.101 Audit notes there were no requirements relating to reliability or the time taken to receive vehicle locations or messages, notwithstanding that intended uses of the system included time-critical applications such as CAD.

2.102 Without specific and measurable performance standards, any assessment of the performance of the FireLink system against the Statement of User Requirements would be highly subjective. As a result, the Territory would not have strong legal grounds to pursue non-performance by the contractors, if any.

2.103 Audit also noted that end users, particularly the RFS and SES, were not fully consulted in developing the Statement of User Requirements. The Statement of User Requirements, which formed part of the contract, was developed mostly by the project team. In contrast, the Statement of User Requirements for the New CAD system (2001), which included a costed option for a mobile data system, was developed in consultation with stakeholders and included specific performance requirements such as:

- individual messages should be able to be sent and acknowledged electronically in less than ten seconds for 90% of messages while Mobile Data Terminals are within radio area coverage with no re-tries being required; and
- system availability... should exceed 99.99% at each installation site.

2.104 The lack of full involvement from the key stakeholders in the development of measurable user requirements for FireLink was likely to result in systems which did

not meet the operating needs of the Authority. Further, without clear and measurable specifications and deliverables detailed in the contract with the supplier, the Territory may not be in a position to assess any perceived non performance of the contractor, or to take corrective (or punitive) actions against the contractors.

Recommendation 5

The Agency should ensure that Statements of Requirement are developed in consultation with key stakeholders, including end users, and include specific and measurable performance standards against which the delivery of goods or services can be assessed.

Contract provisions

2.105 The proposed introduction of the FireLink technology within the Authority was essentially at a conceptual stage rather than constituting a proven finished product, resulting in the execution of a so-called ‘developmental contract’ – a point acknowledged by ATI, although the company maintained that such contracts were not uncommon when providing services to, for instance, the Department of Defence. However, the very nature of a ‘developmental contract’ left the Authority, and therefore the Territory, exposed to substantial risk if the product being ‘developed’ proved not to be viable or to meet operational needs of critical public functions such as emergency services.

2.106 Audit found that certain decisions made by the Authority during the contract negotiation stage were either not consistent with Government guidelines, or not properly justified on other grounds. For example, it is standard practice for the Territory to require suppliers to have public liability, professional indemnity, and product liability insurance to a standard value (where appropriate). However, in the case of FireLink, the Authority paid ATI’s insurance premiums for 2004-05 (totalling \$24,040); it was not clear why the Authority met these costs. When informed that the Territory would meet the cost of the supplier’s insurance, the GSO described this arrangement as ‘unusual’ and advised the Authority to check whether any verbal agreement had been reached with ATI regarding insurance. Audit notes the insurance premium for 2005-06 onwards was included in the follow-on support fees.

2.107 ATI has advised that:

The reason for the premium being funded by the ESA contract was because the GSO wanted to apply unrealistic levels of cover and could not justify it to either ESA or ATI.

The cover ... was over and above the standard insurance cover required by ATI’s frequent customers i.e. Department of Defence for both Australia and New Zealand.

2.108 Audit notes that the levels of insurance cover required in the contract - \$10m for public liability and \$5m for public indemnity - were not excessive, and indeed were less than the standard for ACT government contracts of this type.

2.109 Another example related to the inclusion of a clause that proposed that all the text of the contract, other than the name and value of the contract, would be kept confidential. Following a brief review of the final version of the FireLink contract in November 2004, the GSO advised that:

This position does not reflect the legal obligations placed on ESA under the [*Government Procurement Act 2001*]...

... [T]he parties will need to execute a deed of variation to the contract which sets out the details of the text and the grounds under which it is to be kept confidential.

2.110 At the time the contract with ATI was executed, Section 35(1) of the *Government Procurement Act 2001* listed four possible grounds for a Territory entity to agree to any part of a contract being confidential text. The clause included in the FireLink contract did not provide any justification for proposing that all the text of the contract be kept confidential, nor did it mention any of the grounds listed.

2.111 The Authority and ATI executed a deed of variation that addressed the issue of confidential text in February 2005, citing the grounds ‘that the disclosure of the text would disclose information (other than a trade secret) having a commercial value that would be, or could reasonably be expected to be, destroyed or diminished if the information were disclosed’. The information to be kept confidential was the:

- period of licence for Licensed Software;
- levels of insurance coverage; and
- individual pricing components of the total charges payable.

2.112 Although there are grounds for treating individual pricing components of the charges payable as having ‘commercial value,’ Audit considered that the non-disclosure of the licence period and insurance coverage could not be justified on the basis of protecting the commercial value of the supplier (ATI).

2.113 In October 2005, within a year of signing the two-year contract with ATI, the Authority entered a deed of variation to extend the contract for a further three years. There was no documentation to support this decision. Audit considers that a decision to extend the contract at an early stage, and without the opportunity to effectively assess the supplier’s performance or the system suitability and capacity, was imprudent. This decision to extend the contract also committed the Authority to considerable additional costs (\$0.974m).

2.114 Further, the decision to extend the contract was contrary to the advice of the APU and GPB, which had both recommended that the Authority conduct a review of outcomes after 18 months of the initial two year contract, prior to extending the contract for a further three years. No such review was conducted.

3. PROJECT IMPLEMENTATION AND MANAGEMENT

INTRODUCTION

3.1 This chapter examines the implementation and management of the FireLink Project. The implementation phase of the project covers the period from the signing of the contract up until the installation of the FireLink system in ESA vehicles, and customisation of the technology to meet the Authority's operational needs.

KEY FINDINGS

- Performance requirements for the system and the supplier were not adequately specified prior to execution of the contract, and continuous changes to the scope of the Project were not managed well.
- The FireLink technology required the Authority to adopt new business practices and processes. However, attention given to change management to facilitate implementation of the new system was insufficient to ensure the support of various operational services, particularly the Rural Fire Service.
- The lack of strong support and commitment from some key users created implementation difficulties, particularly because FireLink, as a developmental system, was expected to evolve over the course of the project as the Authority better defined users' needs and expectations.
- The FireLink system had several significant unresolved problems related to operational performance, reliability of coverage and delays in communication. These problems led users to express a lack of confidence in the system. Further, there was a lack of action to follow-up on these unresolved issues since December 2006, while the ACT Government and the Agency commissioned two consultants' reports on the Agency's ICT projects.
- An external consultant's report commissioned in December 2006 by JACS (and overseen by a committee comprising Treasury, InTACT, SES and JACS representatives) was critical of the Authority's governance and management of ICT projects, including the FireLink Project.
- A second external consultant's report, commissioned by the Agency in June 2007, recommended that the FireLink Project should cease, leading to the announcement by Commissioner Manson on 13 July 2007 to withdraw FireLink system from operations.
- At the time of the Commissioner's announcement to withdraw FireLink from operations, the FireLink Project did not achieve a number of the objectives stated in the procurement plan or meet the expected timeline.

- The Agency advised Audit that it has been implementing new governance and project management systems since December 2006, and that it was in the process of looking at alternative and more cost effective solutions to replace FireLink.

BACKGROUND

3.2 The CMD’s policy on IT project management, states:

All projects... must use a Project Management Method (PMM) that conforms to the standards set out in this policy.

... The approval of a PMM for each project is the responsibility of the project owner.

Provided they are satisfied that the PMM is fully documented... the owner may approve any PMM that he or she considers is the most appropriate for the project.

... A Project Owner may approve a PMM only if satisfied that the PMM covers all of the 9 areas of knowledge as described in *A Guide to Project Management Body of Knowledge, 2000 edition*, (the handbook) published by the Project Management Institute. [The nine areas of knowledge are outlined at Appendix B to this report.]

TIMELINE

3.3 The timeline below (Table 3.1) describes the implementation and management phases of the FireLink Project.

Table 3.1: FireLink Project – Timeline for implementation and management phases

Month	Event
October 2004	The Authority and ATI entered into a contract for ‘the provision of FireLink and MAC ² technology’. The contract provided for the supply of a range of hardware items (principally MAC ² Mobile Units and server outfits) and software development to customise the system to meet the Authority’s stated user requirements.
October 2005	The Authority extended the ATI contract for maintenance support of FireLink system for a further three years.
February 2006	Problems with FireLink were first registered on the Problems and Issues Register, notwithstanding that service users and the project team had raised issues with FireLink at earlier stages.
June 2006	The Authority Commissioner resigned. FireLink Project activities carried on as normal.
1 July 2006	The Emergency Services Agency was formed as part of JACS.
17 July 2006	The FireLink Acceptance Certificate was signed as suitable for introduction into operational service.
July 2006 to December 2006	As tasked by the Agency, ATI worked on additional customisation of the system to add further functionality.

Month	Event
September 2006	An operational trial of the FireLink system was conducted by the ACT Rural Fire Service, as an 'end-to-end' total system check, was terminated before completion due to an unknown fault. The fault was later attributed to internal infrastructure at Authority Headquarters (i.e. not to the FireLink system itself). Nevertheless, the Minister was briefed that 'there is no doubt that the failure of the trial has had some impact on the many members of staff and volunteers who were involved in the trial. ... it is better to proceed with further trials of the system and thus gain operator confidence in its use'. Audit understands that no further trial of the system was conducted.
December 2006	The new Agency Commissioner was appointed. The new Commissioner requested that no new money was to be spent on projects, including FireLink, until a review of each project had been undertaken.
March 2007	Consultant report released to the Agency Commissioner. Key recommendations related to FireLink were: <ul style="list-style-type: none"> • The Agency should abandon FireLink in favour of a progressive extension of the urban new Computer Aided Dispatch system • By June 2007 the Agency should establish the suitability of FireLink to support mobile incident management in remote locations, and establish the value and commitment to the RFS and SES to the continuing use of FireLink.
May 2007	A second consultant was engaged to advise on the continuing suitability of FireLink to the Agency's operations.
June 2007	The second consultant reported to the Agency. The main finding of this report was that 'the FireLink system was not sufficiently robust for it to be relied upon by the RFS and SES during normal operations.'
July 2007	The Commissioner announced that FireLink was withdrawn from the Agency's operations.

3.4 Phase 1 of the FireLink Project has been completed. This involved the delivery of the core system – three command consoles and 135 mobile data units in accordance with the contract. Phase 2 involves improving coverage with additional mobile data units installed in communications towers around the ACT and further customisation of the system in response to issues identified by end users. This phase was still under way at the time of audit.

3.5 Completion dates of these phases are not clear in the contract between ATI and the Authority.

DOCUMENTATION

3.6 During the fieldwork stage of the audit, limited documentation was made available to Audit to assess the project management practices employed by the Authority for the FireLink Project. Official files on the FireLink Project effectively ceased between November 2004 and November 2006, notwithstanding the significant

development of the project within these first two years. Although Audit was provided a quantity of information through electronic files and email correspondence, it was not possible to determine the status of many of these documents (e.g. whether they were draft, finalised, approved or otherwise authoritative etc), and as such this information did not necessarily constitute reliable audit evidence.

3.7 At a late stage of the audit process, further documentation, which had not been previously identified by the Agency, was made available to Audit. The additional documents subsequently provided included briefings, agenda and minutes for a number of meetings of various committees and groups, a further ten monthly status reports from ATI detailing various technical aspects of work on the project (taking the total to 29), and various policies and guidelines, some of unknown formal status. The existence of some of these documents was brought to Audit's attention by third parties.

3.8 The additional documents were thoroughly considered by Audit in preparing the final audit report. Consequently, Audit is of the view that sufficient appropriate evidence has been obtained and examined to base the audit opinions.

3.9 Under the *Territory Records Act 2002* (the Records Act), 'an agency must make and keep full and accurate records of its activities' (section 14), and maintain a records management program that will cover 'the creation, keeping, protection, preservation, storage and disposal of, and access to, records of the agency' (sections 16 and 10).

3.10 Further, under the Records Act, public officials are obligated to protect records:

Section 22 - Protecting records

- (1) An agency must ensure the safekeeping and proper preservation of its records.
- (2) An agency must ensure that its records that are in someone else's possession are held under arrangements that provide for the safekeeping, proper preservation and return of the records.
- (3) If an agency does not have control of a record that it is entitled to control and the record is not held under arrangements mentioned in subsection (2), the agency must take reasonable steps to recover control of the record.
- (4) Subsection (3) does not apply if the record is under the control of someone else who has a right to control it.

Section 23 - Protection measures

- (1) An agency must not—
 - (a) abandon or dispose of a record; or
 - (b) transfer or offer to transfer, or be a party to arrangements for the transfer of, the possession or ownership of a record; or
 - (c) damage a record; or
 - (d) neglect a record in a way that causes, or is likely to cause, damage to the record.

3.11 Poor records management can expose organisations to unnecessary risks. The poor management within the Authority of many official records for a period of some two years indicates that the Authority failed to meet its obligations under the Territory Records Act. The loss or unavailability of complete, accurate, reliable, and authentic records of the business activity of an agency has an impact on the decision-making and operations of the agency. It also impairs public accountability for the processes and decisions of government.

Recommendation 6

The Agency should ensure that it complies with the *Territory Records Act 2002* and maintains adequate supporting documentation for its ICT and other projects, including a documented and approved project management method for each project.

USER ACCEPTANCE

3.12 Minutes of the Authority's Communications Management Group (CMG), indicated that in early 2006 there were difficulties in successfully integrating FireLink with the Computer Aided Dispatch (CAD) system used by the Authority. The issue was significant enough for the CMG to direct that FireLink 'be removed from production CAD', and this was consequently affecting the degree to which end-users were satisfied with the FireLink the system. Nevertheless, in March 2006, the project manager advised the CMG that FireLink was scheduled for 'introduction into production' on 30 June 2006. The CMG meeting on 12 July 2006 was advised by the then project manager and project director that testing had been completed and passed, and an implementation plan had been prepared, although business rules and procedures between the Services were still to be discussed. A Certificate of Acceptance was 'ready for signatures'.

3.13 A Certificate of Acceptance was signed by representatives of the RFS, SES and the Agency on 17 July 2006. This Certificate indicated that FireLink 'has been accepted ... as suitable for introduction into operational service'. The acceptance by the RFS and SES was conditional, with the Services representatives:

... [acknowledging] that additional fixed-points would be introduced by 30 Aug 06, in order to provide the coverage required to support ... operational readiness ... Mobile and transportable repeaters will further supplement these fixed points as required.

3.14 CMG Minutes note in August 2006 that 'FireLink is now classified as a Production System' indicating that it was operational within the Authority. Further acceptance testing was planned for September 2006. In early September, the CMG was advised that technical issues had arisen during the testing ('4 outages during the test period') and there were concerns the system 'was not operational'. The CMG agreed that 'a full load test will need to be rearranged before RFS and [Fire Brigade] accept system fully'. Concerns continued to be expressed at the CMG up until December 2006 that problems in integrating FireLink and CAD meant that FireLink was not fully operational.

3.15 Audit noted that the ACT Rural Fire Service conducted an operational trial the FireLink system in September 2006, but the trial was halted when the system failed. The failure was identified as a breakdown in ESA infrastructure, which was to be repaired and further tested later that month. Although the breakdown was not due to ‘contracted deliverables of the FireLink system’ further trials of the system were recommended to gain operator confidence. ATI advised Audit that ATI supported the recommendations to repeat the trial to demonstrate the system to the RFS, but Audit understands the FireLink system was not further trialled.

3.16 Documentation made available to Audit included a second Certificate of Acceptance that was prepared in late October 2006, for signature by the Heads of the relevant Services and the (then Acting) Commissioner. This draft Certificate was intended to acknowledge that FireLink was ‘accepted into full operational service’. The Certificate, however, remained unsigned. Audit was advised that this reflected the fact that users did not have confidence that the system had met their operational requirements.

FireLink Problem and Issues Register

3.17 A policy document issued by the Authority in July 2004 entitled *Project Problem and Issue Management Policy* notes:

Problems and issues will arise throughout the life of any project, and the problem and issue management processes ensure firstly that all of these are identified and recorded, and secondly that the resolution of each one is monitored and controlled until such time as the problem or issue is rectified, or agreement is reached that no action is necessary.

3.18 The policy provides a process for ‘the management of problems and issues that development during the design, build, and test and acceptance phases of a capital equipment project’. It further notes that:

Efficient and effective Problem and Issue Management is fundamental to the success of any project. Problems and issues can cause fatal damage to a project by impacting on any or all of the quality of the deliverables, the delivery schedule, and the project price. Problems and issues cannot be allowed to be left unresolved. It is important to quickly understand, record, categorise and address problems and issues as they arise, to contain potential damage, determine a solution and if necessary to quickly initiate recovery action.

3.19 A Problem or Issue Register for the FireLink Project does not appear to have existed before February 2006, when the Communications Management Group took on the role as the ‘working group’ for the FireLink Project. This was more than a year after the FireLink contract had been awarded to ATI.

3.20 The first issue listed on the Issue Register for the FireLink Project was categorised as ‘major’ and was listed as:

Ongoing reports of FireLink system’s shortcomings in operational performance, reliability, and coverage.

3.21 The proposed solution for the issue was for the project manager to conduct a review and provide a report to the steering committee.

3.22 As detailed in the Problem and Issue Registers for the FireLink Project, there are many significant unresolved problems regarding the performance of the FireLink system. These problems have led to some users having a lack of confidence in the system.

3.23 As of February 2007, there were 51 problems listed on the Problem Register for FireLink, including 26 resolved and 25 unresolved problems. Twelve unresolved problems were categorised as ‘major’. Table 3.2 below describes some of the ‘major’ unresolved problems associated with the FireLink Project.

Table 3.2: ‘Major’ unresolved problems associated with the FireLink Project (as at February 2007)

Description of Problem	Date Raised	Proposed Solution
Objectives of Rural Fire Service Trial of September 2006 not achieved (due to technical failure of system).	02/09/06	Conduct new trial.
Improve coverage of FireLink in Kowen Forest.	11/10/06	Install mobile data unit as a fixed repeater at Kowen Tower.
Acceptance into Operational Service requires sign-off by Chief Officers, Commissioner’s Advisory Group members and the Commissioner. Signatories not inclined to sign-off.	31/10/06	Satisfy outstanding problems and issues.
Concerns raised by SES regarding performance of FireLink.	17/11/06	Conduct review of FireLink performance. The particular issue is the time taken by the system to poll and effect status changes in excess of 60 seconds.
Inconsistency of times to poll vehicles logged onto network, and consequent query whether FireLink can be used in a reliable manner as a dispatch tool.	28/11/06	Explore options to improve consistency and performance.
Changes implemented under Service Pack 4 do not address issues for more timely polling and status changes	28/11/06	Explore options to improve time taken for polling and update of vehicle status
FireLink system stops working for reasons unknown.	29/11/06	Investigate cause and rectify.
FireLink system not displaying nearest and most appropriate RFS resource for assignment by Dispatcher.	29/11/06	Investigate cause and rectify.
FireLink system becomes slow and unreliable whenever system is under operational load.	21/01/07	Investigate cause and rectify.

FireLink system appears to fail whenever numerous RFS units are converging at the same area (e.g. location of fire).	21/01/07	Investigate cause and rectify.
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Source: Emergency Services Agency

3.24 Since early 2005, ATI has provided monthly reports to the Authority on the status of the FireLink Project. These reports advised on such matters as meetings held with Authority personnel, finance issues, contract status and outstanding activities. The reports were received by the Authority's project manager. The ATI reports examined by Audit do not indicate what action was taken by ESA following their receipt, and there is no reference to the reports in the minutes of the various Authority project governance committees and groups.

3.25 Audit noted that the ATI reports since December 2005 repeatedly list the same outstanding issues, indicating that little action had been taken by the Authority to resolve the matters.

3.26 ATI advised Audit that the Agency had been unwilling to allow necessary upgrades of the FireLink system to enhance the system's performance, and this lack of action had caused the FireLink system to deteriorate.

3.27 The Commissioner advised Audit that there had not been any direction not to install upgrades, only that from December 2006 there should be no new expenditure on the FireLink system while a comprehensive review of the Agency's ICT needs was carried out. The Agency has advised:

A review of the ESA's treatment of [the ATI's] reports, in particular over the last 12 months, is that of the ten configuration change proposal requests from ATI, six were accepted and implemented immediately, two were partially implemented and two were rejected.

Of the two rejected requests, one received in April 2007 was rejected due to the request not being consistent with the contractual requirements for data recording ... as it was incompatible with ... data systems used by ESA for other matters. The other, on 22 May 2007, was rejected on the basis that ATI remained uncertain as to the true cause of the faults requiring the configuration change proposals and in agreement with ESA, ATI were to conduct further monitoring to enable an informed decision to be made on the need for a change. Neither of the rejected configuration change proposal upgrades, or the two partially implemented, have any material effect on the overall performance or suitability issues that saw the Commissioner withdraw FireLink from service.

3.28 Audit noted that at the earliest stage of the FireLink Project, both the Authority and ATI recognised that the FireLink technology required the Authority to adopt new business practices and processes. Hence, there was a strong need to communicate well with the relevant Services (i.e. the end-users) to facilitate and manage the changes.

3.29 At a CAG meeting on 7 December 2004, a presentation was made to the Group by a consultant engaged to examine communication and consultation concerning the Authority’s IM&C³ Group. This presentation outlined important issues including identified barriers in communications within the Services, that stakeholders detected the ‘disinterest’ in the IM&C³ group in consultation, the rush to deliver, and that consultation has taken a back seat. Various recommendations were made and agreed at this meeting to improve the consultation process with assistance of a ‘Change Manager’. However, it appeared that these recommendations were not properly implemented, and that the communication and consultations problems continued throughout the project.

PROJECT OUTCOMES

Cost

3.30 Table 3.3 below shows the costs related to the contract with ATI. It does not include related costs to the Authority such as the cost of the contracted project manager and the project team.

Table 3.3: Project Costs (to ATI only) from October 2006 – June 2009

Description	Amount invoiced/estimated (\$)
Contract signature (commitment to equipment cost, warranty, labour and insurance)	707 097
Delivery of three command consoles and software	271 759
Delivery of 135 mobile data units	1 389 059
Labour – Year One	576 056
Labour – Year Two	256 025
Total for original contract	3 199 996
Additional command console and software licences	104 266
Follow-on support (monthly to 2009)	869 972
Total after variation to contract	4 174 234
NOTE: These costs reflect direct payments to ATI and do not include any costs that have not been invoiced.	

Source: Provision of FireLink and MAC² Technology and Variation to Provision of FireLink and MAC² Technology.

3.31 The budget for the FireLink Project submitted by the Authority with the procurement plan was \$4.5 million, including 10% contingency funding. As detailed in Table 3.3 above, the original contract was for a total amount of \$3 199 997. However, a subsequent variation to the contract in November 2005 amended the duration of the contract to 30 June 2009, and increased the contract price by \$974 238 (or 30.44%) to \$4 174 235.

3.32 Following the decision to withdraw FireLink from the Agency's operations, ATI advised Audit that it 'will be pursuing [follow-on support] funding as well as legal costs'.

Time

3.33 The contracted deliverables (i.e. hardware and software) have generally been delivered within the timeframes specified in the contract and the project plan. However, the FireLink Project as a whole was running behind schedule.

3.34 As stated in the procurement plan for FireLink, the Authority sought 'delivery of the required capability... prior to the commencement of the 2004-05 bushfire season'. Although the Authority accelerated the procurement process in an effort to meet this timetable, at the time of this Audit the performance of the system has not met the requirements of the end users, including the intended operational timeframe.

3.35 ATI advised that:

ATI, and the FireLink system, does not have any key milestones imposed upon it since delivering both hardware and software at contract signature. Deliverables since then have been based on user requirements and modifications to support the integration to CAD and other tasking requirements imposed by ESA.

Quality and Scope

3.36 The Authority did not have a documented process to evaluate and accept key milestone achievements against the contract or to assess the quality of the services provided by ATI, that is, to ensure the project would satisfy the needs for which it was undertaken. Appendix 2 to the FireLink contract (Acceptance Testing) stated that ATI would conduct the commissioning tests for the FireLink system. Audit considers it would be more appropriate for the Authority to have taken responsibility for this function.

3.37 Furthermore, the post-implementation review recommended by the APU and GPB was not conducted by the Authority. If such a review had been conducted by the Authority it may have identified any quality or system performance issues and provided an opportunity to address those issues prior to deciding to vary the FireLink contract to extend the duration for a further three years.

3.38 As noted previously, the Agency has assessed the performance of the system as not meeting user requirements, and additional functionality and product customisation has been sought (through tasking orders) by the Authority at an additional cost.

3.39 ATI advised that:

... if there is an issue with FireLink not meeting end user requirements then ESA had the responsibility of directing ATI, through the contract, to meet those requirements.

... to customise the system at a cost to the ESA was the nature of the contract. The ESA contracted ATI under a developmental style arrangement where customisation would be achieved by specific tasks identified, costed and approved prior to any effort being applied.

3.40 The Authority had introduced a Project Problem and Issue Management Policy, effective from 27 March 2004, to identify and record issues and problems. The first item documented in the Problem and Issue Register for the FireLink Project was raised in February 2006, more than a year after the first batch of mobile data units had been delivered by ATI. The first documented problem concerned inconsistent coverage around the Bushfire Abatement Zone (BAZ).¹² Although this could suggest that no issues had arisen until February 2006, information available to Audit from other sources indicated that significant problems were known much earlier than 2006. The apparent failure to apply the Authority's Project Problem and Issue Management Policy for much of the FireLink Project further complicates the assessment of the management of the project, and indeed, of the contract to deliver the FireLink system.

REVIEW OF ICT PROJECTS

3.41 Audit was advised that the Agency's most recent decisions on the future of FireLink Project were based on the findings of the two external consultancy reports commissioned by JACS and the Agency, referred to below. Audit did not form any opinion on the reliability or independence of these consultancy reports, nor on the technical capacity of FireLink which is referenced in the reports.

3.42 In November 2006, a scoping study was commissioned by the ACT Government to review ESA's ICT projects, including the FireLink Project. The review stated that it involved numerous interviews with a cross-section of Agency staff, including senior executives of each of the emergency services, and less senior staff within the Agency. A final report from the consultant engaged to undertake the review, *Scoping Study to Review ESA's Communications and Information Requirements and Current ICT Projects* (the review report) was received by JACS in February 2007.

3.43 The review report made a number of observations and recommendations across all of the Agency's ICT projects, including the FireLink Project. The general observations included:

¹² The purpose of the Bushfire Abatement Zone (BAZ) is to reduce the impact of bushfires on the built up areas within the ACT. In addition to the primary BAZ around the built up area of Canberra, the BAZ includes three outlying areas (Uriarra Village, Pierces Creek Village and the Tidbinbilla Tracking Station). To see a map of the BAZ use the URL below.

http://www.esa.act.gov.au/Fire_Safety/SBMP/Version-1/Early_Final_-_7jan05/Map_1/map1.pdf

http://www.esa.act.gov.au/Fire_Safety/SBMP/Version-1/legislation.html#BAZ

accessed on 10 July 2007

- a lack of justification for the spending of funds on projects through the development of sound business cases including cost-benefit analyses;
- procurement processes that indicate that there has been a particular product or a specific technical solution in mind;
- a lack of consultation with each of the four response services on decisions regarding ICT;
- a lack of an identified business owner or sponsor for ‘business projects’ (those projects that have the capacity to make significant changes to operational or administrative processes); and
- a lack of certainty regarding project costs.

3.44 The review report suggests that a number of the issues above may have been due to the fact that:

At various times..., ESA management has emphasised the importance, above all, of quick results... at the expense of quality and... at a higher cost.

3.45 The review report also included a number of specific observations regarding the FireLink Project:

The FireLink System is the most problematical of all of ESA’s ICT projects... [It] is neither a proven system nor is relied upon by RFS and SES personnel. There are so many problems with the FireLink system occurring on a regular basis (e.g. a vehicle not being polled for hours despite being in areas of good FireLink radio coverage) that staff no longer make the effort to report these problems.

The attempts to rush [FireLink] into ‘production’ despite obvious shortcomings have given the system a very poor reputation within ESA... All the [mobile data units] have been purchased and installed in advance of the FireLink system being proven in a range of operational situations. Although the original pilot did test the requirements of FireLink at the time, only 76% of tests were passed. This coupled with the expanding scope of requirements led to a poorly implemented product.

Each of the services expressed their strong reservations about the FireLink system. Of all the ESA ICT projects FireLink was the one that services personnel highlighted as being of major concern. The Consultant directly observed repeated situations where the FireLink reported locations of vehicles were not minutes but up to 15 hours out of date – despite the vehicles being in good radio reception areas...

3.46 ATI advised that:

... ATI acknowledges that there were problems in polling, progressively rectified.

The developmental nature and the priority of implementation of developments in essentially a non-structured manner sometimes meant that what was initially implemented may subsequently require modification based on future separate implementation, which only field use could determine. Due to the numbers, roll out of this ‘retrofit’ would thus be based on platform availability. Of necessity there may have been platforms with problems for a period of time until asset availability was provided.

There is also the subject of system inoperability due to incorrect usage. Despite undertaking training courses some volunteers did not take kindly to the use of this

technology ... Other delays were due to hardware failures of CAD, through which FireLink was integrated.

3.47 A second report commissioned by the Agency and provided to the Commissioner in June 2007, reviewed the functional and technical aspects of the FireLink system, in order to determine the system's suitability for the Agency. The report concluded that:

- FireLink would not appear to be a suitable alternative system compared to other systems now available in the market place; and
- the FireLink system is not sufficiently robust for it to be relied upon by the RFS and SES during normal operations.

3.48 ATI has advised that it disagrees with the consultant's conclusions.

THE VIABILITY OF FIRELINK

3.49 Audit notes that the Agency's solution to some of the coverage problems experienced with the FireLink system has been to install additional mobile data units as fixed repeaters in communications towers to improve coverage. This appears to contradict a 'unique' attribute of the system and conflict with the Statement of User Requirements included in the FireLink contract, which states that:

The users of the network must not be dependent upon a fixed area of operations (restricted to positions of repeater stations etc)...

The network must not require fixed infrastructure (for example, radio towers, land lines).

3.50 In addition, it appears that a number of the objectives stated in the procurement plan for FireLink have not been achieved. For example, the FireLink system was to provide a 'real-time' common operating picture for the Authority. However, as the vehicle locations reported by the FireLink system have been reported to be minutes or longer out of date, it cannot be considered to have been providing 'real-time' data in a reliable manner.

3.51 The FireLink system was also intended to provide a 'highly scaleable means of communication'. However, as the system relies on transmissions to be relayed from unit to unit within line of sight (with vehicles in and out of contact of each other), delays are exacerbated with increasing numbers of vehicles and with the need for retransmission. This is highlighted by an example provided in the review report:

[In] a bushfire emergency, when many capable ESA vehicles would be deployed, FireLink's performance would be at its worst, with poll cycles taking 5 minutes (for 30 vehicles) or longer.

3.52 Although Audit did not cover the technical aspect of FireLink, Audit noted that the views expressed by the Agency's staff and by the consultants commissioned by the Agency in the review reports were that the underlying communications

technology used by the FireLink system was unable to provide the frequency of updates required to support an effective computer aided dispatch system in the field.

3.53 In response to an Audit query about whether the upgrades proposed by ATI would resolve the identified issues, the current Commissioner expressed doubts that any upgrades would solve the basic problems of the system not meeting the operational needs of the emergency services business. The Commissioner said that although there had been some acceptance of the FireLink system by the SES, the communication delays were too lengthy for use by the RFS.

FIRELINK WITHDRAWN FROM OPERATIONS

3.54 Since this audit, and prior to the finalisation of this Report, the Agency Commissioner made the decision to withdraw the FireLink system from operations at the Agency. Commissioner Manson stated that:

... fresh reviews of ICT programs within ESA have made a number of recommendations regarding procurement, governance, operability and priority setting against budgets ... the evaluations on the FireLink Project indicated that the program is unsuitable for the ESA's ongoing operations.

3.55 At the time of the Commissioner's announcement, the FireLink Project had cost approximately \$4.5m with trailing contracts and associated costs estimated at \$0.5m. The decision also involved an asset write off of approximately \$1.68m.

APPENDIX A – AUDIT CRITERIA, APPROACH AND METHODOLOGY

AUDIT CRITERIA

Key issues to be determined included:

Project initiation

- A clear link exists between business strategies, IT strategies and the project objectives, including clear and complete Requirements Specifications for new systems;
- A sound business case supports the project, which should include a cost-benefit analysis, and should estimate and reflect uncertainty and risk;

Project planning

- A Project Management / Execution Plan or similar exists to identify:
 - the phases of a project and the links between phases and deliverables;
 - the party controlling each phase and controlling each area of risk (if not the same party);
 - the accuracy of project time and cost estimates throughout the project, and the certainty of business benefits being delivered;
 - the impact of scope changes during the project life cycle on project success; and
 - the different types of risks associated with the project.

Project implementation and management

- The effectiveness and efficiency of project management activities is assessed against the approved Project Management / Execution Plan.
- The effectiveness and efficiency of the overall project management process is assessed, including:
 - governance and accountability arrangements;
 - stakeholder management;
 - risk management;
 - procurement and contract management;
 - change management;
 - communication management;
 - issues management;
 - resource management;
 - quality management;

- management review and progress evaluation; and
- record management.

AUDIT APPROACH AND METHODOLOGY

The audit approach and methodology consisted of:

- reviewing documents publicly available;
- interviewing senior management in JACS and ESA;
- obtaining stakeholder views;
- interviewing project team staff;
- reviewing project documentation from the beginning of the project until contract signature;
- reviewing project implementation and variations;
- reviewing project governance and reporting;
- determining whether all relevant policies and guidelines had been complied with; and
- identifying the FireLink Project's performance in terms of achieving a quality result to budget and schedule and if possible the reasons for the outcomes.

Audit also held discussions with the former Commissioner and the supplier of FireLink, ATI.

APPENDIX B – KEY ASPECTS OF PROJECT MANAGEMENT

The Project Management Institute has developed and issued the *Project Management Body of Knowledge* (PMBOK), which describes knowledge of proven practices widely applied in the profession of project management. The PMBOK identifies knowledge and practices generally recognised as ‘good practice’ and acknowledge that the correct application of these skills, tools and techniques can enhance the chances of success over a wide range of different projects.¹³

The Territory’s Project Management Policy adopts the PMBOK as the basic standard by which project management methods are recognised.

The PMBOK describes nine key aspects of project management practice:

- Project Integration Management;
 - Project Integration Management includes the processes required to ensure that the various elements of the project are properly coordinated, focusing primary on the project plan development, project plan execution and integrated change control.
- Project Scope Management;
 - Scope management includes the processes required to ensure that the project includes all the work required, and only the work required to complete the project successfully. It is primarily concerned with defining and controlling what is or is not included in the project.
- Project Time Management;
 - Project Time Management includes the processes required to ensure timely completion of the project. Processes are broken down into: activity definition; activity sequencing; duration estimating; schedule development; and schedule control.
- Project Cost Management;
 - Project Cost Management includes the processes required to ensure the project is completed within the approved budget. The major processes include: resource planning; cost estimating; cost budgeting; and cost control.
- Project Quality Management;
 - Project Quality Management includes the processes required to ensure the project will satisfy the needs for which it was undertaken. It includes all activities of the overall management function that determine the quality policy objectives, and responsibilities and

¹³ Project Management Institute, USA *A guide to the Project Management Body of Knowledge* (PMBOK Guide) 2000 edition.

implements them by means such as quality planning, assurance and control.

- Project Human Resource Management;
 - Project Human Resource Management includes the processes required to make the most effective use of people involved in the project. Including: stakeholders; sponsors; customers; partners; and individual contributors.
- Project Communications Management;
 - Project Communications Management includes the processes required to ensure timely and appropriate generation, collection, dissemination and ultimate disposition of information.
- Project Risk Management; and
 - Risk management includes the processes involved in identifying, analysing and responding to project risks.
- Project Procurement Management.
 - Project Procurement Planning includes the processes required to acquire goods and services, to attain project scope from outside the organisation. The process is broken down into the following: procurement planning; solicitation planning; solicitation; source selection; contract administration; and contract closeout.

APPENDIX C – RESPONSE FROM THE COMMISSIONER OF THE FORMER EMERGENCY SERVICES AUTHORITY

The Proposed Performance Audit Report forwarded to me by the Auditor General under cover of a letter dated 10 August 2007 is both disappointing and superficial in its examination of the development of the FireLink Project. Even though I resigned from the appointment of Commissioner of the former Authority some 14 months ago, it appears that only partial information on the project has been considered.

At a meeting on 24 July 2007 to discuss the draft findings of the audit with the Auditor General and staff involved in this audit, it was immediately obvious that the audit team was unaware of a large volume of both electronic and hardcopy documentation that related to this project, which was submitted in FY2004/05 to some members of the opposition in response to requests under the FOI Act, and the governance arrangements that applied to all projects in the former Emergency Services Authority. Further, the audit team appeared to be somewhat surprised at the implications of some of the information (or lack thereof) with which they were dealing.

As a result of this meeting I requested a pause in the audit so as to allow time for the appropriate records to be provided by the new ESA and to be examined by the audit team. This was not agreed to by the Auditor General. Only 12 working days have elapsed since that meeting. It would appear from the Audit Report that only a cursory examination has occurred of the additional material in that short time.

My email to the Auditor General is included as a part of this response to the Proposed Audit Report.

There is no debate that the FireLink system works and that it is a sophisticated system. This point has been made repeatedly by the Minister for Emergency Services, the new Commissioner of the ESA and me in public statements. Such a system does not come into being without reasonable processes being in place.

One of the important issues omitted from examination in the report is that the ACT Government Cabinet, on a recommendation from the ACT Treasury, approved \$23.668m in *capital funding* for the ESB's New Radio Project in FY2003/04. The ESB's bid for *recurrent funding* to also be appropriated was removed. The impact of this decision was to stall the project completely as no software licences could be acquired, equipment hired or project management staff employed. This fundamental flaw in the appropriation decision meant that only activities that could be "capitalised" could be undertaken.

All of the staff in the Authority, contractors and ATI personnel involved in this project did an outstanding job and delivered a system under pressure and extreme difficulty. The system met the objectives that accompanied the Cabinet decision approving the capital funding for the overall new communications project – in particular the 'provision of mobile data and automatic vehicle location equipment for front line bushfire and emergency service response vehicles'. These Objectives are not included in the Audit Report and should be.

The Audit Report's reference to the lack of a business case for the system fails to acknowledge the detail of the McLeod Report into the operational response to the January 2003 bushfires. Communications totally collapsed in the ESB HQ at Curtin on 18 January 2003. The need for replacement systems was well overdue and the catastrophe of that day and the subsequent analysis of the communications failures and the failure of coordination between the ACT Bushfire Service (now ACT RFS), the ACTFB and the ACT SES provided that business case.

The Audit Report claims that it is not required or indeed, able to pass comment on the technical issues surrounding FireLink yet it does so (see p.47). This Audit Report (and apparently the report by the [second consultants commissioned by the Agency]) considers FireLink to be a system very similar in nature (if not identical) to a Computer Aided Despatch system. FireLink is not a CAD system and was never intended to be one.

FireLink is a Command and Control system that provides a capability to ‘see’ assets, anticipate operational needs and coordinate multi-service operations, particularly in rural and interface areas, FireLink uses two-way messaging, file transfer plus video and photography to ‘collect’ information in order to establish a comprehensive Common Operating Picture (COP) of an emergency situation such as a bushfire. This information is then displayed on a series of screens in the Emergency Coordination Centre (ECC) for strategic planning, coordination and support purposes.

A key feature of FireLink is its ability to allow for decentralised forward control of incidents that enables tactical planning, direction and support to be undertaken by Incident Controllers. This is essential in major disasters. The centralisation of control forced on the ESB because of resource constraints was one of the most important contributing factors in the collapse of the control system on 18 January 2003.

The use of a CAD system forces centralised control using non-deployable infrastructure. This is unacceptable operationally in attacking large landscape fires. The ACTRFS would be very unlikely to ever accept this situation again.

The Audit Report’s reference to other CAD systems that were available for consideration as alternative systems to FireLink raises questions as to the credibility of the Report. Apparently the Audit Team has, on the basis of incorrect information, believed that FireLink and CAD are similar systems. They are not.

It should be noted that the FireLink system was specifically designed for use by emergency services – only one element was introduced from a military source. The FireLink system has now been modified to meet military needs (the Audit Report states the reverse) and has been acquired using “single select processes” by every purchaser to date. FireLink is a unique and outstanding system.

The Audit Report highlights two exercises designed to test FireLink that failed to achieve their stated objectives (as a result of failures in the ESA’s ICT systems that were not related to FireLink). For balance, the report should also include reference to the successful operational use of FireLink by the AFP during the visits to Canberra of the President of the United States and the President of China, during the December 2006 Canberra hailstorm (when the CAD system failed) and during last summer’s Tumut fires. These successful employments of FireLink should be added to the successful trial and then operational use of FireLink in the “Lone Pine” fire in May 2004 that is referenced in the Audit Report. It should be noted that a development version of FireLink was successfully used by the ESB for urgent support during the 2003 bushfires.

References in the Audit Report to missing files and poor file management do not correspond to the document management system that was brought into place during my tenure as Commissioner. The ICT Project Team assumed responsibility for records management in the Authority and liaised very closely with the ACT Government records management team which was implementing the IDMS [Integrated Document Management System] Project. An officer was attached to the Authority to ensure that records management moved quickly to electronic records and compliance with ACT Government policy. When the IDMS project was abruptly cancelled (after the expenditure of a reported \$9m) the Authority continued electronic records management. My advice is that the documents are still available.

There are many other matters that are treated in an incomplete manner in the Audit Report such as the reference to the installation of FireLink equipment on Mt Tennant without considering the reasons for this action. This installation was not undertaken because infrastructure was needed to operate FireLink. I do not intend to cover each matter in detail but would make the comment that there are many inaccuracies and unsubstantiated assertions in the Audit Report.

[Paragraph omitted]

The possibility of bias in the provision of information to the audit team was raised by me with the Auditor General (see attached email). The Auditor General assured me that the audit systems are robust enough to manage such situations. I remain to be convinced and I think that the ACT community requires strong reassurance that no biased or filtered information has been passed to the audit team in the conduct of this Audit work.

Having criticised the Audit Report I will conclude by saying that the introduction of FireLink was not a perfect process. Clearly there were improvements that could have been made. None of the project management issues that were, with hindsight, capable of improvement however, would lead to the decision to scrap \$4.5m worth of equipment and effort because FireLink is too sophisticated for the ACT.

Peter Dunn, AO

19 August 2007

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