

Digital Recordkeeping Pathway

for

Territory Records Office

by

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1. Executive Summary

This report provides a high-level pathway for implementing digital recordkeeping across the ACT Public Service (ACTPS).

The pathway

- applies to all areas of the ACT Government
- defines the key drivers for taking action on digital recordkeeping
- identifies two core principles and five objectives for the desired state of digital recordkeeping in the ACTPS
- provides practical steps to achieve the objectives through a range of whole-of-government programs and strategies.

The governing principles are that:

1. Authentic and reliable digital records of government business need to exist
2. Government information (contained in digital records) needs to be found and used for as long as required.

The Digital Recordkeeping Pathway can be summarised in the table from section 5 of this report.

Objective (s.4)	Pathway
<p><i>1. The ACT Government has a sound, modern practice framework for digital recordkeeping</i></p>	<p>TRO issues standards, guidelines & advices. TRO retains role as regulator and policy setter. A governance structure to oversee the implementation of policy and strategy for digital recordkeeping. Appropriate, expert resources in TRO to take leadership and facilitation of digital recordkeeping initiatives. Agencies develop strategies for systems, work processes and practices underpinned by digital recordkeeping.</p>
<p><i>2: The ACT Government has appropriate technology support for digital recordkeeping (including information retrieval from digital records)</i></p>	<p>A single, whole-of-government ICT platform for digital recordkeeping. Short term - continue using existing systems and ensure maintenance agreements are in place for them; build on existing TRIM licensing; develop digital recordkeeping projects. Medium term - acquire whole-of-government software for digital recordkeeping; TRO to be 'business owner'; undertake a Requirements Analysis; develop an Acquisition Plan & Business Case; develop System Specification; run tender & select whole-of-government software; develop a System Migration Plan; decommission PDMS. In parallel (1-5 years) - Deployment Plan for whole-of-government software; focus on core Directorates; develop a baseline implementation model. In parallel (1-5 years) - enable business systems to be used for digital recordkeeping.</p>

Objective (s.4)	Pathway
	<p>Long term – target integrations with core business systems; provide advanced system functionality; migrate legacy digital recordkeeping systems to the whole-of-government platform.</p> <p>Implement whole-of-government recordkeeping systems within a strategic framework, with structured program and project governance.</p> <p>Enable business systems to be used for digital recordkeeping.</p>
<p><i>3: Digital recordkeeping in the ACTPS is consistent, compliant and continuously improved.</i></p>	<p>A whole-of-government digital recordkeeping compliance framework – based on a capability maturity model.</p> <p>A proactive approach to capability assessment and reporting.</p> <p>Build digital recordkeeping skills across the ACTPS.</p>
<p><i>4: The community has smooth, timely and consistent access to Government information (from digital records) – as a right, and on demand</i></p>	<p>A robust, whole-of-government ICT platform for digital recordkeeping.</p> <p>Relevant standards and tools.</p> <p>Processes for accessing digital records, by the ACTPS and the public.</p>
<p><i>5: The ACT digital preservation strategy sustains and provides access to government digital information for as long as needed</i></p>	<p>A Digital Preservation Strategy – using existing models.</p> <p>Continue use of the whole-of-government thesaurus.</p>

This study was undertaken through:

- review of key documents relating to the regulatory framework and management of records in the ACT, and reports of relevant reviews into records management in the ACTPS (sources listed at Appendix 1)
- targeted consultation with staff from the TRO, TAMS, Shared Services ICT, ACT Record Services and the Chair of the Territory Records Advisory Council (list at Appendix 2).

A glossary of terms and acronyms used in this report is at Appendix 3.

2. Key Drivers for Digital Recordkeeping

2.1 A Strategic Approach to Digital Recordkeeping

This report takes up recommendations from a series of recent strategic reports and legislative initiatives as key drivers for better practice digital recordkeeping in the ACTPS.

Recommendations from these reports are summarized below, detailed in Appendix 4, and addressed in the principles, objectives and actions in sections 4-5 of this report.

A strategic approach to digital recordkeeping will support an open and accountable government through:

- providing online information about government and its services – thereby enabling greater transparency of government as well as community engagement
- managing the information arising from government online services – enabling responsive and accountable service delivery
- meeting discovery demands over time through good information governance and operations
- capitalising on investment in ICT through a whole-of-government approach to digital recordkeeping systems
- using digital recordkeeping to reduce the financial and environmental cost of paper-based processes
- using digital recordkeeping to improve efficiency, support business continuity, and decision-making effectiveness
- improving the skills of its workforce to implement effective and sustainable digital recordkeeping systems and methods.

2.2 Hawke Review, One ACT Government - One ACT Public Service

The February 2011 *Governing the City State, One ACT Government - One ACT Public Service, ACTPS Final Report* by Allan Hawke (herein after called the Hawke Review') made a number of observations and recommendations relating to recordkeeping, all of which have direct implications for digital recordkeeping in the ACTPS:

- Web 2.0 technologies provide opportunities to achieve more open, accountable, responsive and efficient government
- The ACTPS must control and make use of its knowledge better so that the creation, capture, use, reuse and storage of information will contribute to the achievement of its objectives
- The 'one ACT Public would give impetus to alignment of whole of government projects relating to records and document management
- Publishing of all FOI decisions on the web enhances the availability of information, and scrutiny of and accountability for government decisions and actions

- A fundamental imperative for improved, collaborative and structured ways of working is an electronic records and document management system (EDRMS). This underpins Government's decision-making processes, its relationship with the community, and the way in which the ACTPS does its business.
- Improved capacity of the ACTPS workforce is required to implement its knowledge management programs and strategies
- Structural realignment is recommended of 'the end to end continuum of government information'.

This Digital Pathways report advocates that properly documented, efficiently managed and accessible digital records support an open and accountable government, as summarised by the following statement from the Hawke Review:

'The way the information is collected, stored, analysed, interpreted, and released is fundamental to citizen centred governance, public value, robust high quality policy and program development and operational service delivery'.¹

More detailed recommendations and observations from the Hawke Review are in Appendix 4.

2.3 Audit Reports

The Auditor General's *Performance Audit Report into Records Management in ACT Government Agencies* (2008) contained a number of recommendations affecting digital recordkeeping which must be addressed and reported on.

The subsequent Government Submission (2010) and the Standing Committee on Public Accounts' Review of the Audit Report (2010) have all reinforced 'the importance of good records management practices as a way of ensuring transparency and accountability in Government'².

Requirements for transparency, legislative compliance, good governance, knowledge of what has occurred and better decision-making underpin the message that good recordkeeping is fundamental to open and accountable government.

The Standing Committee review advocated that agencies develop recordkeeping strategies to 'prioritise recordkeeping awareness on activities that present the greatest level of risk'³. Inadequate management of digital records poses a high risk of lack of information, and/ or lost, inaccessible or unreadable information. This affects the government's ability to do its business, respond to community requests, provide services, and meet legislative or court discovery demands.

2.4 Review of the Operation of the *Territory Records Act 2002*

This review highlighted electronic records as one of the most important issues, along with related issues that area not solved by legislation, such as:

- a failure of agency recordkeeping infrastructure to keep pace with the technological changes in information creation and use
- poor implementation of records management programs in agencies
- lack of adequate training and communication in agencies as the greatest barriers to good recordkeeping.⁴

3. Current State

This section contains a high-level summary of the key issues identified relating to digital recordkeeping in the ACTPS.

3.1 Regulatory and Strategic Framework

The main purposes of the *Territory Records Act 2002* are:

- (a) to encourage open and accountable government by ensuring that Territory records are made, managed and, if appropriate, preserved in accessible form; and
- (b) to support the management and operation of Territory agencies; and
- (c) to preserve Territory records for the benefit of present and future generations; and
- (d) to ensure that public access to records is consistent with the principles of the *Freedom of Information Act 1989*.⁵

Under the *Territory Records Act*, the definition of records clearly includes digital records. The purposes of the Act above apply to digital records. As Government business is conducted electronically, and the volume of digital records is increasing, the print-to-paper regime of the past is no longer feasible or sustainable. Action is needed to ensure that digital records are made, managed, kept for as long as needed and accessible to the public over time.

The 2010 Review of the Operation of the Territory Records Act highlighted electronic records as one of the most important issues identified during the Review.⁶ All of recommendations of this report directly or indirectly relate to digital records. Specifically:

- Recommendation 18 – that the TRO ensure that its standards and guidelines reflect all legal requirements for the evidential validity of electronic records’ – has in part been addressed by the issue of Standard and Guideline No 9 Records Digitisation and Conversion, 2011.
- Recommendation 19 – that the TRO assist agencies by assessing electronic document and records management systems and/or business systems against the TRO Standard No 6 Digital Records – is addressed in this Digital Pathways Report.

Other issues raised relating to digital recordkeeping capacity (noted in section 2 above) are also addressed in this Digital Pathways Report.

The Auditor General's *Performance Audit Report of Records Management in ACT Government Agencies* (2008) contained a number of recommendations affecting digital recordkeeping which must be addressed and reported on by the Minister for Territory and Municipal Services. These are listed at Appendix 4. In summary these relate to:

- increasing compliance activities
- consistent records management practices across government
- assessing the legal validity of digital records
- assessing the suitability of agency electronic recordkeeping systems
- wider application of electronic recordkeeping systems across government

- auditing, monitoring and reviewing recordkeeping practices, systems, etc
- recordkeeping training
- procedures for capturing digital records.

The subsequent Standing Committee on Public Accounts' review (2010) of the Audit Report recommended a three-stage process for the responsible Minister to report on:

- a) the progress and effectiveness of the implementation of the Audit Report
- b) the progress and effectiveness of the implementation of the accepted recommendations from the 2010 *Review of the Operation of the Territory Records Act 2002*
- c) the effectiveness of amendments made to the Act, and standards revised or issued under the Act.

The drivers noted in Section 2 above make a direct connection between open and accountable government and the creation, management and accessibility of digital records. In addition, the enactment and enforcement of a range of legislation also requires full and accurate records to be kept and made available for as long as needed. For example:

- *Freedom of Information Act 1989* – The Hawke Review recommends that 'the Government ... adopt a more proactive model of release of information held by the ACTPS ... to support broader policy debate in the community...'⁷
- *Evidence Act 1971* – The Act enables the admissibility of digital documents as evidence in court, subject to various conditions, including ability to demonstrate that the documents are accurate and authentic, and that the computer/system that produced the document was operating on a continuous and reliable basis.
- The ACT is an Australian leader in the area of human rights, being the first to enact a Human Rights Act (2004) and establish the ACT Human Rights Commission in 2006. Commission services in the areas of community engagement, complaints handling, compliance, and policy and law reform⁸ all require responsiveness and accountable processes which rely on evidence-based information.
- Other legislation, relating to issues such as Privacy and Health Records.

There is an absence of whole-of-government ICT strategic direction in the ACT Government, although *The Strategic Plan for ICT 2011-15* has been recently drafted. The lack of endorsed strategic direction inhibits adoption of agency or whole-of-government technology for digital recordkeeping.

The wide range of TRO Standards, Guidelines and Advices⁹ relating to digital records are well known. The most recent Standard for Records Digitisation and Conversion appears well received by agencies, including legal areas which have witnessed litigation failures or vulnerabilities relating to digital evidence.

3.2 Roles and Responsibilities

Roles and responsibilities for digital recordkeeping within the ACTPS are distributed as follows, some stated, some assumed but unstated:

- Director of Territory Records – regulator
- Shared Services ICT - service provider for ICT services
- ACT Record Services - service provider for records storage and hardcopy records management services
- OCIO – potentially in the near future – policy initiator.

3.3 Management of Digital Records

Overall, there is a very low level of management of digital records across the ACPS, although there are examples of good practice in a few specific agencies.

The TRO instruments¹⁰ relating to digital records require recordkeeping technology in order to implement the requirements in any comprehensive or compliant way.

Any management of digital records appears limited to capture of MS Office documents at best, not email, web content, or output from Web 2.0 media.

Agencies are very focussed on the management of paper records, with storage of digital records in shared drives, personal drives and email systems – none of which constitute a recordkeeping system.

Records Managers do not tend to be involved in new projects/initiatives which result in digital records.

Successful and widespread use of the whole-of-government thesaurus including its use in some agencies for standardising electronic recordkeeping in shared drives. While this provides a sound basis for enabling disposal of hardcopy and digital records, there is little evidence of systematised disposal of digital records, (other than ACTPLA).

In relation to EDRMS technology supporting digital recordkeeping, the following observations are made:

- Overall low penetration of EDRMS technology in the ACTPS, with two agencies using Objective, 32 licences of TRIM being consolidated to one licence (both systems hosted by Shared Services ICT), and PDMS – an old system used in some agencies and no longer supported. (Anecdotally, 80% of agencies use ACT Record Services for the creation of paper files, none of which have an EDRMS to record/control those files.)
- It is at least seven years since the ACT Government issued a formal tender for EDRM software. Business requirements will have changed since then, so has the technology.
- Some agencies use an EDRMS for digital recordkeeping (notably ACTPLA), and mostly for ministerial correspondence management. The rest use the EDRMS for control of paper records.
- Microsoft SharePoint is part of the SOE available across the ACTPS for content management and collaboration, although the level of use is not clear.

3.4 Finding Information in Digital Records

Difficulties have been experienced in satisfying discovery orders and other retrieval needs from digital records, e.g. for FOI purposes, court cases. This is due to:

- unclear responsibilities for information retrieval from digital records (i.e. TRO, the responsible agency, Shared Services ICT)
- potentially numerous places in which to find the information (e.g. shared drives in the originating agency, backup files held by Shared Services ICT, an EDRMS),
- uncertainty on how to access the information
- service charges (e.g. levied by Shared Services ICT) reduces an agency's willingness to search for digital records.

Recovery of digital records from Shared Services ICT can only be guaranteed for between 2 weeks and a year if originating on network drives, and 12 months if originating from an EDRMS. Seven years of backup tapes are kept, but have not been maintained sufficiently to access the data, and in many cases the technology is no longer available to read them.

3.5 Digital Archives

Compared to other Australian governments, ACT is at the lower end of capability in relation to electronic recordkeeping leading to preservation of digital archives – as summarised in Table 1 below.

Table 1: Status of Digital Archives Capability

Jurisdiction	Status of Digital Archives Capability
Commonwealth	Digital Preservation Framework – in place since 2004 Digital archives repository
Victoria	Victorian Electronic Records Strategy – in place since 1996 Digital archives repository VERS refresh - 2011
NSW	2011 – funding allocated for digital archives project
Queensland	2011 – substantial funding allocated for digital archives project and repository
South Australia	Requires VERS compliance in EDRMS purchased by agencies
West Australia	Established the Digital Records Initiative c.2005 - providing an e-permanence pathway for digital archives
Northern Territory	No model
Tasmania	No model

In summary:

- There is no whole-of-government digital archives model or facilities in the ACT.
- Regular and reliable backup routines of EDRMS stores and shared drives are done, but do not equate to digital archiving.

- Shared Services ICT's tiered storage model enables records to be moved to the long-term data store (WORM archive), but agencies do not see the benefits as outweighing the costs.
- An 'archival platform' (WORM archive) is in place (managed by Shared Services ICT) for the long-term storage of medical images from ACT Health.
- Saving records in proprietary formats means they will not be readable or usable in the long-term. Even for records required in the intermediate term (e.g. 5-10 years), they are unlikely to be readable.
- Shared Services ICT, as the custodian of ACTPS digital records does not know agency requirements for long-term management and retention of records, or access to records.
- It is not within Shared Services ICT's current business model to provide the infrastructure and services to manage digital records as long-term (permanent) archives.

3.6 Capability for digital recordkeeping

The level of recordkeeping professionals engaged across the ACTPS is low. For example, out of 81 separate reporting entities across the ACTPS (nine departments and various agencies)¹¹ only eight people are full-time Records Managers, and a further 16 people have recordkeeping as part of their responsibility.

Further to the point above, generally agencies do not have sufficient skills to implement digital recordkeeping initiatives, such as an EDRMS selection and implementation.

Training is available, however:

- Formal qualifications from CIT (Introductory and Certificates 3 & 4) are at the low-medium level of capability in relation to digital recordkeeping
- There is little, if any, use of external providers from TRO's preferred supplier panel¹² for consultants and training services in relation to digital recordkeeping. There are no training companies on the panel.

4. Desired State

To meet the drivers listed in section 2, two core principles define better practice for digital recordkeeping in the ACTPS:

- 1. Authentic and reliable digital records of government business need to exist**
- 2. Government information (contained in digital records) needs to be found and used for as long as required**

In turn, these principles are supported by a number of objectives or targets that provide a picture of the desired state of digital recordkeeping.

4.1 Principle 1: Authentic and reliable digital records of government business need to exist

Authentic and reliable digital records are required to support the business of government, to enable the government to account for its actions to its stakeholders. Digital records need to be:

- *Created – as a full and accurate record of government business*
- *Controlled – in a systematic, compliant and reliable manner, for as long as the records are required.*

Objective 1: The ACT Government has a sound, modern practice framework for digital recordkeeping

Objective 2: The ACT Government has appropriate technology support for digital recordkeeping (including information retrieval from digital records)

Objective 3: Digital recordkeeping in the ACTPS is consistent, compliant and continuously improved

4.2 Principle 2: Government information (contained in digital records) needs to be found and used, for as long as required

Digital records need to be locatable, retrievable and able to be read and used, whenever needed and over time. This requires the controls noted in Principle 1 above, as well as technology, tools and processes to enable access to those records, and access into the future for records deemed to be Territory archives.

Objective 4: The community has smooth, timely and consistent access to Government information (from digital records) – as a right, and on demand

Objective 5: The ACT digital preservation strategy sustains and provides access to government digital information for as long as needed

5. The Pathway

This section outlines the five objectives for managing and making digital information available and a pathway of actions to achieve those objectives.

5.1 Approach

The approach is evolutionary, rather than revolutionary:

- It results in improving digital recordkeeping capability as widely as possible across the ACTPS, rather than high capability in only a few areas.
- It involves proactive capability maturity approach over time, rather than punitive compliance.
- It advocates linking digital recordkeeping strategy and practice to those areas of the ACTPS responsible for risk, governance and information security – to capitalize on outcomes for Government that cover a range of related concerns or issues in today's environment.

The Pathway is presented in summary form below in Table 2, followed by a more detailed explanation of recommendations.

Table 2: Digital Recordkeeping Pathway

Objective (s.4)	Pathway
<p><i>1. The ACT Government has a sound, modern practice framework for digital recordkeeping</i></p>	<p>Director of Territory Records issues standards, guidelines & advices. TRO retains role as regulator and policy setter. A governance structure to oversee the implementation of policy and strategy for digital recordkeeping. Appropriate, expert resources in TRO to take leadership and facilitation of digital recordkeeping initiatives. Agencies develop strategies for systems, work processes and practices underpinned by digital recordkeeping.</p>
<p><i>2: The ACT Government has appropriate technology support for digital recordkeeping (including information retrieval from digital records)</i></p>	<p>A single, whole-of-government ICT platform for digital recordkeeping. Short term - continue using existing systems and ensure maintenance agreements are in place for them; build on existing TRIM licensing; develop digital recordkeeping projects. Medium term - acquire whole-of-government software for digital recordkeeping; TRO to be 'business owner'; undertake a Requirements Analysis; develop an Acquisition Plan & Business Case; develop System Specification; run tender & select whole-of-government software; develop a System Migration Plan; decommission PDMS. In parallel (1-5 years) - Deployment Plan for whole-of-government software; focus on core Directorates; develop a baseline implementation model. In parallel (1-5 years) - enable business systems to be used for digital recordkeeping.</p>

Objective (s.4)	Pathway
	<p>Long term – target integrations with core business systems; provide advanced system functionality; migrate legacy digital recordkeeping systems to the whole-of-government platform.</p> <p>Implement whole-of-government recordkeeping systems within a strategic framework, with structured program and project governance.</p>
<p><i>3: Digital recordkeeping in the ACTPS is consistent, compliant and continuously improved.</i></p>	<p>A whole-of-government digital recordkeeping compliance framework – based on a capability maturity model.</p> <p>A proactive approach to capability assessment and reporting.</p> <p>Build digital recordkeeping skills across the ACTPS.</p>
<p><i>4: The community has smooth, timely and consistent access to Government information (from digital records) – as a right, and on demand</i></p>	<p>A robust, whole-of-government ICT platform for digital recordkeeping.</p> <p>Relevant standards and tools.</p> <p>Processes for accessing digital records, by the ACTPS and the public.</p>
<p><i>5: The ACT digital preservation strategy sustains and provides access to government digital information for as long as needed</i></p>	<p>A Digital Preservation Strategy – using existing models.</p> <p>Continue use of the whole-of-government thesaurus.</p>

5.2 Digital Pathway – Actions

Objective 1: The ACT Government has a sound, modern practice framework for digital recordkeeping

This can be achieved by:

- a) TRO continuing to issue relevant standards, guidelines and advices (including testing of standards to ensure ease of application; regular review of standards to retain currency).

Potential new standards, guidelines or advices include: records in databases, evidence and digital records. There is a large range of products, tools and models available from other Australian and New Zealand jurisdictions that would be useable by, and scalable to the ACT Government environment. Standardisation of digital recordkeeping practice across the Australian and NZ Governments is promoted through the work of ADRI. TRO's participation in this arena can be exploited by:

- using ADRI products (such as the *Model plan for an archival authority implementing digital recordkeeping and archiving*)
- benefiting from the experience of larger jurisdictions in implementing digital recordkeeping initiatives.

- b) TRO retaining its strategic role as regulator and policy setter for digital recordkeeping, and in consultation with the OCIO and Shared Services ICT as key partners in implementation.
- c) Establishing a governance structure to oversee the implementation of policy and strategy for digital recordkeeping, involving areas of government responsible for risk, governance and information security.
- d) TRO to have appropriate, expert resources to take leadership and facilitation of digital recordkeeping initiatives across the ACTPS.

TRO leadership to include:

- establishment of a new role of 'Digital Records Officer' or similar, at the level of Senior Officer Grade C
 - contributing to whole-of-government initiatives in digital/data storage, e-government, data and information security
 - some realigning of effort within TRO. The whole-of-government thesaurus is well embedded, the suite of standards and guidelines are fit-for-purpose and current, hence it is an opportune time to redirect effort to digital recordkeeping initiatives under the direction of a Digital Records Officer.
 - requiring digital recordkeeping reporting in the submission and review of Records Management Programs from agencies, initially at the policy and procedure level, then implementation level
 - keeping a 'register' (e.g. as a web published overview) of digital recordkeeping initiatives occurring across the ACTPS
 - facilitating and coordinating digital recordkeeping projects in the ACTPS, and identifying opportunities for joint projects across agencies (see section 6.4 below)
 - TRO staff spending time in agencies to push the digital recordkeeping messages
 - focusing the Records Management Network agenda on digital recordkeeping solutions and action
 - developing new standards and guidelines in digital recordkeeping, as recommended above.
- e) Agencies to develop strategies to define, plan and implement projects for systems, work processes and practices that are underpinned by digital recordkeeping.

Objective 2: The ACT Government has appropriate technology support for digital recordkeeping (including information retrieval from digital records)

This can be achieved by:

- a) Availability of a single, whole-of-government ICT platform for digital recordkeeping (including software application such as EDRMS, standardized hardware and central technology support services).

One digital recordkeeping system provides support infrastructure for *One ACT Government – One ACT Public Service*.

b) In the short term 1-2 years:

- Continue using EDRMS' TRIM and Objective where currently installed
- For new acquisitions, build on the TRIM licensing, due to
 - Higher prevalence and knowledge of this product across the ACTPS
 - Ease of implementation at the baseline level
 - Cost
- Ensure maintenance agreements are in place for agencies using Objective.
- Continue with maintenance agreements for TRIM licences
- For agencies using TRIM or Objective for paper records, develop simple digital recordkeeping projects using these systems, e.g. ministerial correspondence management
- For agencies not acquiring EDRMS in the short-term, encourage function-based 'G' drive structure for e-records/documents in network drives

c) In the medium term 1-5 years plan for, and acquire whole-of-government software for digital recordkeeping:

- TRO position itself as the 'business owner' for whole-of-government software for digital recordkeeping
- Undertake a Requirements Analysis for whole-of-government software for digital recordkeeping, e.g. in 2012. (This may be an EDRMS, ECM or similar).
- Develop an Acquisition Plan, including at least a Business Case and the Requirements Analysis, e.g. by end 2012
- Develop a System Specification and related documents suitable for tender, e.g. by end 2012. (ISO 16175-1:2010, *Information and documentation - Principles and functional requirements for records in electronic office environments*¹³ is a good starting point.)
- Run tender and select whole-of-government software for digital recordkeeping, e.g. by end 2013 (involving TRO and Shared Services ICT)
- Develop a System Migration Plan to gradually move existing EDRMS sites onto the new software (where it is different)
- Decommission PDMS and replace with new software.

No assumptions are made here about the specific software acquired. Within 2-5 years, the EDRM and ECM systems as we know them may have changed considerably, to provide software functionality as a 'service' behind core business systems, to more easily integrate with core business systems, and to provide storage in the cloud. There may be an opportunity to capitalize on current investment in MS SharePoint. With greater recordkeeping functionality in or added to the product, this could be a way of implementing digital recordkeeping across the ACTPS at low cost, with a fast implementation path, and building on existing SharePoint capability.

- d) In parallel (1-5 years) develop and commence a Deployment Plan for implementation of whole-of-government software for digital recordkeeping:
- Focus on core of the Chief Minister and Cabinet Directorate and eight other Directorates
 - Develop a baseline implementation model, able to be applied in agencies of all sizes, and containing core digital recordkeeping functionality.

- e) In parallel (1-5 years) and beyond, enable business systems to be used for digital recordkeeping.

Establish a model for assessing recordkeeping functionality in business systems. This is to enable agencies to use core business applications for digital recordkeeping to support the end-to-end business function.

Not all digital records are best managed by an EDRMS or similar. Some business processes rely on workflows and data management processes that link seamlessly with related digital documents. (For example, a case management system may link to and produce documents as part of the case management process. The system can either have the functionality to manage those digital records, or pass those records to another control system that has the required functionality, e.g. an EDRMS).

The model involves:

- Defining functional requirements for records in business systems – to be issued by TRO
- Developing a method for assessing the recordkeeping capability of existing systems, legacy systems and future business systems acquired by the ACTPS - also to be issued by TRO
- Providing recommendations which support appropriate business information systems design and/or procurement, in relation to digital recordkeeping conformance
- TRO positioning itself to be involved with agencies in defining the business requirements for new systems, well prior to product tender and acquisition.¹⁴

- f) In the longer term 1-7 years:

- Target functions of government where the recordkeeping software can be integrated with core business systems
- Ensure availability of advanced system functionality for agencies with complex or more sophisticated needs
- Gradual migration of legacy digital recordkeeping systems to the whole-of-government platform, and decommissioning of those systems.

- g) Ensure whole-of-government recordkeeping systems implementation is conducted:

- within a strategic framework expected to emerge from the new OCIO
- with structured program and project governance, including strong project management
- within a clear framework for managing the balance between an open government and need for information security.

Objective 3: Digital recordkeeping in the ACTPS is consistent, compliant and continuously improved

This can be achieved by:

- a) Establishing and implementing a whole-of-government digital recordkeeping compliance framework – based on a capability maturity model.
- b) Taking a proactive approach to capability assessment and reporting, and focusing on critical areas of digital record capture, retrieval and preservation.

A digital recordkeeping compliance framework may comprise

- Self assessment by agencies, and reporting via the Records Management Programs lodged with TRO (with an emphasis on digital recordkeeping reporting)
 - Follow-up assessment by the TRO or third party engaged to conduct assessments on behalf of the TRO
 - Compliance reporting by the Director of Territory Records to its Advisory Council where issues have been identified, and reporting as part of the TRO's reports to the Legislative Assembly.
- c) A proactive approach to building digital recordkeeping skills across the ACTPS – through training, engagement of expert resources and leadership from the TRO.

Leadership from the TRO is discussed in Objective 1 d) above.

Build digital recordkeeping skills across the ACTPS through:

- Providing incentives for staff to undertake CIT courses through:
 - Paid time to undertake courses during work time
 - Pay incentives for completion
 - Commission short (e.g. one week) 'master classes' in specific digital recordkeeping subjects. Focus on lifting capabilities in specific agencies, and select staff to attend. Examples of subjects are: EDRMS requirements definition and system design, project management in implementing EDRMS.
 - Providing incentives for staff to undertake tertiary courses which include digital recordkeeping, especially part-time, on-line courses, e.g. Monash University, Curtin University, Edith Cowan University. Support staff ability to undertake courses in work time, ability to use their own agency for case study work, ability to use other agencies for practicum/work placement, assistance with part payment of fees.
 - Assisting staff to attend professional conferences and similar. Commission IIM or RIM Professionals Australasia to stage events specifically for the ACTPS, on a cost recovery basis and small incentive for the association.
- d) Plan and focus the education and training program across the ACTPS, rather than simply encouraging agencies to undertake relevant training. TRO can take a facilitation role by:
 - Advising on how to direct training funds in a focused manner
 - Defining training/educational objectives
 - Ensuring effort and results are aimed at building overall capability across the ACTPS, and acquiring skills at different levels

Objective 4: The community has smooth, timely and consistent access to Government information (from digital records) – as a right, and on demand

This can be achieved by:

- a) Establishing a robust, whole-of-government ICT platform for digital recordkeeping (as recommended above)
- b) Using relevant standards and tools (e.g. resource discovery scheme, security protocols) to enable common methods of a) identifying and b) retrieving information from digital records
- c) Defining and establishing clear processes for accessing digital records, by the ACTPS and the public, in particular via the web.

It is assumed that the establishment of the OCIO and finalization of a whole-of-government ICT Strategy will address the issue of, and plan for single-point public access to information.

Objective 5: The ACT digital preservation strategy sustains and provides access to government digital information for as long as needed

Generally records need to be kept for three periods:

- Short-term temporary records, e.g. finance records, many routine business records – to be kept for up to seven years
- Long-term temporary records, e.g. case information (such as patients, claimants), usually records relating to accountabilities, rights and entitlements – to be kept up to 70-80 years
- Permanent records – those 3-5% that do constitute the archives of the ACT Government and society.

Consideration of digital recordkeeping includes digital preservation, to address the latter two groups of information. Information governance includes management of digital records beyond their current business use, to ensure they are available, retrievable and readable by successive bureaucracies and the community.

An approach to digital preservation can be achieved by:

- a) Developing a Digital Preservation Strategy to manage processes for appraisal and disposal of digital records, including the transfer, documentation, preservation and access to those deemed to be Territory Archives.

There are other models in operation in other Australasian government jurisdictions, such as the National Archives 'Digital Preservation Framework'. It is not necessary for the ACT Government to develop something new or unique. In developing a Strategy consider:

- Which of the standards is most applicable or easily translated into the ACTPS environment, how should they be re-cast for the ACTPS (if at all)
- And relating to the above point, what service delivery model is best for the ACTPS and ACT community

- Mandating use of digital formats for long-term records, using open standards such as PDF/A as defined by ISO 19005-1:2005¹⁵
- Requirements for a digital repository, given the current non-custodial model for hardcopy archives
- What collaborative opportunities are there with other governments
- Resource implications in terms of ICT infrastructure, building facilities, expert staffing.

ADRI's Model plan for an archival authority implementing digital recordkeeping and archiving, 2007 is a sound starting point.

- b) Continuing use of the whole-of-government thesaurus. It has assisted, and will assist in the movement of records (including digital records) over time, as a result of machinery of government changes, as well as government-wide disposal coverage for digital records.

6. Implications of Recommended Pathway

6.1 Roles and Responsibilities

For an open government to provide ready access to information (internally and externally) for the efficient delivery of services, a whole-of-government approach to digital recordkeeping requires a high level of collaboration between those areas responsible for various aspects of information management.

The current distributed roles and responsibilities within the ACTPS for digital recordkeeping will be subject to the administrative restructuring arising from the Hawke Review.

Regardless of structural placement, close cooperation, communication and clearly articulated roles are required from areas responsible for:

- recordkeeping regulation – policy, frameworks, standards, compliance
- recordkeeping program and project governance
- provision of services for recordkeeping systems – acquisition and operation of ICT infrastructure, acquisition of technology/ systems, support and sustainability of infrastructure and systems over time
- information risk management
- information security
- implementation and operation of recordkeeping systems and processes, compliant with policy and frameworks.

There may be long-term implications for the role of ACT Record Services with increased digital recordkeeping, use of Shared Services ICT's data storage and technology support, and online retrieval. The demand for paper-based storage and services will diminish.

The operational role of ArchivesACT in making government records older than 20 years available for public access, will change as more and more requests are for digital records to be available on line. The responsibilities for digital information service provision will need defining and establishing, along with policy, infrastructure and processes for making this information available in a timely, efficient and secure manner.

6.2 Human Resources

Resources will be required for implementing the actions in this report. Project outcomes will be achieved and sustainable with the appropriate expert staff to steer and implement the digital pathway.

Specifically, the following resources are required:

- a digital recordkeeping leadership role at TRO – recommended at the level of Senior Officer Grade C
- digital recordkeeping expertise within the ACTPS
- project management expertise to direct and control digital recordkeeping software and process implementations across the ACTPS

Some resourcing options are:

1. Acquire additional, expert resources into the ACTPS. Use them to lead change, mentor others, and build capability as part of the implementation and continuous improvement process
2. Build on expertise already within the ACTPS. An example is to establish one or more small teams with expertise in digital recordkeeping and deploy them into agencies to plan, advise, mentor and project manage digital recordkeeping projects. Move teams around as projects are completed or underway and responsibility handed over. Leading by example enables use of staff from areas that are progressive and successful in digital recordkeeping initiatives. (This method worked successfully in the Northern Territory whole-of-government deployment of an EDRMS.)
3. Engage consultants or contractors to undertake initial implementations, train, mentor, and build capability across the ACTPS
4. Any combination of the above.

Whatever option is chosen for resourcing implementation activities, ACTPS staff should be involved as much as possible:

- to establish and retain ownership of projects
- to enable knowledge transfer and increased capability in agencies with new digital recordkeeping implementations
- to prepare agencies for whole-of-government digital recordkeeping capability.

For the longer term, establish roles of dedicated Records Manager in each agency to provide the full range of digital recordkeeping services.

6.3 ICT infrastructure

A gradual move to a whole-of-government digital recordkeeping technology framework will have implications and greater demand for ICT infrastructure, in terms of hardware, software, integration services, support services generally and long-term data storage, preservation and retrievability.

Increased use of EDRMS' will increase data storage requirements and therefore costs to agencies due to the Shared Services ICT cost recovery model. This may be a disincentive to take up of digital recordkeeping technology and processes.

6.4 Funding

Government will need to fund digital recordkeeping initiatives, for example: technology, human resources, process design, technology and process implementations.

This can be done in a targeted way – supporting those agencies that demonstrate a critical need, according to Government priorities. Or it can be done in a holistic way by:

- creating groups of expertise that can be relocated across the ACTPS
- acquiring a whole-of-government contract for digital recordkeeping software
- sharing funding across agencies for joint implementation of projects, or funding of positions such as a contract Project Manager.

Appendix 1 – References

ACT Auditor-General's Office, *Performance Audit Report - Records Management in ACT Government Agencies*, June 2008

ACT Human Rights Commission, *Annual Report: 2009-2010*

ACT Department of Treasury and the ACT Chief Minister's Department, (draft) *The Strategic Plan for ICT 2011-15*

ACT Government WHoG *ICT Programs and Strategies 2011-2015*, (working document)

ACT Legislative Assembly Standing Committee on Public Accounts, *Review of Auditor-General's Report No. 3 of 2008: Records Management in ACT Government Agencies*, August 2010

ACT Legislative Assembly, *Report to the ACT Legislative Assembly on the Progress and Effectiveness of Records Management in the ACT*, 2010

ACT Legislative Assembly, *Government Submission, Standing Committee on Public Accounts Performance Audit Report No.3/2008 Records Management in ACT Government Agencies*, August 2010

Allan Hawke, *Governing the City State, One ACT Government - One ACT Public Service, ACTPS Final Report*, February 2011

Australasian Digital Recordkeeping Initiative (ADRI), *Model plan for an archival authority implementing digital recordkeeping and archiving*, v.1.0, 02 March 2007

Australian Government Information Management Office, *Engage: Getting on with Government 2.0 - Report of the Government 2.0 Taskforce*, December 2009

Macpherson, P. *Review of the Operation of the Territory Records Act 2002*, February 2010

Queensland State Archives, *Digital Archiving Discussion Paper: Informing an Approach to the Long-term Management and Preservation of Government Digital Records*, May 2010

Territory Records Office:

- *Standard for Records Management No. 6: Digital Records*
- *Guideline for Records Management No. 6: Digital Records*
- *Standard for Records Management No. 9, Records Digitisation and Conversion*
- *Guideline Records Management No. 9, Records Digitisation and Conversion*
- *Records Advice No 3 Email as a record*
- *Records Advice No.4 - What is a recordkeeping system?*
- *Records Advice No 5 Electronically created records*
- *Records Advice No 7 Preparation for the implementation of an Electronic Records Management System*
- *Records Advice No 50 Retention and Storage of Digital Photographs and Images*
- *Records Advice No 53 Managing web content as records*
- *Records Advice No 54 Use of Portable Flash Memory Electronic Data Storage Devices*
- *Records Advice No 55 Web 2.0 - Social Networking and Collaboration Applications and Recordkeeping*

Appendix 2 – People Consulted

Mick Chisnall	ICT Strategic Plan
Olwyn Conran	ACT Record Services
Elizabeth Estbergs	Territory Records Office
Wayne Finlaison	Territory Records Office
Peter Major	Senior Manager, ICT Security - Shared Services ICT
Ken Moore	General Manager, Shared Services ICT
Christo Norman	Planning and Development Manager - Shared Services ICT
Anthony Polinelli	Director, Corporate, TAMS
Ash Rutledge	Facilities and Storage Manager - Shared Services ICT
Steve Stuckey	Chair Territory Records Advisory Council
David Turner	Head of Solutions Architecture Services - Shared Services ICT
David Wardle	Director, Territory Records Office
Lynda Weller	Territory Records Office

Appendix 3 – Glossary

Term	Definition
ACTPLA	ACT Planning and Land Authority
ACTPS	ACT Public Service
ADRI	<p>Australasian Digital Recordkeeping Initiative - an undertaking of the Council of Australasian Archives and Records Authorities (CAARA), the peak body of government archives and records institutions in Australia and New Zealand.</p> <p>The primary objective of ADRI is to pool resources and expertise to find better ways to ensure that digital records are preserved and made accessible for the future.</p>
Agency	As prescribed in the <i>Territory Records Act 2002</i> covering various areas of government.
Archives	Records that are appraised as having archival value. (National Archives of Australia – Glossary)
CIT	Canberra Institute of Technology
Digital records	A record created, and/or maintained, by means of digital computer technology. It includes records that are born digital or have undergone conversion from a non-digital format. Digital records are a subset of electronic records. (<i>National Archives of Australia – Glossary</i>)
ECM	Enterprise Content Management
EDRM	Electronic Records and Document Management
EDRMS	Electronic Records and Document Management System
FOI	Freedom of Information
Shared Services ICT	ACT Government's ICT service provider
IIM	Institute for Information Management – one of Australia's professional associations for information managers
OCIO	Office of the Chief Information Officer
Record/s	Information created and kept, or received and kept, as evidence and information by a person in accordance with a legal obligation or in the course of conducting business; including information in written, electronic or any other form (<i>Territory Records Act 2002, p.48</i>)
RIM Professionals Australasia	The largest of Australasia's professional associations for information managers
SOE	Standard Operating Environment
TAMS	Territory and Municipal Services
Territory Archives	Records preserved for the benefit of present and future generations
TRO	Territory Records Office

Appendix 4 – Recommendations from Recent Strategic Reports

Allan Hawke, *Governing the City State, One ACT Government - One ACT Public Service, ACTPS Final Report, February 2011*

Recommendations and observations relating to, or affecting digital recordkeeping

The report supported the views of the Government 2.0 Taskforce (note: reference) summarised as ‘new collaborative tools and approaches of Web 2.0 offers an unprecedented opportunity to achieve more open, accountable, responsive and efficient government’. (p.89)

‘The ACTPS must harness and apply its knowledge better in order that the creation, capture, use, reuse and storage information will contribute to the achievement of its objectives.....

The single largest barrier to effective knowledge management is organisational culture – built on silos, knowledge hoarding and protection of fiefdoms. The repositories of knowledge (systems, people (tacit knowledge) and information (i.e. explicit knowledge)) are not accessed in a systematic way and have no whole of government strategic framework governing their access and operation. (p.90)

In recommending ‘one ACT Public Service’ the report noted that it would (amongst other things) ‘give impetus to alignment of information systems, and other whole of government projects relating to records and document management’. (p.82)

‘The way the information is collected, stored, analysed, interpreted, and released is fundamental to citizen centred governance, public value, robust high quality policy and program development and operational service delivery.... Technological change will be central to how the ACTPS does its business, and how the Government relates to the Canberra community in the future.’(p.88)

‘..all FOI Act decisions made by the ACTPS (should) be published on a central website reflect(ing) the reality that release of a document under FOI is release “to the world” and would enhance the availability of information, and scrutiny of and accountability for decisions and actions’. (p.92)

‘A fundamental imperative for improved, collaborative and structured ways of working is an electronic record keeping and electronic document management system.... The issues involved are broader than just purchasing a workflow system and document database. They go to the fundamentals of the Government’s decision making processes, the basis of its relationship with the citizenry, how and where the Government’s records and archives are stored, maintained and accessed, and perhaps above all, to the way in which the ACTPS talks to itself.’ (p.93)

The report urges caution in aiming too high, due to new and better technology always on the horizon, and the existence of effective EDRMS already used in the ACTPS.

‘The ACTPS will need to build the capacity of its workforce to implement its knowledge management programs and strategies’. And, a balance is needed between permanent staff, contractors and partnerships. (p.93)

It notes that 'Responsibility for knowledge management governance is currently shared between a number of agencies' and goes to recommend structural realignment of 'the end to end continuum of government information including the *Territory Records Act*, the FOI Act and other legislation relating to record keeping by the ACTPS, the proactive release of government material, whole of government information management and ICT governance, policy, information architecture, strategic planning, and web 2.0 technologies' under a Chief Information Officer (CIO). (p.93)

'Fundamental to a (recommended) knowledge management framework are the foundations of the ICT Strategic Plan, the refocus of Territory Records to a whole of government policy function for information collected, interrogated and published and the enhancement of a central policy function for FOI.' (p.94)

* * * *

ACT Auditor-General's Office, Performance Audit Report - Records Management in ACT Government Agencies, June 2008

Recommendations relating to, or affecting digital recordkeeping

Recommendation 1

The Territory Records Office should increase its compliance activities to ensure agencies comply with their approved Records Management Programs and the Territory Records Act 2002.....

Recommendation 2

The Territory Records Office should investigate and promote consistent records management practices across all ACT Government agencies.

Recommendation 6

The Territory Records Office should:

- subject to legal advice, improve the Standard for Records Management No. 6 Digital Records to provide sufficient information for agencies to assess the legal validity of their digital records;
- assist agencies in assessing the suitability of electronic recordkeeping systems or tools (including those currently in use such as Objective or TRIM); and
- assess the suitability of electronic recordkeeping systems or tools for wider application across government.

Recommendation 8

Agencies should implement a system, including conducting internal audits, to formally and regularly monitor and review their recordkeeping practices, systems, policies and procedures.

Recommendation 10

Agencies should develop formal training programs that improve the skills and understanding of all staff in recordkeeping.

Recommendation 11

Agencies should develop procedures that provide sufficient practical guidance to enable all staff to capture both paper and digital records.

Endnotes

¹ Hawke, p.88

² ACT Legislative Assembly Standing Committee on Public Accounts, s.3

³ ACT Legislative Assembly Standing Committee on Public Accounts, s.4.5

⁴ Macpherson, pp.28-29

⁵ *Territory Records Act 2002*, s.3

⁶ Macpherson, p.1

⁷ Hawke, p.91

⁸ ACT Human Rights Commission, p.3

⁹ Territory Records Standards, Guidelines and Advices as listed in Appendix 1

¹⁰ Ibid

¹¹ Taken from Hawke, p.42

¹² Territory Records, Records management standing offer arrangements as detailed in *Records Advice No 40*, 2007-2011

¹³ A set of three international standards, initially led by Australia, may assist:

- ISO 16175-1:2010, *Information and documentation - Principles and functional requirements for records in electronic office environments - Part 1: Overview and statement of principles*
- ISO 16175-2:2011, ... *Part 2: Guidelines and functional requirements for records in electronic office environments*
- ISO 16175-3:2010, ... *Part 3: Guidelines and functional requirements for records in business systems*

¹⁴ Note: See also ISO 16175-3:2010, *Part 3: Guidelines and functional requirements for records in business systems*

¹⁵ ISO 19005-1:2005, *Document Management - Electronic document file format for long term preservation - Part 1: Use of PDF 1.4 (PDF/A-1)*