

Auditing for the Australian Capital Territory

The Auditor-General is head of the Auditor-General's Office. He and his Office act independently of the Government. The Office assists the Auditor-General to carry out his duties, which are set out in the Auditor-General Act 1996, by undertaking audits of management performance and the financial statements of public sector bodies. The aim is to improve public sector management and accountability by firstly, ensuring the Legislative Assembly and the electorate are provided with accurate and useful information about the management of public sector resources and secondly, by providing independent advice and recommendations for improving the management of public resources.

PA98/07

10 May 1999

The Speaker,
ACT Legislative Assembly
South Building
London Circuit
CANBERRA ACT 2601

Dear Mr Speaker

In accordance with *Section 17* of the *Auditor-General Act 1996*, I transmit to the Speaker my Report titled '*The Management of Year 2000 Risks*' for presentation to the Legislative Assembly by the Speaker.

This Audit was managed by Jo Benton from 4 January 1999 and by Peter Hade prior to this date.

The Audit was undertaken with the assistance of the following staff and accounting firms.

Auditor-General's Office

Vikram Singh Behla, Nancy Choy, Megan Giles, Sonali Liyanage, Fiona Nairn, Rod Nicholas, Chinarie Perera, Chris Peterson, Mark Scanes and Ajay Singh.

Accounting Firms

Acumen Alliance; *Bird Cameron Partners* (David Wall, Sally Hall and Emma McCarthy); *Deloitte Touche Tohmatsu* (Peter McPhillips, Trevor Brown, Irene Austin, Kurt Munro, Stewart Ball, Carolyn Gowers, Michelle Evans and Justin Dundas-Smith); *Duesburys* (Adrian Bray, Rod Scott and Andrei Ohlmus); *KPMG* (Nick Baker, Stewart de Carle and Sian Ramsden); *PriceWaterhouseCoopers*; and *Walter and Turnbull* (Don Walter, Bruce Papps, Roger Kauffman and Ian Smith).

Yours sincerely,

John A Parkinson

TABLE OF CONTENTS

CHAPTER	PAGE
1 Audit Opinion.....	1
2 YEAR 2000 Risks and Solutions.....	19
3 Management of the Year 2000 Risk.....	26
4 ACT Community Care	44
5 ACTEW Corporation Ltd.....	47
6 ACT Forests.....	62
7 ACT Housing.....	65
8 ACTION.....	69
9 ACTTAB Ltd.....	72
10 Australian International Hotel School.....	78
11 Calvary Public Hospital	82
12 Canberra Cemeteries Trust	89
13 Canberra Cultural Facilities Corporation	91
14 Canberra Institute of Technology	95
15 Canberra Tourism and Events Corporation.....	100
16 CanDeliver Limited	103
17 Casino Surveillance Authority.....	106
18 Chief Minister's Department.....	109
19 Construction Industry Long Service Leave Board.....	115
20 Corrective Services	118

THE MANAGEMENT OF YEAR 2000 RISKS

21	Department of Education and Community Services.....	122
22	Department of Health and Community Care	128
23	Department of Justice and Community Safety	133
24	Department of Urban Services	140
25	Emergency Services Bureau	147
26	Exhibition Park in Canberra	154
27	Gungahlin Development Authority	157
28	InTACT.....	159
29	Legal Aid Office	166
30	Legislative Assembly Secretariat.....	170
31	Milk Authority of the ACT	173
32	Registrar General's Office	175
33	The Canberra Hospital.....	179
34	Totalcare Industries Limited	186
35	University of Canberra.....	193
36	Glossary.....	198

1 AUDIT OPINION

1.1 INTRODUCTION

This report presents a summary of the results of a performance audit of the management of the Year 2000 risk by ACT public sector agencies.

The audit addresses management responses to the risk that the 'millennium bug' will adversely affect computer hardware, software applications, operating systems and or computerised applications that are embedded in any operational system. The report focused on the risk of failure of critical computerised systems within each agency.

Chief Executives of public sector agencies were advised of the Auditor-General's intention to undertake the audit in April 1998 and contractors and Audit Office staff undertook fieldwork at agencies during the latter half of 1998. In many cases these contacts provided an impetus for agencies to accelerate, and in some cases commence, their Year 2000 preparations. In order to ensure that this audit would result in a useful and contemporaneous report to members of the Legislative Assembly and other readers, it was necessary for contractors and Audit Office staff to undertake follow up fieldwork during the first four months of this year.

Even so, readers of this report should note that this audit is an audit of work in progress. As such, preparations are continuing in all agencies, and will do so for most of the remainder of this year.

1.2 OBJECTIVE OF THE AUDIT

The objective of the audit is to provide an independent opinion to the Legislative Assembly on the overall effectiveness of actions taken by ACT public sector agencies to manage their Year 2000 risks.

The independent audit opinions formed from the audit are set out in *page 3*.

1.3 AUDIT APPROACH

The audit reviewed actions by agencies' management to the risks that the Year 2000 problem will adversely affect computer hardware, software applications, operating systems and or computerised applications that are embedded in operational systems.

The audit did not re-test the testing of date dependent systems undertaken by or on behalf of agencies. Rather the audit assessed whether appropriate processes were in place in agencies to provide for such testing.

The audit focused on the risk of failure of critical computerised systems. In this context critical computerised systems are defined as those systems that would expose the community to the risk of significant personal danger or risk of death or injury or aggravation of an existing physical or medical condition if they failed as a result of the 'millennium bug'. They also include the provision of basic public utilities and key services to the community or businesses that may have a significant and adverse impact on the community or businesses if they were to fail as a result of the 'millennium bug'.

Such systems include those that are essential for:

- the provision of emergency medical services;
- transport regulation and traffic flow;
- the provision of electricity, water and sewerage services;
- the provision and coordination of fire fighting, ambulance and emergency services;
- the provision of operational police services;
- the provision of public transport;
- the control of persons in custody;

AUDIT OPINIONS

- The Territory and most agencies were off to a slow start in addressing Year 2000 risks, however, senior management in the Territory and all agencies now fully recognise the magnitude of the challenge and as a result are generally managing Year 2000 preparations effectively.
- While considerable progress has been made in readying individual systems to ensure that critical systems will not be disrupted by the change to the new millennium, there is still some considerable way to go before all critical systems and contingency and business continuity plans are Year 2000 ready.
- Audit estimates that a little over 50% of the Territory's critical systems or 25% of all agencies will be Year 2000 ready by 30 June, however, this is not a cause for alarm and provided agencies are able to complete the outstanding work highlighted in this report, especially the modernisation of the Territory's information technology infrastructure, the Territory and all of its agencies should be ready by 31 December.

SIGNIFICANT ACTIONS IDENTIFIED

- The Executive and senior management in each agency should monitor progress closely and frequently to ensure that firm and achievable objectives are agreed and met.
- Particular attention should be given to the development and testing of a whole of government business continuity plan and the development and implementation of a Territory communications plan.
- Early consideration should be given to whether it would be appropriate to provide additional resources to the infrastructure Modernisation Project to make achievement of the program's Year 2000 readiness related objectives within the context of an extremely tight timeframe, more certain.
- Interstate electricity suppliers should be monitored very closely and, if necessary, consideration should be given to making contingency arrangements for the emergency supply of alternate sources of power such as petroleum, diesel and gas.

THE MANAGEMENT OF YEAR 2000 RISKS

- the operation of computer controlled devices, such as, doors, alarms, lifts, security systems, that may affect life or limb, physical security or cause significant disruption to the community or ACT Government employees;
- the provision of ACT Public Service salaries;
- major revenue generation by the Government, its agencies or Territory owned corporations; and
- the provision of Whole of Government and whole of agency financial management services.

In applying this definition to individual agencies, Audit separately identified each major function as a critical system. In addition, Audit also identified groups of smaller but similar or related functions as a critical system. Thus, for example, the Year 12 Certification and Assessment System in the Department of Education and Community Services was identified as one critical system and the Canberra Hospital's 4000 items of bio-medical equipment was also identified as a critical system. Furthermore, each agency's date dependent building systems were also identified as a critical system.

While this approach has resulted in the identification of critical systems that are not in any way comparable, it does, however, result in a manageable number of critical systems for monitoring purposes. Based on this approach, the Territory has about 120 critical systems. Each of these systems is identified in the specific findings in the chapters on individual agencies.

The audit's scope, rationale and methodology are addressed in Chapter 2.

1.4 LIMITATION ON SCOPE

The findings and conclusions included in this report are largely based on representations received from agencies. To the extent possible, the Audit has reviewed available evidence supporting those representations.

THE MANAGEMENT OF YEAR 2000 RISKS

Due to the pervasive nature of the Year 2000 problem and the audit methodology used, this Audit cannot and does not provide any assurances as to the accuracy and completeness of agencies' responses, the evidence made available to support those responses and the resultant findings and conclusions.

Furthermore, for the same reasons, Audit is unable to provide any assurances on whether the planning and management procedures adopted by agencies are totally adequate to address and correct all systems and sub-systems which could fail as a result of the transition to the new millennium or related occurrences.

It should also be noted the objective of the audit was to provide an opinion on the effectiveness of agencies management of their Year 2000 risks. As such Audit did not perform any tests of individual systems or sub-systems to verify whether agencies assertions, that their systems or sub-systems were Year 2000 ready, were in fact correct. Such procedures would have been beyond the scope of the audit.

1.5 BASES FOR AUDIT OPINIONS

The audit opinions were based on the following significant findings.

Significant Whole Of Territory Findings [Page 26]

- *The overall management of Year 2000 preparations in the Territory is generally effective;*
- *About 20% of the Territory's critical systems are Year 2000 ready now, this figure is expected to rise to a little over 50% by 30 June;*
- *About 10% of the Territory's 32 agencies are Year 2000 ready now, this figure is expected to rise to 25% by 30 June;*
- *Provided the program to modernise the Territory's information technology infrastructure is completed on schedule and agencies otherwise meet their objectives, all agencies will probably have their critical systems Year 2000 ready by 31 December;*

THE MANAGEMENT OF YEAR 2000 RISKS

- *Interstate electricity suppliers do not give assurances at any time that they are able to provide a continuing supply of electricity to their customers and they have given no indication that this policy will be varied to take account of concerns about the change to the new millennium;*
- *A whole of government risk assessment and a whole of government Year 2000 contingency plan has not been prepared, however, the Office of Information Technology and Multimedia (OITM) is using Commonwealth guidelines along with agencies' evolving contingency plans to develop a whole of government approach;*
- *A communications strategy to explain the implications and significance of the change to the new millennium has not been developed, however, an officer has now been seconded to the Chief Minister's Department to assist with this task; and*
- *The Emergency Services Bureau does not have the statutory power to manage emergencies, including those that may arise from Year 2000 related failures, however, an Emergency Management Bill has been introduced into the Legislative Assembly by the Minister for Justice and Community Safety that would overcome this deficiency.*

Significant Findings In Respect Of Individual Agencies

The remainder of this Chapter sets out the key significant findings in relation to each agency. The detail supporting the findings and an overall conclusion on each agency's position is provided in the body of this report.

ACT Community Care [page 44]

- *Community Care's critical systems are its financial management system and its building systems.*
- *The software component of Community Care's financial management system is Year 2000 ready and the whole system will be Year 2000 ready when InTACT's Information Technology Modernisation Project is finalised;*
- *Community Care's building systems are not Year 2000 ready, however, Community Care has advised remedial work will commence by early in the next financial year to address the compliance deficiencies identified.*

ACTEW [page 48]

- *ACTEW has three operational systems which are critical to its operations, that is the electricity transmission and distribution system, the water treatment and reticulation system, and the sewerage reticulation and treatment systems.*
- *ACTEW also has three applications and two hardware/software systems which are critical to its operations.*
- *None of ACTEW's systems are yet Year 2000 ready, although progress is being made on all systems.*
- *ACTEW has scheduled an external evaluation of the whole of its Year 2000 preparations for July and August, which will be completed by 31 August.*
- *ACTEW does not generate its own electricity and its external electricity suppliers do not give assurances at any time that they are able to provide a continuing supply of electricity to their customers and they have given no indication that this policy will be varied to take account of concerns about the change to the new millennium.*

ACT Forests [page 63]

- *ACT Forests have no critical systems, however, the agency is in the process of modifying and testing all of its systems with a view to them being ready by June.*

ACT Housing [page 66]

- *ACT Housing's critical systems are its loans, property and rent system, its financial management system and building systems.*
- *The loans, property and rent system is not Year 2000 compliant and is being replaced, with a view to having the system fully Year 2000 ready by June.*
- *ACT Housing's building systems are not Year 2000 ready, however, ACT Housing has identified those building systems which contain embedded chip technology and have engaged Totalcare and Asset Services to evaluate and modify these systems, where necessary by June.*

ACTION [page 69]

- *ACTION's critical systems are its Automated Ticketing System, its financial management system, its payroll system and its building systems.*
- *None of ACTION's critical systems are Year 2000 ready, however the Automated Ticketing System is currently being redeveloped and advice has been sought from the vendor on the status of the payroll system.*
- *ACTION advises that evaluation has been undertaken of Year 2000 risks associated with its leased head office building; the only matter outstanding is a report on Year 2000 readiness of the fire detection system; ACTION also advise that in relation to depots, workshops and plant, managers are currently working with consultants to evaluate Year 2000 readiness.*

ACTTAB [page 72]

- *ACTTAB's critical systems are its betting systems and its financial management system.*
- *ACTTAB's betting systems are Year 2000 ready.*
- *ACTTAB has been advised that its financial management system is Year 2000 compliant and testing, to verify its readiness is scheduled to be completed by June.*
- *Testing of interstate links is partially complete and all interface testing is expected to be finalised by June.*
- *Contingency planning is well underway and is forecast to be finalised by the middle of this year.*

Australian International Hotel School [page 78]

- *The School's critical systems are its financial management system and its building systems.*
- *Neither of these systems are Year 2000 ready, however, progress is being made to address compliance issues.*

Calvary Public Hospital [page 82]

- *The Hospital's critical systems are its bio-medical system, its financial management system and its building systems.*
- *More than 95% of its bio-medical systems have been assessed as Year 2000 ready; the Hospital is conducting extensive testing on its remaining bio-medical systems to ensure they are fully Year 2000 ready by June.*
- *The Hospital's building systems are not Year 2000 ready, however, action is in hand to have them upgraded or retired by the end of the year.*
- *The Hospital also has critical links with ACTEW, AGL, Telstra and Optus for the provision of electricity, water, gas and telecommunications services; the Year 2000 status of these systems is unknown.*

Canberra Cemeteries Trust [page 89]

- *The Trust's critical system is its Arrow financial management system.*
- *A Year 2000 compliant version of Arrow has been installed, however, the software has not yet been tested to verify its Year 2000 readiness and the readiness status of the Trust's hardware is unknown; the Trust has advised that it plans to upgrade its hardware and then test its software.*

Canberra Cultural Facilities Corporation [page 92]

- *The Corporation's critical systems are its financial management and building systems.*
- *The financial management system software is a widely used commercial package which was purchased on the premise that it is Year 2000 compliant; however, the Corporation has advised that testing may be conducted following installation if it is deemed necessary;*
- *All of the Corporation's building systems are not Year 2000 ready, however, outstanding systems are scheduled to be upgraded by June; the Corporation also believes that the impact of any building system failure would be minor inconvenience, as all systems have manual overrides whose operation is well understood by staff.*

THE MANAGEMENT OF YEAR 2000 RISKS

- *The Corporation has prepared contingency plans for its computerised systems.*

Canberra Institute of Technology [page 96]

- *CIT's critical systems are its Student Information Management System, its building systems and its financial management system.*
- *The Student Information Management System is not Year 2000 ready, however, a compliant version of the system will be installed in June and will then require testing to confirm that it is Year 2000 ready.*
- *CIT has advised that its building systems are Year 2000 ready.*

Canberra Tourism and Events Corporation [page 100]

- *The Corporation's critical systems are its financial management system and its building systems.*
- *Whilst the Corporation's financial management software has been certified to be Year 2000 ready, it is reliant on InTACT to ensure its hardware is Year 2000 ready.*
- *The building systems consist of systems located at the Canberra Visitors Centre and SAP Tower; the building systems within the Canberra Visitors Centre have been assessed as Year 2000 ready; the Corporation is planning to obtain written advice from the Building Managers of the SAP Tower on that building's Year 2000 status.*

CanDeliver Limited [page 103]

- *The Company's critical systems are its financial management systems and its building systems.*
- *The financial systems' software and hardware have been certified by vendors as Year 2000 compliant and the Company intends to conduct Year 2000 testing prior to June.*
- *All components of the building systems have been assessed and were found to have no date dependent components.*
- *The Company has developed contingency plans for its critical systems.*

Casino Surveillance Authority [page 106]

- *The Authority's critical systems are its system used to verify Casino revenues, its financial management system and its building systems.*
- *The system used to verify Casino revenues is not fully Year 2000 ready and will be upgraded as part of the InTACT Modernisation Project.*
- *The vendor has certified the financial management system software as Year 2000 compliant; the Authority has advised that it has also conducted sample testing to verify its readiness.*
- *The Year 2000 status of the Authority's building systems is unknown, however it has requested advice on this matter from the building manager.*
- *The Authority has advised that it has developed formal contingency plans for all of its computerised systems.*

Chief Minister's Department [page 110]

- *The Department's critical systems are:*
 - *The budget development system;*
 - *Rates & Land Tax System;*
 - *ACTTAX – the taxation system;*
 - *Gaming Machine System;*
 - *The ACT Public Service payroll distribution system;*
 - *Agency monthly financial reporting system;*
 - *Financial management system; and*
 - *Building systems.*
- *None of the Department's critical systems are Year 2000 ready, however, considerable progress is being made towards upgrading them to be Year 2000 ready.*
- *With the exception of the Rates and Land Tax and ACTTAX systems, all of the Department's critical systems are undergoing final testing; the Department has advised that arrangements for the final testing of the Rates and Land Tax system are under consideration and action is underway to ensure ACTTAX will be upgraded and tested by June.*

THE MANAGEMENT OF YEAR 2000 RISKS

- *Building systems are still in the early stages of being prepared to be year 2000 ready, however, the Department has advised that these systems are expected to be Year 2000 ready by June.*

Construction Industry Long Service Leave Board [page 116]

- *The Board's critical systems are its Leave Entitlement System and its building systems.*
- *The Leave Entitlement System is Year 2000 ready.*
- *All components of the building systems have been assessed as Year 2000 ready.*

Corrective Services [page 119]

- *Corrective Services critical systems are the Offender Management Systems and its building systems at the Belconnen Remand Centre and the Periodic Detention Centre.*
- *The Offender Management Systems are not Year 2000 ready, however, they have been upgraded and final testing has been scheduled.*
- *The building systems are not Year 2000 ready, however, their status is in the process of being determined and, where practicable, testing of all items with a date component is being scheduled.*

Department of Education and Community Services [page 123]

- *The Department's critical systems are its School Administration System, its Year 12 Certification and Assessment System, its Central Student Database, its financial management system and its building systems.*
- *The School Administration System is Year 2000 ready.*
- *The Year 12 Certification and Assessment System has been developed in-house and the Department considers that it is substantially Year 2000 ready and is installing it in non-government schools, however, final testing and refinement will continue until December.*
- *The Central Student Database is not yet year 2000 ready, however, the Department considers that it will be fully functional by June.*

THE MANAGEMENT OF YEAR 2000 RISKS

- *The Department's building systems are not Year 2000 ready, however the Department has advised that they are scheduled to be Year 2000 ready by June.*

Department of Health and Community Care [page 128]

- *The Department has identified six critical systems, these are, the Health Protection Service system, the Monitoring Drugs of Dependence system, the Immunisation and Communicable Diseases system, the Purchasing and Inventory Control System, its building systems and the financial management system.*
- *None of the systems are Year 2000 ready, however, the first three systems have been certified as Year 2000 compliant by their suppliers and testing commenced in April.*
- *The Purchasing and Inventory Control System is undergoing remediation, and this work is expected to be complete by May.*
- *The Department's building systems are not Year 2000 ready, however, it has advised that assessment of the buildings owned by the Department is nearly complete; the Office of Asset Management is yet to advise on the compliance status of premises rented by the Department.*

Department of Justice and Community Safety [page 134]

- *The Department's critical systems are the Case Management Systems for the Magistrates and Supreme Courts, its building systems and its financial management system.*
- *The Case Management System for Magistrates Court has been assessed as Year 2000 ready.*
- *The Case Management System for the Supreme Court is not Year 2000 ready, however, the Department has advised that it has been upgraded and final testing has been scheduled.*
- *Assurances have been received from the Australian Federal Police that all of their operational systems are Year 2000 ready, however, the AFP is not in a position to advise when its building systems will be ready.*

Department of Urban Services [page 141]

- *The Department's critical systems are its Transport Regulation Information Processing System, its Canberra Actuated Traffic Signal System, its financial management system and its building systems.*
- *No systems are Year 2000 ready, however, each system owner has stated that they are in the process of modifying and testing all of their critical systems with a view to them being fully Year 2000 ready by the end of June.*
- *Embedded and related systems in certain buildings either owned or leased directly by the Department agencies did not appear on any Year 2000 Corrective Action Report, and, are not being reviewed or examined by OAM or Totalcare; the Department has advised that the non-inclusion of building systems on their inventory has been a conscious decision, as the Department considered that Totalcare was already reporting separately on these systems to the Chief Minister's Department.*
- *The building systems not being reviewed are:*
 - *All libraries;*
 - *Environment ACT depots;*
 - *City Operations depots;*
 - *Dickson Motor Registry;*
 - *Waste depots; and*
 - *Other surplus properties.*

Emergency Services Bureau [page 147]

- *The Bureau's critical systems consist of its communications systems, its electronic emergency response systems, other operational systems and its financial and management system.*
- *The Year 2000 status of the Telstra and ACT Government telecommunications networks are unknown, however, the Bureau has requested advice on the status of both systems.*
- *The Bureau's radio communications system is Year 2000 ready.*
- *Some parts of the Communications Centre's electronic emergency response systems are not Year 2000 ready, however, the Bureau has*

THE MANAGEMENT OF YEAR 2000 RISKS

advised that it plans to rectify all deficiencies in these systems by September.

- *A consultant has assessed the hazardous chemicals database used by the ACT Fire Brigade as being non-compliant, however, the Bureau is seeking clarification from the supplier.*
- *The Bureau has not developed a specific Year 2000 business continuity plan, nor has it modified its existing system level contingency plans to take account of possible Year 2000 failures, however, action is in hand to modify these plans by September.*

Exhibition Park in Canberra [page 154]

- *EPIC's critical systems are its financial management system and its building systems.*
- *EPIC's financial management system is Year 2000 ready.*
- *EPIC's building systems are not Year 2000 ready, however, the vendors have been asked to confirm their Year 2000 status.*

Gungahlin Development Authority [page 157]

- *The Authority's critical systems are its lease system, its financial management system and its building systems.*
- *The lease system, the software supporting the financial management system and the building systems have been assessed as Year 2000 ready.*
- *The Authority's hardware is planned to be upgraded as part of the InTACT Modernisation Project.*
- *The Authority has a documented business continuity plan that has been endorsed by the Board.*

InTACT [page 160]

- *InTACT's critical systems are the following whole of government systems:*
 - *Oracle Government Financials;*
 - *the Human Resource Management System (PERSPECT);*
 - *the Revenue Reporting System (RAPS);*

THE MANAGEMENT OF YEAR 2000 RISKS

- *Information Technology infrastructure; and its building systems.*
- *None of these systems are Year 2000 ready, although the software elements of Oracle and PERSPECT have been certified by the vendors as compliant and have been tested; the overall systems will be subjected to final testing after their associated hardware and infrastructure has been modernised.*
- *A contract has only recently been finalised for the upgrade of the Revenue Receipting System, and Audit has been advised that scoping of the remediation necessary to make RAPS Year 2000 ready will commence immediately.*
- *Modernisation of the information technology infrastructure at the Canberra Hospital is nearing completion and all other agencies are scheduled to be modernised by early December.*

Legal Aid Office [page 166]

- *The Office's critical systems are its financial management system, its client management system and its building systems.*
- *The vendor has advised that the Office's financial management and client management systems are Year 2000 compliant and testing of these systems are currently underway to ensure that they are Year 2000 ready.*
- *The readiness status of the Office's building systems is unknown, however the Office has sought advice on its status from the owner.*
- *The office has developed contingency plans for its critical financial and client management systems.*

Legislative Assembly Secretariat [page 170]

- *The Secretariat has three critical systems: financial management, human resource management and building systems.*
- *The financial management and human resource systems have been certified by their vendor as Year 2000 ready but will be subjected to site testing to verify their readiness.*
- *The Legislative Assembly building systems are not Year 2000 ready, however, they are currently being assessed and tested.*

Milk Authority [page 174]

- *The Authority's critical system is its financial management system.*
- *The Authority's financial management system has been certified by vendors as Year 2000 compliant; the Authority has advised that it has undertaken informal testing on the system to confirm that it is Year 2000 ready.*
- *The Authority has a Risk Management Plan to facilitate the continuous supply of fresh milk in the ACT, which incorporates the possibility of a Year 2000 related failure.*

Registrar-General's Office [page 175]

- *The Office's critical systems are its Land Titles System; Deeds and Instrument System; Births, Deaths and Marriages System; Document Management System; and Rental Bonds Tracking System.*
- *All critical systems except the Rental Bonds Tracking System have been assessed as Year 2000 ready; the Rental Bonds Tracking System is scheduled to be tested for Year 2000 readiness by May.*
- *The Office has a critical link with the Australian Securities and Investment Commission's National Names Index; it is currently awaiting receipt of advice on the Year 2000 status of this system.*

The Canberra Hospital [page 179]

- *The Hospital's critical systems are its bio-medical equipment, medical support systems, building systems and its financial management system.*
- *The hospital has almost 4,000 pieces of bio-medical equipment with embedded computer chips, 51 critical medical support systems, and up to 5,500 building systems whose criticality is currently being evaluated.*
- *To date 60% of the bio-medical equipment has been assessed as Year 2000 ready, five percent has been assessed as non-compliant and 35% remains to be assessed; the likely cost of rectifying non-compliant equipment is assessed at about \$2 million.*

THE MANAGEMENT OF YEAR 2000 RISKS

- *Of the 51 medical support systems rated critical, 29% have been declared Year 2000 ready; however, none have yet completed the full certification procedure endorsed by the Hospital Executive; the Hospital has advised that it plans to complete all remediation action by September.*
- *A contract was recently let to complete the Year 2000 testing and certification of building systems; the Hospital has advised that this task is due to be completed by June.*

Totalcare Industries Ltd [page 186]

- *Totalcare's critical systems are its major revenue generating systems; these include the medical equipment sterilising system, financial management system and the building systems.*
- *Each of the Company's four main revenue generating units have or are addressing Year 2000 risks for their system.*
- *Totalcare's Sterilising system is Year 2000 ready, however, the system relies on external supplies of electricity and no back up power source is available at this time.*
- *Totalcare's financial management system is not Year 2000 compliant, however, Totalcare has commenced two projects to upgrade and replace the existing system; Totalcare expects to complete these projects by the end of July.*
- *Totalcare's building systems are predominantly Year 2000 ready; Totalcare have advised that those systems that are not yet Year 2000 ready should be by the end of June.*

University of Canberra [page 193]

- *The University has three critical systems: Student Administration, Corporate Management and its Building Systems.*
- *All critical systems are Year 2000 ready.*
- *The University plans to have all of its non-critical systems Year 2000 ready by July.*

2 YEAR 2000 RISKS AND SOLUTIONS

2.1 INTRODUCTION

Year 2000 risks, Y2K problems or the 'Millennium Bug' are terms used to describe several problems that could occur in computerised systems at or around the turn of the century.

Year 2000 risks are not confined to computer software programs and databases. They could also affect a range of other products, systems and processes, which rely upon embedded microchips to control their operations. Computer hardware, bio-medical equipment, analytical systems, air conditioning and heating systems, security systems, lifts and traffic light controls all could be affected.

Some systems may have only one or a small number of date dependent sub-systems or routines embedded within them. Some of the more complex systems, however, may contain many thousands of embedded date dependent sub-systems and routines.

No one can be sure how individual systems will operate if they are not Year 2000 ready. Computer systems that are not ready may react in different and unpredictable ways when crucial dates are used. Some may not be able to cope and will simply fail to operate or will reject data inputs. Others may continue to operate, but will produce meaningless or erroneous data. Many computerised systems that have the 'millennium bug' and have used turn of the century data have already failed at considerable cost and inconvenience to their owners.

This Chapter provides a description of the Year 2000 problem. It then briefly outlines the scope, rationale and methodology employed by this audit in assessing each agency's management of its Year 2000 risks. Finally the chapter outlines a generic methodology used to make computerised systems Year 2000 ready.

2.2 THE YEAR 2000 PROBLEM

The Year 2000 problem is not restricted to the change in date from 31 December 1999 to 1 January 2000. A number of other date problems may also occur. The Year 2000 problem stems from three main issues: two-digit data storage, leap year calculations and special meanings for dates. When a system has been examined and any deficiencies have been addressed a system is said to be Year 2000 ready.

Two-digit Data Storage

In order to preserve memory storage capacity, many computer systems of the past represented years by using only the last two digits. For example, systems have been programmed to know that 99 refers to 1999, assuming the century is 19. While this is normally sufficient within a century, the change of year from 1999 to 2000 presents difficulties where the date is used in a calculation or as a trigger for some other activity. A system may incorrectly interpret 00 to represent the year 1900. Alternatively, a system may revert to other beginning-of-time dates such as 1980 or the date when the system was first implemented.

Leap year Calculations

Computers that use dates must be able to recognise a leap year, which is a year in which there are 366 days, the extra day being 29 February.

Subject to the following exception, a leap year is recognised when the year number is divisible by four. The exception is century years, which although divisible by four are not leap years. There is, however, an exception to this exception. That is, a century year is a leap year if it is divisible by 400.

Although many programmers were aware of the centuries exception, some were not aware of the exception to the exception. In these cases, their programs would not recognise that 2000 is a leap year and that February has 29 days.

Special Meanings for Dates

Other problems arise from the ambiguous use of the character 9 in some fields. '99' was sometimes used in programming for special purposes such as an instruction to the computer to exit a program step or to terminate the program completely. Consequently the use of '99' in a year field or the date

sequence '9/9/99' may inadvertently trigger an unintended response from a computer.

2.3 AUDIT SCOPE, RATIONALE AND METHODOLOGY

Audit Scope

The agencies addressed in this report include all Territory departments, statutory authorities, Territory Owned Corporations and all other entities that have one or more critical systems as defined in Chapter 1.

Definition of a 'Year 2000 Ready' System

A system is said to be Year 2000 ready when it has been reviewed to assess its Year 2000 status, has had remediation work performed on it, if necessary, and has then been tested using an appropriate set of representative dates. On the basis of the review and associated test results, a system is Year 2000 ready when the risk of material failure of the system, as a result of a date processing problem, is not significant.

In some cases, the testing of a software program cannot be finalised until the hardware and operating systems on which the software program runs has been upgraded to also make them Year 2000 ready.

Furthermore, in the case of systems that are groups of similar or related functions, a system is not regarded as Year 2000 ready until all of its elements are Year 2000 ready.

Audit Rationale

Many agencies within the ACT Government have a large number of computerised and embedded systems as well as links with external organisations that are susceptible to possible Year 2000 problems. The failure of any of these systems could have an adverse impact on the operations of the Government and its agencies, private businesses and the wider community.

The risks to key ACT government functions associated with the Year 2000 problem include:

THE MANAGEMENT OF YEAR 2000 RISKS

- disruption to the provision of critical services, such as police and emergency services and transport regulation;
- program expenditure not being made or made incorrectly;
- government revenue not being received or being processed incorrectly; and
- legal risks arising from liability for adverse effects upon other parties such as contractors, clients or customers.

The risks to the ACT community associated with the Year 2000 problem include:

- risk to personal security or safety;
- disruption or malfunction of medical or emergency equipment;
- disruption to electrical power supply, water supply and sewerage treatment;
- disruption in the provision of services, such as public transport; and
- disruption in the provision of goods and services which are provided from external sources, such as gas, fuel, telecommunications and banking services.

Audit Methodology

The methodology employed in assessing each agency's Year 2000 readiness included the use of the Control Objectives for Information Systems (COBIT), Audit Compliant Guideline for the Year 2000. The guideline, published by the Information Systems Audit and Control Association, is a generally applicable and accepted standard for good information technology security and control practice.

As an audit methodology targeted towards reviewing an organisation's Year 2000 efforts, it essentially assesses whether:

- all application programs are Year 2000 ready;
- all hardware and operating systems are Year 2000 ready; and

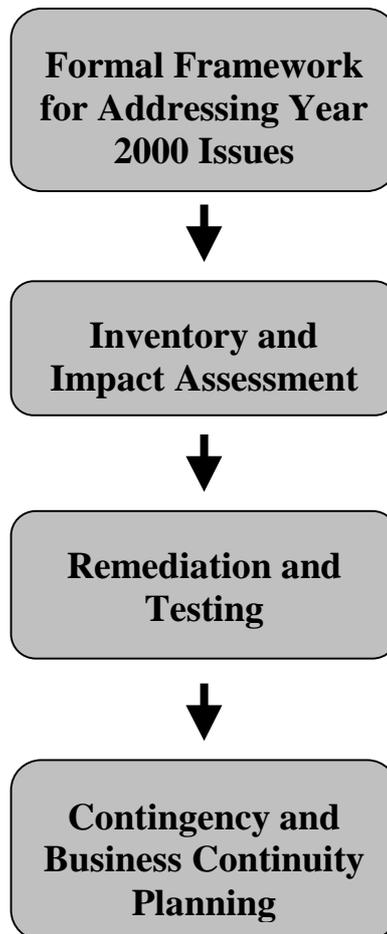
THE MANAGEMENT OF YEAR 2000 RISKS

- all plans are in place to monitor Year 2000 readiness and effect a timely response where necessary.

Drafts of chapters of this report were circulated to relevant chief executives for their comments. Where chief executives had comments on the drafts, they were taken into account in finalising this report.

The audit focused on assessing the extent to which agencies had taken a number of fundamental steps in managing their Year 2000 risks. These steps are illustrated in Figure 1 and are summarised in the following paragraphs.

FIGURE 1 – Key Steps in the Year 2000 Readiness Process



2.4 FORMAL FRAMEWORK IN ADDRESSING YEAR 2000 ISSUES

Development of an Agency Plan

The first step in resolving Year 2000 issues should be the development of an agency level plan. Such a plan would include designating a senior officer to have overall responsibility for the project, defining the problem and the agencies objectives, allocating the necessary personnel and other resources required for an agency to achieve Year 2000 readiness and establishing a timetable to achieve the plan's objectives. The plan should also include an officer or officers who are responsible for signing off individual systems or procedures as ready when all Year 2000 readiness action has been completed. The agency's Chief Executive and board (where existing) should approve the plan and monitor its implementation on a regular basis.

A multi-disciplinary project team, drawn from all major areas of the agency, should be established to implement the agency's plan. The main goals of the team should be to promote awareness of the Year 2000 problem, perform a detailed inventory of all computerised systems, develop compliance plans, test all systems and prepare system level and agency level contingency plans.

Inventory and Impact Assessment

During the inventory phase of a Year 2000 project, a list of all systems owned and used by an agency should be compiled. This includes all date dependent systems such as hardware, software, operational systems and systems with embedded chip technology.

The inventory should then be used to review each system to determine the impact of its failure on the agency's operations and assess the Year 2000 readiness options available for each system. All vendors of relevant systems should be contacted to ascertain whether they consider their systems are Year 2000 ready or not. Where appropriate, compliance certificates should be obtained from vendors.

Remediation and Testing

After each system is assessed, a compliance plan should be developed. A compliance plan would include the steps to be undertaken to ensure that each

THE MANAGEMENT OF YEAR 2000 RISKS

system is Year 2000 ready. The plan would typically include timeframes for completion of remediation and testing.

The testing phase is the most critical phase of the Year 2000 project. Agencies should undertake Year 2000 testing of all relevant systems, including those for which they have received compliance certificates from vendors, to verify that the systems are, in fact, Year 2000 ready.

Contingency and Business Continuity Planning

Each agency should develop and document contingency plans at both the system and agency level to provide for the possibility that, despite the steps taken to ensure that relevant systems are Year 2000 ready, they fail. Agency level contingency plans are sometimes called business continuity plans.

System level contingency planning is the selection and documentation of alternative operating strategies for the purpose of mitigating or avoiding the failure of or risks of the failure of individual systems.

Agency level contingency planning or business continuity planning is the selection and documentation of response and recovery strategies for the purpose of providing for the continuation of the agency's principal activities in the event of the failure of one or more of its important date dependent systems.

Plans at both levels should be documented, communicated to all relevant persons and practiced. They should include the identification of trigger events, immediate actions to be taken, resources required, timings and procedures to follow.

They should be validated, through testing, to ensure that they are able to provide for the continuing functioning of business processes and can be implemented within a specified period of time.

3 MANAGEMENT OF THE YEAR 2000 RISK

3.1 INTRODUCTION

Whole of Territory management of the Year 2000 risk is the responsibility of a number of agencies. The Office of Information Technology and Multimedia (OITM) in the Chief Minister's Department has overall coordinating responsibility. The Office of Asset Management (OAM), also in the Chief Minister's Department, has responsibility for managing the assets of the Territory Government.

The Emergency Services Bureau has responsibility for preparing for any emergency situation that may arise out of a significant Year 2000 related failure. InTACT has responsibility for three key whole of government management systems and the related information technology Modernisation Project. Totalcare Industries Limited has building management responsibilities for Territory owned buildings and certain buildings leased by OAM.

This chapter reports on the Territory level management arrangements undertaken by each of these agencies. It also briefly addresses the legal implications of a Year 2000 failure. Subsequent chapters report in more detail on the Year 2000 preparations of the Emergency Services Bureau, InTACT and Totalcare.

3.2 SPECIFIC FINDINGS

- *The overall management of Year 2000 preparations in the Territory is generally effective;*
- *about 20% of the Territory's critical systems are Year 2000 ready now, this figure is expected to rise to a little over 50% by 30 June;*
- *about ten percent of the Territory's 32 agencies are Year 2000 ready now, this figure is expected to rise to 25% by 30 June;*

THE MANAGEMENT OF YEAR 2000 RISKS

- *provided the program to modernise the Territory's information technology infrastructure is completed on schedule and agencies otherwise meet their objectives, all agencies will probably have their critical systems Year 2000 ready by 31 December;*
- *interstate electricity suppliers do not give assurances at any time that they are able to provide a continuing supply of electricity to their customers and they have given no indication that this policy will be varied to take account of concerns about the change to the new millennium;*
- *a whole of government risk assessment and a whole of government Year 2000 contingency plan has not been prepared, however, OITM is using Commonwealth guidelines along with agencies' evolving contingency plans to develop a whole of government approach;*
- *a communications strategy to explain the implications and significance of the change to the new millennium has not been developed, however, an officer has now been seconded to the Chief Minister's Department to assist with this task;*
- *the Emergency Services Bureau does not have the statutory power to manage emergencies, including those that may arise from Year 2000 related failures, however, an Emergency Management Bill has been introduced into the Legislative Assembly by the Minister for Justice and Community Safety that would overcome this deficiency;*
- *periodic reports to the Executive and the Chief Minister have not always included the Year 2000 status of key statutory authorities, Territory Owned Corporations, and buildings either owned or leased by the Territory, nor do they include all critical systems of those agencies for which it does report, however, a new reporting format has been introduced to overcome these shortcomings; and*
- *no specific budgetary support has been provided to assist agencies to become Year 2000 ready, however, a loan facility has been established to provide funding support for those agencies which are unable to absorb the cost of remedying their date dependent systems.*

3.3 OVERALL CONCLUSIONS ON CURRENT POSITION

Given that OITM has only been established for a short time, it is generally effectively managing whole of government Year 2000 coordination and its evolving procedures will be further enhanced by the adoption of the suggestions included in this Chapter.

In addition, some agencies should give a higher priority to making themselves Year 2000 ready. In some of those cases, the Year 2000 problem is still seen as a 'computer thing' and is not being addressed by the most senior levels of management. The focus of attention should be on critical systems and contingency and business continuity planning. In this regard, OITM should negotiate with appropriate agencies, including InTACT, a considered and practical timetable for them to achieve Year 2000 readiness of each of their critical systems and each of their contingency plans that are not now Year 2000 ready. Such a timetable, when coupled with the strengthened progress reporting arrangements discussed below, would give a greater assurance that all agencies will be fully Year 2000 ready by the end of the year.

Consideration should be given to the timely reporting of progress towards Year 2000 readiness to the Executive on a monthly basis. Such an approach would raise the visibility of agency preparations and would facilitate consideration at the highest level of key Territory critical systems, contingency plans and communications planning. It would also provide a well established and authoritative mechanism for communicating decisions on further action required on Year 2000 preparations to all agency heads.

The timeframe for completion of the InTACT Modernisation Project is extremely tight. Progress should be monitored very closely as any significant slippage in InTACT's upgrade of agencies' systems could have implications for their Year 2000 readiness. It may be prudent to consider providing additional resources to InTACT now to make the achievement of its objectives more certain.

Interstate electricity suppliers do not give assurances at any time that they are able to provide a continuing supply of electricity to their customers and they have given no indication that this policy will be varied to take account of concerns about the change to the new millennium. Accordingly, the situation should be monitored very closely and, if necessary, consideration should be given to making contingency arrangements for the emergency

THE MANAGEMENT OF YEAR 2000 RISKS

supply of alternate sources of power such as petroleum, diesel and gas. Decisions taken in this context could have financial implications for the Territory or its agencies.

Responsibility for ensuring the Year 2000 readiness of date dependent systems in buildings, which are either owned or leased by Territory agencies, should be clarified as a matter of urgency and communicated to all relevant agencies.

Agencies need to carefully consider the legal implications that may arise if they are not able to demonstrate to third parties that they have taken reasonable steps to ensure that they are Year 2000 ready and that they have not developed appropriate contingency plans.

3.4 POLICY AND MANAGEMENT FRAMEWORK

Policy Guidance

A policy framework for addressing Year 2000 issues was published in December 1996 when the InTACT Group, then an element of the Department of Urban Services, issued a document 'The Year 2000 Date Problem – Policy and Guidelines.' This document required all agencies to:

- appoint a Year 2000 Project Officer and an SES level Project Sponsor;
- prepare an initial impact assessment by mid January 1997;
- prepare a broad Year 2000 Compliance Plan by the end of March 1997 and detailed implementation plans by 1 July 1997; and
- report progress to agency executives and InTACT at the end of each quarter.

Under these arrangements, Ministers and Department Heads are responsible for:

- developing Information Technology strategic plans including Year 2000 readiness;

THE MANAGEMENT OF YEAR 2000 RISKS

- developing business cases for Information Technology modernisation including business applications, involving InTACT as appropriate;
- conducting risk assessments of all systems, including embedded systems and supply chains, and assess overall Year 2000 readiness including in-house, vendor supplied, and end user systems;
- upgrading hardware and operating systems through InTACT and applications through InTACT or other applications providers, whilst ensuring compliance with the standard operating environment; and
- developing contingency and business continuity plans.

Office of Information Technology and Multimedia

The creation of an Office of Information Technology and Multimedia (OITM) within the Chief Minister's Department was announced in the 1998-99 budget papers. The role of OITM is to:

- provide a strategic and integrated focus for communications management and Information Technology and Multimedia at a whole of government level; and
- provide policy advice to Government on business development and strategic Information Technology and Multimedia issues and business proposals.

At present, one of OITM's main priorities is to meet Year 2000 compliance imperatives. Its goal in managing the Year 2000 problem is to minimise any disruption to normal services, thereby protecting the ACT Community.

OITM has six staff members and two are employed full time on Year 2000 matters. In addition, an international research and consultancy firm, the Gartner Group, has been engaged to advise on the full range of Year 2000 issues.

The main Year 2000 related functions of OITM are to:

- manage whole of government Year 2000 risks;
- report to the Chief Minister and the Executive on Year 2000 progress;

THE MANAGEMENT OF YEAR 2000 RISKS

- participate in intra and inter-governmental fora on year 2000 issues; and
- raise community awareness of Year 2000 issues.

These functions are discussed following.

Whole of Government Management

OITM has asked that all agencies be Year 2000 ready by the end of June. In addition, at its February meeting, the OITM Advisory Board agreed that agency contingency plans should be in place by June. In this regard, OITM has asked all ACT Government agencies to take note of the Commonwealth Office of Government Online (OGO) guidelines on contingency planning.

Audit Comment

OITM's March Progress Report to the Chief Minister indicates that no agency will be fully Year 2000 ready by 30 June. All agencies, however, have advised OITM that they plan to have all of their critical systems ready by the change to the new millennium.

As outlined in Chapter Two, Audit has adopted a rigorous approach to deciding whether a system is ready or not. Systems have not been assessed as Year 2000 ready until they have been tested to confirm their readiness. In some cases such testing cannot be finalised until the hardware and operating elements of the system have been modernised or otherwise upgraded to make them also Year 2000 ready.

Based on this criteria and the definition of critical systems detailed in Chapter One, about 20% of the Territory's critical systems are Year 2000 ready now. Based on agency advice, this figure is expected to rise to just over 50% by 30 June.

About ten percent of the Territories 32 agencies are Year 2000 ready now. Based on agency advice, this figure is expected to rise to 25% by 30 June.

Furthermore if InTACT's modernisation project is completed on time then all agencies will have their critical systems ready by year end.

This audit reports in subsequent chapters that some agencies will not have their contingency plans finalised by the end of June as required. In fact

THE MANAGEMENT OF YEAR 2000 RISKS

some agencies will not have seriously commenced their whole of agency contingency plans by that date.

Based on these observations, it is considered that OITM should negotiate with appropriate agencies, including InTACT, a firm timetable for them to achieve Year 2000 readiness of each of their critical systems and each of their contingency plans. Such a timetable, when coupled with the strengthened progress reporting arrangements discussed later, would give a greater assurance that all agencies will be Year 2000 ready by the end of the year.

OITM is yet to undertake a whole of government risk assessment and develop a whole of government contingency plan. Such plans should provide for the central control and coordination of emerging policy issues and emergency response services in the event of a major Year 2000 failure. It would also establish communications and liaison arrangements and procedures that may need to be activated to manage competing demands for scarce resources. The plan would also set in train precursor actions that would mitigate the impact of overarching risks to the Territory including those that would arise from the failure of the electricity supply.

Reporting Progress

As indicated above, OITM prepares progress reports to both the Chief Minister and the Executive. The content and timing of these reports are discussed following.

Since August 1998, OITM has submitted monthly reports to the Chief Minister on progress in achieving Year 2000 readiness by Departments and agencies. Periodic reports to the Executive commenced in October 1998. These reports have been submitted to the Executive about every three months and, except for one major exception that is discussed later in this section, have generally followed the same format as those provided to the Chief Minister.

The reports are based on progress schedules submitted by agencies which name individual systems and provide information on their compliance status, the required readiness completion date, percentage figures representing the risk and impact of each system and activities completed during the current month and those planned for the following month.

THE MANAGEMENT OF YEAR 2000 RISKS

Reports to the Chief Minister consist of a summary memorandum which highlights key issues for the Chief Minister's attention, an attachment which summarises the Year 2000 readiness status of agencies, an attachment which summarises major Year 2000 readiness activities and copies of the schedules submitted by agencies.

Agencies are required to submit their schedules to OITM by the end of the second week in each month on their readiness status at the end of the preceding month. In the case of reports to the Chief Minister, this information is reported to the Chief Minister by the end of the first week in the following month. For example, on 9 March the Chief Minister was advised of how ready agencies were at the end of January.

Reports to the Executive cover the preceding quarter. That is, for example, the report considered by Cabinet in March advised of the readiness status of agencies in December.

Reports to the Executive contain recommendations for further action by agencies in addition to providing a situation report on progress by agencies. For example the report considered by Cabinet in March recommended that all agencies should have comprehensive business continuity plans completed by the end of June.

Audit Comment

The reports are a useful summary of preparedness highlights, however, they have not:

- included building systems;
- included all agencies;
- included all critical systems for those agencies for which it does report; and
- addressed progress on assuring the supply to the Territory of critical external goods and services, such as electricity, gas, liquid fuels, telephone and currency.

If the reports are to be useful to decision makers they should be completed in a more timely fashion. This observation, is particularly relevant in the case of reports to the Executive. OITM has advised that the time frame for

THE MANAGEMENT OF YEAR 2000 RISKS

reports to the Chief Minister has steadily been compressed and the target for the new format is three weeks from the end of the month.

Some information included in the agency schedules is confusing and open to misinterpretation. OITM has advised that it has now revised the format of its monthly reports to the Chief Minister. The new format will identify individual critical systems in each agency, describe their role and importance, detail remediation action proposed and indicate the date by which the system is scheduled to be Year 2000 ready. The new report will also focus on each agency's progress in developing system and agency level contingency plans. This approach is supported.

OITM has also advised that it has asked OAM to provide it with a monthly report on building systems on a building by building basis. This report will also be included in the reports to the Chief Minister.

At present, Statutory Authorities report quarterly to the Chief Executive of their administering department. The report is signed off by the CEO and forwarded to OAM. OITM has advised that it intends to have the reports on all Territory Owned Corporations and Statutory Authorities forwarded to it each month for inclusion in the reports to the Chief Minister.

OITM advised that it represents the ACT on the Commonwealth Year 2000 Government and Industry Consultation Committee where progress on critical external goods and services, such as gas, fuel, electricity, telephone and banking, are considered. OITM has also advised that it intends to incorporate information on such matters in its monthly reports.

Consideration should be given to reporting progress towards Year 2000 readiness to the Executive on a monthly basis. Such an approach would raise the visibility of agency preparations and would facilitate consideration of agency critical systems and contingency planning as well as Territory level contingency and communications planning at the highest level. It would also provide a well established and authoritative mechanism for communicating decisions on further action required on Year 2000 preparations to all agency heads.

Intra and Inter-Governmental Arrangements

OITM participates in a wide range of Commonwealth, Territory, regional and other fora on Year 2000 related issues. At the Commonwealth level, OITM participates in a national Year 2000 steering committee and the

THE MANAGEMENT OF YEAR 2000 RISKS

Commonwealth/State Year 2000 liaison group, which includes industry representatives.

Within the ACT, an OITM Advisory Board and an Information Services Group have been established. Both have representatives from departments and agencies and meet fortnightly to ensure effective coordination of Year 2000 issues including the adoption of uniform standards.

The Advisory Board's purpose is to provide strong and effective links between OITM and agencies. It works to ensure that there is understanding and collective ownership of all Year 2000 issues.

The Information Services Group is a technical level committee. It assists communication between agencies, OITM and InTACT with regard to business cases and standards such as coding, data retention, and backup policies.

Audit Comment

All sectors of the Territory are dependent for their operational activities and wellbeing on the continuous availability of a wide range of goods and services flowing into the Territory from outside its borders. In the context of a possible year 2000 failure, the continuous availability of electricity, water, gas, petroleum, currency and telephone services to government agencies, businesses and the wider community will be critical matters.

Year 2000 issues associated with the provision of telephone services and currency are being handled at the Commonwealth level and the Territory's views are represented at that level through OITM representation on the national fora described above.

The Department of Urban Services has written to the Australian Gas Light Company concerning the availability of gas supplies in the event of a Year 2000 failure. AGL has given written assurances that it is working to minimise the impact of any gas related problems in the Territory arising from a Year 2000 failure. The Company has indicated that it is working to a timetable of achieving full Year 2000 readiness of all mission critical activity by June, if not sooner. In respect of its mission critical suppliers, AGL has advised that it has adopted an approach of ensuring that suppliers have a Year 2000 project team rather than requesting excessively detailed information and sign off at an impractical point in time.

THE MANAGEMENT OF YEAR 2000 RISKS

The provision of electricity, water and sewerage services is addressed in Chapter 5. ACTEW has assured Audit that it has done and will continue to do all that it reasonably can to be as sure as it can that there will be no problem with electricity generation or distribution. In addition, a February statement from the Electricity Supply Industry National Year 2000 Information Forum advised that, as at that date, the testing program had not revealed any problems that would have significantly impacted the current level of supply reliability, which was then around 99.98%. Interstate electricity suppliers, however, do not give assurances at any time that they are able to provide a continuing supply of electricity to their customers and they have given no indication that this policy will be changed to take account of concerns about the change to the new millennium.

If the supply of electricity fails, even for a part of a day, then hospitals, other key agencies and consumers will need to resort to the use of alternate sources of fuel and/or the use of emergency generators as a source of electric power. Agencies that have their own emergency generators usually only hold a small reserve of fuel for use during those times. No specific arrangements, however, have been made to assure the emergency supply of fuels, such as diesel, gas and petroleum that would be needed to operate such generators during an emergency that may last longer than a few days. Accordingly, the situation should be monitored very closely and, if necessary, consideration should be given to making contingency arrangements for the emergency supply of alternate sources of power such as petroleum, diesel and gas. Decisions taken in this context could have financial implications for the Territory or its agencies.

Raising Community Awareness

The Commonwealth Office of Government Online is currently developing a national 'Roadshow' to raise Year 2000 awareness. Its objective is to encourage key infrastructure suppliers to report publicly to industry on the state of their Year 2000 preparations and risk assessment by the end of July.

Public awareness of Year 2000 issues will also be facilitated by the passage of the Commonwealth Government's Year 2000 Disclosure Act 1998. The objective of this legislation is to give limited legal protection to businesses and industries that specifically disclose what they have done in preparation for the Year 2000. It is mainly designed for large and medium sized enterprises and specifies that disclosure cannot be used for advertising purposes. The expected impact is to raise awareness of the issues and

THE MANAGEMENT OF YEAR 2000 RISKS

encourage information sharing. The Territory has accepted coverage under the Commonwealth Act and will not require its own legislation.

Audit Comment

OITM has not formally developed a Territory level communications strategy, including a public awareness program, for small to medium enterprises and the general community.

OITM has, however, advised Audit that it is currently using the ACT Y2K website and CMD's *Comunicado* magazine and has given preliminary consideration to:

- encouraging public statements by key local industry groups such as Canberra Business Council and the Chamber of Commerce and Industry;
- encouraging public statements by ACTEW; and
- facilitating regular media discussion of the issue.

In addition, The Chief Minister has written to a number of industry umbrella organisations to ask them to encourage their members to take all necessary steps to prepare for Year 2000.

These initiatives should be pursued and a major communications strategy for the Territory should be developed. Such a strategy should provide for the following matters to be addressed:

- awareness of the Year 2000 problem;
- the consequences of non-compliance;
- what aspects of businesses it may affect;
- sources of information;
- the need to focus on critical systems;
- the importance of contingency planning;
- the need for immediate action by businesses; and

- how the Year 2000 issue may affect the public.

3.5 INFORMATION TECHNOLOGY INFRASTRUCTURE

InTACT is the ACT Government's information technology service provider. The role of InTACT is to own and manage information technology infrastructure on behalf of Territory agencies in a cost effective and efficient manner. It is an element of the Chief Minister's Department.

InTACT is responsible for the whole of government information technology project, known as the modernisation project. InTACT is also the system owner for the whole of government financial management system, Oracle Government Financials and the whole of government human resource management system, known as PERSPECT. InTACT is also the provider of whole of government Revenue Receipting System known as RAPS. Overview comments on the modernisation project and aspects of the RAPS project follow. These projects and the Oracle and PERSPECT systems are discussed further in Chapter 28.

Modernisation Project

The Modernisation Project aims to acquire and implement modern information technology infrastructure in a consistent and cost effective manner across all Territory agencies. InTACT has formalised a detailed plan for the modernisation project by December. Part of the planning process was to prioritise the implementation sequence. The first element of the Modernisation Project to be installed by InTACT is the Canberra Hospital. This large project is nearing completion. A number of agencies with key Territory level critical systems, however, are well down InTACT's installation schedule.

Revenue Receipting System

This system is used for receipting monies across the whole of ACT Government. ACT Government Shopfronts are totally dependant on the operation of RAPS to collect revenue on behalf of the Government.

THE MANAGEMENT OF YEAR 2000 RISKS

InTACT has accepted responsibility for ensuring Year 2000 readiness of RAPS. The Chief Minister's Department has advised that a contract with Fujitsu was signed during the first week in May and that scoping of remediation necessary to make RAPS Year 2000 ready will commence immediately.

Audit Comment

InTACT is placing reliance on the successful completion of the Modernisation Project in a timely manner to ensure that information technology infrastructure for the whole of Territory Government is Year 2000 ready. The ultimate readiness of Oracle and PERSPECT is also dependent on the successful implementation of the modernisation project. The timeframe for the completion of this project, including final implementation testing by individual agencies, is extremely tight. In view of the extremely tight timeframe involved, Audit has concerns about InTACT's ability to achieve Year 2000 readiness for all of its whole of government systems and consider that its progress should be monitored very closely.

Apart from a \$10 million capital works funding injection to InTACT, there has been no budgetary allocation specifically for the costs involved in the assessment and remediation of Year 2000 issues. Each agency is required to fund its program from its annual appropriation. An arrangement has been made, however, for InTACT to borrow on agencies' behalf to fund any component of modernisation that is beyond the immediate capacity of individual agencies. Such borrowings are to be repaid to InTACT over a three year period. In view of the extremely tight timeframe involved for the modernisation project, it may be appropriate to consider providing additional resources to InTACT now to make the achievement of its objectives more certain.

A draft installation schedule for the modernisation project has been presented to the OITM Advisory Board. Audit understands that this schedule is now being adjusted to reflect appropriate priorities. Audit suggests that such adjustments should take into account the definition of Territory level critical systems detailed in Chapter 1 of this report.

Action to ensure that RAPS is Year 2000 ready has only just commenced. Progress in this matter will need to be followed intensively.

3.6 ASSET MANAGEMENT ARRANGEMENTS

Buildings used by Territory agencies may be either owned or leased by the Territory through the Office of Asset Management (OAM) or owned or leased by individual agencies. Responsibility for Year 2000 arrangements may differ in each of these cases.

OAM has the responsibility to manage the office buildings owned by the Territory. Totalcare is the property manager for the buildings owned by OAM and is OAM's representative for leased properties.

OAM has engaged Totalcare Property Management to report on the Year 2000 status of all properties managed on behalf of OAM and co-ordinate remedial action where appropriate. In the case of Territory owned buildings, Totalcare Property Management has completed an audit which investigated all building services such as mechanical services, electrical and lighting control systems, fire protection systems, lifts and security and access control systems. That report has been given to OAM and OITM. It details the status of all date dependent building systems and an estimate of the cost required to complete their remediation.

OAM have advised that they will undertake responsibility for the cost of remediation of Government owned buildings. The cost is estimated to be about \$250,000. Totalcare have advised that remedial work has commenced and will be completed prior to 1 January 2000.

Totalcare Property Management has written to all landlords of properties leased by OAM to request information on the status of their building systems. A number of responses are still outstanding.

Totalcare Building Maintenance has also written to its clients to advise them of their responsibilities regarding the need to undertake Year 2000 reviews of their buildings. Totalcare Building Maintenance has offered to undertake Year 2000 audits of those facilities on a fee for service basis and where necessary, residual works. Some agencies have accepted Totalcare Building Maintenance's offer. Others have engaged other providers to perform remedial work on their building systems.

Audit Comment

Notwithstanding the arrangements outlined above, some agencies remain confused about their responsibilities for the Year 2000 preparations of the

buildings that they use. Responsibilities need to be clarified as a matter of priority.

In addition, Audit considers that overall management arrangements would be improved if OAM prepared consolidated reports on progress in the assessment and remediation of date dependent systems in all buildings for which it is responsible. Agencies that either own or lease their own buildings would continue to report direct to OITM on their progress in these matters. Audit understands that consolidated reports are now being prepared on a monthly basis and included in the reports to the Chief Minister and the Executive.

3.7 EMERGENCY MANAGEMENT ARRANGEMENTS

The Emergency Services Bureau is responsible for disaster planning and coordination arrangements in the Territory.

The Bureau was established some years ago to create a forum for coordinating emergency response in the Territory. As a result, the Bureau now provides the administrative infrastructure and support for the Territory's four emergency services, that is the ACT Ambulance Service, ACT Bushfire Service, ACT Emergency Service and the ACT Fire Brigade.

The Bureau currently has disaster plans in place to cater for a wide range of emergencies. These plans are comprehensive and address key issues such as command, control, coordination, communications and liaison (including with adjacent shires) arrangements. The plans, however, do not specifically address Year 2000 issues. The Bureau has advised, however that action is in hand to modify its existing contingency plans by September.

There is no legislative basis, however, to the Bureau's emergency planning arrangements. As a result, the Department of Justice and Community Safety and the Bureau have developed an Emergency Management Bill to overcome these deficiencies. The Minister for Justice and Community Safety introduced the Bill to the Legislative Assembly in December 1998. The Bill provides for, among other things, the use of emergency powers in the case of technological problems including the widespread simultaneous failure of computers.

Audit Comment

Preparations for the formalisation of emergency arrangements are on track. The Act would provide a comprehensive framework for the management of emergencies in the Territory. Consideration of the Emergency Management Bill should be finalised by the Assembly as soon as possible.

3.8 LEGAL ISSUES

There are significant legal implications associated with a Year 2000 failure. These implications could possibly involve the Territory in significant legal and compensatory costs. Thus, consideration needs to be given to areas where liability may arise and steps that agencies should take to minimise the incidence of any subsequent liability.

The law of negligence considers the behaviour of a person who is in a sufficiently proximate relationship with another person so as to owe them a duty of care, in response to a foreseeable risk. If that duty is breached and results in loss or injury that is not too remote, then the person could be liable. In assessing liability the law would look at whether sufficient steps have been taken in response to that foreseeable risk.

Actions may be brought against suppliers or persons providing services affected by Year 2000 who cannot fulfil their explicit or implied contractual obligations. Failure to supply or provide, or incorrectly supply or provide, may give rise to an action in respect of breach of contract. It may also leave the recipient party in breach of its own obligations and liable for failure to perform.

Another key issue to be addressed in terms of potential risk and legal liability is the role an entity plays in the larger chain of supply. Even if an agency or system is Year 2000 compliant, the necessary inputs to the agency or system may not be. This interdependence highlights the need for co-operation and mutual disclosure in solving Year 2000 problems that may affect inter-reliant organisations.

The law requires employers to provide a safe place of work. The presence of embedded chips in a range of equipment and machinery, such as motor

THE MANAGEMENT OF YEAR 2000 RISKS

vehicles, biomedical equipment, buildings and security systems, gives rise to concerns regarding how such equipment may function on the change to the new millennium and beyond. Areas of risk should be identified and dealt with, particularly where there is risk of personal injury.

Actions may be brought against employers or landlords for the failure to deal with Year 2000 issues arising in respect of key building equipment such as security systems, lifts and air-conditioning systems. In addition to actions in tort and contract pursuant to leases, this may lead to liability under Occupational Health and Safety legislation.

Actions may be brought in relation to matters arising indirectly from a failure due to a Year 2000 problem. Where contingency plans have not been developed or are inadequate, there is scope for actions arising in tort and contract for consequential liability where a service is unable to be provided.

Audit Comment

All agencies should be mindful of the possibility of litigation against the Territory where due diligence and reasonable care is not exercised in regard to ensuring Year 2000 compliance. To this end, it is prudent to maintain adequate project records to demonstrate to external parties that all reasonable compliance actions have been taken to ensure business continuity during transition into the next millennium.

4 ACT COMMUNITY CARE

4.1 INTRODUCTION

ACT Community Care provides community health and disability services for all sections of the community. Services include caring for people with illnesses, promotion of health, prevention of illness and maintaining and improving quality of life.

4.2 SPECIFIC FINDINGS

- *Community Care's critical systems are its financial management system and its building systems;*
- *the software component of Community Care's financial management system is Year 2000 ready and the whole system will be Year 2000 ready when InTACT's Modernisation Project is finalised;*
- *Community Care's building systems are not Year 2000 ready, however, Community Care has advised remedial work will commence by early in the next financial year to address the compliance deficiencies identified; and*
- *work has recently begun to develop contingency and business continuity plans, and Community Care has advised that these should be complete by the end of June.*

4.3 OVERALL CONCLUSIONS ON CURRENT POSITION

While considerable progress has been made by ACT Community Care to ensure that its operations will not be disrupted by the change to the new millennium, there is some way to go before Community Care's critical systems and contingency plans will be Year 2000 ready.

If Community Care is able to complete the outstanding work mentioned in this chapter it will be in a good position to achieve an appropriate degree of readiness by the change to the new millennium.

4.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

Community Care has developed a Year 2000 plan and kept it updated. Community Care has an Executive Sponsor for the Year 2000 project and a Project Manager. Project progress is reported to the Community Care Information Systems Committee.

Inventory Assessment

A list of computerised information systems was compiled for the initial Year 2000 plan, and has been kept updated. Responsibility for the Year 2000 compliance of hardware rests with InTACT, and will be dealt with as part of the Information Technology Modernisation Project. Building systems have been dealt with by contractors. Bio-medical equipment has been assessed, and no important equipment has been found to be non-compliant.

Compliance Plan

Community Care has a compliance plan which has been updated several times to reflect the progress of the Compliance project. While the Plan's Action List provided detail on tasks, it did not include required completion dates for these tasks.

Community Care has advised that it has now addressed this and monthly reports submitted to OITM now include dates by which elements of their Year 2000 preparations are scheduled for completion.

Contingency Planning

Community Care has not developed any contingency plans to guard against the possible failure of its systems as a result of the transition to the new millennium. Community Care has advised, however, that it intends to have plans developed by mid year.

Audit Comment

The framework in place at ACT Community Care is appropriate to ensure that it is adequately prepared for the transition to the new millennium. The focus of Community Care's attention should now be directed to the preparation of comprehensive contingency plans.

4.5 STATUS OF CRITICAL SYSTEMS

Financial Management System

Community Care's financial management system is Oracle Government Financials. The software component is Year 2000 ready. Community Care is reliant on InTACT, through its Modernisation Project, to ensure that its hardware and operating systems are also Year 2000 ready. These matters are discussed further at Chapter 3.

Building Systems

A compliance audit of Community Care buildings was completed in October 1998. Community Care has advised that minor remedial work will commence early in the new financial year. Totalcare manages the Moore St building for the Office of Asset Management. Totalcare has assessed this building and remedial work will be carried out as part of the work on all ACT Government buildings.

Audit Comment

ACT Community Care is on track to ensure that the buildings under its management are not adversely affected by the transition to Year 2000. It relies on the activity of Totalcare and the Office of Asset Management to ensure its main building is not adversely affected.

4.6 STATUS OF OTHER SYSTEMS

Health Care Systems

Many of Community Care's small non-critical information applications are to be replaced by the Community Health Information System (CHIS) that is currently under development. Community Care has advised that although CHIS will not be developed and installed until well into 2000, almost all the non-compliant sub-systems it was to have replaced have now been replaced with interim sub-systems. Work on the interim sub-systems will be finalised when InTACT's Information Technology Modernisation Project is completed.

Community Care has also advised that the Breast Screening Monitor application is Year 2000 ready. In addition, the Methadone Dosing Management system is to be replaced by June.

4.7 LINKS WITH EXTERNAL ORGANISATIONS

The impact of links with external organisations has not yet been substantively addressed by Community Care. However, assessment of this area has commenced and Community Care has identified only a small number of items which are essential to the delivery of its services.

5 ACTEW CORPORATION LTD

5.1 INTRODUCTION

ACTEW Corporation is responsible for the supply, promotion and management of water and electricity and the provision and management of

sewerage service within the Territory. ACTEW Corporation has six subsidiaries:

- ACTEW Energy Limited;
- ECOWISE Environmental Limited;
- ACTEW Investments Pty Ltd;
- ACTEW China Pty Ltd;
- ECOWISE Services Ltd; and
- TransAct Carrier Pty Ltd.

This chapter addresses the Corporation and its subsidiaries.

5.2 SPECIFIC FINDINGS

- *ACTEW has three operational systems which are critical to its operations, that is the electricity transmission and distribution system, the water treatment and reticulation system, and the sewerage reticulation and treatment systems;*
- *ACTEW also has three applications and two hardware/software systems which are critical to its operations;*
- *none of ACTEW's systems are yet Year 2000 ready, although progress is being made on all systems;*
- *ACTEW has scheduled an external evaluation of the whole of its Year 2000 preparations for July and August, which will be completed by 31 August;*
- *ACTEW has contingency plans in place for most of its sub-systems and is currently in the process of developing an over-arching Year 2000 business contingency plan; and*

- *ACTEW does not generate its own electricity and its external electricity suppliers do not give assurances at any time that they are able to provide a continuing supply of electricity to their customers and they have given no indication that this policy will be varied to take account of concerns about the change to the new millennium.*

4.3 OVERALL CONCLUSIONS ON CURRENT POSITION

ACTEW has taken, and continues to take, satisfactory steps to prepare for the Year 2000 transition to protect itself and its customers from any negative impacts which may arise from the transition.

The comprehensive external review planned to be completed by August should provide a good guide to the effectiveness of ACTEW's preparations for the Year 2000.

The possibility that external electricity generators will not provide assurances that ACTEW will receive a continuing supply of electricity on the transition to the new millennium should be addressed in the context of a whole of government contingency plan. This matter is further discussed in Chapter 3.

5.3 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

During the early stages of the audit, Audit was concerned about the adequacy of the Corporation's Year 2000 preparations. Key areas of concern were the setting of key milestones, business area project reporting, the content of reporting to the Board, the completeness of the inventory of systems, management sign off of system assessment and conversion, and the standardisation of testing.

ACTEW has undertaken the following measures to address these issues.

THE MANAGEMENT OF YEAR 2000 RISKS

In December 1998, the ACTEW Board endorsed a revised and more stringent Year 2000 Project Framework and Plan. This plan includes monthly reporting to the ACTEW Board and the inclusion of Year 2000 as a standing agenda item at all fortnightly ACTEW Executive Meetings.

ACTEW appointed a new project manager with two full time project staff reporting to the Deputy Chief Executive. The project manager has responsibility to co-ordinate the Year 2000 project across all of ACTEW.

Since the December Board Meeting, ACTEW has taken a number of further actions including:

- upgrades to the level, style and frequency of progress reporting within ACTEW;
- the preparation of a step by step guide for achieving Year 2000 Readiness;
- the preparation of ACTEW Year 2000 Test Procedures, largely for software applications;
- the preparation of guidelines for the use of ACTEW's Systems Integration (Systems Test) Laboratory; and
- implementation of a Year 2000 project documentation strategy.

ACTEW has also appointed Year 2000 Delegates in each of its business areas. They have responsibility for developing an inventory, and arranging for the evaluation and remediation of all date dependent equipment and systems within their business area. They are also responsible for the review and/or development of Year 2000 contingency and disaster recovery plans.

Inventory Assessment

ACTEW's Year 2000 inventory includes its Information Technology infrastructure, financial and customer information systems, operational systems, building systems and dam control devices. Each business area was involved in compiling an inventory of systems upon which they rely.

ACTEW's inventory has not always been mapped to critical business processes to confirm priorities, but remedial action is underway. All Year 2000 Delegates have been requested to provide monthly updates of their

contributions to the corporate Year 2000 inventory. The Year 2000 reporting process now includes sign off as the only way an area/system/application can be declared as Year 2000 ready.

Compliance Plan

ACTEW's revised project plan includes the setting of key milestones for its critical systems. The Board receives monthly reports on progress against this plan. Year 2000 issues are also discussed at fortnightly ACTEW Executive Meetings.

ACTEW has also developed or is in the process of developing comprehensive procedures for developing Year 2000 Test Plans, largely for its software applications, and has prepared guidelines for use of its Systems Integration (Systems Test) Laboratory.

Contingency Planning

Since the early stages of the audit, an inventory of contingency plans has been completed and all contingency plans have been, or are being, reviewed to ensure that they are Year 2000 Ready.

ACTEW has developed contingency plans for the majority of its sub-systems forming the Electricity Transmission and Distribution System, the Water Treatment and Reticulation System and the Sewerage Reticulation and Treatment System. The contingency plans for four of ACTEW's sub-systems involve manual procedures.

ACTEW has also started to develop an over-arching Year 2000 Business Contingency Plan, which is designed to:

- integrate various contingency plans that already exist within ACTEW;
- document ACTEW's emergency preparedness management over the Year 2000 period; and
- document ACTEW's roles and responsibilities in relation to ACT community emergency management.

ACTEW has advised that it has developed generic disaster recovery plans for the electricity supply system. In addition, most key Year 2000 related failures in the water treatment and supply system and the sewerage system

could be overcome by the use of labour intensive manual operation of the necessary valves and by the use of stand by equipment that is not computer dependant if necessary.

Audit Comment

Although ACTEW has provided sufficient formal guidance in terms of an overall formal framework and a stringent compliance plan to ensure its business areas will not be affected by possible Year 2000 failure, the Audit process revealed a number of issues.

Audit noted that the inventory assessment has not been mapped to critical business processes in all cases since the initial assessment. This could result in some critical systems being overlooked, however, the technical audits planned at the end of each Year 2000 ready process in each business area, system and application, and the ACTEW wide evaluation over the July and August period should capture any slippage.

Audit noted the Corporation's omission to prepare formal contingency plans for those critical systems that would be replaced by manual procedures were they to fail. The use of manual procedures may be the appropriate contingency arrangements to react to a Year 2000 failure. Contingency arrangement of this nature should be documented to formalise the response and be tested to ensure that sufficient staff will be available on the day, the staff are aware of their contingency responsibilities and know precisely what the contingency procedures are.

Audit notes that contingency plans exist for all electricity, water and sewerage systems and that reviews of these plans in the light of Year 2000 are underway. Audit notes, however, that this level of preparedness does not yet exist in relation to critical applications.

5.4 STATUS OF CRITICAL SYSTEMS

This section identifies the agency's critical operational systems and assesses the Year 2000 readiness of each system.

In general terms, ACTEW has three operational systems, (that is the electricity transmission and distribution system, the water treatment and reticulation system and the sewerage reticulation and treatment system), three applications systems and two hardware/software systems that are critical to its operations. In addition, ACTEW's links with external electricity generators are a critical component of its operations.

5.5 THE ELECTRICITY TRANSMISSION AND DISTRIBUTION SYSTEM

The Electricity Transmission and Distribution System consists of five sub-systems. These are the supervisory and control systems, protection systems, metering systems, secondary systems and the operational monitoring and control system.

The supervisory and control systems — These systems monitor the electricity network and the operator interface allows control of the systems. There are 14 components that form ACTEW's total supervisory and control systems. All components have been evaluated and only two components require remediation.

The Protection Systems — These systems protect the network by monitoring the current flow and in some cases the voltage on the line. There are 18 protection components, all of which have been assessed as Year 2000 ready. An internal review by protection specialists of this equipment is underway.

The Metering Systems — These systems monitor and record the energy flow through the network for billing purposes. Of the nine components, one was found to be non-compliant and will be replaced.

The Secondary Systems — The secondary systems support the above three systems and usually consist of Uninterrupted Power Supply equipment, battery chargers etc. There are seven components forming the inventory of this system. Evaluation of these systems is 80% complete.

ACTEW has developed contingency plans for all aspects of electricity supply and has extensive generic disaster recovery plans for network failures

and disasters. These contingency plans are under review to ensure they take into account data related problems. ACTEW has advised that specific Year 2000 plans will be prepared.

The Operational Monitoring and Control System — The Operational Monitoring and Control System is a stand-alone system which allows ACTEW to monitor and control major elements of its electrical network remotely from its System Control Room. If this system were to fail this would reduce ACTEW's ability to respond to and rectify problems in the network.

The Corporation has advised that Year 2000 compliance information has been received from the vendors of all software components. Systems upgrades have been performed to rectify some hardware problems. Initial testing has been conducted. ACTEW has advised that final testing will be conducted by June.

The operator interface for the Operational Monitoring and Control System was Year 2000 tested during factory acceptance testing prior to installation within ACTEW. ACTEW has advised that a planned upgrade is scheduled shortly and re-testing will occur to monitor continuing system compliance.

Audit Comment

Most of the sub-systems forming the Electricity Transmission and Distribution System have been assessed as Year 2000 ready. ACTEW plans to have the whole system assessed as Year 2000 ready before the external evaluation scheduled to be completed by August.

The Operational Monitoring and Control System would be of particular importance in the event of reduced supply of electricity to the ACT. In these circumstances, failure of this system would affect the load shedding and restoration requests, which establishes priorities for the distribution of electricity to critical areas. Progress in the readying of this system should be monitored closely.

5.6 THE WATER TREATMENT AND RETICULATION SYSTEM

The Water Treatment and Reticulation System consists of six sub-systems, namely, the Water Supply Storage Dams, Bulk Water Supply Mains, Water Treatment Plants and Raw Water Pump Stations, Water Supply Service Reservoir Monitoring & Control System, Water Supply Pump Stations and Water Supply Reticulation Mains.

Water Supply Storage Dams — This group of assets comprises the four water supply storages for the Canberra and Queanbeyan water supply. These are Corin Dam, Bendora Dam, Googong Dam and Cotter Dam. These assets are major civil engineering structures, which have facilities for the controlled release of water from the associated impoundment to the downstream river and/or piping systems that convey the water from the storage to the water supply system.

The water supply storage dams, including all valves controlling the release of water, have been assessed as Year 2000 ready.

The release of water from the storages for both potable supply and environmental flows will not be affected by any loss of power supply to the ACT or NSW region. All electrically operated facilities can, if required, be manually operated.

Bulk Water Supply Mains — This group of assets comprises the key water supply mains connecting the water supply storages with the water treatment plants and then to city service reservoirs. These pipelines are civil engineering structures, which are equipped with isolating and control valves at various locations. The bulk water supply mains including all valves controlling the flow of water in the mains have been assessed as Year 2000 ready.

Water Treatment Plant and Raw Water Pump Stations — This group of assets consists of two water treatment plants and associated pump stations. All hardware and software associated with these assets have been certified by manufacturers as Year 2000 ready. Completion of all testing is scheduled for early May. ACTEW has advised that it is reasonably confident that any program modifications that may be required will not be major and will be developed, installed and tested by the end of June.

The Stromlo Water Treatment Plant is the major water treatment plant in the ACT. It has an emergency generator on site. In the event that there is a loss

THE MANAGEMENT OF YEAR 2000 RISKS

of power to the site, the generator is able to provide approximately 75% or more of the maximum daily demand for treated water for the Canberra/Queanbeyan region for several days without a resupply of fuel or continuously with a regular fuel supply.

Water Supply Service Reservoirs and Reservoir Monitoring and Control System — This group of assets comprises the 45 water service reservoirs located within the Canberra city area. The reservoirs, including all valves controlling the flow of water in the mains and level monitoring equipment in reservoirs, are Year 2000 ready. The operations of the reservoirs will not be affected by any loss of power supply, as the electrically operated valves can be manually operated if required. If required, reservoir levels can also be manually monitored, although this is resource intensive.

The hardware supporting the system has been assessed as Year 2000 ready but some testing is still required on the software used to monitor the overall network.

Water Supply Pump Stations — This group of assets comprises the 20 water pump stations located within the Canberra City area and the equipment used to monitor and control pump operation. The pump stations, including all valves controlling the flow of water in the mains and level monitoring equipment in reservoirs, have been assessed as Year 2000 ready. Control system equipment has been tested. All electrically operated valves at the facilities can, if required, be manually operated. The hardware used to monitor pump station operation has been assessed as Year 2000 ready. Some testing is still required on the software used to monitor the overall network.

Water Supply Reticulation Mains — This group of assets comprises the piping from reservoirs to consumer taps. Three pressure pumps are located within the piping network. The pressure pumps located within the network are currently being assessed, and Year 2000 readiness is scheduled for early April. Contingency plans have not been prepared for this area.

The piping does not have any electrical controls and therefore will not be affected by any Year 2000 problems.

Audit Comment

The Canberra Water Supply is considered at low risk from any Year 2000 problems. Power supply and communication system losses would not prevent the Canberra/Queanbeyan water supply from continuing to operate.

Water can be delivered to the city by gravity from Bendora Reservoir. Treatment of water at Stromlo will continue as this plant has its own full capacity emergency power supply. With the exception of a few high level reservoirs, all city service reservoirs are filled by gravity with no reliance on pumping.

5.7 THE SEWAGE RETICULATION AND TREATMENT SYSTEM

The Sewerage systems consist of three sub-systems. These are the Sewerage Reticulation System, Sewage Pump Stations and Sewage Treatment Plants.

Sewerage Reticulation System — This group of assets comprises the sewerage reticulation piping from consumer premises to either local sewage pump stations or to the sewage treatment plants.

The sewerage reticulation piping does not have electrical controls that will be affected by Year 2000 problems.

Sewage Pump Stations — This group of assets comprise the 28 sewage pump stations located within the Canberra City area and the monitoring system used to monitor pump operation.

The pump stations, including all valves controlling the flow of water in the mains and level monitoring equipment in reservoirs, have been assessed as Year 2000 ready. Control system equipment software is currently being evaluated. The control system software used to monitor pump station operation, and local monitoring and control hardware, has been assessed as Year 2000 ready.

All electrically operated valves at the facilities can also, if required, be manually operated.

THE MANAGEMENT OF YEAR 2000 RISKS

Sewage Treatment Plants — ACTEW has three Sewage Treatment Plants, but only the Lower Molonglo Water Quality Control Centre is considered essential. The plant has its own emergency power generator and a storage dam that would enable the plant to continue to operate effectively for several days without resupply of fuel or continuously with a regular fuel supply. All instrumentation systems have been identified and satisfactorily tested for Year 2000 readiness. This plant is able to have its related equipment/process systems operated manually.

In the event of failure, the plant processes could be operated at reduced efficiency. The main problem would be the lack of an accurate flow measurement that would prevent effective chemical dosing. Without an accurate measurement of the flow of effluent, dosing could only be done on an estimated basis. If those estimates were inaccurate, it may have health implications and could result in some environmental damage down stream.

Completion of all testing is scheduled for early May. ACTEW is confident that any program modifications will be developed, installed and tested by June.

Audit Comment

The Year 2000 readiness of the Sewerage Reticulation and Treatment System is well under way and many aspects can be manually controlled if necessary. However, the possibility of environmental and possibly other damage as a result of inadequate treatment of sewerage indicates the importance of developing and testing adequate contingency plans.

5.8 CRITICAL APPLICATIONS

There are three applications which ACTEW has determined as critical. This section describes the agency's critical applications and comments on their Year 2000 readiness.

The Customer Information Management System (CIMS) — The Customer Information Management System maintains data on ACTEW's customers and supports the billing process. There are several interfaces to

THE MANAGEMENT OF YEAR 2000 RISKS

external agencies including the provision of meter data to ACTEW and billing information to a third party for bill processing. ACTEW plans to undertake Year 2000 testing in May.

The National Electricity Market System — The National Electricity Market System supports ACTEW's participation in national and local electricity markets. The system is used for forecasting, wholesale and retail energy purchasing, sale and settlement and billing of contracts. It is a newly developed in-house system, which has been developed, in full recognition of Year 2000 issues.

Financial Management System — ACTEW's financial management system is currently in ACTEW's Year 2000 Systems Test laboratory. ACTEW has advised that the corporate Payroll System is also due to go into the Year 2000 System Test laboratory shortly.

ACTEW has advised that test plans are currently being developed for all critical software systems and that contingency plans are being prepared to ensure that key business processes can continue in the event of a Year 2000 failure.

Audit Comment

The Year 2000 readiness of ACTEW's critical applications is well under way. Appropriate attention is being given to the importance of developing and testing adequate contingency plans.

5.9 HARDWARE/SOFTWARE SYSTEMS

This section describes the agency's critical hardware/software systems and comments on their Year 2000 readiness.

Information Technology Infrastructure — The Information Technology Infrastructure supports business applications, including operating systems, databases, servers etc. ACTEW has defined a Year 2000 ready Desktop 99 system which is scheduled to be implemented across ACTEW before June. The Desktop 99 Operating Systems have been installed in ACTEW's Systems Integration Laboratory and are to be rolled out in April. The

THE MANAGEMENT OF YEAR 2000 RISKS

Desktop 99 Office Automation Systems are to be installed and tested in the laboratory during April and will be rolled out in May.

Voice and Data Communications System — Voice Communications within ACTEW occur via its privately owned and operated PABX which interfaces to the public network. The PABX system is awaiting final sign off by management to certify its Year 2000 readiness. Should the public network fail, ACTEW will use its own internal voice communications system.

ACTEW has its own in-house trunk mobile radio and a Very High Frequency radio system, which is used for communications with people in vehicles, remote locations etc. These systems are not Year 2000 ready but ACTEW has advised that compliance is expected shortly. ACTEW has also advised that the trunk mobile radio has partial dependence on ACTEW's Wide Area Network but the high frequency radio system is completely independent.

Electronic data communications are generally via the Information Technology Infrastructure. ACTEW's network is privately owned and operated. The only Year 2000 issue for the network relates to the remediation of some switching mechanisms, which are currently being investigated.

ACTEW has advised that contingency plans are being prepared to cover the possibility that its voice and data communication systems fail.

Audit Comment

ACTEW is taking adequate steps to ensure that its critical hardware/software systems will be Year 2000 ready. Appropriate attention is being given to the importance of developing and testing adequate contingency plans.

5.10 STATUS OF OTHER SYSTEMS

ACTEW has many other financial, operational and management systems, as well as embedded systems in plant, equipment and buildings all of which are now in the evaluation or remediation phase.

THE MANAGEMENT OF YEAR 2000 RISKS

ACTEW plans to have all systems Year 2000 Ready by June. ACTEW has advised that this will be followed by an external evaluation of the whole ACTEW Year 2000 effort, which is planned to be completed by August.

5.11 KEY LINKS WITH EXTERNAL ORGANISATIONS

ACTEW does not generate electricity itself but purchases it from inter-state electricity generators. Accordingly, it is of the utmost importance that ACTEW seeks to ascertain as much information on the Year 2000 readiness status of its suppliers as possible, whether it would continue to receive electricity in the event of a Year 2000 failure by one or more of its suppliers, and the priorities for the distribution of electricity if demand exceeds supply as a result of a Year 2000 failure.

ACTEW actively participates in the Electricity Supply Association of Australia Forum and the Electricity Association of New South Wales Forum to keep abreast of what is happening in relation to Year 2000 Readiness amongst electricity generators. Both of these industry groups encourage the sharing of information and resources to identify, discuss and resolve issues of mutual concern.

External generators do not provide assurances about the electricity supply under normal circumstances, therefore assurances about supply in relation to the Year 2000 will not be forthcoming.

ACTEW has advised that the members of the Electricity Association of New South Wales are currently addressing the question of the continuity of supply in the event of a Year 2000 related failure. They plan to complete consideration of this issue in June.

In the event of a reduced availability of electricity arising from a Year 2000 related failure, the supply of electricity to the ACT in comparison with other regions is managed in accordance with a memorandum of understanding between the National Electricity Market Management Company (NEMMCO) and each of the State and Territory Governments. In accordance with this understanding, if there is a shortage of electricity as a result of a Year 2000 related failure, NEMMCO would direct ACTEW to shed load according to the demands of the specific situation.

THE MANAGEMENT OF YEAR 2000 RISKS

In the event of reduced supply of electricity to the ACT, ACTEW has a load-shedding schedule, which establishes priorities for the supply of electricity within the ACT. This priority takes into consideration public safety, reliance on electricity, customer sensitivity and alternate generation sources. Examples of high priority loads include hospitals without emergency power, high rise apartments without stand by generators and hazardous industries. Examples of medium priority loads include hospitals with emergency power, perishable food processing plants and multi-story shopping complexes. Examples of low priority loads include domestic and rural customers.

Audit Comment

Although ACTEW itself may, in the end, be well prepared to meet the challenges of the Year 2000, it would be of little consequence if it is unable to receive supplies of electricity from inter-state generators. Therefore it is important for ACTEW to continue to be actively involved in industry forums to keep abreast of developments and to influence inter-state and national outcomes.

6 ACT FORESTS

6.1 INTRODUCTION

According to the latest Department of Urban Services annual report, ACT Forests manages 26,900 hectares (ha) of the ACT's non-urban land including 15,700 ha of pine plantation. The non-plantation land includes riverine and road reserves, nature reserves, woodland conservation areas, vegetation corridors and water features including creeks, rivers, dams and the Cotter Reservoir. ACT Forests has 42 employees and supports other jobs in forestry and saw-milling activities in the region.

6.2 SPECIFIC FINDINGS

- *ACT Forests have no critical systems;*
- *ACT Forests believes the compliance status of its MARVL, TIMBER MASTER, spreadsheet packages and STAND PAK systems is contingent on the successful implementation of the InTACT Modernisation Project;*
- *ACT Forests has stated it is in the process of modifying and testing all systems with a view to them being fully Year 2000 ready by the end of June; and*
- *a formal, documented business continuity plan specifically addressing Year 2000 issues has not yet been prepared by ACT Forests, however, formal business continuity plans will be implemented as and when considered necessary.*

6.3 OVERALL CONCLUSIONS ON CURRENT POSITION

While progress has been made by ACT Forests to ensure that its operations will not be disrupted by the change to the new millennium, there is still some way to go before contingency plans will be Year 2000 ready. ACT Forests have advised that contingency plans will be formally documented as and when they are considered necessary.

If ACT Forests is able to complete the outstanding work, including that mentioned in this chapter, Forests will be in a good position to achieve an appropriate degree of readiness within the required timeframe.

6.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues and Inventory Assessment

ACT Forests has compiled a high level inventory of business applications in the form of a 'Corrective Action Report'. The inventory listing also outlines tasks, time schedules, progress and comments. The listing is reported to the Department of Urban Services Year 2000 action officer on a monthly basis, and is required to be formally signed off by ACT Forests Information Technology Manager and Executive Director.

Contingency Planning

ACT Forests has not yet documented a business continuity plan addressing potential implications from the Year 2000 date change. ACT Forests believe that in the event of a disaster, affected applications could be recovered in a period of time unlikely to result in adverse economic consequences to their business.

ACT Forests have advised that they have identified risk areas and have considered the impact and ways of working around them. Furthermore, they have advised, that they expect their important risk areas will be addressed. ACT Forests have advised that because of this, it is not considered to be an efficient or appropriate use of resources, at this stage, to prepare formal business continuity plans.

ACT Forests have also advised that the progress of Year 2000 remediation will continue to be monitored. Formal business continuity plans will be put in place as and when required.

Audit Comment

ACT Forests has made progress toward ensuring systems potentially affected by the Year 2000 date change have been identified and monitored in a systematic manner. The only outstanding matter is the formalisation of its business continuity plans.

6.5 STATUS OF OTHER SYSTEMS

ACT Forests have advised that they manage all their own buildings. They further advise that their building systems are limited to simple security and air-conditioning systems that have been reviewed. The agency has concluded that there is little risk arising from Year 2000 failure of these systems. If failure were to occur it would have no operational impact and would cause minimal inconvenience. Given this, ACT Forests does not intend to seek expert advice from external parties, such as Totalcare.

Other systems have also been identified by ACT Forests as important, but not critical. The potential failure of these systems is seen as significant, but unlikely to materially affect the ongoing viability of the business. Plans for the testing, updating and certifying these systems has also progressed such that ACT Forests believe all systems will be Year 2000 ready by June.

ACT Forests believes the compliance status of its MARVL, TIMBER MASTER, spreadsheet and STAND PAK systems is contingent on the successful implementation of the InTACT driven modernisation project. None of these systems, however, have been ranked as critical.

7 ACT HOUSING

7.1 INTRODUCTION

ACT Housing acquires and manages public housing properties and tenancies. Its specific role is:

- providing information on housing assistance options – public, private, community based and emergency;
- assessing applicant eligibility and allocating public rental properties;
- managing rental tenancies, tenant rent accounts and public housing property assets; and

THE MANAGEMENT OF YEAR 2000 RISKS

- assessing and providing rental assistance to public and private tenants.

7.2 SPECIFIC FINDINGS

- *ACT Housing's critical systems are its loans, property and rent system, its financial management system and building systems;*
- *the loans, property and rent system is not Year 2000 compliant and is being replaced, with a view to having the system fully Year 2000 ready by June;*
- *ACT Housing's building systems are not Year 2000 ready, however, ACT Housing has identified those building systems which contain embedded chip technology and have engaged Totalcare and Asset Services to evaluate and modify these systems, where necessary by June; and*
- *a formal, documented contingency plan specifically addressing Year 2000 issues is currently being prepared.*

7.3 OVERALL CONCLUSIONS ON CURRENT POSITION

While progress has been made by ACT Housing to ensure that its operations will not be disrupted by the change to the new millennium, there is still some way to go before the Department's critical systems and contingency plans will be Year 2000 ready.

If ACT Housing completes the outstanding work, including that mentioned in this chapter, they will be in a good position to achieve an appropriate degree of readiness by the millennium change.

7.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues and Inventory Assessment

ACT Housing has compiled an inventory of business applications. The inventory listing also outlines tasks, time schedules, progress and comments. The listing is reported to the Department of Urban Services Year 2000 action officer on a monthly basis, and is required to be formally signed off by ACT Housing's Information Technology Manager and Executive Director.

Contingency Planning

ACT Housing has given consideration to potential adverse implications from the Year 2000 date change, and is in the process of documenting a formal business continuity plan.

Audit Comment

ACT Housing has undertaken adequate steps to ensure that all Year 2000 risks are systematically addressed. The continuity of its operations is also well supported through development of contingency plans.

7.5 STATUS OF CRITICAL SYSTEMS

Comments on each of ACT Housing's critical systems follow.

Loans, Property and Rent System

The loans, property and rent system has three modules – Loans Management, Property Management and Client Management.

The Loans Management module is no longer used. The loans portfolio and related data was transferred to a private sector company in April.

The Property Management and Client Management modules are to be replaced by an off the shelf Year 2000 compliant system by the end of June.

The Homenet system implementation is to commence in early April and be completed by June. Homenet is an off the shelf package that is certified Year 2000 ready by the vendor.

Financial Management System

ACT Housing's financial management system is Oracle Government Financials. It is reliant on InTACT to ensure this system is Year 2000 ready. ACT Housing is also reliant on InTACT, through its Modernisation Project, to ensure that its hardware and operating systems are also Year 2000 ready. These matters are discussed further at Chapter 3.

Building Systems

ACT Housing has identified three building systems that contain embedded chip technology. It has indicated that one of these systems has been assessed and was found to have no Year 2000 impact on its functions. ACT Housing has advised that the remaining two systems will be assessed and modified where necessary by June. Totalcare has been engaged to undertake this task.

Audit Comment

The successful and timely implementation of ACT Housing's new system is expected to mitigate the Year 2000 risks associated with ACT Housing's identified critical systems, based on representations made by the system's vendor. The system will require testing by ACT Housing before it is confirmed as Year 2000 ready.

7.6 STATUS OF OTHER SYSTEMS

Other systems have been identified by ACT Housing as important, but not critical to their business. The potential impact of the failure of these systems is seen by ACT Housing as significant, but unlikely to affect ongoing operations. Plans for the testing, updating and certifying of these systems has progressed such that ACT Housing believe all such systems will be Year 2000 ready by June.

8 ACTION

8.1 INTRODUCTION

ACTION operates Canberra's public bus network. It also provides school services, charter buses and special needs transport services.

8.2 SPECIFIC FINDINGS

- *ACTION's critical systems are its Automated Ticketing System, its financial management system, its payroll system and its building systems;*
- *none of ACTION's critical systems are Year 2000 ready, however, the Automated Ticketing System is currently being redeveloped and advice has been sought for the vendor on the status of the payroll system;*
- *ACTION advises that evaluation has been undertaken of Year 2000 risks associated with its leased head office building; the only matter outstanding is a report on Year 2000 readiness of the fire detection system; ACTION also advise that in relation to depots, workshops and plant, managers are currently working with consultants to evaluate Year 2000 readiness; and*
- *a formal, documented business continuity plan specifically addressing Year 2000 issues is currently being prepared.*

8.3 OVERALL CONCLUSIONS ON CURRENT POSITION

To date limited progress has been made by ACTION to ensure that its operations will not be disrupted by the change to the new millennium. Considerable work remains to be completed.

In view of the tight timeframes involved, Audit has some doubts about ACTION's ability to achieve Year 2000 objectives for its critical systems in the short term. Audit considers that progress should be monitored closely for those systems. ACTION should also finalise the timeframe for testing of its business continuity plan.

Agency Response

Subsequent to considering Audit's overall conclusions, ACTION advised that it had engaged additional resources to assist it in ensuring that its critical systems are Year 2000 ready.

8.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues and Inventory Assessment

ACTION has compiled an inventory of business applications. The inventory listing also outlines tasks, time schedules, progress and comments. The listing is reported to the Department of Urban Services Year 2000 action officer on a monthly basis, and is required to be formally signed off by ACTION's Information Technology Manager and Executive Director.

Contingency Planning

ACTION has given consideration to potential adverse implications from the Year 2000 date change, and is in the process of documenting a formal business continuity plan. ACTION anticipates completing this plan by April. The timeframe for testing of this plan has not been finalised at the time of the review.

Audit Comment

While ACTION has adopted an appropriate framework to ensure systems potentially affected by the Year 2000 date change have been identified and their progress is updated, efforts need to be focused on validating its business continuity plan through testing.

8.5 STATUS OF CRITICAL SYSTEMS

Comments on each of ACTION's critical systems follow.

Automated Ticketing System (ATS)

ACTION's Automated Ticketing System (ATS) has been identified as critical. The system is crucial in collecting fares and generating patronage and revenue information. The ATS is not Year 2000 ready. ACTION anticipates that it will take approximately 3 months of development and testing to ensure the system is Year 2000 ready. ACTION has engaged a contractor to undertake this redevelopment. No final decision, however, on timing for commencement of this project had been made at the time of the audit.

Financial Management System

ACTION's financial management system is Oracle Government Financials. It is reliant on InTACT to ensure this system is Year 2000 ready. ACTION is also reliant on InTACT, through its Modernisation Project, to ensure that its hardware and operating systems are also Year 2000 ready. These matters are discussed further at Chapter 3.

Payroll System

Certification has been sought from the vendor of the payroll system (PERSON), however this is yet to be received.

Building Systems

Buildings owned or leased directly by ACTION did not appear on ACTION's Year 2000 Compliance inventory at the time of the Audit, and thus the responsibility for ensuring the Year 2000 Compliance of these systems is uncertain.

ACTION advises, however, that an evaluation has been undertaken of Year 2000 risks associated with their leased head office building. The only matter outstanding is a report on Year 2000 readiness of the fire detection system. In relation to depots, workshops and plant, managers are currently working with consultants to evaluate Year 2000 readiness.

Audit Comment

ACTION has made limited progress on working towards achieving compliance of its critical systems. Considerable work is necessary to ensure this area is adequately addressed prior to the Year 2000. It is considered critical that development and testing to ensure the ATS system is Year 2000 ready is commenced immediately. The buildings owned or leased directly by ACTION should also be formally identified, recorded and appropriate action taken to ensure potential issues are addressed.

8.6 STATUS OF OTHER SYSTEMS

Other systems have been identified by ACTION as important, but not critical to their business. The potential impact of the failure of these systems is seen by ACTION as significant, but unlikely to affect ongoing operations. Plans for the testing, updating and certifying of these systems has progressed such that ACTION believe all such systems will be Year 2000 ready by June.

9 ACTTAB LTD

9.1 INTRODUCTION

The principal activity of ACTTAB Ltd is the provision of a totalisator betting service, offering a wide range of bet types and betting facilities, in active competition with other gambling media. ACTTAB has the exclusive right to provide totalisator betting services in the ACT for races and other sporting events held within and outside the Territory. In addition to the totalisator services, ACTTAB provides other services relating to betting as approved by the Government such as Keno with the South Australian Lotteries Commission and Footy TAB with TAB Limited.

9.2 SPECIFIC FINDINGS

- *ACTTAB's critical systems are its betting systems and its financial management system;*
- *ACTTAB's betting systems are Year 2000 ready;*
- *ACTTAB has been advised that its financial management system is Year 2000 compliant and testing to verify its readiness is scheduled to be completed by June;*
- *testing of interstate links is partially complete and all interface testing is expected to be finalised by June;*
- *ACTTAB's other systems are undergoing assessment, modification and testing with the objective of them being fully Year 2000 ready by June; and*
- *contingency planning is well underway and is forecast to be finalised by the middle of this year.*

9.3 OVERALL CONCLUSIONS ON CURRENT POSITION

ACTTAB has given top priority to remedying any defects in its critical operational and business systems.

Action taken by ACTTAB to date and the satisfactory completion of work in prospect appear to be sufficient to indicate that it will be Year 2000 ready. The single significant issue is the completion of contingency plans.

9.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

The ACTTAB Board has approved a Year 2000 Compliance Strategy prepared by the agency's Technology Division and has made available the necessary resources required to complete the Year 2000 project on a timely basis. In addition, the Board has given approval for the recruitment of two additional Technology Division staff specifically for the year 2000 project. One of these positions has been filled and attempts are continuing to fill the remaining position. Top priority has been given to remedying any defects in its critical betting systems.

The ACTTAB Board monitors the progress of the Year 2000 project through reports that are provided to it on a monthly basis. The monthly report includes a table of all tasks in ACTTAB's Year 2000 project, for all systems. The table lists the percentage complete and anticipated completion date for all tasks and systems.

Inventory Assessment

ACTTAB has compiled a detailed inventory of computer hardware, software applications, operating systems and those computerised systems that are embedded in operational systems and other facilities that may potentially have a Year 2000 impact. A database has been developed to record and monitor progress on all these items.

Compliance Plan

ACTTAB's high level Year 2000 Plan for the remediation of the agency's systems has been noted by the ACTTAB Board. A more detailed plan that outlines tasks, time schedules and resources required has been developed. The Board receives monthly reports on progress against this plan.

Vendor compliance certification has been sought from the suppliers of all external systems. Comprehensive test plans have been developed and are being refined. System testing has highlighted the need for increased automation of integration tests. Accordingly, test plans are being refined and additional hardware has been allocated to assist in the conduct of testing.

Contingency Planning

ACTTAB is currently in the process of formally documenting contingency plans. The plans are being progressively developed on the basis of integration testing of the components of the betting and other systems. Progress has been made in planning the process that will deliver a business continuity plan. The agency's plans are forecast to be finalised during the middle of the year.

Audit Comment

ACTTAB has placed high priority on completing all necessary modifications and testing of its critical and other systems to ensure that its operations are not threatened by Year 2000 failure. In particular the agency has rightly given top priority to remedying any defects in its critical business systems. The single significant issue is the completion of ACTTAB's contingency plans.

9.5 STATUS OF CRITICAL SYSTEMS

Comments on ACTTAB's critical systems follow.

Betting Systems

The most critical system supporting the operations of ACTTAB is the Betting System. This is a stable system, which was built in-house and is over 20 years old. It consists principally of four sub-systems for on-line betting, off-line processing, end of day and the betting system network. The system also includes a number of interstate links.

Remediation work and functionality testing has been completed, and ACTTAB has advised that specific Year 2000 issue testing has now been successfully completed. ACTTAB's Betting Systems are now Year 2000 ready.

Key Links with External Organisations

The operations of ACTTAB place heavy reliance on computer based facilities such as automated data processing and data communications, both

THE MANAGEMENT OF YEAR 2000 RISKS

in a local and interstate environment. ACTTAB has received advice from all interstate link partners specifying the status of their Year 2000 systems compliance.

ACTTAB links with TABCORP in Victoria for the pooling of racing bets which comprise the majority of ACTTAB's turnover. TABCORP has advised that its systems will be Year 2000 ready by mid 1999. ACTTAB has advised that two tests have been successfully conducted with TABCORP. TABCORP have indicated that due to the success of the tests, no further testing is likely to be required for Year 2000 compliance. Should TABCORP fail Year 2000 compliance, ACTTAB is in a position to either pool on its own or make arrangements with other TABs who would be similarly affected by TABCORP's non-compliance.

ACTTAB links with TAB Limited in NSW for the pooling of FootyTAB bets. Year 2000 testing has already been successfully completed with NSW.

ACTTAB links with the South Australian Lotteries Commission (SALC) for the pooling of Keno. SALC are currently in the process of implementing a new selling system. The Commission has advised that the new system is Year 2000 ready and will be on-line no later than mid 1999. Should SALC fail to introduce their new Year 2000 ready system, ACTTAB will not be able to run Keno.

Financial Management System

ACTTAB's financial management system is the SunSystems accounting package. Statements are in hand with ACTTAB from the package developers confirming that the version in use is Year 2000 compliant. ACTTAB plans to test and verify these statements by June.

Audit Comment

ACTTAB has made significant effort on its critical systems to ensure their Year 2000 readiness. Outstanding work is largely dependent on timing, specified by external agencies.

9.6 STATUS OF OTHER SYSTEMS

In addition to the main betting system, ACTTAB uses many systems that are provided by software and hardware vendors. These systems include the 'Micro Pay' payroll system, office automation software, operating systems and hardware systems. Although failure of these systems will not have as significant an impact as the cash betting system, they would affect the operations of ACTTAB.

ACTTAB installed the latest version of Micro Pay which has been certified by its vendor as Year 2000 compliant. ACTTAB has advised that initial Year 2000 testing has been successful. This version is expected to be put into production in May, after completion of Year 2000 testing.

ACTTAB sought certification from all vendors that their products are Year 2000 ready. For non-respondents, they have repeated their request for information on their latest compliant version and advice on upgrades if necessary.

ACTTAB has two systems that use embedded chip technology. These are the Uninterrupted Power Supply system and the telecommunications system. The timer on the Uninterrupted Power Supply System has no functional impact on the systems operation. All telecommunications equipment used in connection with the Telebet service has recently been replaced. The supplier has certified this equipment as Year 2000 ready subject to the supporting computer equipment also Year 2000 ready. ACTTAB has now completed action to ensure that this supporting equipment is also Year 2000 ready.

Audit Comment

ACTTAB has made significant progress on its other systems to ensure Year 2000 readiness. It has placed high priority on completing all necessary modifications and testing of other systems to ensure that its operations are not threatened by Year 2000 failure.

10 AUSTRALIAN INTERNATIONAL HOTEL SCHOOL

10.1 INTRODUCTION

The Australian International Hotel School was created under the *Hotel School Act 1996*, with the objective of providing education and training to develop knowledge and skills in relation to hotel management and related fields. Currently the major activity of the School is based on the delivery of a degree in Hotel Management, developed in affiliation with Cornell University.

The School also operates a boutique hotel on a commercial basis for the purpose of providing practical experience for students of its degree program.

10.2 SPECIFIC FINDINGS

- *The School's critical systems are its financial management system and its building systems;*
- *neither of these systems are Year 2000 ready, however, progress is being made to address compliance issues; and*
- *the School has not documented any contingency planning activities.*

10.3 OVERALL CONCLUSION ON CURRENT STATUS

The School is adopting a systematic approach to addressing Year 2000 issues. It will not however be Year 2000 ready in the short term. The School has considerable work to perform to become Year 2000 ready. The School is aware of this and has appropriate plans in place.

THE MANAGEMENT OF YEAR 2000 RISKS

The School should formally develop contingency plans to guard against the possibility of failure of its systems during the transition to the new millennium.

10.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

The School has engaged consultants to identify systems at risk of Year 2000 failure, and funding has been specifically allocated within the School's budget to action any remediation required.

The School has established an Information Technology Steering Committee, which has overall responsibility for Year 2000 activities. The Committee is directly involved in examining and assessing impact, alternate services, quotations and options for replacement. Progress on the Year 2000 project is reviewed by the School's Finance and Audit Committee, which reports to its Board.

The Steering Committee has also relied on the Information Technology Modernisation Project managed by InTACT to reduce its exposure to Year 2000 issues. The Committee is currently providing direct input to the Modernisation Project and identification of replacement software for business systems where compliance does not appear certain. These systems include the Hotel Systems, Student Records and Library System.

Inventory Assessment and Compliance Plan

To determine the exposure of the School to Year 2000 risks, arrangements were entered into with InTACT to engage a consultant to identify and report on all operational software and embedded systems for Year 2000 compliance. This report, provided in July 1998, forms the basis of the School's Plan for achieving compliance.

Vendor compliance certification has also been sought from the suppliers for its two major applications and the PABX system.

Contingency Planning

The School has not formally documented its contingency planning arrangements.

Audit Comment

The School has adopted a systematic approach to addressing Year 2000 issues. It should now focus attention on formally developing and documenting contingency plans to guard against the possibility of failure of its systems during the transition to the new millennium.

10.5 STATUS OF CRITICAL SYSTEMS

Each of the School's critical systems is discussed following.

Financial Management System

The financial management system for the School is not Year 2000 ready. Vendors have certified the software application (Exact) as Year 2000 compliant. No testing has been undertaken, however, to confirm that the software is Year 2000 ready.

The School is reliant on InTACT, through its Modernisation Project, to ensure that its hardware and operating systems are Year 2000 ready. This matter is discussed further at Chapter 3.

Building Systems

The initial survey by the consultants identified the Honeywell control system which controls electricity supply, the School's security system and lifts as possibly having embedded chip technology associated with its functions. The School has advised that Totalcare is currently undertaking a detailed assessment and progress is being closely monitored.

Audit Comment

The School's financial management system can only be considered to be Year 2000 ready after its compliance status has been tested by processing a

THE MANAGEMENT OF YEAR 2000 RISKS

range of date dependent transactions that span the change to the new millennium and other critical dates.

The School will need to give careful consideration to the remedial action to be taken on non-compliant building systems disclosed as a result of the assessment being undertaken by Totalcare.

10.6 STATUS OF OTHER SYSTEMS

The School records details of revenue it receives from the Hotel and student accommodation on the Hotel Operations System which utilises the Maxial application. The School has advised that the system requires upgrading or replacement. It is currently investigating the possibility of integrating it with the financial management system.

The School has in excess of 50 desktop computers whose compliance status is dependent upon the upgrade of its hardware components through the InTACT Modernisation Project scheduled for August. It has advised that action has already been taken to replace the hardware in the student Information Technology Laboratory to avoid disruptions to students.

The School has advised that the PABX system requires upgrading and action is being taken to examine appropriate cost actions.

The School also has a number of other systems such as the Student Registration and Administration system, the Library system and Teaching Hotel Simulation system which are all currently being investigated for compliance or are undergoing remedial action.

11 CALVARY PUBLIC HOSPITAL

11.1 INTRODUCTION

Calvary Public Hospital is a fully accredited public hospital funded by the ACT Government for the people of Canberra and surrounding regions. The Hospital shares the same building as with Calvary Private Hospital. This arrangement allows for a sharing of infrastructure and support services. The ACT Hospice is also an integral part of Calvary's public hospital services.

11.2 SPECIFIC FINDINGS

- *The Hospital's critical systems are its bio-medical systems, its financial management system and its building systems;*
- *more than 95% of its bio-medical systems have been assessed as Year 2000 ready; the Hospital is conducting extensive testing on its remaining bio-medical systems to ensure they are fully Year 2000 ready by June;*
- *the Hospital's building systems are not Year 2000 ready, however, action is in hand to have them upgraded or retired by the end of the year;*
- *the Hospital also has critical links with ACTEW, AGL, Telstra and Optus for the provision of electricity, water, gas and telecommunications services; the Year 2000 status of these systems is unknown; and*
- *the Hospital does not have a business continuity plan, however the Hospital has advised that it is addressing this issue.*

11.3 OVERALL CONCLUSION ON CURRENT POSITION

While considerable progress has been made by Calvary Hospital to ensure that its operations will not be disrupted by the change to the new millennium, there is still some way to go before its critical systems will be Year 2000 ready.

If the Hospital is able to complete the outstanding work, including that mentioned in this chapter, it will be in a good position to achieve an appropriate degree of readiness within the required timeframe.

11.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

To date the Hospital has not developed a formal corporate policy, which provides the necessary authority and resources required to address Year 2000 issues.

However, the Hospital has developed a document titled 'Year 2000 Strategy Calvary Hospital Inc.' This document outlines a strategy for resolving Year 2000 issues, provides guidelines for developing systems inventory and testing and a broad timeline for completion of Year 2000 remedial work. The completion date is scheduled for June.

The Manager of the Information Systems Department is responsible for overseeing the Year 2000 project. In general, remedial work in relation to Information Systems within the Hospital is carried out by members of the Information Technology Department, in consultation with representatives from user areas. Remedial work relating to bio-medical systems is being carried out by vendors.

While management of Year 2000 risks has largely been informal, the Hospital has demonstrated a strong commitment to ensuring its critical systems will not fail during the millennium transition.

The Hospital has advised that it is committed to allocating adequate resources to ensure necessary systems testing is completed. To date, the

THE MANAGEMENT OF YEAR 2000 RISKS

Hospital has committed \$1m to upgrade its Patient Management Information Systems to ensure that it is Year 2000 ready.

Inventory Assessment

The Hospital has completed an inventory assessment in relation to hardware, software, bio-medical embedded systems and non bio-medical embedded systems. Although risk assessments have been conducted, these are considered by Audit as incomplete in that items assessed as non-risky or irrelevant have been removed.

The Manager of the Information Systems Department advised that all critical systems would be tested, including those systems that are subject to Year 2000 compliance certification.

Compliance Plan

Although the Hospital has not developed a formal compliance plan, it has a schedule which outlines the timelines for completion of Year 2000 remedial work.

To date assessment of the impact of systems failure is carried out based on the 'Year 2000 Strategy Calvary Hospital Inc.' document. The impact of the failure of Information Technology systems is assessed as being either critical or irrelevant to the hospital's operations. Those items that are assessed as being critical are reassessed to ensure prioritisation of remedial work.

Contingency Planning

The Hospital has not developed a comprehensive business continuity plan.

Staff have given some preliminary consideration to actions that could be taken in the event of systems failure. These plans are currently being documented for all critical systems. The Information Systems Department is also updating its contingency and disaster recovery plans.

Audit Comment

While some detail is not included in the existing inventories, Audit is satisfied that suitable work has been undertaken in the identification of critical systems and the prioritisation of remedial work to be undertaken at the Hospital.

The Hospital has advised that it is also planning to develop compliance, contingency and business continuity plans to minimise its exposure to possible Year 2000 failure.

11.5 STATUS OF CRITICAL SYSTEMS

Bio-Medical Embedded Systems

The Hospital is heavily reliant upon embedded systems. These are most prevalent in bio-medical life support systems and diagnostic systems, which are critical to its operations. Since community safety is a top priority, most effort in relation to embedded systems has focused on this area.

Assessment of the impact of failure of these systems is carried out by technicians responsible for their maintenance, in consultation with staff who use the equipment.

Extensive testing has been conducted on these bio-medical systems as an initial step in identifying the potential for Year 2000 failure. The Hospital has advised that testing of more than 95% of the bio-medical systems have been completed. Vendors are carrying out necessary remedial work. Information Systems Department staff and bio-medical technicians have undertaken additional testing in those areas where remedial work has been completed.

Financial Management System

The Hospital's financial management system is Oracle Government Financials. The Hospital is reliant on InTACT to ensure that this system is Year 2000 ready. The Hospital is also reliant on InTACT, through its Modernisation Project, to ensure that its hardware and operating systems are also Year 2000 ready. These matters are discussed further at Chapter 3.

Building Systems

The Hospital's building systems include lifts, heating and air conditioning systems. Testing has indicated that most of this equipment does not involve date and time processing. However, steps were taken to identify all items

that are at risk of Year 2000 failure, and these will either be upgraded to a Year 2000 ready status, or be retired before the end of the year.

Audit Comment

The Hospital has identified all bio-medical and whole of Government systems, which are considered critical to its operations. It has taken an appropriate approach to testing and remediation of these systems to ensure that disruptions are not caused as a result of Year 2000 issues.

11.6 KEY LINKS WITH EXTERNAL ORGANISATIONS

The Hospital has critical links with ACTEW, AGL, Telstra and Optus for the provision of electricity, water, gas and telecommunications services. These issues are discussed following and also in Chapter 3.

Electricity Supply to the Hospital — ACTEW has advised that it cannot guarantee its Year 2000 readiness status as it relies on many third parties to provide compliant products, services and information. However, the Hospital has an emergency generator that can provide electricity to its critical areas on a continuing basis subject to the continuing availability of fuel.

Gas Supply for Boilers and Kitchen Facilities — The Hospital uses gas for its boiler equipment and for kitchen facilities. AGL has advised that it expects to be Year 2000 ready by June. In the event of failure of the gas supply, the Hospital's boiler can be fuelled by diesel and sufficient steam for the Hospital's purposes could be provided on a continuous basis subject to the continuing availability of diesel. A majority of the Hospital's kitchen facilities are dependent on gas and if the gas supply failed cold collations, salads etc could be provided for patients, while hot food would need to be obtained externally.

Telephone and Communications Network — The Hospital's external communications occur via the Telstra telephone lines, Optus Mobile telephone network, ISDN lines for data communication and via two-way radios with the ACT Ambulance Service. The status of the Telstra and Optus telecommunications networks are unknown. The Hospital has

advised that in the event of a failure of both the Telstra and Optus telecommunications systems, it could maintain contact with ambulance and other emergency services through use of the two-way radio system.

Water and Sewerage Services to the Hospital — Water and Sewerage Services are also provided by ACTEW. Toilets in the Wards are on a flusherette system and there is a potable water tank to supply water to the wards in the short term. The Hospital has advised that in the absence of the main water supply, the flusherette system may last about half a day and the potable water tank may last about 3 to 5 days.

Audit Comment

The Hospital's critical dependence on ACTEW, AGL, Telstra and Optus for provision of electricity, water, gas and telecommunication services are matters for serious attention. Embryonic contingency plans have been developed for these services and further work is required.

11.7 STATUS OF OTHER SYSTEMS

The Hospital's business systems are its Patient Management Information Systems and its Windows application programs. These two are parallel systems are accessed through the desktop machines.

A project plan covering the \$1m replacement of these systems is in place and the project is underway. Operational plans exist to further assess and test outstanding items by June.

Non Bio-Medical Embedded Systems — The Hospital also has a number of other systems which use embedded chip technology. These systems are found in some areas of medical support, such as sterilisation equipment and pathology analysis equipment and telecommunications. Sterilisation and pathology analysis equipment have been assessed as Year 2000 ready.

Existing telecommunications equipment (PABX) was found to be non-compliant. According to the supplier's assessment, the effect of non-compliance will only affect the reporting not the functionality of the

THE MANAGEMENT OF YEAR 2000 RISKS

equipment. Calvary has advised that the PABX is scheduled for replacement in the near future.

11.8 OTHER LINKS WITH EXTERNAL ORGANISATIONS

ACT Pathology located at the Canberra Hospital in Woden, provides pathology analysis services to the Hospital. All equipment in the Pathology Section of Calvary Hospital has been tested and is Year 2000 ready. The compliance status of the pathology equipment in Canberra Hospital is currently not known by Calvary management.

The Hospital also uses a system known as Purchase and Inventory Control System (PICS) to facilitate its supply function. This is done through a direct computer link with Business Services Bureau of the Department of Health and Community Care which is the principle agent for supply of hospital consumables. Failure of the PICS system will not have an immediate impact on the Hospital's operations, but in the short term it would impact on the supply of its necessary consumables. The PICS application is not Year 2000 ready, but a Year 2000 ready version is currently being tested by the Information Management Unit of the ACT Department of Health and Community Care.

Audit Comment

Most of the Hospital's business systems are assessed as Year 2000 ready, and those that are not, are in the process of being made ready.

12 CANBERRA CEMETERIES TRUST

12.1 INTRODUCTION

The Canberra Cemeteries Trust operates pursuant to the provision of the *Cemeteries Act 1933*. The principal activity of the Trust is to manage and operate the Gungahlin, Hall and Woden cemeteries.

12.2 SPECIFIC FINDINGS

- *The Trust's critical system is its Arrow financial management system;*
- *a Year 2000 compliant version of Arrow has been installed, however, the software has not yet been tested to verify its Year 2000 readiness and the readiness status of the Trust's hardware is unknown;. the Trust has advised that it plans to upgrade its hardware and then test its software; and*
- *the Trust has not prepared a contingency plan, although it has advised that its financial management operations can be conducted manually.*

12.3 OVERALL CONCLUSION ON CURRENT POSITION

Because of the nature of its operations, the Trust is unlikely to have serious Year 2000 problems. However, it does need to test its software package when its hardware has been modernised and also set in place appropriate contingency arrangements.

12.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

The Trust has not established a formal plan to address Year 2000 issues.

Inventory Assessment

No formal inventory or risk assessments were conducted because of the very small size of the Trust.

Compliance Plan

The Trust does not have a Compliance Plan, however, it has obtained certification of Year 2000 compliance from the consultants who installed the financial management system and the Cemeteries Trust database. The Trust has also engaged a consultant to assess all its systems and ensure they are ready for the millennium transition.

Contingency Planning

The Trust has not developed formal contingency or business continuity plans. However, it has advised that it can operate with a manual system.

Audit Comment

The Trust has undertaken an informal approach to managing Year 2000 risks. Without a full inventory, impact assessment and compliance plan, there is a possibility that some of its systems may be overlooked. The absence of a formal contingency plan leaves the Trust vulnerable to unforeseen problems in the event of a Year 2000 related failure.

12.5 STATUS OF CRITICAL SYSTEMS

The Trust's only critical system is discussed following.

Financial Management System

The Trust's financial management system utilises the ARROW Accounting Software package to enable the preparation of periodic financial statements.

THE MANAGEMENT OF YEAR 2000 RISKS

It advised that this software was upgraded to a Year 2000 ready version in January.

The compliance status of the Trust's computer hardware is unknown. The Trust has engaged a consultant to assess and remediate its non-compliant hardware.

Audit Comment

The Trust is taking adequate steps to ensure that its systems will be Year 2000 ready.

12.6 STATUS OF OTHER SYSTEMS

The only other system used by the Trust is the Cemeteries Trust Database. This database records the burial details for each plot. It has been assessed as Year 2000 ready by the consultants who installed the system.

13 CANBERRA CULTURAL FACILITIES CORPORATION

13.1 INTRODUCTION

The Canberra Cultural Facilities Corporation's primary objective is to add value to the cultural life of the ACT and region by delivering high quality arts and heritage services, through professional management of its facilities.

The Corporation undertakes the management of a number of cultural assets on a purchaser/provider basis with the Chief Minister's Department. The operations of the Corporation are funded by a combination of user charges from the Government, and revenue generated by the Corporation's

THE MANAGEMENT OF YEAR 2000 RISKS

performing arts businesses and programmes, and by admission fees and activities associated with the museum and galleries.

13.2 SPECIFIC FINDINGS

- *The Corporation's critical systems are its financial management and building systems;*
- *the financial management system software is a widely used commercial package which was purchased on the premise that it is Year 2000 compliant; however, the Corporation has advised that testing may be conducted following installation if it is deemed necessary;*
- *all of the Corporation's building systems are not Year 2000 ready, however, outstanding systems are scheduled to be upgraded by June; the Corporation also believes that the impact of any building system failure would be minor inconvenience, as all systems have manual overrides whose operation is well understood by staff; and*
- *the Corporation has prepared contingency plans for its computerised systems.*

13.3 OVERALL CONCLUSION ON CURRENT POSITION

If the Corporation is able to complete the outstanding work mentioned in this chapter it is well placed to achieve Year 2000 readiness by the change to the new millennium.

13.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

Two officers were assigned to be responsible for the transition of the Information Technology systems to Year 2000 compliance. Although the approach taken was somewhat informal, the size of the organisation is such that this approach has not had an impact on the outcome.

Inventory Assessment

A formal inventory and impact assessment was carried out by Corporation staff, in conjunction with external experts where appropriate. Further confidence of the comprehensiveness of the inventory was gained from an independent review undertaken of the Corporation's Year 2000 exposure in 1998. The Corporation's museums and galleries and the Canberra Theatre Centre were reviewed to identify all operational and embedded systems for Year 2000 compliance.

Compliance Plan

Whilst there was no formal plan, the Corporation adopted an approach whereby risks were identified, vendor statements were obtained where appropriate, and where systems were to be replaced, Year 2000 compliance was listed as a procurement prerequisite.

Contingency Planning

The Corporation has prepared contingency plans for its financial management system, building systems and its ticketing system.

Audit Comment

Although the Corporation has adopted a relatively informal approach to managing Year 2000 issues, it has provided sufficient management support and resources required to ensure that the transition to Year 2000 does not have an adverse impact on its normal operations.

13.5 STATUS OF CRITICAL SYSTEMS

Financial Management System

The financial management system used by the Corporation utilises the ACCPAC accounting software. The Corporation has advised that the software was purchased in 1999, with Year 2000 compliance forming part of the selection criteria. It has also advised that testing will be undertaken once the system has been fully installed if any significant risk is identified, and a cost-effective testing solution is available.

The Corporation has also advised that full transaction, trial balance and financial hardcopy reports will be generated prior to the millennium transition. Due to its size, a range of manual replacement procedures could be implemented that would allow business continuance if a Year 2000 failure were to occur.

Building Systems

The Corporation has advised that its alarms, fire, emergency lighting, PABX and call accounting systems have been assessed as being fully Year 2000 ready.

The Canberra Theatre Centre air conditioning system is not Year 2000 ready and requires a software upgrade. The Museum's security system has been upgraded. The security systems of the Theatre and remote locations are only partially compliant.

The Corporation has advised that Year 2000 readiness for all building systems is scheduled for completion by June. It has also advised that all major building systems have manual overrides on all automated components.

Audit Comment

Subject to testing of the Corporation's financial system and remediation and testing of its building systems which have been identified to be non-compliant, the Corporation is well placed to achieve Year 2000 readiness by the change to the new millennium.

13.6 STATUS OF OTHER SYSTEMS

Although the ticketing software has been extensively tested and is assessed as Year 2000 ready, the operating system upon which it relies is non-compliant. The Corporation has advised that the operating system is scheduled to be upgraded by June. The Corporation has also advised that in any event manual procedures can be implemented for at least a couple of weeks.

The Corporation is reliant on InTACT, through its Modernisation Project, to ensure that its hardware and operating systems are Year 2000 ready. This matter is discussed further at Chapter 3.

14 CANBERRA INSTITUTE OF TECHNOLOGY

14.1 INTRODUCTION

The Canberra Institute of Technology serves the vocational, educational and training needs of the ACT and its region from six main campuses located at Bruce, Reid, Southside, Weston, Fyshwick and Watson. The Institute has some 18,000 full and part time students and some 1,900 staff.

This Chapter also addresses the Year 2000 preparations of CIT Solutions Pty Ltd which is wholly owned by CIT. CIT Solutions Pty Ltd offers customised training programs for commercial clients, study tours for groups from overseas, and educational and specialist consultancies. The Company is also a major provider of adult and community education courses in the ACT and its surrounding regions.

14.2 SPECIFIC FINDINGS

- *CIT's critical systems are its Student Information Management System, its building systems and its financial management system;*
- *the Student Information Management System is not Year 2000 ready, however, a compliant version of the system will be installed in June and will then require testing to confirm that it is Year 2000 ready;*
- *CIT has advised that its building systems are Year 2000 ready; and*
- *CIT has not completed any contingency plans for its critical systems but has advised that they will be in place by June.*

14.3 OVERALL CONCLUSIONS ON CURRENT POSITION

CIT has put in considerable effort to address its Year 2000 issues and has advised that all of its critical systems will be Year 2000 ready for the new millennium. A large number of items of non-critical date dependent plant and equipment, however, have yet to have their Year 2000 status assessed. Furthermore, CIT needs to refine its compliance planning procedures as soon as possible.

If CIT completes its identified work as planned, including that raised in this Chapter, its key systems will be Year 2000 ready. Audit has some concern, however, about the extent of work required to assess and remediate, where necessary, all of CIT's non-critical date dependent plant and equipment. It is possible that all of this equipment will not be Year 2000 ready by the end of the year. CIT has advised that if any of these systems fail, the only impact would be disruptions to classes or other inconveniences to staff or students. If this assessment is correct, and the disruptions to classes are minimal, then the impact on CIT would be manageable.

14.4 MANAGEMENT AND PLANNING

Formal Framework in Addressing Year 2000 Issues

The Year 2000 Compliance Plan developed in 1997 provides the framework for the management of Year 2000 issues at CIT. Each faculty, school and unit is responsible for ensuring that systems that they own achieve Year 2000 readiness.

The Year 2000 project is co-ordinated and monitored by the CIT Management Information System Steering Committee. The Committee is chaired by the General Manager Corporate Services. It meets quarterly to review the progress made.

Inventory Assessment

CIT advised that its Year 2000 project office maintains a comprehensive inventory of applications, systems and equipment. The office also assists individual faculties, schools and units to undertake investigation of systems they own.

Compliance Plan

In accordance with CIT's Year 2000 Compliance Plan, individual faculties, schools and units are responsible for liaison with vendors and testing, where possible, systems to ensure they are Year 2000 ready. However, CIT has not developed a testing regime including test data, test platform, protocol and expected outcomes for applications, systems and equipment. Similarly there are no sign-off procedures in place to ensure compliance by individual faculties, schools or units. In addition, the Compliance Plan does not include an action plan for each individual faculty, school or unit to enable performance monitoring and early identification of slippage. Some Year 2000 vendor compliance certificates are vague generalised statements that should not be relied upon as indicators of those systems Year 2000 status.

Contingency Planning

CIT does not currently have contingency plans in place for its critical systems, however, it is in the process of developing them. CIT has advised that these contingency plans will be available by June, as required.

Audit Comment

Deficiencies in CIT's compliance planning procedures should be rectified as soon as possible. If they are not rectified, it is possible that CIT will be unable to effectively provide management oversight of its Year 2000 processes.

Audit has examined some of CIT's outline contingency plans for some of its systems and considers that they appear to address the relevant issues. When they are completed they will provide for effective strategies to work around failed date dependent systems. CIT will also need to give attention to developing agency level contingency plans to provide for the continuity of its business should critical systems fail as a result of the change to the new millennium.

14.5 STATUS OF CRITICAL SYSTEMS

Student Information Management System

The current version of the Student Information Management System used by CIT is not Year 2000 compliant. CIT has advised that it will be installing a compliant version in June.

Building Systems

CIT has advised that all building systems have been replaced and tested and are now Year 2000 ready.

Financial Management System

CIT's financial management system is Oracle Government Financials. CIT is reliant on InTACT to ensure that this system is Year 2000 ready. CIT is also reliant on InTACT, through its Modernisation Project, to ensure that its hardware and operating systems are also Year 2000 ready. These matters are discussed further at Chapter 3.

Audit Comment

After the new version of the Student Information Management System is installed in June it will need to be comprehensively tested by CIT before it can be assessed as Year 2000 ready.

CIT has advised that all of its building systems have been tested before they were assessed as Year 2000 ready. Audit notes that the comprehensive testing of these systems was particularly important, given the vague and generalised nature of some of the certificates of compliance provided to CIT by some vendors.

14.6 STATUS OF OTHER SYSTEMS

CIT has some 8000 items of plant and equipment that may have embedded date dependent systems. The year 2000 compliance status of these items is unknown. CIT has advised that individual faculties, schools and units are currently examining their asset listings to identify any items that may have Year 2000 problems that have not already been remedied. CIT has advised that if any of these systems fail the only impact would be disruptions to classes or inconvenience to staff or students.

CIT uses Two Teacher systems, the Part-Time Teacher System and Full-Time Teacher System. These systems maintain records on hours of employment of CIT's full-time and casual staff, staff availability and subjects they are qualified to teach. Both systems were assessed as being non-compliant and are to be replaced by a module from the Year 2000 compliant version of the Student Information Management System when it is installed in June.

CIT has a library system called Book Plus which maintains details of borrowings and returns of its library books. The current version is non-compliant. CIT is currently pursuing the vendors of the system to establish when the Year 2000 ready version will be released. CIT plans to upgrade, but not test, the new version.

15 CANBERRA TOURISM AND EVENTS CORPORATION

15.1 INTRODUCTION

The Canberra Tourism and Events Corporation was established as a statutory corporation by the *Canberra Tourism and Events Corporation Act 1997*. The Corporation aims to maximise the social, cultural, economic and employment benefits of tourist visitation to the ACT community through the promotion of the Territory as a tourist destination and through the provision of quality tourism events and services.

The Corporation operates the Canberra Visitors Centre and undertakes a range of promotional and marketing activities. The Corporation's Board also oversees two separate events, Floriade and the Rally of Canberra.

15.2 SPECIFIC FINDINGS

- *The Corporation's critical systems are its financial management system and its building systems;*
- *whilst the Corporation's financial management software has been certified to be Year 2000 ready, it is reliant on InTACT to ensure its hardware is Year 2000 ready;*
- *the building systems consist of systems located at the Canberra Visitors Centre and SAP Tower; the building systems within the Canberra Visitors Centre have been assessed as Year 2000 ready; the Corporation is planning to obtain written advice from the Building Managers of the SAP Tower on that building's Year 2000 status; and*
- *the Corporation has advised that contingency plans are currently being developed with a view to completing them by May.*

15.3 OVERALL CONCLUSION ON CURRENT POSITION

Although the Corporation is well placed to achieve Year 2000 readiness, further work is necessary including upgrading and testing its hardware and operating systems, and the preparation of appropriate contingency plans.

15.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

The Corporation's Information Technology Services are provided by Telstra Atlas for the Atlas Amadeus Reservation System and InTACT for hardware and software. The Corporation has also engaged a consultant to examine all the Year 2000 issues and identify areas of non-compliance that may fall between the two service providers.

Inventory Assessment

The consultant has identified and conducted a risk analysis of all computerised systems utilised by the Corporation.

Compliance Plan

The Corporation has a documented compliance plan which outlines key events and timelines to ensure compliance of its Information Technology systems. The Corporation has advised that it plans to have all its hardware and software systems ready by August.

Contingency Planning

The Corporation has advised that contingency plans are currently being developed and should be completed by June.

Audit Comment

The Corporation has undertaken a formal approach to addressing possible Year 2000 risks and is well placed to be Year 2000 ready by the change to the new millennium.

15.5 STATUS OF CRITICAL SYSTEMS

Comment follows on each of the Corporation's critical systems.

Financial Management System

The Corporation's financial management system is Oracle Government Financials. InTACT has certified the software as Year 2000 ready. However, the Corporation's hardware and operating systems are not Year 2000 ready. The Corporation has advised that depending on the outcome of discussions between itself and InTACT, a decision will be made as to whether the Corporation proceeds with InTACT's Modernisation Project or an alternative service provider.

Building Systems

The Corporation has premises at the Canberra Visitors Centre and within the SAP Tower. It has advised that the Visitors Centre has been assessed as Year 2000 ready in terms of cabling, security and equipment.

The SAP Building is leased from the Canberra Centre management and all building operational systems are their responsibility. The Corporation has requested certification of compliance.

Audit Comment

Subject to the upgrade and testing of its hardware and operating systems, the Corporation is well placed to achieve Year 2000 readiness by the change to the millennium.

15.6 STATUS OF OTHER SYSTEMS

The Corporation also utilises the following software applications to conduct its operations.

The Corporation uses Microsoft Office 97 Professional, which is not Year 2000 ready. However, it has advised that this can be rectified using the free Microsoft resources available on the Internet.

THE MANAGEMENT OF YEAR 2000 RISKS

The Corporation is meeting with OITM to discuss options for a full hardware and software modernisation by August.

The Canberra Visitors Centre uses Atlas 2000, a central reservation system. Atlas has provided the Corporation with documentation confirming that all software provided is Year 2000 compliant.

16 CANDELIVER LIMITED

16.1 INTRODUCTION

CanDeliver Limited was incorporated on 22 September 1997 and commenced trading on 1 October 1997. The Company's main activity is prime contracting of public sector corporate and support services. To achieve this, the Company uses local business firms in consortia. This enables some firms to be involved in bids for large contracts that would otherwise be beyond their capacity. The ACT Government holds all shares in the Company.

16.2 SPECIFIC FINDINGS

- *The Company's critical systems are its financial management systems and its building systems;*
- *the financial systems' software and hardware have been certified by vendors as Year 2000 compliant and the Company intends to conduct Year 2000 testing prior to June;*
- *all components of the building systems have been assessed and were found to have no date dependent components; and*
- *the company has developed contingency plans for its critical systems.*

16.3 OVERALL CONCLUSION ON CURRENT STATUS

The Company is taking adequate steps to ensure that all its systems are Year 2000 ready. Year 2000 testing on financial systems' software and hardware are expected to be completed by June. It is also noted that the Company is reliant on InTACT to ensure that its wide area network (WAN) environment and electronic mail become Year 2000 ready.

16.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

The Company's quality system requires that only Year 2000 ready software be installed on its personal computers and server. Statements of compliance are required before installation can occur.

In July 1998, the Company's computer systems were upgraded to meet Year 2000 requirements. It purchased new personal computers, a server, telephone system, software and installed new cabling and a NT networking environment.

The only part of the system which was not upgraded, was the electronic mail system and the Wide Area Network (WAN) environment. Apparently the WAN environment cannot be upgraded until the ACT Government WAN systems are upgraded, to ensure that the two systems are compatible.

Inventory Assessment

The Company maintains an inventory of its software and hardware systems and their compliance status.

Contingency Planning

The Company has developed contingency plans for its financial management and building systems.

Audit Comment

The Company has adopted a formal framework in addressing Year 2000 risks. It has undertaken adequate steps to ensure all systems will be Year 2000 ready.

16.5 STATUS OF CRITICAL SYSTEMS

The following comments are provided on each of the Company's critical systems.

Financial Management Systems

The Company's financial management system uses the MYOB Accounting Software package. The contractor who manages the Business Centre has commenced using Quickbooks Pro to record sub-contractor payments. A monthly report is generated by the Business Centre and the financial information is consolidated into the Company's financial system manually.

Both systems have been assessed as Year 2000 compliant. The Company has advised that Year 2000 testing will be conducted on both systems prior to June. A manual contingency option is also available should either system fail to operate.

Building Systems

The Company's building systems consist of its air-conditioning system and lifts. The Building Owners do not foresee any problems of systems failure due to Year 2000 issues as both systems are not date dependant. However, suitable contingency options are available in the event that either system should fail.

Audit Comment

The Company is well placed to achieve Year 2000 readiness by the change to the new millennium.

16.6 STATUS OF OTHER SYSTEMS

The Company's internal systems are Year 2000 ready, both in terms of hardware and software. However, the Company is reliant on InTACT, through its Modernisation Project, to ensure that its WAN environment and its electronic mail are also Year 2000 ready. This matter is discussed further at Chapter 3.

17 CASINO SURVEILLANCE AUTHORITY

17.1 INTRODUCTION

The ACT Casino Surveillance Authority is an independent statutory authority established under the Casino Control Act 1988 to supervise the operations of the Canberra Casino. The Authority ensures that Casino activity is conducted in accordance with the Act, approved rules of the games and agreed operating procedures. For example, the Authority is responsible for keeping the Casino crime free by monitoring activity within the Casino, and is responsible for auditing and verifying Casino revenues and therefore Government Casino tax receipts.

17.2 SPECIFIC FINDINGS

- *The Authority's critical systems are its system used to verify Casino revenues, its financial management system and its building systems;*
- *the system used to verify Casino revenues is not fully Year 2000 ready and will be upgraded as part of the InTACT Modernisation Project;*

THE MANAGEMENT OF YEAR 2000 RISKS

- *the vendor has certified the financial management system software as Year 2000 compliant; the Authority has advised that it has also conducted sample testing to verify its readiness;*
- *the Year 2000 status of the Authority's building systems is unknown, however it has requested advice on this matter from the building manager; and*
- *the Authority has advised that it has developed formal contingency and business continuity plans for all of its computerised systems.*

17.3 OVERALL CONCLUSION ON CURRENT POSITION

While progress has been made by the Authority to ensure that its systems will not be disrupted by the change to the new millennium, there is still some way to go before the Authority will be year 2000 ready.

If the Authority's modernisation is completed on schedule and its building systems are made Year 2000 ready as planned, it should be Year 2000 ready by year end.

17.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

The Authority has adopted a formal framework to address Year 2000 issues.

Inventory Assessment

The Authority has compiled a detailed inventory of computer hardware, software applications, operating systems and those computerised systems that are embedded in operational systems.

Compliance Plan

The Authority has developed a compliance plan. Compliance certification has also been requested from the Building Manager.

Contingency Planning

The Authority has developed formal contingency and business continuity plans for all its computerised systems.

Audit Comment

The Authority has undertaken adequate steps to ensure that all Year 2000 risks are systematically addressed. The continuity of its operations are also well supported by contingency and business continuity planning.

17.5 STATUS OF CRITICAL SYSTEMS

Comments on each of the Authority's critical systems follow.

Verification of Casino Revenues

The Authority audits and verifies casino revenues and therefore government casino tax receipts. Records of tax receipts are maintained on Excel spreadsheets. The computer systems will need to be upgraded to ensure full year 2000 compliance. The Authority has advised however, that this task can be performed manually if necessary.

Financial Management System

The Authority's financial management system utilises the MYOB Accounting Software package, which has been certified by its suppliers to be Year 2000 compliant. It has advised that sample testing indicates that the software package is Year 2000 ready. The Authority has also advised that it is possible to revert to manually generated accounts if the need arises.

Building Systems

The Authority's building systems consists of its lifts, security system, automatic doors and lighting. It has requested the Year 2000 compliance

THE MANAGEMENT OF YEAR 2000 RISKS

status of these systems from the Building Manager. The Authority has advised that a full report on building systems is expected in mid April.

Audit Comment

Completion of outstanding work is dependent on implementation of a modernised environment by InTACT, and any work that may be required by the building managers to ensure the building systems are Year 2000 ready.

17.6 STATUS OF OTHER SYSTEMS

The Casino Employee Licensing Database (Paradox), stores details on the Casino's licensed employees. The supplier of Paradox has confirmed that Paradox itself is Year 2000 ready, but indicated that there may be Year 2000 issues in the applications developed by the Authority. The Authority has advised that minor modifications have been completed on the database and extensive testing has revealed that it is Year 2000 ready.

The Authority's hardware consists of five personal computers, which are owned by InTACT. It is reliant on InTACT, through its Modernisation Project, to ensure that its hardware and operating systems are also Year 2000 ready. This matter is addressed further at Chapter 3.

18 CHIEF MINISTER'S DEPARTMENT

18.1 INTRODUCTION

The core role of the Chief Minister's Department is to assist the Government in achieving its strategic objectives and implementing its programs.

THE MANAGEMENT OF YEAR 2000 RISKS

Its stated major objectives are to provide corporate leadership and drive in the planning, development and implementation of ACT government strategy, financial and economic management, and asset management.

The objectives are achieved through four functional Offices: Business Development and Tourism, Asset Management, Strategy and Public Administration and Financial Management.

The Interim Kingston Foreshore Development Authority and the Registrar of Financial Institutions operate as administrative units within the department. As such, the management of Year 2000 risks for these agencies is being undertaken as part of the management strategy set in place by the Department and is addressed in this chapter.

18.2 SPECIFIC FINDINGS

- *The Department's critical systems are:*
 - *the budget development system;*
 - *Rates & Land Tax System;*
 - *ACTTAX – the taxation system;*
 - *Gaming Machine System;*
 - *the ACT Public Service payroll distribution system;*
 - *agency monthly financial reporting system;*
 - *financial management system; and*
 - *building systems.*
- *None of the Department's critical systems are Year 2000 ready, however, considerable progress is being made towards upgrading them to be Year 2000 ready;*
- *with the exception of the Rates and Land Tax and ACTTAX systems, all of the Department's critical systems are undergoing final testing; the Department has advised that arrangements for the final testing of the Rates and Land Tax system are under consideration and action is underway to ensure ACTTAX will be upgraded and tested by June;*

THE MANAGEMENT OF YEAR 2000 RISKS

- *building systems are still in the early stages of being prepared to be year 2000 ready, however, the Department has advised that these systems are expected to be Year 2000 ready by June; and*
- *the Department does not have comprehensive contingency plans in place for any of its systems, however, the Department has advised that it will have contingency plans in place for all of its critical systems by June.*

18.3 OVERALL CONCLUSION ON CURRENT POSITION

While progress is being made by the Department to ensure that its operations will not be disrupted by the change to the new millennium, there is still some way to go before the Department's critical systems and contingency plans will be Year 2000 ready. The Department has advised that it expects all but one of its systems will achieve this objective by June.

In view of the tight timeframes involved, it is possible that the Department may not achieve its Year 2000 objectives for those systems with June deadlines. Audit considers that the Department's progress should be carefully monitored including the development and testing of comprehensive contingency plans.

18.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

The Department has developed a comprehensive framework based on policies and standards for addressing Year 2000 issues developed by OITM. The framework addresses Year 2000 compliance, including development of contingency plans, and involves monthly status reports to Government.

Inventory Assessment

During the early stages of the audit there were concerns that the inventory of computerised systems undertaken within the Department was restricted to business systems software and did not address hardware, operating systems, embedded systems or office automation software.

The Department advised that the inventory has been reviewed and it now includes service wide corporate systems.

Compliance Plan

The Department engaged Q Data Consulting Pty Ltd to prepare a broad high level Year 2000 Compliance Plan. This work was completed in June 1998. Further to this, analysis work is being carried out to address the implementation issues of migrating the business applications to a new platform. The Department has advised that it has engaged a separate contractor to manage the process.

Contingency Planning

The Department does not have comprehensive contingency plans in place for any of its systems or the Department as a whole. The Department has advised, however, that its business application managers are developing contingency plans for their respective systems. When these are completed they will provide for business continuity in the event of a Year 2000 failure. These are expected to be in place by June in accordance with OITM guidelines.

Audit Comment

The Department is taking adequate steps in the overall planning and management of the process of achieving Year 2000 readiness. The key outstanding matter is the development and testing of contingency plans. Audit notes the Department's advice that it will have its contingency plans completed by June and stresses the importance of meeting this deadline. Progress in this regard should be monitored closely particularly with regard to the scope and comprehensiveness of those plans.

18.5 CRITICAL SYSTEMS

The following comments are provided on each of the Department's critical systems.

Budget Development System

The 'Budget Development Application' is the system used by the Office of Financial Management, in association with government agencies, to develop the budget. This system has been upgraded to make it Year 2000 ready and is currently in the testing phase. The Department has advised that it anticipates that final testing will be complete by June.

Revenue Systems

There are three critical systems in the Department that are fundamental to the collection of revenue in the ACT. The systems are discussed in the following.

The Rates & Land Tax System — This system operates on a NT environment and the vendor has advised that it is Year 2000 compliant. Formal certification has been sought from the vendor. The Department has advised that it anticipates that final testing will be complete by May.

The taxation system — ACTTAX — This system provides for the administration of ACT Taxes. It is not Year 2000 ready. A Year 2000 ready upgrade is expected to be delivered in May. Compliance testing will be undertaken following delivery. The Department has advised that the system is expected to be operational by June.

Gaming Machine System — This system is for the administration of Gaming Machine returns. It has been upgraded and testing has been completed. The Department has advised that it anticipates to receive final certification documentation from the vendor by May.

ACT Payroll System

ACT Public Servants receive their salaries through the Commonwealth Department of Finance and Administration payroll disbursement system called NEWpay. The Department has advised that although the vendor has successfully tested pay run processing for the period spanning the millennium date change, the system has not yet been certified as Year 2000

ready. The Department has advised that the vendor will be required to confirm Year 2000 compliance in accordance with contractual requirements by August.

To guard against the possibility that the system may not be Year 2000 ready, a contingency plan is being developed with the vendor of the whole of government personnel management system, PERSPECT

Financial Reporting System

'Monthly Workbooks' is the system used by Agencies for monthly financial reporting to OFM. This system has been upgraded to Excel '97 which has been assessed as Year 2000 ready, and is in the final testing phase. The Department has advised that it anticipates that final testing will be complete by June.

Financial Management System

The Department's financial management system is Oracle Government Financials. It is reliant on InTACT to ensure that this system is Year 2000 ready. The Department is also reliant on InTACT, through the Modernisation Project, to ensure that its hardware and operating systems are also Year 2000 ready. These matters are discussed further at Chapter 3.

Building Systems

The Department occupies two buildings, that is, the Canberra Nara Centre and FAI House.

The Department has advised that the owner of the Canberra Nara Centre has commissioned a consultant team to undertake a survey of its readiness status. The Department plans to have the survey completed and any remedial action finalised by June. The building security system, Fingerscan 111, has been upgraded to Fingerlan 111 to achieve Year 2000 compliance. The Department advised that the manufacturers will provide confirmation that this system is Year 2000 ready.

The Office of Asset Management is negotiating with Totalcare Industries to undertake an assessment of the Year 2000 status of FAI House.

Audit Comment

Progress is in hand to ensure that all of the Department's critical systems will be Year 2000 ready, although it is possible that OITM's June deadline may not be achieved fully. Particular attention will need to be given to the building systems at FAI House and to a lesser extent at the Canberra Nara Centre.

18.6 STATUS OF OTHER SYSTEMS

The Department maintains approximately 20 systems that have been developed in-house and a further 20 systems that have been supplied by vendors. Vendor certification of Year 2000 compliance in relation to hardware or software has not yet been obtained.

The Department proposes that most of its information technology infrastructure, including its desktop environment, will be replaced as part of the ACT Government Information Technology Modernisation Project. The Department has advised that it will not migrate any business applications that are not Year 2000 ready to the modernised environment.

**19 CONSTRUCTION INDUSTRY LONG
SERVICE LEAVE BOARD**

19.1 INTRODUCTION

The Long Service Leave Board is established under the *Long Service Leave (Board and Construction Industry) Act 1981*. The Board is a body corporate with perpetual succession. Its functions are to administer the scheme of long service leave benefits established by the Act in respect to employees and contractors engaged in the ACT building and construction industry.

19.2 SPECIFIC FINDINGS

- *The Board's critical systems are its Leave Entitlement System and its building systems;*
- *the Leave Entitlement System is Year 2000 ready;*
- *all components of the building systems have been assessed as Year 2000 ready; and*
- *the Board has not yet formalised an overall contingency plan.*

19.3 OVERALL CONCLUSION ON CURRENT STATUS

The Board has taken adequate steps to ensure all of its critical systems, in particular its Leave Entitlement System, are Year 2000 ready. The Board has advised that its critical systems are now Year 2000 ready. The only outstanding measure for the Board to address is the formalisation of an overall contingency plan.

19.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

The Board has not developed a formal policy document outlining the resources and timelines required to achieve Year 2000 compliance. An informal approach to managing Year 2000 issues has been adopted due to the small size of the agency and the close working relationship amongst the six full time staff employed.

Inventory Assessment

In February 1998, the Board's Information Technology staff developed a document titled 'ACT Construction Industry Long Service Leave Board Year 2000 Conversion'. This document provides a detailed explanation of

THE MANAGEMENT OF YEAR 2000 RISKS

Year 2000 issues as they apply to its financial application, and addresses minimum and recommended changes that should be made to the Board's systems.

However, this document did not address non-Information Technology systems such as facsimile machines, photocopiers or building controls. These items have since been identified and appropriate action is being taken to ensure their compliance.

Impact assessments contained in the document only identify the technical impact of the failure of information technology systems. They do not address the business wide implication of systems failure.

Compliance Plan

The Board's compliance plan addresses areas requiring attention, but it does not set out a timeframe for remedial work.

However, planning for remediation work is well underway. The Board has obtained vendor compliance certification and comprehensive test plans are also in place, with a view to completing testing of its systems by June.

Contingency Planning

The Board has not developed a formal contingency plan. However, discussion with staff revealed that a relatively simple contingency exists for its Leave Entitlement System, which would allow continuance of business processes using manual recording techniques.

Audit Comment

Although the Board has adopted an informal approach to managing Year 2000 issues, it has provided sufficient management support and resources required for the investigation and remediation of its computerised systems within the required timeframe.

It is considered the Board should formally develop and document an overall contingency plan.

19.5 STATUS OF CRITICAL SYSTEMS

Comments on the Board's critical systems follow.

Leave Entitlement System

The Leave Entitlement System records leave entitlements and calculates payments for long service leave. It is custom built using a fourth generation computer language called APPX. Remediation work on the software and hardware was finalised earlier than anticipated and the Board has advised that Year 2000 testing was successfully completed. This system is now Year 2000 ready.

Building Systems

The Board's building systems, which consist of its air conditioning system, security system, fire alarms and electrical controls, use embedded chip technology.

The Board has advised that its building systems have been assessed as Year 2000 ready.

Audit Comment

The Board is well placed to achieve Year 2000 readiness by the change to the new millennium.

20 CORRECTIVE SERVICES

20.1 INTRODUCTION

ACT Corrective Services is responsible for providing for the secure and safe custody of prisoners and detainees, and the safe management of people on community corrections orders. Corrective Services consist of four operational units: The Belconnen Remand Centre which provides safe and secure custody for people remanded in custody; the Periodic Detention

THE MANAGEMENT OF YEAR 2000 RISKS

Centre which administers Periodic Detention Orders; Community Corrections which provides advice to Courts and releasing authorities, and supervises offenders on Court and releasing authority orders; and the Court Transport Unit which transports prisoners within the ACT and between the ACT and NSW correctional facilities.

20.2 SPECIFIC FINDINGS

- *Corrective Services critical systems are the Offender Management Systems and its building systems at the Belconnen Remand Centre and the Periodic Detention Centre;*
- *the Offender Management Systems are not Year 2000 ready, however, they have been upgraded and final testing has been scheduled;*
- *the building systems are not Year 2000 ready, however, their status is in the process of being determined and, where practicable, testing of all items with a date component is being scheduled; and*
- *Corrective Services does not have any contingency plans for its critical systems, nor, has it developed a business continuity plan; Audit understands, however, these plans are currently being developed.*

20.3 OVERALL CONCLUSIONS ON CURRENT POSITION

While progress has been made by Corrective Services to ensure that its operations will not be disrupted by the change to the new millennium, there is still some way to go before its critical systems and compliance plans will be Year 2000 ready.

If Corrective Services is able to complete outstanding work, including that mentioned in this chapter, it will be in a good position to achieve an appropriate degree of readiness within the required timeframe. In view of the tight timeframes involved, however, the audit considers that their progress should be monitored closely.

20.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

Corrective Services has developed a corporate policy for achieving Year 2000 compliance. As part of the Department of Justice and Community Safety, it is required to report to the Department's Year 2000 sub-committee on a quarterly basis, however, until recently there were no formal mechanisms in place to monitor project progress, particularly in regard to building systems. The Department now requires the Director of Corrective Services to certify the agency's monthly Year 2000 compliance progress reports.

Inventory Assessment

Corrective Services has not adopted a structured approach in compiling an inventory of all systems used for its daily operations. An inventory listing has been developed by the Information Technology Manager based on personal knowledge of Corrective Services' systems. Corrective Services has also not conducted risk and impact assessments on any of its systems. Some building systems may have also been omitted in the process.

Corrective Services has advised that in an attempt to overcome possible deficiencies in the inventory, it is in the process of reviewing its system and equipment inventory. It also plans to undertake a full impact and risk assessment of each system in conjunction with responsible business managers.

Compliance Plan

While Corrective Services has a Year 2000 compliance plan, it has not been fully documented. However, vendors have been contacted to obtain certification of its identified Information Technology systems.

Contingency Planning

Corrective Services does not have any Year 2000 contingency or business continuity plans. Audit has been advised, however, that these are currently being developed.

Audit Comment

In general, while not all compliance activities have been documented, the Project Manager appears to have clear understanding of the procedures required to achieve Year 2000 readiness, particularly in regard to Information Technology Systems.

However, without a full inventory and impact assessment and compliance plan, there is a possibility of overlooking one or more critical systems.

20.5 STATUS OF CRITICAL SYSTEMS

Comments on the Department's critical systems are as follow.

Offender Management Systems

The Offender Management Systems consists of the Belconnen Remand Centre Offender Information Management System, Periodic Detention Centre Database and the Probation and Parole Database. These databases include personal information, medical circumstances, offence details and deferment details.

The Belconnen Remand Centre Offender Information Management System was upgraded to be Year 2000 compliant in September 1998. Testing has been scheduled to confirm that the system is Year 2000 ready.

The Periodic Detention Centre Database was upgraded to be Year 2000 compliant in November 1998. Testing has been scheduled to confirm that the database is Year 2000 ready.

The Probation and Parole Database was upgraded and tested and is assessed as Year 2000 ready.

Failure of the Belconnen Remand Centre Offender Information Management System and the Periodic Detention Centre Database would have a minimal impact on both the well being of detainees and the operations of Corrective Services as paper records continue to be the prime source of information.

Building Systems

Corrective Services completed an initial review of all building systems in the remand and detainee centres which indicated that security systems were either compliant or did not have a date impact. As the results of this review were not always fully documented, a second review is currently in progress which will document all aspects. Corrective Services considers that the risk of failure of these systems is low.

Financial Management System

Corrective Services' financial management system is Oracle Government Financials. It is reliant on InTACT to ensure that this system is Year 2000 ready. Corrective Services is also reliant on InTACT, through its Modernisation Project, to ensure that its hardware and operating systems are Year 2000 ready. These matters are discussed further at Chapter 3.

Audit Comment

Two of the three Corrective Services' critical databases require testing before they can be certified as Year 2000 ready. A more thorough documentation trail needs to be established for the compliance activities associated with its building systems. The progress of the current review of building systems and any follow up remedial action will need to be monitored closely.

21 DEPARTMENT OF EDUCATION AND COMMUNITY SERVICES

21.1 INTRODUCTION

The principal activity of the Department of Education is provision of Government education services in the ACT, as required under the Education Act 1973 and the Schools Authority Act 1976. The Department also provides funding support and registration of non-government schools. In

addition, the Department is responsible for coordinating vocational education and training, delivering services to enhance the education, development, care, protection and well-being of those in the community with specific needs and management of sport and recreation programs and facilities.

21.2 SPECIFIC FINDINGS

- *The Department's critical systems are its School Administration System, its Year 12 Certification and Assessment System, its Central Student Database, its financial management system and its building systems;*
- *the School Administration System is Year 2000 ready;*
- *the Year 12 Certification and Assessment System has been developed in-house and the Department considers that it is substantially Year 2000 ready and is installing it in non-government schools, however, final testing and refinement will continue until December;*
- *the Central Student Database is not yet year 2000 ready, however, the Department considers that it will be fully functional by June.*
- *the Department's building systems are not Year 2000 ready, however the Department has advised that they are scheduled to be Year 2000 ready by June;*
- *the Department does not have a complete inventory of date dependent systems that lists compliance status and priority for the remediation of systems that are found to be non-compliant, however, the Department has advised that most of these systems are small desk top applications and agreed to update its compliance plan; and*
- *the Department has not developed contingency or business continuity plans to counteract failure of its systems should they occur, however, the Department has advised that it will have them prepared by June.*

21.3 OVERALL CONCLUSION ON CURRENT POSITION

The Department has advised that it has invested considerable resources in the redevelopment and replacement of its critical systems, but acknowledges that more work is required in a number of key areas. The Department considers that this work will be substantially complete by June.

If the Department is able to complete outstanding work, including that detailed in this chapter it will be in a good position to achieve an appropriate degree of readiness within the required timeframe. In view of the tight timeframe involved, Audit has some doubts about the Department's ability to complete its preparations in the short term but would expect that they should be completed by year end. Progress should be monitored closely.

21.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

The Department has had a Year 2000 project sponsor and manager since 1997. The Department's Year 2000 Plan developed in July 1997 provides the objective and priorities for planning for Year 2000 compliance. The plan, however, has not been updated. The Department has agreed to update the plan. In addition, the Department is preparing an information package for schools, to facilitate their Year 2000 activities.

Inventory Assessment and Compliance Plan

The Department has not compiled a detailed inventory listing of all computer hardware, software applications and other facilities that may potentially have a Year 2000 impact.

An inventory of operational and embedded systems has been prepared with the assistance of a consultant. However, the inventory does not list all systems, their compliance status and agreed priority.

Vendor compliance certification has been sought from some suppliers of some external systems. The Department is also testing its systems, although a formal testing strategy has not been documented.

The Department has agreed to update its compliance plan.

Contingency Planning

The Department has not developed Year 2000 specific contingency or business continuity plans. The Department has advised that it has invested considerable resources in the redevelopment and replacement of its critical systems, most notably the School Administration System, the Year 12 Certification and Assessment System and the Central Student Database. This has resulted in contingency planning being left until later. The Department has also advised that it will have developed contingency plans by June.

Audit Comment

The Department's Year 2000 plan should be updated to include a strategy, timetable, issues that may impact on the progress of the project, for example reliance on InTACT and Totalcare and details of how the progress is to be monitored.

A complete inventory should be prepared. It should include hardware, software, interfaces, and embedded systems. For each item, the following information should be included: compliance status, remediation required, priority, completion date and the name of the staff member or contractor responsible for ensuring compliance. The inventory should be signed off by senior management to indicate that they are satisfied that it is complete and that priorities are agreed.

The focus of the Department's planning attention should then shift to the development of contingency and business continuity plans. The audit has some doubts about the Department's ability to have its contingency plans completed by June. Progress in this regard should be monitored closely particularly with regard to the extent and comprehensiveness of those plans.

21.5 STATUS OF CRITICAL SYSTEMS

School Administration System

The Department's School Administration System, MAZE, underpins all aspects of student administration, including the Year 12 Certification and Assessment System and the Central Student Database. The System is Year 2000 ready.

Year 12 Certification and Assessment System

This system provides year 12 student scores and University Admission Index data for all government and most non-government schools. A replacement system has been developed by the Department's development team. It was installed and run in parallel to the existing system in 1998. The Department has advised that the parallel run was successful but testing identified the need for further refinement and testing prior to full implementation. The Department considers that the System is substantially Year 2000 ready and, as a result, is being installed in non-government schools. Final testing and refinement will continue until December.

Central Student Database

The Central Student Database provides the functionality the Department requires to extract student data and facilitate student transfers between schools. The Department has advised that the application has been successfully converted to run in the schools' Windows NT environment. Initial testing of the application across the Wide Area Network has been successful. It is expected that this database will be fully functional by June.

Financial Management System

The Department's financial management system is Oracle Government Financials. It is reliant on InTACT to ensure that this system is Year 2000 ready. The Department is also reliant on InTACT, through its Modernisation Project, to ensure that its hardware and operating systems are also Year 2000 ready. These matters are discussed further at Chapter 3.

Building Systems

As part of the consultant's work referred to above, a range of embedded systems was identified in schools. These included fire control, evacuation

THE MANAGEMENT OF YEAR 2000 RISKS

control, security and heating and cooling systems. The Department has recently undertaken a survey of all schools to collect detailed information on the systems. The Department has advised that discussions are currently taking place with Totalcare on the remedial action required and the cost implications that this will have for schools. Remediation will focus on fire control, evacuation, security and building components systems. The Department has advised that its building systems are scheduled to be Year 2000 ready by June.

Audit Comment

The timetable for remediation of the Department's building systems seems tight and as a result, it is possible that the systems will not be Year 2000 ready by June as forecast by the Department.

21.6 STATUS OF OTHER SYSTEMS

The Department has a large number of non-critical systems that are progressively being addressed in the context of readying them for the Year 2000.

The Department is working closely with InTACT in the context of Information Technology modernisation to ensure the compliance of all computer hardware including personal computers, photocopiers and common software such as Microsoft Office and CC-Mail. The Department accepts responsibility for these systems.

22 DEPARTMENT OF HEALTH AND COMMUNITY CARE

22.1 INTRODUCTION

The Department is responsible for health policy and providing public health services in the ACT. It includes the Health Protection Service, the Clinical Health Outcomes Centre, the Professional Registration Boards, Health Pact, ACT Government Analytical Laboratory, the Business Services Bureau and the Health Complaints Commission.

It is a purchaser of health and community care services under contracts with The Canberra Hospital, Calvary Public Hospital, ACT Community Care, and non-government organisations.

The performance of the Canberra Hospital, Calvary Public Hospital and ACT Community Care is addressed in separate chapters.

22.2 SPECIFIC FINDINGS

- *The Department has identified six critical systems, these are, the Health Protection Service system, the Monitoring Drugs of Dependence system, the Immunisation and Communicable Diseases system, the Purchasing and Inventory Control System, its building systems and the financial management system;*
- *none of the systems are Year 2000 ready, however, the first three systems have been certified as Year 2000 compliant by their suppliers and testing commenced in April;*
- *the Purchasing and Inventory Control System is undergoing remediation, and this work is expected to be complete by May;*
- *the Department's building systems are not Year 2000 ready, however, it has advised that assessment of the buildings owned by the Department is nearly complete; the Office of Asset Management is yet to advise on the compliance status of premises rented by the Department; and*

- *the Department has advised that contingency planning has commenced, with completion and testing to be achieved by June.*

22.3 OVERALL CONCLUSIONS ON CURRENT POSITION

While considerable progress has been made by the Department to ensure that its operations will not be disrupted by the transition to the new millennium, there is still some way to go before its critical systems and contingency plans will be Year 2000 ready.

If the Department is able to complete the outstanding work detailed in this chapter, it will be in a good position to achieve an appropriate degree of readiness within the required timeframe for its health systems. Audit has some doubts, however, that all testing will be complete by June as planned and it is unlikely that the Department's building systems will be Year 2000 ready until the third quarter or possibly later.

22.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

The Department's Information Management Unit has overall responsibility for the conduct and outcome of the Year 2000 project. Each unit within the Department is responsible for its own systems. The high degree of autonomy of the various Departmental units requires close coordination and cooperation. A Departmental-wide working group has been established to facilitate information dissemination and co-operation between business units on Year 2000 and modernisation issues. There is regular reporting to the Departmental Information Management Steering Committee.

Although InTACT has responsibility for the Information Technology Modernisation Project and Whole of Government applications such as human resource and financial management systems, the progress of these aspects is being monitored by the Department.

Inventory Assessment

The Department has completed an inventory of all systems and assessed them for compliance status, data dependence and criticality.

Compliance Plan

The Department's Year 2000 Compliance Plan has been updated several times to reflect changing activity and the inclusion of new tasks as they are identified. It includes tasks for the autonomous units. Although there has been some slippage in the original timetable, completion is now expected to be mid 1999.

Contingency Planning

The Department has advised that contingency planning has commenced, in priority order of system criticality. All units are scheduled to have fully tested contingency plans, including business continuity plans, in place by the end of June.

Audit Comment

The Department has appropriately adopted a strategic view in planning and management of Year 2000 issues. Close attention will need to be given to contingency plans as they are developed to ensure that their scope and comprehensiveness is adequate.

22.5 STATUS OF CRITICAL SYSTEMS

Health Protection Service System

This system is used in the inspection of premises where food is prepared and served and in air and water testing. The system has been certified as Year 2000 compliant by the vendor and the Department has advised that testing commenced in April.

Monitoring Drugs of Dependence System

Doctors and pharmacies use this system to monitor the prescribing and issuing of drugs of dependence. The system has been certified as Year 2000 compliant by the vendor and the Department has advised that testing also commenced in April.

Immunisation and Communicable Diseases System

This system is used to monitor immunisation and communicable diseases. The system has been certified as Year 2000 compliant by the vendor and the Department has advised that testing also commenced in April.

Purchasing and Inventory Control System

This system is used to monitor and control purchasing and inventories. It is non-compliant. A contractor is currently working on the necessary remediation, and compliance testing is scheduled to be complete by the end of April.

Audit Comment

The Department will need to monitor the testing of these systems closely and be prepared to inject additional resources into the process if it is to meet the June deadline for readiness of all of its critical systems.

Building Systems

The Department has advised that the assessment of the buildings owned by the Department is nearly complete, the only outstanding item being the compliance status of the Fire Panel. The Office of Asset Management is yet to advise on the compliance status of premises rented by the Department.

Financial Management System

The Department's financial management system is Oracle Government Financials. It is reliant on InTACT to ensure that this system is Year 2000 ready. The Department is also reliant on InTACT, through its Modernisation Project, to ensure that its hardware and operating systems are also Year 2000 ready. These matters are discussed further at Chapter 3.

22.6 STATUS OF OTHER SYSTEMS

The Department and its out-riders also use a number of date dependent systems that are important to its operations but are not regarded as critical in a whole of government sense. The most important of these are briefly discussed below.

The Patient Master Index System facilitates the unique identification of patients throughout the ACT. It has been redeveloped to improve functionality, achieve Year 2000 compliance and reduce its dependence on the Hospital's Patient Administration System. Acceptance testing is underway, to be followed by Year 2000 testing. It will be implemented in mid-July, concurrently with the Hospital's new Patient Administration System.

The Laboratory Information Management System, which is an ACT Government Analytical Laboratory application, is not compliant and is to be replaced. The Department has advised that as the replacement may not be implemented in time to address Year 2000 issues, work-arounds and contingency plans are now being designed to ensure that laboratory operations are not affected during the transition to Year 2000.

The Department has prepared a full inventory of ACT Government Analytical Laboratory equipment and has sought vendor compliance information. The Department has advised that responses are being monitored on a day to day basis. There has been some delay due to relocation of the laboratory to a new building. The scope and extent of testing to be undertaken will depend on compliance information provided.

22.7 KEY LINKS WITH EXTERNAL ORGANISATIONS

The Department is a purchaser of health and community care services under contracts with a number of non-government organisations. The Department has advised that the Business Services Bureau has developed a three-phase strategy to assess and manage the compliance of these organisations. Phases 1 and 2, which involve assessment of the organisations' and product supply risks, are expected to be complete by the end of May. The time spent on Phase 3, which involves the management strategy/action to address the

anticipated supply risks, is dependent on the outcome of the first two phases. The outcome of this project will be the assurance of critical supplies and services.

23 DEPARTMENT OF JUSTICE AND COMMUNITY SAFETY

23.1 INTRODUCTION

The Department of Justice and Community Safety was established on 31 March 1998 from the former Attorney Generals' Department. The Department is responsible for the provision of legal and emergency services for the community. It also provides programs and funding to deliver community legal services, administer justice, and maintain law and order within the ACT.

The structure of the Department of Justice and Community Safety is different from that of a traditional Department. It consists of a small central agency surrounded by specialist agencies, which operate largely as autonomous bodies.

The elements of the Department addressed in this Chapter are:

- Agents Board of the ACT;
- Community Advocate;
- Commissioner for Land and Planning;
- Consumer Affairs Bureau;
- Electoral Commission;
- Government Solicitors Office;
- Human Rights Office;
- Legal Policy Division;
- Liquor and Adult Services Registration;
- Magistrates Court;

THE MANAGEMENT OF YEAR 2000 RISKS

- Ministerial and Corporate Services;
- Office of the Director of Public Prosecutions;
- Office of the Public Trustee;
- Parliamentary Counsel's Office;
- Resource Management; and
- Supreme Court.

Separate chapters address the readiness of the Emergency Services Bureau, Corrective Services and Registrar-General's Office.

23.2 SPECIFIC FINDINGS

- *The Department's critical systems are the Case Management Systems for the Magistrates and Supreme Courts, its building systems and its financial management system;*
- *the Case Management System for the Magistrates Court has been assessed as Year 2000 ready;*
- *the Case Management System for the Supreme Court is not Year 2000 ready, however, the Department has advised that it has been upgraded and final testing has been scheduled;*
- *assurances have been received from the Australian Federal Police (AFP) that all of their operational systems are Year 2000 ready, however, the AFP is not in a position to advise when its building systems will be ready; and*
- *no agency within the Department has yet developed contingency plans to provide for the continued delivery of services if individual computer sensitive systems fail, however, the Department has requested that all agencies develop contingency plans for their critical systems by June.*

23.3 OVERALL CONCLUSIONS ON CURRENT POSITION

While considerable progress has been made by the Department to ensure that its operations will not be disrupted by the change to the new millennium, there remains much work to be performed before the Department's critical systems will be Year 2000 ready.

If the Department is able to complete outstanding work, including that mentioned in this chapter, it will be in a good position to avoid disruptions from the year 2000 issue. Appropriate attention should be given to developing and testing adequate contingency plans.

23.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

A Year 2000 Compliance Plan was published in June 1997. The plan allocates responsibility for overall coordination to the Department's Information Management and the Technology Strategy Committee and responsibility for achieving Year 2000 readiness at the agency level to each agency's senior management. Each agency is required to ensure the systems that they own are Year 2000 ready. In particular, agencies are responsible for liaising with vendors and testing, where necessary, to ensure that their systems are ready for the millennium transition.

The Information Management and Technology Strategy Committee provides guidance to agencies on actions to be undertaken by them. The Committee is chaired by the Director, Ministerial and Corporate Services and includes representatives from all agencies within the Department.

There appears to be some confusion, however, within the Department as to the role of InTACT. The Department considers that testing of hardware replaced as part of the Modernisation Project would be the responsibility of InTACT. The Department will sample test each batch of new PCs supplied by InTACT under the Modernisation Project for Year 2000 compliance. All business system hardware will be tested for Year 2000 compliance.

Inventory Assessment

The Department has prepared an inventory of all Year 2000 systems, including computer hardware, in-house software, vendor supplied software and embedded systems. However, risk assessments have only been undertaken on software applications. An assessment of hardware and embedded systems has not been undertaken as they were considered the responsibility of InTACT and Totalcare respectively. The Department is currently in the process of revising its inventory and risk assessments.

Compliance Plan

As indicated earlier, a compliance plan was published in June 1997. It is updated every six months. The plan provides for all critical systems to be tested based on compliance testing guidelines issued to all agencies.

The Department has sought vendor certification from the suppliers of all external systems. A number are outstanding and the Department has advised that it is following these up.

Contingency Planning

There is a lack of contingency planning across all agencies within the Department. This appears to be primarily due to a belief that compliance action taken by agencies and external parties will ensure Year 2000 disruptions will not be experienced.

The Department has now requested all agencies to develop their own contingency plans for their critical systems. In addition, the Department has advised that it plans to test the contingency plans, where practicable, when they have been developed.

Audit Comment

The Department is managing the Year 2000 risk by devolving responsibility to its agencies. While this approach has many advantages, a number of issues have arisen that may need to be resolved at the Departmental level. Such issues include the responsibilities of agencies in comparison with those of InTACT and Totalcare.

Audit agrees that those agencies within the Department that have distinct operational roles and management structures are best placed to develop their

own contingency plans. There are a number of other elements within the Department, however, that are not stand alone agencies. Audit considers that it would be appropriate for the Department to assess whether a departmental contingency plan should be developed for these.

23.5 STATUS OF CRITICAL SYSTEMS

Comments on the Department's critical systems follows.

Case Management Systems for the Magistrates and Supreme Courts

These systems track the progress of all matters before the courts. The Case Management System at Magistrates Court has been tested and is assessed as Year 2000 ready. The Case Management System at the Supreme Court is not Year 2000 ready. The Department has advised that it plans to upgrade and test the system shortly. The Department has also advised that contingency plans are currently being developed for both systems.

Operational Policing Services

Policing services are provided in the Australian Capital Territory under an agreement with the Australian Federal Police (AFP). In accordance with this agreement the AFP maintains an ACT Region headquarters and sub-regional patrols that provide the full range of community policing services to the Territory.

The Department is not responsible for AFP computer systems and their Year 2000 compliance activities have been undertaken under the Commonwealth Year 2000 program. Nonetheless the Department has sought formal assurances from the AFP on the Year 2000 status of the operational policing elements in the ACT Region.

The AFP has advised the Department that all its critical operational systems have been tested and are assessed as Year 2000 ready. Its information technology infrastructure is scheduled to be ready by June. The AFP's building systems are currently undergoing assessment to verify their compliance status. The AFP have advised that they are not in a position to

indicate when any remediation that may be necessary as a result of that assessment will be undertaken.

Building Systems

The Department occupies premises at GIO House Building, Magistrates Court Building, Reserve Bank Building, FAI Building, 4 Mort Street, Supreme Court Building and the Trading Standards Building at Kingston.

Totalcare has agreed to manage the Year 2000 readiness of all of the Department's premises except the Supreme Court and the Trading Standards Building. These are being managed by the Supreme Court and the Department respectively.

With the exception of the Offices at 4 Mort Street, none of the Department's premises are Year 2000 ready. Remedial work is required at the Magistrates Court, Supreme Court and the Reserve Bank Building. Assessments are under way at the GIO Building, FAI Building and Building Trades Standards Office. The Department has advised that all premises are scheduled to be Year 2000 ready by June. Building systems within the Supreme Court and the Trading Standards Building are also currently being investigated with a view to being Year 2000 ready by June.

Security Systems at the Supreme Court consist of the Internal Card Reader Security System and the CCTV Surveillance System. The Internal Card Reader Security System is not Year 2000 ready. The Department has advised that an upgrade to the system is scheduled. The Department has also advised that a contingency plan is currently being developed for this system. The CCTV Surveillance System has been certified and tested to be Year 2000 ready.

Financial Management System

The Department's financial management system is Oracle Government Financials. It is reliant on InTACT to ensure that this system is Year 2000 ready. The Department is also reliant on InTACT, through its Modernisation Project, to ensure that its hardware and operating systems are also Year 2000 ready. These matters are discussed further at Chapter 3.

Audit Comment

In view of the amount of work required to assess the readiness of the Department's premises and undertake any remedial work required, Audit has some doubts as to when Year 2000 readiness for this area will be achieved.

The other critical systems within the Department's responsibility are well placed to achieve Year 2000 readiness.

23.6 STATUS OF OTHER SYSTEMS

The Department also uses a large number of non-critical specialist computerised systems to assist in the conduct of its operations. Some of these systems are currently being assessed for Year 2000 readiness by Departmental staff. In addition, the Department anticipates that the modernisation process, to be undertaken by InTACT, will result in the replacement of a number of its non-compliant systems.

The following comments are provided on some of the Department's more important non-critical systems.

A Sentencing Database is used by the Supreme Court to maintain records on the sentences given to offenders. This system has been assessed as Year 2000 ready. The Department has advised that contingency plans for this system are being developed.

The TACT system is a specialised system used by the Public Trustees Office to aid in the provision of trustee services to the ACT Community. This system records details on the preparation of wills, administration of deceased estates, trustee for persons lacking legal capacity and trustee for life interest estates. The Department has advised that this system is Year 2000 ready. Final testing is being performed to confirm this.

A specific module of the Australian Federal Police's PROMIS system is used by the Office of the Director of Public Prosecutions to assist in determining whether to prosecute matters referred by the AFP. The Department has advised that it understands that the PROMIS system was

THE MANAGEMENT OF YEAR 2000 RISKS

developed as a Year 2000 ready system. The AFP have advised that PROMIS is Year 2000 ready.

The Access databases used by the Electoral Commission have been modified to conform with Year 2000 date formats. When the Commission's computers and software have been modernised, including upgrade to Access 7, all databases will be tested for Year 2000 compliance.

24 DEPARTMENT OF URBAN SERVICES

24.1 INTRODUCTION

The Department of Urban Services is responsible for the delivery of a wide range of services to the ACT community. Some of these services include land and building development controls, libraries, environmental management, national and urban parks and roads.

This chapter encompasses the following business units or agencies of the Department:

- Environment ACT;
- Planning and Land Management Group (PALM);
- City Operations;
- Information Planning and Services;
- Corporate Group;
- Infrastructure Policy;
- Industry Policy and Regulation; and
- Transport and Housing Policy.

The performance of ACT Housing, ACT Forests and ACTION which form part of the Department, is addressed in separate chapters.

24.2 SPECIFIC FINDINGS

- *The Department's critical systems are its Transport Regulation Information Processing System, its Canberra Actuated Traffic Signal System, its financial management system and its building systems;*
- *no systems are Year 2000 ready, however, each system owner has stated that they are in the process of modifying and testing all of their critical systems with a view to them being fully Year 2000 ready by the end of June;*
- *embedded and related systems in the following buildings either owned or leased directly by the Department's agencies did not appear on any Year 2000 Corrective Action Report and are not being reviewed or examined by the Office of Asset Management (OAM) or Totalcare:*
 - *Environment ACT depots;*
 - *City Operations depots;*
 - *Dickson Motor Registry;*
 - *all Libraries;*
 - *Waste depots; and*
 - *other surplus properties.*
- *The Department has advised that the non-inclusion of building systems on their inventory has been a conscious decision by the Department, as Totalcare already reports separately to the Chief Minister's Department; and*
- *no formal, documented contingency plans specifically addressing Year 2000 issues have been prepared by any of the entities subject to this review; the Department has advised that business continuity plans are anticipated by many agencies to be completed before July.*

24.3 OVERALL CONCLUSIONS ON CURRENT STATUS

Failure of the Department's critical systems could have a significant Territory wide impact. While considerable progress has been made by the Department to ensure that its operations will not be disrupted by the change

to the new millennium, there is some way to go before the Department's critical systems will be Year 2000 ready.

If the Department is able to complete outstanding work including that mentioned in this chapter, it will be in a good position to achieve an appropriate degree of readiness within the required timeframe. In view of the tight time frames involved, Audit has some doubt about the Department's ability to achieve its Year 2000 objectives. Progress should be monitored closely.

Agency Response

The Department acknowledges that work remains to be done to achieve Year 2000 readiness of a significant number of systems. It has advised that the work is planned and in progress across all agencies of the Department. The Department is confident that the work to date will be reflected in the growing number of Year 2000 ready systems through the April-June period.

24.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

Responsibility for Year 2000 compliance has been devolved to each of the individual agencies within the Department. The Information Management Unit within the Department is, however, centrally managing the Year 2000 project.

Each Agency follows recommended procedures distributed by the Information Management Unit, and has been reporting monthly to the Information Management Unit project manager on their progress.

There are two types of reports that are submitted by Agencies to the Information Management Unit on a monthly basis. The first report is a 'Year 2000 Corrective Action' report. This details all business applications identified by individual Agencies.

A second report — a listing of 'business critical' systems — in a format required by OITM is also forwarded monthly to the Department's Information Management Unit.

In the early stages of the project, Information Managers met on a monthly basis. These meetings ceased as each agency became aware of the key issues relating to Year 2000 Compliance.

Inventory Assessment

A 'Year 2000 Compliance Audit', commissioned by the Department, was undertaken by Q Data Consulting Pty Ltd early in 1998 with a final report delivered in April 1998.

The Q Data Consulting audit report included a detailed inventory of all systems across all areas of the Department. As part of the audit, systems identified were ranked according to the potential impact of their failure on the Department's operations as a result of the date change to 2000.

Compliance Plan

The Department has a formal, documented Year 2000 Compliance Plan. For the early stages of the project — such as completing the inventory and performing an impact analysis — the plan is comprehensive. The plan, however, only briefly outlines procedures to be undertaken for the later stages of the project, such as planning for funding and resourcing, business continuity planning and change control. It was noted that the plan did not include testing strategies, which Audit understands are the responsibility of individual business units or agencies.

The Department is now using a 'Year 2000 Corrective Action' report as a high level project plan, rather than further developing the formal Year 2000 Compliance Plan. The Department has advised that detailed plans for particular systems are in place at the business unit or agency level.

Vendor compliance certification is being managed on an individual agency and individual system basis. It is the practice that vendor certification is sought for systems where the Department cannot access the source code and for systems purchased off the shelf and not customised.

Contingency Planning

Formal, documented business continuity plans specifically addressing Year 2000 issues have not yet been prepared by any of the entities which were subject to this review. Discussions with some agencies, however, indicated that specific business continuity planning for the Year 2000 has either

commenced or is to commence, and formal documented business continuity plans are anticipated by many agencies to be completed before July.

Audit Comment

Considerable progress has been made toward ensuring systems potentially affected by the Year 2000 date change have been identified and where necessary tested, updated or certified by vendors. Considerable work however remains to be completed.

24.5 STATUS OF CRITICAL SYSTEMS

In general terms, the Department's critical systems are its Transport Regulation Information Processing System, its Canberra Actuated Traffic Signal System, the financial management system and its building systems. The Year 2000 status of each of these systems is discussed below.

Transport Regulation Information Processing System (TRIPS)

This system records all licence and registration information for the ACT. The system is managed by Transport and Housing Policy, a unit within the department of Urban Service. CSC Australia — a private company — conducted a Year 2000 audit on this system in 1998. Additional work to ensure the compliance of this system was identified from this review, and Transport and Housing Policy considers this is approximately 80% complete. CSC is to conduct another audit when the rework is complete.

Canberra Actuated Traffic Signal System (CATSS)

The Canberra Actuated Traffic Signal System was acquired from the Road and Traffic Authority of NSW. As such, the Authority has accepted vendor responsibility for Year 2000 compliance of the system. A letter has been sent by the Department to the RTA requesting a compliance statement, but as yet it has not been forthcoming. RTA has, however, stated that it is in the process of testing this system.

Financial Management System

The Department's financial management system is Oracle Government Financials. It is reliant on InTACT to ensure this system is Year 2000 ready. The Department is also reliant on InTACT, through its Modernisation Project, to ensure that its hardware and its operating systems are also Year 2000 ready. These matters are discussed further at Chapter 3.

Building Systems

Totalcare is responsible for the Year 2000 compliance of building systems only within the buildings that it manages. Some of these buildings are owned by the ACT Government's Office of Asset Management (OAM), and others are leased by the OAM.

OAM has engaged Totalcare to do a report on the Year 2000 status of all ACT Government owned properties. Audit has been advised by Totalcare that this report is nearly complete, and recommendations for replacing building systems have already been approved by OAM. Final advice is still to be provided regarding lifts and building security systems.

OAM has not formally engaged Totalcare to review properties that are not owned by ACT Government agencies, but are managed by Totalcare. Totalcare has, however, written to all landlords of leased properties that it manages requesting information on the status of building systems. In some instances Totalcare has made recommendations to landlords as to the type of rectification work required. Totalcare has stated that responses from most building owners have been received, and when compliance has been assured, a compliance statement has been requested.

Whilst not part of the Year 2000 report to OAM, Totalcare report to OITM and OAM on the compliance status of all buildings it manages.

Other buildings owned or leased directly by the Department do not appear to have been reviewed by the Department to ensure Year 2000 compliance. Some buildings identified during the audit were:

- Environment ACT depots;
- City Operations depots;
- Motor Registry Dickson;
- Waste depots; and

THE MANAGEMENT OF YEAR 2000 RISKS

- Surplus properties.

The Department's Asset Management Unit is responsible for surplus properties. These include approximately 12 depots across the ACT and include the former Phillip Motor Registry.

The Phillip Motor Registry has fire systems and is tenanted. The Asset Management Unit has stated that it is to contact the former managing agent to determine whether any Year 2000 compliance work has been done. The Asset Management Unit is also in the process of obtaining quotes to reinstate the fire and monitoring systems. As part of this process, it intends ensuring the compliance of these systems is checked.

Audit has been advised that other surplus depots within the Department are shed type buildings that have basic building systems — an alarm or a lock on the door — and nothing else. Some, however, are tenanted. No Year 2000 compliance work has been done on the basis of a low risk assessment in the event of the failure of such systems.

All other properties mentioned above are either owned or leased by the Department, and managed by the individual agency tenant. They do not appear on any agency's Year 2000 compliance inventory that Audit reviewed, and thus the responsibility for ensuring the Year 2000 compliance of these systems is uncertain.

The Department advises that all Library buildings are being managed through a separate arrangement with Totalcare. This is anticipated to be completed by the end of May.

The Department further advises that the remainder of these buildings are currently being re-examined for required Year 2000 work.

Audit Comment

Further work is considered necessary to ensure potential issues related to building systems are adequately addressed prior to the Year 2000. Specifically, buildings owned or leased directly by the Department should be identified, recorded and appropriate action taken to ensure potential issues are addressed.

24.6 STATUS OF OTHER SYSTEMS

This review has encompassed the status of critical systems. Other applications have been identified by the Department on the 'Year 2000 Corrective Action' report, and are reported to OITM using the same format and procedures as for critical systems. As this audit did not review these systems, no conclusions are reported.

25 EMERGENCY SERVICES BUREAU

25.1 INTRODUCTION

The role of the Emergency Services Bureau is to minimise the impact of fire, road accidents, medical and other emergencies and natural disasters. A key element of the Bureau's operations is its communications centre located at Curtin.

The Bureau's responsibility is to provide the administrative infrastructure and support for four operational services. These are the ACT Ambulance Service, ACT Bushfire Services, ACT Emergency Service and ACT Fire Brigade.

25.2 SPECIFIC FINDINGS

- *The Bureau's critical systems consist of its communications systems, its electronic emergency response systems, other operational systems and its financial and management system;*
- *the Year 2000 status of the Telstra and ACT Government telecommunications networks are unknown, however, the Bureau has requested advice on the status of both systems;*

THE MANAGEMENT OF YEAR 2000 RISKS

- *the Bureau's radio communications system is Year 2000 ready;*
- *some parts of the Communications Centre's electronic emergency response systems are not Year 2000 ready, however, the Bureau has advised that it plans to rectify all deficiencies in these systems by September;*
- *a consultant has assessed the hazardous chemicals database used by the ACT Fire Brigade as being non-compliant, however, the Bureau is seeking clarification from the supplier;*
- *the Bureau has not yet finalised a formal compliance plan with which to manage its progress actioning Year 2000 readiness, however, it has advised that work on this matter is underway; and*
- *the Bureau has not developed a specific Year 2000 business continuity plan, nor has it modified its existing system level contingency plans to take account of possible Year 2000 failures, however, action is in hand to modify these plans by September.*

25.3 OVERALL CONCLUSIONS ON CURRENT POSITION

Some of the Bureau's critical systems are not Year 2000 ready. The discovery of additional non-compliant critical systems at the communications centre, which were originally certified as Year 2000 ready by external consultants, has considerably worsened the Centre's overall status and caused slippage in the timeframe envisaged to achieve Year 2000 readiness. The Bureau has now advised that it expects to have all of its critical systems and contingency plans ready by September. Audit considers however, that testing of the Bureau's business continuity plans may not be able to be undertaken until the final quarter of the year.

If the Bureau is able to complete outstanding work including that mentioned in this chapter, it will be in a good position to achieve an appropriate degree of readiness by the change to the new millennium. Progress should be monitored very closely, however, particularly in view of the key role that the Bureau could play in the event of a significant Year 2000 failure in the Territory.

25.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

The Bureau has a corporate policy in place to oversight the management of Year 2000 issues, however this needs to be formalised. Such a policy should establish oversighting arrangements, provide guidance on actions required, establish priorities and a mechanism to resolve emerging issues.

Inventory Assessment

The Bureau engaged external consultants, through InTACT, to report on the Year 2000 status of all the Bureau's systems and equipment. The Bureau has advised that a number of critical systems that were certified as compliant by this activity were subsequently found by the Bureau staff to be non-compliant. The discovery of these additional non-compliant systems at the communications centre has considerably worsened the Centre's overall status and caused slippage in its readiness schedule. The Bureau has advised that the consultant has recently agreed to undertake further work to rectify the situation at no cost to the Bureau.

The Bureau also advises that within the external consultant's report, terminology such as critical is not defined and therefore may be inconsistent with that used by either this Audit or the Office of Information Technology and Multimedia (OITM). Moreover, the initial criticality assessment used by the external consultant is based on the impact on individual internal business units and therefore may overstate the overall impact on the Bureau's capability to deliver its operational services to the community. These matters have priority in the external consultant's further work.

Compliance Plan

The Bureau has not yet finalised a formal agency specific compliance plan, however, the Bureau has advised that work on this matter is underway. A consultant will be engaged, through InTACT, to manage the rectification and compliance certification of all other critical systems and equipment.

Contingency Planning

The Bureau is developing Year 2000 contingency plans for its systems and equipment. These plans are based on current contingency plans that are being modified as necessary. The aggregate of these plans will form the

THE MANAGEMENT OF YEAR 2000 RISKS

basis of the Bureau's overall business continuity plan. The Bureau advises that the development of these plans necessitates a stepped approach. The Bureau has also advised that its current scheduled completion date for its overall business continuity plan is September.

Audit Comment

Without a formal documented compliance plan there cannot be complete assurance that all Year 2000 issues will be addressed in time.

Audit agrees with the Bureau's plans to modify its existing business level continuity plans to take account of a possible Year 2000 failure. If new equipment is to be acquired by September, it is possible that testing may not be completed until the following month. Audit considers that systems testing should be completed prior to any testing of the Bureau's business continuity plan. Accordingly Audit suggests that testing will probably not be able to be undertaken until the last quarter of the year.

In any event, business continuity plans should be comprehensively tested in conjunction with OITM and other non-emergency service agencies. Audit considers that arrangements for such testing should seek the involvement of very senior decision makers as active participants.

25.5 STATUS OF CRITICAL SYSTEMS

The Bureau has a number of critical systems. These comprise its communications systems, its electronic emergency response systems, other operational systems, and its financial and management system. Each of these systems is discussed below.

Communications Systems

The Year 2000 readiness of the telecommunications network is of the utmost importance to the Bureau's business continuity. The Year 2000 readiness status of both the Telstra and the ACT Government telecommunications networks are currently unknown. The Bureau has advised that it has requested advice on the status of both systems but has not yet received that advice.

THE MANAGEMENT OF YEAR 2000 RISKS

The Bureau's radio communications systems, including antenna and back up power plant, do not have date-specific embedded systems. In the event of a Year 2000 failure, they would be able to be operated continuously in the normal course of events.

The automatic fire alarm system monitors fire alarms for commercial customers. The status of all alarms is displayed in the Communications Centre. Hot alarms generate an emergency response. The data stream received from each alarm contains date/time information that is not Year 2000 compliant, however, the Bureau's own fire alarm processing system inserts its own date/time stamp on the incoming data. The Bureau has advised that this action effectively overcomes the deficiency arising from the non-compliant incoming data stream.

Audit Comment

The Year 2000 status of the telecommunications system is being addressed at the Commonwealth/State/Territory level. This issue is addressed in Chapter 3.

In the event of a Year 2000 failure of the telecommunications system, the radio communications network would provide an effective back-up link between a Government command and control centre, if established, and the Bureau and its deployable elements. In these circumstances, Audit understands that a means of communication with members of the community, who wish to seek emergency assistance, will be addressed as part of the Bureau's contingency planning processes.

Electronic Emergency Response System

The Bureau's emergency response system, which is primarily located at the Communications Centre, is made up of numerous sub-systems and components. Most of this system is of an electronic nature. Some of the sub-systems and components are Year 2000 ready or do not have date dependent components. Six critical components are not Year 2000 compliant. These are discussed below.

The six systems non-compliant components are:

The *Electrodata call logging equipment* which records voice activity on predetermined channels of the telecommunications network, and the Bureau's radio network;

THE MANAGEMENT OF YEAR 2000 RISKS

The *MegaPAC equipment* which converts automatic fire alarm data and Telstra 000 Calling Line Information (i.e. essential locational information) into a format usable within computers for use by both fire and ambulance emergency call operators;

The *Tradecentre equipment* which provides for a common voice line that can to be used for both telephone and radio networks, enables multiple calls to be made through a single audio line, and for these calls to be recorded by the call logging system;

The *Centracom sub-system* which enables operators to select different radio frequencies;

The *Australian Incident Reporting System* is a database which is used for the after event reporting of fire related incidents; and

The Ambulance Service's *Computer Assisted Rapid Dispatch sub-system* generates case information essential for the timely and accurate dispatch of medical emergency response.

The Bureau has advised that each of these systems will be replaced or remediated, as necessary, by September.

All of the equipment used by emergency vehicles during emergencies have been certified as Year 2000 compliant by their manufacturers or will otherwise perform their designated critical functions.

Audit Comment

Audit is concerned that the timeframe for the replacement and testing of elements of the Bureau's electronic emergency response systems at the Communications Centre by September may be tight. In this regard, Audit understands that the Bureau is in the process of ordering replacement equipment and sub-systems. The Bureau has advised that each item will be comprehensively tested after it has been delivered.

Other operational Systems

Following discussions with staff in individual business units, external consultants assessed five other operational databases as being non-compliant. Of these, two will shortly become redundant and two have subsequently been assessed by senior management as not being critical to

operational service delivery. The Bureau has advised that the status of the remaining database, that is the hazardous chemicals database used by the ACT Fire Brigade, requires clarification with the supplier. The Bureau has also advised that if this application is confirmed as being non-compliant, corrective action will be undertaken.

Audit Comment

The re-assessment of this system should be finalised as soon as possible.

Financial and Management Systems

The Bureau's financial management system is Oracle Government Financials. It is reliant on InTACT to ensure that this system is Year 2000 ready. This matter is discussed further in Chapter 3.

The Bureau is also reliant on InTACT, through its Modernisation Project, to ensure that its hardware and operating systems are also Year 2000 ready. The Bureau is concerned about the proposed timing of its modernisation that is currently scheduled for the end of September. The Bureau has a large number of non-compliant systems and considers that because of the critical nature of its operations the timing of its modernisation should be brought forward.

Audit Comment

Audit understands that the Department of Justice and Community Safety is currently negotiating with InTACT on its behalf in this regard. This matter is also discussed further in Chapter 3.

25.6 STATUS OF OTHER SYSTEMS

The Bureau has 28 other vendor supplied and in-house developed systems that are considered by internal business units of the Bureau to range from important to marginal. Of the 26 systems ranked important, the consultants assessed that 14 still need redevelopment or rectification. The Bureau has advised that the real status of these systems is an issue, as separate advice indicates that the listed applications are certified as compliant. The Bureau

has advised that it has requested its external consultants to clarify the status of these systems.

Audit Comment

The re-assessment of these systems and any remediation action that may be required should be undertaken as a matter of priority.

26 EXHIBITION PARK IN CANBERRA

26.1 INTRODUCTION

The main undertakings of Exhibition Park in Canberra (EPIC) are to:

- establish, manage, develop and maintain a multi-purpose exhibition and event centre of national standard to meet the requirements of EPIC's major clients and the community of Canberra and the region; and
- promote the use of the complex with a view to maximising revenue and to continuously improve operational efficiency and where possible, reduce costs.

26.2 SPECIFIC FINDINGS

- *EPIC's critical systems are its financial management system and its building systems;*
- *EPIC's financial management system is Year 2000 ready;*
- *EPIC's building systems are not Year 2000 ready, however, the vendors have been asked to confirm their Year 2000 status; and*

- *EPIC has not developed formal contingency or business continuity plans.*

26.3 OVERALL CONCLUSION ON CURRENT POSITION

EPIC's approach to addressing Year 2000 issues is adequate, given the small size of the agency.

Follow up action is required by EPIC to ensure that building systems are Year 2000 ready. In addition, formal contingency and business continuity planning needs to be developed and tested to address the possibility of unforeseen problems in the event of a Year 2000 failure.

If EPIC completes these actions it should be in a good position to be Year 2000 ready by the end of the year.

26.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

EPIC has adopted an informal approach to addressing Year 2000 issues.

Inventory Assessment and Compliance Plan

EPIC has prepared an inventory of its computerised systems with the exception of hardware and software owned by InTACT. EPIC has also begun a process of obtaining written confirmation of compliance from manufacturers and suppliers.

Contingency Planning

EPIC has not developed formal contingency or business continuity plans.

Audit Comment

EPIC's approach to addressing Year 2000 issues is adequate given the small size of the agency. It should, however, develop formal contingency plans to address the possibility of any unforeseen problems arising from a Year 2000 related failure.

26.5 STATUS OF CRITICAL SYSTEMS

Financial Management System

EPIC maintains its financial records on the MYOB accounting package. The vendor has confirmed the package as Year 2000 compliant. EPIC has conducted testing of the system to confirm that it is Year 2000 ready.

Building Systems

EPIC has informally assessed all building systems and identified its fire services and the lift as potentially being affected by Year 2000 problems. The vendors of both systems have been asked to confirm their Year 2000 compliance status.

Audit Comment

Follow up action is required by EPIC to ensure that building systems are Year 2000 ready.

26.6 STATUS OF OTHER SYSTEMS

EPIC has a booking system, which has been certified by its vendors as Year 2000 compliant.

EPIC is reliant on InTACT through its Modernisation Project to ensure that its hardware and operating systems are Year 2000 ready. This matter is discussed further at Chapter 3.

27 GUNGAHLIN DEVELOPMENT AUTHORITY

27.1 INTRODUCTION

The Gungahlin Development Authority was established by the Gungahlin Development Authority Act 1996. Its principle objective is to ensure that the Gungahlin Central Area and Town Centre is developed in accordance with the principles and policies for that area as set out in the Territory Plan, in order to provide for the social and economic needs of the community.

27.2 SPECIFIC FINDINGS

- *The Authority's critical systems are its lease system, its financial management system and its building systems;*
- *the lease system, the software supporting the financial management system and the building systems have been assessed as Year 2000 ready;*
- *the Authority's hardware is planned to be upgraded as part of the InTACT Modernisation Project; and*
- *the Authority has a documented business continuity plan that has been endorsed by the Board.*

27.3 OVERALL CONCLUSION ON CURRENT POSITION

Subject to the upgrade of its hardware, the Authority appears to be well placed to become Year 2000 ready.

27.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

The Authority has developed a Year 2000 compliance plan in conjunction with InTACT.

Inventory Assessment

The Authority has undertaken an inventory assessment of all its computerised systems.

Compliance Plan

The Authority has prepared a compliance plan.

Contingency Planning

The Authority's business continuity plan is incorporated into its compliance plan.

Audit Comment

The Authority has adopted a formal framework in addressing Year 2000 risks. It has undertaken adequate steps to ensure all systems will be Year 2000 ready.

27.5 STATUS OF CRITICAL SYSTEMS

The following comment is provided on the Authority's critical systems.

Lease System

The ACT Executive has authorised the Chief Executive of the Authority to grant leases to approved persons. Lease documentation is generated from a word processing package, which is run on the three personal computers used by Authority staff. InTACT has advised that the computers are not Year 2000 ready. The computers are to be replaced, as part of the InTACT Modernisation Project.

THE MANAGEMENT OF YEAR 2000 RISKS

In the event that InTACT is unable to provide the new computers by the scheduled date (no later than 1 November), the Authority's business continuity plan is to purchase one or more computers, to which the lease documentation and MYOB software will itself be transferred.

Financial Management System

The vendor has certified the Authority's financial management software MYOB, is Year 2000 ready.

Building Systems

The Building Owner has confirmed the Authority's building systems as Year 2000 ready.

Audit Comment

The Authority has undertaken adequate steps to ensure its software and building systems are Year 2000 ready.

28 INTACT

28.1 INTRODUCTION

InTACT provides information technology and telecommunications services to ACT Government agencies, and deliver these services through five principal groups:

- Service Delivery;
- Corporate Support;
- Marketing;
- Business Solutions; and
- Modernisation.

THE MANAGEMENT OF YEAR 2000 RISKS

The Service Delivery group operates the Customer Support Centre (Help Desk) and Regional Delivery Centres in Tuggeranong, Woden, Belconnen and Civic.

The Corporate Support group is responsible for whole of government systems, purchasing and procurement of information technology and telecommunications (IT&T) infrastructure products and services, IT&T asset management.

The Marketing group has responsibility for account management and communication with clients.

The Business Solutions group is responsible for providing fee for service support to agencies as required.

The Modernisation group negotiates and manages InTACT's strategic business partnerships. During the previous fiscal year, InTACT selected three strategic partners in the areas of office systems (GE Capital IT Solutions), networks (Telstra), personal communications equipment (Telstra) and electronic data storage and management (Fujitsu Australia).

28.2 SPECIFIC FINDINGS

- *InTACT's critical systems are the following whole of government systems:*
 - *Oracle Government Financials;*
 - *the Human Resource Management System (PERSPECT);*
 - *the Revenue Reporting System (RAPS); and*
 - *Information Technology infrastructure; and its building systems.*
- *None of these systems are Year 2000 ready, although the software elements of Oracle and PERSPECT have been certified by the vendors as compliant and have been tested; the overall systems will be subjected to final testing after their associated hardware and infrastructure has been modernised;*

THE MANAGEMENT OF YEAR 2000 RISKS

- *a contract has only recently been finalised for the upgrade of the Revenue Receipting System, and Audit has been advised that scoping of the remediation necessary to make RAPS Year 2000 ready will commence immediately;*
- *modernisation of the information technology infrastructure at the Canberra Hospital is nearing completion and all other agencies are scheduled to be modernised by early December;*
- *at the time of the review, InTACT was unable to provide evidence of a documented compliance plan detailing the tasks, time schedules and resources required to ensure all of its non-critical systems identified as potentially affected by the date change to 2000 are ready; and*
- *InTACT has not finalised any contingency plans for its whole of government systems, however, these are in preparation.*

28.3 OVERALL CONCLUSIONS

The Year 2000 readiness of InTACT's whole of government systems are crucial elements in the overall preparedness of almost all Territory agencies for the change to the new millennium. While InTACT has made significant progress toward discharging its responsibilities in this regard considerable work remains to be done, particularly in respect of modernising agencies information infrastructure and the Revenue Receipting System. The modernisation project is not scheduled for completion until early December.

If InTACT can complete its outstanding work, including that mentioned in this chapter, it will achieve Year 2000 readiness by the end of the year. In view of the extremely tight timeframe involved, however, Audit has concerns about InTACT's ability to achieve Year 2000 readiness for the modernisation project and less importantly the Revenue Receipting System. Audit considers that their progress should be monitored very closely. It may be appropriate to consider providing additional resources to InTACT now to make the achievement of its objectives more certain.

28.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

During the audit of InTACT's Year 2000 compliance progress, no evidence of a documented, formal Year 2000 compliance plan for its non-critical systems could be found. InTACT appears not to have documented consideration of related Year 2000 compliance project management issues for non-critical systems such as resourcing, funding, contingency planning and change control methods.

Audit discussions with key personnel revealed that a major outcome of the modernisation project – discussed later – is full Year 2000 compliance of all underlying ACT Information Technology infrastructure.

InTACT's approach to addressing potential risks for other systems identified as non-critical has included preparation of a high level inventory of potentially affected systems, ranking those systems as critical, important or minor and determining strategies to ensure these systems are Year 2000 ready.

InTACT has advised that it has implemented internal policies and procedures for addressing Year 2000 issues across key areas of its business. This includes potentially riskier areas such as the procurement process.

Inventory Assessment

An inventory of InTACT's internal business applications has been prepared. The inventory ranks each business application on the basis of the potential impact on InTACT's operations should the system fail as a result of the date change to 2000.

Contingency Planning

InTACT has not prepared any contingency plans for its whole of government systems. InTACT has agreed, however, that specific contingency arrangements to address the possibility of a Year 2000 related failure should be prepared.

Audit Comment

InTACT has made progress toward ensuring systems potentially affected by the Year 2000 date change, have been identified and where necessary tested, updated or certified by vendors.

However, InTACT should consider developing a business continuity plan to account for the possibility that the Modernisation Project may not be completed by the anticipated timeframe.

28.5 STATUS OF CRITICAL SYSTEMS

InTACT is responsible for the whole of government information technology project, known as the modernisation project. InTACT is also the system owner for the whole of government financial management system, Oracle Government Financials, the whole of government human resource management system, known as PERSPECT and the provider of the whole of government Revenue Receipting System known as RAPS. InTACT is responsible for ensuring that each of these systems is Year 2000 ready. These systems are addressed below.

Modernisation Project

A major aim of the Modernisation Project is the acquisition and implementation of modern information technology infrastructure in a consistent and cost effective manner across all Territory agencies.

Within this overarching aim, InTACT recommends replacing or upgrading infrastructure that is potentially affected by the date change to 2000. Infrastructure includes cabling, personal computers, operating systems, file servers, printers, some desktop packages including Microsoft Office and Microsoft Exchange as well as other infrastructure items.

InTACT has formalised a detailed plan for the modernisation project. Part of the planning process was to prioritise the implementation sequence. The implementation schedule has been presented to the OITM Advisory Board. To assist agencies with their Year 2000 compliance testing on the new

THE MANAGEMENT OF YEAR 2000 RISKS

infrastructure, Audit has been advised that a test environment has been established by InTACT to enable agencies to test their existing applications.

The first element of the Modernisation Project to be installed by InTACT is the Canberra Hospital. This very large project is nearing completion. The next agency on InTACT's installation schedule is the Secretariat of the Legislative Assembly. This is followed by ACT Community Care and Department of Health. A number of agencies with key Territory level critical systems, however, are well down InTACT's installation schedule. InTACT has advised that it plans to complete the Modernisation Project by early December. InTACT acknowledge that this timeframe is challenging.

Oracle and PERSPECT

InTACT has completed the upgrade of the Oracle software in accordance with the project schedule. The software component of the system has been subjected to extensive testing to ensure that it is in fact Year 2000 ready.

PERSPECT is the Human Resource system used by most ACT Government agencies. Aspect Computing has been contracted to ensure that the human resource component of PERSPECT is Year 2000 ready. The payroll component of this system is the responsibility of the Chief Minister's Department and is discussed at Chapter 18. InTACT advised that it has received written certification from the vendor that PERSPECT is Year 2000 compliant. The software component of the system has been subjected to extensive testing to ensure that it is in fact Year 2000 ready.

Overall Year 2000 readiness testing for Oracle and PERSPECT will be performed at a machine and database level when each machine and operating system is modernised in each agency. That is, although testing of software has been undertaken progressively, neither system will be fully Year 2000 ready until the modernisation project has been completed in each agency.

Revenue Receipting System (RAPS)

This system is used for receipting monies across the whole of ACT Government. ACT Government Shopfronts are totally dependant on the operation of RAPS to collect revenue on behalf of the Government. The Information Planning and Services branch of the Department of Urban Services manages the Shopfronts. InTACT operates a help desk service for RAPS. A service contract between the Chief Minister's Department and

THE MANAGEMENT OF YEAR 2000 RISKS

Fujitsu was reviewed by audit. Fujitsu is responsible for RAP System Support. The system support contract sighted by audit did not, however, specify that Fujitsu is responsible for coordinating the Year 2000 compliance status for RAPS.

InTACT has accepted responsibility for ensuring Year 2000 readiness of RAPS. The Chief Minister's Department has advised that a contract with Fujitsu was signed during the first week in May and that scoping of the remediation necessary to make RAPS Year 2000 ready will commence immediately.

Audit Comment

InTACT is placing reliance on the successful completion of the Modernisation Project in a timely manner to ensure that information technology infrastructure for the whole of Territory Government is Year 2000 ready. The ultimate readiness of Oracle and PERSPECT is also dependent on the successful implementation of the modernisation project. The timeframe for the completion of this project, including final implementation testing by individual agencies, is extremely tight. On the other hand, InTACT believes that based on work done to date at the Canberra Hospital, other agencies can be effectively modernised in the available timeframe.

In view of the extremely tight timeframe involved, Audit has concerns about InTACT's ability to achieve Year 2000 readiness for all of its whole of government systems and considers that its progress should be monitored very closely. It may be appropriate to provide additional resources to InTACT now to make the achievement of its objectives more certain.

The installation schedule for the modernisation project has been presented to the OITM Advisory Board. Audit suggests that this schedule should be reviewed by the Advisory Board and InTACT against the definition of Territory level critical systems detailed in Chapter 1 of this Report and other operational considerations, and if appropriate, varied accordingly.

Action to ensure that RAPS is Year 2000 ready has only just commenced. Progress in this matter will need to be followed intensively.

Building Systems

The Office of Asset Management is responsible for ensuring that all of InTACT's building systems are Year 2000 ready. This matter is discussed further at Chapter 3.

28.6 OTHER SYSTEMS

InTACT has identified and documented its internal agency business systems and applications potentially affected by the Year 2000 date change. InTACT believes that on completion of planned upgrades and vendor certification, these systems will be fully Year 2000 ready before June.

29 LEGAL AID OFFICE

29.1 INTRODUCTION

The Legal Aid Office was established by the Legal Aid Act 1977. The Office provides legal assistance to eligible people by arranging for the services of private legal practitioners to be made available at its expense, or by making available the services of its own officers.

29.2 SPECIFIC FINDINGS

- *The Office's critical systems are its financial management system, its client management system and its building systems;*

THE MANAGEMENT OF YEAR 2000 RISKS

- *the vendor has advised that the Office's financial management and client management systems are Year 2000 compliant and testing of these systems are currently underway to ensure that they are Year 2000 ready;*
- *the readiness status of the Office's building systems is unknown, however the Office has sought advice on its status from the owner; and*
- *the Office has developed contingency plans for its critical financial and client management systems; the Office has advised that because of its size it has not developed a formal business continuity plan, however, the Office believes that it has analysed all foreseeable risk and taken reasonable steps to avoiding those risks.*

29.3 OVERALL CONCLUSION ON CURRENT POSITION

The Office's management of Year 2000 risks has been sound. Most of the essential work has been carried out or soon will be. The Office is well placed to avoid any serious disruptions from a Year 2000 failure.

29.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

The Office has incorporated its Year 2000 issues in its Information Technology Strategic Plan, which was developed to ensure systems are in place to provide the most effective, efficient and economical outputs for the Office.

Progress on the Year 2000 project is monitored by the Business Manager and reported directly to the Chief Executive Officer at regular meetings.

Adequate resources have been allocated from the operational budget to ensure a smooth transition into the millennium. The main costs would be in replacing the non-compliant personal computers with compliant ones. It is

THE MANAGEMENT OF YEAR 2000 RISKS

intended that these will be purchased out of the operating budget before 30 June.

The Office has a maintenance contract with Computer Power and Computer Associates for hardware and software support. These contractors will be used to resolve Year 2000 issues if and when they arise.

Inventory Assessment

In April 1997, Computer Power was engaged to undertake a Year 2000 Impact Study, to identify any potential risks of Year 2000 failure at the Office. The study focused mainly on the Office's client database, which has now been upgraded.

A subsequent progress report was completed in April 1998, of follow up action required since the initial review. This report indicated that replacement of the non-compliant personal computers as the major issue.

Compliance Plan

The Information Technology Strategic Plan identifies procedures for replacing non-compliant hardware. It also details the timing of any testing required on hardware and software to be Year 2000 ready by June.

Vendor compliance certification has been obtained from the suppliers of its software applications.

Contingency Planning

Because of its size, the Office has not developed a formal business continuity plan. It has advised that the focus has been on ensuring that the Office will be in a position to ensure service delivery by implementing back up and recovery procedures for its critical computer systems and maintain the ability continue operations manually if necessary.

Audit Comment

The Office has given priority to readying its critical systems by June. The Office is confident that testing of these systems will be completed by June. Subject to the satisfactory testing of those systems, it should achieve this objective. The Office, to ensure business continuity, should give attention to the implementation of back up and recovery procedures for its critical systems.

29.5 STATUS OF CRITICAL SYSTEMS

Comments on the Office's critical systems follow.

Financial and Client Management Systems

The Office uses two critical software applications. LA Office is a client and financial management system which integrates with Finance One, an additional financial management system. Vendors have confirmed that both applications are Year 2000 compliant. The applications are in production, and transactions with Year 2000 dates have been posted and processed correctly. Testing of both applications is planned to be completed by June.

Building Systems

As a matter of law, the Office considers that it has no liability with regard to its building management systems because it is a sub-lessee to a lease between Totalcare and the building owners. Nonetheless, the Office has sought advice from the building owner on the Year 2000 status of its building systems.

Audit Comment

The Office is readying its critical systems in a satisfactory manner. However, the achievement of Year 2000 readiness is subject to the completion of testing and receipt of advice from the building owner.

29.6 STATUS OF OTHER SYSTEMS

The personal computers used by the Office's legal officers are unlikely to work as of 1 January 2000 without significant upgrading. Given the age of the computers, the Office has chosen to replace the computers before the end of 1999. The majority of computers have already been replaced with the objective of replacing all machines by June.

Audit Comment

Provided the Office replaces all of its computers, the risk of Year 2000 failure is being managed satisfactorily.

30 LEGISLATIVE ASSEMBLY SECRETARIAT

30.1 INTRODUCTION

The Legislative Assembly Secretariat, headed by the statutory office of Clerk of the Assembly, provides procedural, policy and administrative services to the Assembly, including administrative support to non-executive Members and their staff.

30.2 SPECIFIC FINDINGS

- *The Secretariat has three critical systems: financial management, human resource management and building systems;*
- *the financial management and human resource systems have been certified by their vendor as Year 2000 ready but will be subjected to site testing to verify their readiness;*
- *the Legislative Assembly building systems are not Year 2000 ready, however, they are currently being assessed and tested; and*
- *the Assembly has not prepared contingency or business continuity plans.*

30.3 OVERALL CONCLUSIONS ON CURRENT POSITION

While progress has been made by the Assembly to ensure its operations will not be disrupted by the transition into the new millennium, there is some way to go before the Assembly's critical systems will be Year 2000 ready. Appropriate attention should also be given to the preparation of the planning and management documents.

When the Assembly completes outstanding work, including that mentioned in this chapter, it will have achieved an appropriate degree of Year 2000 readiness.

30.4 PLANNING AND MANAGEMENT

Formal framework in Addressing Year 2000 Issues

The Legislative Assembly has not formally assessed the exposure and impact of Year 2000 failure. The Corporate Manager has been allocated the responsibility for overseeing the Year 2000 issues.

Inventory Assessment

There was no formal inventory and impact assessment of potential exposure to the effects of Year 2000 on the business activities of the Legislative Assembly.

Compliance Plan

The Assembly's Year 2000 compliance plan is out of date and does not contain any reference to the testing of systems to ensure compliance.

Contingency Planning

The Assembly does not have contingency plans to mitigate exposure in the event of system or equipment failure due to Year 2000 issues.

Audit Comment

The Secretariat does not have a full inventory and impact assessment and its compliance plan is out of date. Nor does it have contingency or business

continuity plans. This exposes the Secretariat to the risk of being unable to provide the full range of support services to the Legislative Assembly Members in the event of a possible Year 2000 failure.

30.5 STATUS OF CRITICAL SYSTEMS

The following comments are made on each of the Assembly's critical systems.

Financial Management System

The financial management system is Sun Systems. The supplier, Systems Union, has provided a warranty indicating that it is Year 2000 ready.

The Secretariat has advised that it intends to test this system to verify that it is Year 2000 ready.

Payroll System

The Payroll System is Micropay. Year 2000 compliant software was recently installed.

The Secretariat has advised that it intends to test this system to verify that it is Year 2000 ready.

Building Systems

A contractor was engaged to assess the Year 2000 compliance of all building systems. Of the 19 building systems identified, 16 were assessed as either Year 2000 ready or not affected by the Year 2000 date problem and three were assessed as non-compliant and are to be replaced. The Secretariat has advised that these systems will also be tested to confirm that they are Year 2000 ready.

The three non-compliant systems that are to be replaced are:

Threshold Security System – This system controls entrances to, and movement within certain points of the Assembly building. The security

THE MANAGEMENT OF YEAR 2000 RISKS

alarm links with a security firm whose instructions are to arrange for immediate police response.

Landis and Staeffa Building Management System – This system enables monitoring and where required adjustment of air-conditioning etc.

Minitronics Emergency Lighting System – This system provides lighting independently of normal lighting systems in the event of fire or loss of power.

Audit Comment

The Legislative Assembly is taking appropriate steps to ensure Year 2000 readiness of its critical systems. However, progress on its building systems in particular, should be monitored closely.

30.6 STATUS OF OTHER SYSTEMS

The Hansard System consists of sound recording equipment which is used to enable verbatim records to be maintained. The Assembly has advised that this system is not dependent on date sensitive components.

31 MILK AUTHORITY OF THE ACT

31.1 INTRODUCTION

The Milk Authority is engaged in the supply and sale of raw milk to processors for consumption in the Territory, to administer contracts between industry participants and to ensure stability and quality of milk supply in the ACT. The Authority has four staff members.

31.2 SPECIFIC FINDINGS

- *The Authority's critical system is its financial management system;*
- *the Authority's financial management system has been certified by vendors as Year 2000 compliant; the Authority has advised that it has undertaken informal testing on the system to confirm that it is Year 2000 ready; and*
- *the Authority has a Risk Management Plan to facilitate the continuous supply of fresh milk in the ACT, which incorporates the possibility of a Year 2000 related failure.*

31.3 OVERALL CONCLUSION ON CURRENT POSITION

The Authority is a very small agency and in this context is making good progress to ensure that it will be Year 2000 ready by the change to the new millennium. The Authority has identified major tasks to complete and contingency planning to ensure continuous supply of fresh raw milk to the ACT.

31.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

The Authority has not deemed it necessary to prepare a formal management plan, inventory or compliance plan due to its very small size.

Contingency Planning

The Authority has a Risk Management Plan that specifies procedures to facilitate the continuous supply of fresh raw milk in the ACT in the event of a disaster or other disruptive occurrence. The Authority has advised that this plan covers the possibility of a Year 2000 related failure.

Audit Comment

Due to its very small size, the Authority has undertaken an informal and pragmatic approach to planning its approach to the resolution of Year 2000 issues.

31.5 STATUS OF CRITICAL SYSTEMS

Financial Management System

The Authority uses MYOB as its financial management system. Vendors have certified the software as Year 2000 compliant, and the Authority has advised that it has undertaken informal Year 2000 testing to verify compliance. It has also advised that the system is backed up daily and that financial transactions of the Authority are so few in number that they could easily be conducted manually.

32 REGISTRAR GENERAL'S OFFICE

32.1 INTRODUCTION

The Registrar General's Office provides for the registration of certain documents as specified by various statutes. It includes the registration of land titles; births, deaths and marriages; and business names and associations.

Also included in the Office are the Rental Bonds Unit, which provides an independent custodial service for the receipt and refund of residential rental bonds.

32.2 SPECIFIC FINDINGS

- *The Office's critical systems are its Land Titles System; Deeds and Instrument System; Births, Deaths and Marriages System; Document Management System; and Rental Bonds Tracking System;*
- *all critical systems except the Rental Bonds Tracking System have been assessed as Year 2000 ready; the Rental Bonds Tracking System is scheduled to be tested for Year 2000 readiness by May;*
- *the Office has a critical link with the Australian Securities and Investment Commission's National Names Index; it is currently awaiting receipt of advice on the Year 2000 status of this system; and*
- *the Office advises that it is currently developing a contingency plan to guard against the failure of its external link with the National Names Index; it has also developed contingency plans for all other critical systems; the Office has advised that these plans will be tested and validated by June.*

32.3 OVERALL CONCLUSIONS ON CURRENT STATUS

Although there is work which remains to be done, the Office appears to be well placed to achieve Year 2000 readiness for all of its critical systems. The Office is now giving appropriate attention to developing and testing contingency plans. The Office is confident that these plans will be tested and validated by June.

If the Office is able to complete outstanding work, including that mentioned in this chapter, it will be in a good position to achieve Year 2000 readiness.

32.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

The Office has incorporated its Year 2000 risks in its Business Plan, which identifies the procedure required for the Year 2000 compliance effort for each of its business systems. The Office Information Technology committee addresses all Year 2000 issues. Adequate resources have also been allocated from the operational budget to undertake necessary remedial work.

Inventory Assessment

The Office has prepared a comprehensive inventory of Information Technology and other computerised systems. A detailed and documented Year 2000 impact assessment has also been undertaken as part of the Office's contingency planning processes.

Compliance Plan

The Office has developed an agency specific compliance plan to address Year 2000 issues, which indicates key actions to be followed to achieve Year 2000 compliance of its business systems.

Contingency Planning

The Office has advised that contingency plans have been developed for all of its internal critical systems. It has also advised that it is intended that all plans will be formally tested and validated by June.

The Office is currently developing a contingency plan for its external link with the National Names Index, managed by the Australian Securities and Investment Commission. Failure of this system would result in delays in registering businesses within the ACT.

Audit Comment

The Office is taking adequate steps to ensure that all Year 2000 risks are systematically addressed. The continuity of its operations should also be well supported by contingency and business continuity planning.

32.5 STATUS OF CRITICAL SYSTEMS

Comments on the Office's critical systems follow.

Land Titles System, Register of Deeds and Instruments and Births, Deaths and Marriages System

These systems were developed internally by the ACT Government some 6-10 years ago. They were reviewed for year 2000 compliance in 1997-98 and were found to be non-compliant. As a result the Office engaged a service provider, in conjunction with InTACT, to upgrade the systems to a Year 2000 compatible status. During the upgrade the systems were extensively tested and have been assessed as Year 2000 ready.

Document Management System

This system was installed in July 1998 to replace the Incorporated Associations System. Its compliance status is guaranteed under contract.

Rental Bond Tracking System – Bonds Management System

The Bonds Management System replaced the original tracking system for rental bonds in January. The Office has advised that arrangements are currently underway to engage InTACT to conduct comprehensive Year 2000 testing of this system. Testing is scheduled for completion before June.

Financial Management System

The Office's financial management system is Oracle Government Financials. It is reliant on InTACT to ensure that this system is Year 2000 ready. The Office is also reliant on InTACT, through its Modernisation Project, to ensure that its hardware and operating systems are also Year 2000 ready. These matters are discussed further at Chapter 3.

Audit Comment

The Office's management of the Year 2000 readiness of all critical systems appears satisfactory.

32.6 LINKS WITH EXTERNAL ORGANISATIONS

The Office utilises the National Names Index that is managed by the Australian Securities and Investment Commission. The Index is a national system that services each and every State and Territory within Australia. The Office uses this system to ensure that it does not approve the registration of a business with the same name as a business already registered.

The Office is currently awaiting confirmation of the Year 2000 status of the National Names Index. Failure of this database would result in applications to register businesses not being processed.

33 THE CANBERRA HOSPITAL

33.1 INTRODUCTION

The Canberra Hospital is a major trauma and tertiary care facility which provides health and hospital services to the ACT and South-Eastern Region of New South Wales. Services include all major medical, surgical and women's and children's health specialities on an inpatient and outpatient basis, accident and emergency, mental health, pathology, medical imaging and allied health. The Hospital is also a teaching hospital of the Canberra Clinical School of the University of Sydney.

33.2 SPECIFIC FINDINGS

- *The Hospital's critical systems are its bio-medical equipment, medical support systems, building systems and its financial management system;*

THE MANAGEMENT OF YEAR 2000 RISKS

- *the hospital has almost 4,000 pieces of bio-medical equipment with embedded computer chips, 51 critical medical support systems, and up to 5,500 building systems whose criticality is currently being evaluated;*
- *to date 60% of the bio-medical equipment has been assessed as Year 2000 ready, five percent has been assessed as non-compliant and 35% remains to be assessed; the likely cost of rectifying non-compliant equipment is assessed at about \$2 million;*
- *of the 51 medical support systems rated critical, 29% have been declared Year 2000 ready; however, none have yet completed the full certification procedure endorsed by the Hospital Executive; the Hospital has advised that it plans to complete all remediation action by September;*
- *a contract was recently let to complete the Year 2000 testing and certification of building systems; the Hospital has advised that this task is due to be completed by June;*
- *the re-positioning of the Information Technology section under the Corporate Services directorate (with Bio-medical Equipment and Facilities Management) has seen an improvement in Executive involvement in the Year 2000 project; and*
- *contingency planning is underway and the experience gained from contingency planning for the Information Technology modernisation project will assist in this task.*

23.3 OVERALL CONCLUSIONS ON CURRENT POSITION

Although the Hospital has made progress in ensuring that its critical systems will be ready by the end of the year, it still has a long way to go.

While the impact of a failure to achieve Year 2000 compliance for critical systems would be significant, the Hospital has long recognised this impact, and has devoted extensive resources to minimise the risk.

THE MANAGEMENT OF YEAR 2000 RISKS

It is vital that the Hospital continues to devote sufficient management and financial resources to monitor the progress of Year 2000 project and to ensure that it is completed satisfactorily.

As the time is rapidly approaching when non-compliant systems may not be made ready in time, significant priority effort should be expended on comprehensive contingency and business continuity planning.

33.3 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

A comprehensive Year 2000 Compliance Strategy was endorsed in October 1998. Executive responsibility for this strategy lies with the Executive Director, Corporate Services. Operational responsibility for the project lies with the Directors of Hospital Information Systems, Biomedical Engineering and Facilities Management, all of whom report to the Executive Director, Corporate Services.

There were delays in the approval of funding for critical components of the project and a lack of senior management commitment to requiring functional units to perform tasks within a specified timeframe. The funding issue has now been resolved and a Year 2000 Management Team has been set up to assess and coordinate the project.

After the completion of the Project Management contract in December 1998, a new Project Manager was appointed in January with direct responsibility for the compliance of medical support systems. The Manager monitors and reports on the compliance activity of bio-medical and facilities equipment.

Inventory Assessment

The Hospital has established an inventory of Year 2000 sensitive information, medical support systems and bio-medical equipment. A tender has been recently let to ensure that building systems are made Year 2000 ready. A key initial task of the project is to establish a complete inventory of potential date dependent computer software and building systems.

Compliance Plan

The Hospital has a Year 2000 Compliance Plan for bio-medical equipment and support systems. A large body of work has been carried out obtaining compliance statements from suppliers of bio-medical equipment and building systems.

Functional units have responsibility for assessing, and testing, compliance of systems within their units. Each user area has been given a 'Year 2000 compliance testing education pack' and test documentation standards to assist with providing a high level of documentation related to the Year 2000 project.

Once a business unit has completed testing, it is required to submit an application for certification to the Year 2000 Project Management Team. Although the October 1998 Compliance Strategy endorsed by the Hospital Executive requires certification to be signed-off by the Executive Director, Corporate Services, in practice sign-off will be by the Executive responsible for the relevant business area. The March progress report shows 20% of critical support systems are Year 2000 ready, and 15% are awaiting certification.

Contingency Planning

Contingency plans are under development for critical medical equipment and medical support systems. These plans will contribute to the Business Continuity Plan which is yet to be developed.

Audit Comment

The framework adopted by the Canberra Hospital is appropriate to ensure that it is adequately prepared for the transition to the new millennium. The Hospital, however, should now give priority effort to the development of contingency and business continuity plans to ensure that its operations will not be disturbed in the event of a possible Year 2000 related failure.

33.4 STATUS OF CRITICAL SYSTEMS

General

The Hospital has nearly 4000 pieces of bio-medical equipment, and 51 medical support systems that have a hospital criticality rating of very high or extreme. The task of assessing the criticality of the 5,500 building systems is contracted to be complete by June. After assessment, the systems will be tested according to their criticality. Also included in this section is the Hospital's Financial Management System. Each of these systems is discussed following.

Bio-Medical Equipment

Both the US Federal Drugs Administration and the Australian Therapeutic Goods Administration (TGA) advise that manufacturer/vendor statements represent the most reliable assessment of Year 2000 readiness for bio-medical equipment. TGA recommends that in the absence of manufacturer/vendor statements reference should be made to the College of Biomedical Engineers Year 2000 web page and failing that, local testing. This strategy has been adopted by the Hospital.

TGA has issued manufacturers with a direction to supply Year 2000 compliance statements relating to safety and function issues. Companies who do not supply this information will have their product delisted and therefore they will not be able to be sold. Where safety issues related to Year 2000 arise, TGA requires a mandatory recall of the non-compliant equipment.

As of March, 2,282 (60%) of the 3809 pieces of medical equipment have been assessed as Year 2000 ready. 180 (5%) have been identified as date non-compliant and 26 (less than 1%) non-compliant items have been identified as needing upgrade or replacement. The Year 2000 status of 1321(35%) items has yet to be assessed.

The Hospital has advised that all bio-medical equipment will be assessed for Year 2000 compliance and will either be made compliant or be removed or replaced prior to the Year 2000.

Medical Support Systems

The Hospital has identified 51 medical support systems that have a criticality rating of extreme or very high. These systems provide essential medical support to the pathology, clinical, medical, nursing and corporate services departments. All critical systems have been assessed. Fifteen (29%) are fully Year 2000 ready, nineteen (37%) are being tested, and the balance of seventeen (33%) are awaiting new software prior to testing commencing, or have not yet progressed to the test phase. Each system has been allocated a date by which all testing and, if necessary, remedial action is to be completed. These dates range from April to September.

Building Systems

The Hospital has let a Year 2000 Project contract to ensure that all critical building systems are Year 2000 ready. The contract covers Year 2000 compliance of building services such as emergency generators, air-conditioning and chilled water and condenser systems, ventilation and extraction systems, medical gases supplies, remote monitoring systems, fire detection systems, duress systems and lifts. The Hospital advises that progress is on track for completion by June.

The aim of the project is to ensure that the Hospital undertakes a comprehensive evaluation of all building systems with respect to the impact of Year 2000 and, where necessary, effect change to minimise that impact.

The Hospital's strategy for this project is based on risk management principles to minimise its risks, as resource and time constraints prohibit the testing of every item. For critical products, vendor compliance statements will be obtained and Year 2000 compliance testing will be undertaken. Non-compliant products will be replaced, repaired or retired as appropriate, or a manual workaround will be developed. Any replaced or upgraded product will be tested for Year 2000 compliance.

Financial Management System

The Hospital is reliant on InTACT to ensure that Oracle Government Financials is Year 2000 ready. The Hospital is also reliant on InTACT, through its Modernisation Project, to ensure that its hardware and operating systems are also Year 2000 ready. These matters are discussed further at Chapter 3.

Audit comment

The Hospital has put in place appropriate procedures to ensure that its critical systems and equipment and building systems are assessed and where necessary upgraded. However, there is still a long way to go before the Hospital's critical systems will be Year 2000 ready, and progress will need to be closely monitored.

33.5 STATUS OF OTHER SYSTEMS

Assessment of non-critical information systems has commenced.

Audit Comment

The priority allocated to the remediation of individual groups of equipment and systems should be assessed to ensure that the most important of them are addressed first. Alternatively, consideration might be given to allocating additional resources to this aspect of the Hospital's Year 2000 preparations.

33.6 KEY LINKS WITH EXTERNAL ORGANISATIONS

Identification, risk assessment and compliance assessment of links with external organisations has commenced. The significant task of assessing suppliers' compliance status and the consequent risk to the supply of products and services has been taken over by the Department's Business Services Bureau. Progress is proceeding on this task to ensure that critical supplies are not affected by the Year 2000 transition.

34 TOTALCARE INDUSTRIES LIMITED

34.1 INTRODUCTION

Totalcare Industries Limited is a Territory owned corporation that provides facilities management, automotive services, engineering maintenance, linen hire, sterilising, waste management, engineering and architectural support to ACT public sector agencies and commercial customers.

34.2 SPECIFIC FINDINGS

- *Totalcare's critical systems are its major revenue generating systems; these include the medical equipment sterilising system, financial management system and the building systems;*
- *each of the Company's four main revenue generating units have or are addressing Year 2000 risks for their system;*
- *Totalcare's Sterilising system is Year 2000 ready, however, the system relies on external supplies of electricity and no back up power source is available at this time;*
- *Totalcare's financial management system is not Year 2000 compliant, however, Totalcare has commenced two projects to upgrade and replace the existing system; Totalcare expects to complete these projects by the end of July;*
- *Totalcare's building systems are predominantly Year 2000 ready; Totalcare have advised that those systems that are not yet Year 2000 ready should be by the end of June; and*
- *Totalcare currently has no contingency plans, however, these have been scheduled for development in the period June to September.*

34.3 OVERALL CONCLUSION ON CURRENT POSITION

Totalcare has made significant progress on its critical systems to ensure Year 2000 readiness. All critical systems should be Year 2000 ready by the end of June. Business analysis has been performed to ensure that the operations of Totalcare should not be adversely effected by the change of the millennium.

At the time of gathering information for this Report, Totalcare had no contingency plans. This aspect needs to be closely addressed by management.

34.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

Totalcare initially engaged a consultant to undertake a detailed analysis of its date dependent systems and equipment and to recommend a strategy to achieve Year 2000 readiness. The consultant's report was submitted to Totalcare in September 1998. The Company has advised that the recommendations contained in the consultant's report have been accepted and now form the basis of its Year 2000 readiness strategy.

On receipt of the consultant's report, the Company appointed a steering committee comprising line managers from a number of its operational areas. The Manager Corporate Support chairs the Committee. This Committee is responsible for ensuring that the recommendations from the consultant's report are undertaken.

The Board and the Steering Committee have implemented the following procedures to ensure that all necessary tasks are being performed:

- a Year 2000 master file is maintained to centralise data;
- there are standard forms to be completed for each inventory item, which identifies their status;
- the organisation was divided into business units;

THE MANAGEMENT OF YEAR 2000 RISKS

- each business unit reports on a three weekly basis to the Committee; and
- the Committee produces a monthly report to the Board.

Inventory and Impact Assessments

The Consultant's report, referred to previously, included a detailed inventory of Totalcare's computer software, hardware and systems embedded in building systems and plant as well as strategies to mitigate Year 2000 risks.

Contingency Planning

The Company advised that it has not yet developed any contingency plans. The development of contingency and business continuity plans is scheduled for the period June to September.

Audit Comment

The consultant's report, which included an inventory, an impact assessment and Year 2000 readiness plans, has provided Totalcare with a comprehensive basis from which to work towards Year 2000 readiness.

Totalcare has applied a significant number of resources to the remediation of Year 2000 risks since receiving the consultant's report. A sound planning and management structure has been set up to control the workload required. However, there presently is a lack of contingency planning.

34.5 STATUS OF CRITICAL SYSTEMS

Totalcare's critical systems are its major revenue generation systems, these include the sterilising system, financial management system and building management systems. Each of these systems is discussed below.

Major Revenue Generating Systems

Three quarters of Totalcare's revenue comes from four main business units: Facilities Management, Automotive Services, Engineering Maintenance and Linen. Each of these sources is discussed following.

It is important to note that all of these key areas would be able to operate and generate revenue without the assistance of computer systems. The major uses of systems in these areas are invoicing and work scheduling.

Facilities Management — This unit has approximately 200 customers. It manages 350 to 400 maintenance projects, a large volume of small housing upgrades, as well as consulting on building conditions, property management strategic plans and Year 2000 assessments.

Facilities Management has three main systems and various building management systems that are used for planning, maintenance and invoicing. These systems are:

- the main invoicing system which is scheduled to be compliant in May and is used by many other areas within Totalcare;
- the planning system which is scheduled to be tested in May and remediated thereafter if required. This system accounts for approximately 15% of the facilities management workload; and
- an electronic link to ACT Housing used to download work requests. This system is the responsibility of ACT Housing. In the event of its failure to operate there should be no adverse effect on income generation as requests can be transferred manually.

The building management systems produce a very small proportion, less than five percent, of facilities management revenue. They are discussed later in this Chapter.

Automotive Services — This unit has approximately 120 customers. It manages over 2,000 cars and trucks as well as various items of plant.

Fleet Services has four main systems, which are used for fleet management and invoicing. These systems are:

THE MANAGEMENT OF YEAR 2000 RISKS

- the most critical system is 'AusFleet' which is speciality fleet management software. The supplier has certified this software as Year 2000 compliant;
- the main invoicing system which is scheduled to be compliant in May, is used by many other areas of Totalcare;
- the maintenance scheduling system which is also scheduled to be compliant in May, is used by many other areas of Totalcare; and
- shellcard which is a service that is provided by a third party. A compliance statement has been requested.

Engineering Maintenance — This unit maintains a variety of infrastructures such as Scrivener Dam, Kingston Boat Harbour, bridges, fountains and memorials.

It has three systems, which are used for quoting, costing and invoicing jobs. The only one of these systems that is considered business critical is the invoicing systems. It is planned to have this system Year 2000 ready by the end of May.

Linen Hire — This unit has 350 customers, all under contract. It operates two shifts per day to maintain a supply of clean linen to its customers.

The operation of Linen Hire is dependent on the operation of the Scott Systems to control the laundry process. This system is Year 2000 ready, having received certification from the supplier and been tested on site.

There are a number of other systems that are used for invoicing and stock tracking. Most of these systems are being replaced by the Aladdin system, which is Year 2000 ready. These systems are not considered business critical and would not effect revenue or operation.

Medical Equipment Sterilising System

Totalcare is one of the largest sterilising services in Australia. The sterilising operations at Mitchell are one of a three-part operation that is used to produce sterile theatre packs for Hospitals. This service is provided for all ACT hospitals and about 10 hospitals interstate.

THE MANAGEMENT OF YEAR 2000 RISKS

All control systems that are required to operate machinery in the plant have been made Year 2000 ready.

The other key inputs to the sterilising process are electricity, water, diesel oil and gas. These are required to either operate or be used by the machinery in the sterilisation process.

The most critical of these inputs is electricity as the sterilising equipment cannot operate without it. All other inputs can be substituted with alternatives and Totalcare maintains its own stocks of these items. Therefore, the only event that would result in a complete stop to sterilisation would be loss of electricity supplies to Mitchell.

Financial Management System

Totalcare's financial management system is not Year 2000 compliant. Currently, it operates on the 'powerhouse' platform on an HP 3000 machine. There are two projects under way which will resolve the Year 2000 issues for this system.

The 'powerhouse' software and associated operating system software for the HP 3000 machine is due to be upgraded in May. This will make the financial management system and a number of other key systems Year 2000 ready.

The Company has approved a plan to replace its existing system by July. The new system, Peoplesoft, which is Year 2000 compliant, is an integrated package covering general ledger, accounts payable, fixed assets, purchasing and payroll.

Building Systems

All of the business critical systems, including employee safety related systems, are Year 2000 ready. A number of other systems are still being tested. This testing is due to be completed by June.

Audit Comment

Totalcare has made significant effort on its business systems. Since receiving the detailed inventory and recommendations, rigorous business analysis and testing has been performed to identify business critical systems. The cost and timeframe to remediate these systems has been evaluated and

THE MANAGEMENT OF YEAR 2000 RISKS

appropriate action has been taken. It is likely that all of Totalcare's critical systems will be Year 2000 compliant well before the end of 1999.

34.6 STATUS OF OTHER SYSTEMS

Totalcare has a number of other business units such as: Projects, Survey, Fleet Workshops, Property Management and Environmental Services.

All of these business units are dependent only on systems that run on the powerhouse platform. As this platform is currently being upgraded to be Year 2000 ready there are no significant issues for these business operations.

34.7 PROVISION OF WHOLE OF GOVERNMENT SERVICES

Totalcare is the building manager for many ACT Government buildings. Totalcare has advised its clients, the owners of these buildings, of their responsibilities regarding the need to undertake Year 2000 reviews of their buildings and assets. Totalcare have offered to undertake Year 2000 audits of their facilities on a fee for service basis.

Totalcare is also engaged as a service provider by a number of government agencies to monitor their buildings. There are a total of five types of building monitoring systems that are used by Totalcare for their clients.

Two of the systems are already Year 2000 ready. The agencies that utilise two other systems have agreed to pay the cost of making these systems compliant and Totalcare are in the process of upgrading the systems.

The final system is involved with the monitoring of some schools. Totalcare has yet to come to an agreement with individual schools or the Education Department whether they require, and are willing to pay to make the system Year 2000 ready.

Audit Comment

Totalcare is a commercial entity and clearly not in a position to perform remediation services for other agencies without adequate compensation. This matter will need to be resolved in the very near future.

35 UNIVERSITY OF CANBERRA

35.1 INTRODUCTION

The University of Canberra was founded in 1967 and established as a university in 1990. It has a student population of about 9,000 with a total staff of approximately 800. The campus is in the suburb of Bruce and has over 1,000 students living in residences. There is a pre-school and early childhood centre on campus as well as a cafeteria and sports and fitness training facilities. Services provided include health, personal counselling, careers and employment, disability, chaplaincy and loans.

35.2 SPECIFIC FINDINGS

- *The University has three critical systems: Student Administration, Corporate Management and its Building Systems;*
- *all critical systems are Year 2000 ready;*
- *the University plans to have all of its non-critical systems Year 2000 ready by July; and*
- *the University has begun to address contingency and business continuity planning.*

35.3 OVERALL CONCLUSIONS ON CURRENT POSITION

The University has made excellent progress towards ensuring that it is Year 2000 ready by the change to the new millennium.

35.4 PLANNING AND MANAGEMENT

Formal Framework in Addressing Year 2000 Issues

Overall management of Year 2000 issues at the University is the responsibility of the Deputy Chancellor who is chairman of the University's Year 2000 compliance steering committee. The Committee is comprised of the Chair, three Council members, one Pro Vice-Chancellor, the Head of Information Technology and the Executive Director of Corporate Management. The Committee meets at least on alternate months.

The University has adopted an iterative approach to addressing Year 2000 issues and has been actively involved in this process since June 1998. As the first major step in this process, the University engaged a firm of computer consultants for advice and assistance. The consultant's report was received and accepted by the University on 6 May 1998. This document has provided a framework for subsequent Year 2000 work by the University.

As part of its overall management processes, the Steering Committee developed a comprehensive schedule of date dependent computerised systems across the University and its associated entities. It set up a web site describing the Year 2000 project and included the schedule on it. The Committee offered a prize to any staff member or student who identified equipment or issues of significance that had been omitted from its consideration.

The University has not allocated specific resources to address the Year 2000 issue. Faculties and Divisions are required to absorb any costs in their operating budget.

Inventory Assessment

An associate professor was nominated to manage the University wide approach to meeting Year 2000 compliance. Each faculty, organisation and section prepared an inventory of all computer hardware, software and other date dependent computerised systems. Each inventory identified costs and whether or not the item was compliant and whether or not it was mission critical.

A testing schedule was prepared for each mission critical system in the inventories. The testing schedules identified the testing process to be undertaken and the time by which testing was to be completed. The successful completion of testing process is recorded in the schedules.

Compliance Plan

A Year 2000 Project Master Plan, and a Year 2000 Project Plan for each faculty and operating unit has been prepared. The plans identify individual items of hardware, software, operating systems, and electronic hardware to be assessed for compliance and dates by which each item is to be made compliant.

The Steering Committee monitors compliance on each critical system and on an overall business process or system basis. It does this by receiving oral and written progress reports on each system.

Contingency Planning

The University has advised that the need for contingency planning is reviewed at each meeting of the Year 2000 Compliance Steering Committee. Contingency plans have been prepared for staff pay and paper stocks and a list of technical staff to be placed on standby is presently being drawn up. The University has advised that it expects to finalise the preparation and testing of its contingency plans by 30 July.

Audit Comment

The University's decentralised approach to the management of its Year 2000 preparations seems to be working well.

35.5 STATUS OF CRITICAL SYSTEMS

Student Administration

The Student Administration System contains the academic records for all students. It also contains information on the courses and subjects that each student is enrolled in and their fees and HECS arrangements.

Remediation work has been completed as has testing to ensure Year 2000 readiness. The system is now Year 2000 ready.

Financial and Human Resource Management

The University uses a proprietary system for the financial management of the University as well as the administration of its human resources, including payroll and superannuation.

Remediation work has been completed as has testing to ensure Year 2000 readiness. The system is now Year 2000 ready.

Building Systems

The University has advised that all of its building systems, including student access, fire systems, security systems, and lifts are Year 2000 ready.

Audit Comment

The University has taken appropriate action to ensure that its critical systems are Year 2000 ready.

35.6 STATUS OF OTHER SYSTEMS

The University has a large number of other date sensitive systems and processes. Progress in readying these for the change to the new millennium is being closely monitored by the Year 2000 Steering Committee. A Year 2000 Time-Path Schedule setting out critical dates has been prepared for all systems and equipment not yet Year 2000 ready. The University has advised that the latest scheduled completion date for these systems is 30 July. The following systems are worthy of specific comment.

THE MANAGEMENT OF YEAR 2000 RISKS

Links to the Universities Admissions Centre — The Universities Admission Centre (UAC) is responsible for arranging for the admission of students to most universities. Responsibility for the Year 2000 readiness of its system lies with UAC. The University of Canberra has been advised that UAC plans to upgrade its systems located at the University of Canberra during the second quarter of the year. The University has advised that it will attempt have this process speeded up.

Time Tabling System — The University has advised that its timetabling system is Year 2000 ready.

36 GLOSSARY

Application	Specific items of software that instruct the computer to perform particular tasks such as accounting, payroll, word processing, publishing, project management or to operate computer hardware.
Backup	A copy of data held in computer files for use in the restoration of the database in the event of a computer failure.
Bio-medical system	Medical equipment used for the preservation of human life. Examples include life support systems, diagnostic equipment and ventilators.
Bug	A computer programming error. To eliminate or fix a bug requires the re-programming of computer code and testing of the corrected program to confirm that the bug has been eliminated.
Building systems	Systems with embedded date dependent computer chips that are installed in offices or other buildings. They are critical systems as they could expose individuals to personal danger or risk of death or injury. Examples of building systems include security systems, fire detection systems, duress systems, lifts, air-conditioning and lighting systems.
Business Continuity Planning	The selection and documentation of response or recovery strategies for the purpose of providing for the continuation of an agency's principal activities in the

event of a failure of one or more of its computerised date dependent systems.

Chips

Silicon based semi-conductors or microprocessors, which contain thousands of transistors, designed to respond to digital binary data to produce results to complex computations.

Compliance plan

A compliance plan includes the steps to be undertaken to ensure that each system is Year 2000 ready. This plan would typically include timeframes and responsibilities for completion of remediation and testing.

Compliant

Term used by commercial organisations to assert that the product will not be affected by the Millennium Bug. Compliant products should be tested by users to confirm that they are Year 2000 ready.

Contingency planning

Contingency planning may be undertaken at the system or business level.

System level contingency planning is the selection and documentation of alternative operating strategies for the purpose of providing for the continued production of the system's outputs in the event of a failure of one or more of its date dependent elements or sub-systems.

Agency level contingency planning, which is also referred to as business continuity planning, is the selection and documentation of response and recovery strategies for the purpose of providing for the continuation of the agencies

THE MANAGEMENT OF YEAR 2000 RISKS

principal activities in the event of the failure of one or more of its date dependent systems.

Central Processing Unit

The main processing element of a computer.

Critical systems

Those systems that would expose the community to the risk of significant personal danger or risk of death or injury or aggravation of an existing physical or medical condition if they failed as a result of the 'millennium bug'. It also includes the provision of basic public utilities and key services to the community or businesses that may have a significant and adverse impact on the community or businesses if they were to fail as a result of the 'millennium bug'. For examples of such systems refer to Chapter 1.

Date dependent

Computer hardware, embedded chips and software applications that require date data to execute their tasks.

Desktop system

A stand-alone computer that has its own central processing unit and memory storage capacity.

Embedded systems

Independent computer chips that operate a wide variety of machines, electronic devices and systems, such as plant control systems, bio medical equipment, electric appliances and communications equipment.

Financial Management System

A system which maintains financial records of an agency which is ultimately used in the preparation of year end financial statements. Many small

THE MANAGEMENT OF YEAR 2000 RISKS

agencies use off the shelf software packages such as Mind Your Own Business, AccPAC and Accounting Software, while larger Territory agencies use Oracle Government Financials.

Hardware

The visible components of the computer such as the keyboard or monitor.

Interface

Data data fields that are transferred between computers in different organisations are made through a computer interface. Interfaces usually refer to the point of data transfer between applications and / or systems.

Inventory

A detailed list of each item of computer hardware, software, operating systems and embedded chips in equipment and buildings.

Information Technology

The technology that permit the storage, retrieval and processing of digital information.

Local Area Network

A computer network limited to the immediate area, usually the same building or floor of a building.

Millennium Bug

A deficiency in a software program, operating system or embedded chip which could cause a printer to malfunction when certain date dependent data is processed. (See also Chapter 2.)

Network

A connection of two or more computers which allow for the sharing of resources.

Non-compliant

A computer system, software application or embedded chip that cannot correctly process the date '2000' on related dates

THE MANAGEMENT OF YEAR 2000 RISKS

such as 9 September 1999 or 29 February 2000.

Operating System

Operating system also referred to as platforms. These are essential programs that tell the CPU how to control both hardware and application software. Examples include DOS, UNIX, WIDOWS 95 and WINDOWS NT.

Remediation

The process of repairing the Year 2000 problem in computers or devices containing affected embedded chips.

System

An application, hardware and operating systems which are linked together to perform specific functions.

Upgrade

The modification or addition of computer source code to change non-compliant systems into Year 2000 compliant systems.

Uninterrupted Power Supply

The UPS safeguards against surges, spikes and electrical noise and can power the average PC for more than 10 minutes in the event of power loss.

Wide Area Network

A computer network that covers an area larger than a single building.

Year 2000 Ready

A system is Year 2000 ready when it has been reviewed to assess its Year 2000 status, has had remediation work performed on it, if necessary, or otherwise upgraded and has then been tested using an appropriate set of representative dates. On the basis of the review and associated test results, a system is Year 2000 ready when the risk of material failure of the system, as a

THE MANAGEMENT OF YEAR 2000 RISKS

result of a date processing problem, is not significant.

Year 2000 Testing

Testing of computerised systems using representative dates which may have a Year 2000 impact.

Annexure

Reports Published in 1992

- 1 Information Technology Management Policies in the ACT Government Service**
- 2 Financial Audits with Years Ending to 30 June 1991**
- 3 AGO Annual Management Report for Year Ended 30 June 1992**
- 4 ACT Board of Health - Management of Information Technology**
- 5 Budget Outcome Presentation and the Aggregate Financial Statement for the Year Ended 30 June 1992**
- 6 Financial Audits with Years Ending to 30 June 1992**

Reports Published in 1993

- 1 Management of Capital Works Projects**
- 2 Asbestos Removal Program**
- 3 Various Performance Audits Conducted to 30 June 1993**
 - **Debt Recovery Operations by the ACT Revenue Office**
 - **Publicity Unaccountable Government Activities**
 - **Motor Vehicle Driver Testing Procedures**
- 4 Various Performance Audits**
 - **Government Home Loans Program**
 - **Capital Equipment Purchases**
 - **Human Resources Management System (HRMS)**
 - **Selection of the ACT Government Banker**
- 5 Visiting Medical Officers**
- 6 Government Schooling Program**
- 7 Annual Management Report for the Year Ended 30 June 1993**
- 8 Redundancies**
- 9 Overtime and Allowances**
- 10 Family Services Sub-Program**
- 11 Financial Audits with Years Endings to 30 June 1993**

Annexure (continued)

Reports Published in 1994

- 1 Overtime and Allowances - Part 2
- 2 Department of Health - Health Grants
- Management of Information Technology
- 3 Public Housing Maintenance
- 4 ACT Treasury - Gaming Machine Administration
- Banking Arrangements
- 5 Annual Management Report for Year Ended 30 June 1994
- 6 Various Agencies - Inter-Agency Charging
- Management of Private Trust Monies
- 7 Various Agencies - Overseas Travel - Executives and Others
- Implementation of Major IT Projects
- 8 Financial Audits with Years Ending to 30 June 1994
- 9 Performance Indicators Reporting

Reports Published in 1995

- 1 Government Passenger Cars
- 2 Whistleblower Investigations Completed to 30 June 1995
- 3 Canberra Institute of Technology - Comparative Teaching Costs and Effectiveness
- 4 Government Secondary Colleges
- 5 Annual Management Report for Year Ended 30 June 1995
- 6 Contract for Collection of Domestic Garbage/Non-Salary Entitlements for Senior Government Officers
- 7 ACTEW Benchmarked
- 8 Financial Audits With Years Ending to 30 June 1995

Reports Published in 1996

- 1 Legislative Assembly Members - Superannuation Payments/Members' Staff - Allowances and Severance Payments

Annexure (continued)

- 2 1995 Taxi Plates Auction
- 3 VMO Contracts
- 4 Land Joint Ventures
- 5 Management of Former Sheep Dip Sites
- 6 Collection of Court Fines
- 7 Annual Management Report For Year Ended 30 June 1996
- 8 Australian International Hotel School
- 9 ACT Cultural Development Funding Program
- 10 Implementation of 1994 Housing Review
- 11 Financial Audits with Years Ending to 30 June 1996

Reports Published in 1997

- 1 Contracting Pool and Leisure Centres
- 2 Road and Streetlight Maintenance
- 3 1995-96 Territory Operating Loss
- 4 ACT Public Hospitals - Same Day Admissions
Non Government Organisation - Audit of Potential Conflict of Interest
- 5 Management of Leave Liabilities
- 6 The Canberra Hospital Management's Salaried Specialists Private Practice
- 7 ACT Community Care - Disability Program and Community Nursing
- 8 Salaried Specialists' Use of Private Practice Privileges
- 9 Fleet Leasing Arrangements
- 10 Public Interest Disclosures - Lease Variation Charges
- Corrective Services
- 11 Annual Management Report for Year Ended 30 June 1997
- 12 Financial Audits with Years Ending to 30 June 1997
- 13 Management of Nursing Services

Annexure (continued)

Reports Published in 1998

- 1 Management of Preschool Education**
- 2 Lease Variation Charges - Follow-up Review**
- 3 Major IT Projects - Follow-up Review**
- 4 Stamp Duty on Motor Vehicle Registrations**
- 5 Management of Housing Assistance**
- 6 Assembly Members' Superannuation and Severance Payments to Former Members' Staffers**
- 7 Magistrates Court Bail Processes**
- 8 Territory Operating Losses and Financial Position**
- 9 Financial Audits with Years Ending To 30 June 1998**
- 10 Management of Schools Repairs and Maintenance**
- 11 Overtime Payment To A Former Legislative Assembly Member's Staffer**

Reports Published in 1999

- 1 Stamp Duty on Motor Vehicle Registrations**
- 2 The Management of Year 2000 Risks**

Availability of Reports

Copies of Reports issued by the ACT Auditor-General's Office are available from:

ACT Auditor-General's Office
Scala House
11 Torrens Street
BRADDON ACT 2601

or

PO Box 275
CIVIC SQUARE ACT 2608

Phone (02) 62070833 / Fax (02) 62070826

Copies of Reports are also available from the
ACT Auditor-General's Homepage: <http://www.audit.act.gov.au>