



Many voices, one message

On 1 May 2019, 60 people joined professional associations and industry leaders at the University of Canberra for discussions on contemporary information and data management trends and challenges, and developed solutions to embrace opportunities. The event also launched Information Awareness Month for 2019 with the theme 'Innovation with Information'.

Discussions were facilitated and followed the 'world cafe format' where everyone was encouraged to contribute and explore different views. Participants spent 20–25 minutes discussing a topic and then moved around the room to discuss other issues at other tables.

Topics

- Change management
- National framework for digital access to cultural collection
- Digital archiving
- Data modelling
- Artificial intelligence
- Information governance and security
- Ambiguity and uncertainty in the innovation process

This booklet is a summary of discussions and key themes.

Our thanks to the National Archives of Australia for organising the event, and to Teresa Ward A/g Director General National Archives of Australia for her welcome on the day, our facilitators David Williams and Nerida Hart, and all professional associations involved:

- Australian Library and Information Association
- Australian Society for Knowledge Management
- Australian Society of Archivists
- Data Management Association
- Information Governance ANZ
- Institute for Information Management
- Records and Information Management Professionals Australasia



Change management within the records and information management industry

Hosted by Records and Information Management Professionals Australasia (RIMPA)

Change management impacts all aspects of our daily work with the past decade demanding a focus on this discipline in the records and information management industry. Records managers are now required to have skills and experience in project management, strategic planning, reporting and more, and to compliment these new skillsets – there is effective change management.

The discussions clearly identified that all customers/users are impacted when change occurs. It was agreed amongst the groups that minimal support and or importance is placed on change management when implementing new processes and systems. Projects are often short changed on funding, thus limiting the possible resources to effectively manage change.

With limited support for change management the discussions led to ineffective change with examples of where large to medium projects have gone pear shaped. The reasons for limited or no success were varied but all agreed that the major contributor to failure was a lack of support from management in the decision to change, enforcing the change, and actually undertaking the change. This was summed up as a poor records and information management culture.

Effective change is reliant on many factors with discussions also identifying communication and stakeholder consultation as strong elements for success.

Discussion groups agreed that the current state of change management in the records and information management industry was that it is an unrecognised soft skill that all records professionals should have but is not always encouraged.

It was agreed that projects continue to not meet organisational expectations as a change or implementation of an electronic document and records management system (eDRMS) is not as easy as upgrading to a new version in Microsoft Office and will most likely have a major impact on individuals, business areas and the organisation.

The move from paper to digital records is testament to the above statement with attendees identifying both successful and unsuccessful examples of change projects with varying approaches to the management of this change. Those organisations who considered the project as a business change had appeared to have more success than those that managed the change as an IT change.

Overall, the discussions provided extensive ideas and examples of ineffective and effective change and agreed that organisational culture was the deciding factor when trying to succeed in a new project.

Impacts of change:

- Users are unsure of the end product and are unable to focus on the required change.
- Users become change exhausted.
- Generational impacts can occur with the introduction of new technology.
- Previous unsuccessful change may impact future change project (myths & legends).
- Change can disenchant the workplace (unhappy workers).
- Impact on time commitments by staff to enable the change to occur.

Ineffective change:

- Poor records and information management culture.
- Poor decisions in the selection of systems and or new processes.
- Poor consultation with key stakeholders.
- Limited resources allocated to change management requirements.
- No or minimal communication relating to the proposed change.
- Change for the sake of change.
- Inconsistent messaging from resources about the change.
- High expectations and low deliverables.
- Demanding that change must occur because 'that is the way it is'.



Effective change:

- Changing the mindset of users is more important than the process.
- Effective champions or ambassadors.
- Implement change in small chunks – think agile.
- Stakeholders have ownership in the change and understand the impacts.
- Individual's will benefit from the change.
- Support from the top.
- Change management skills included in the project.
- Small wins to demonstrate success.
- Education and training – during and after project (ongoing).

Key themes

- Consider using the term 'reform' rather than 'change' to eliminate negative connotations.
- Poor records and information culture is the largest obstacle for effective change.
- In person communications and training considered the most effective.
- Adequate time required to implement change effectively.
- Must be able to easily measure success of change.
- Persons implementing the change must have the required skills.



National framework for digital access to cultural collections

Hosted by the Australian Library and Information Association (ALIA)

Our discussions were based around four questions/points

1. How far can and should we go with digitisation of our cultural collections?
2. Can we build in format-shifting to avoid a 'digital Dark Age', with files no longer being readable?
3. What more can we do to generate public awareness, interest and support?
4. Help us build a compelling case for investment.

Just because we can digitise doesn't mean we should. For example, some records are required to be destroyed, others may not merit digitisation on a cost-benefit basis, other information may need special permissions or have privacy implications. The collections need to be understood in order to identify the best format for long term storage – physical or digital.

We need to make sure we're using sustainable formats and have the infrastructure in place to shift to new tech platforms. Some formats are better than others for longevity. We don't need bespoke standards; we need open, non-proprietary standards that are internationally agreed.

No format will last forever. Inevitably, there will be a need to change formats at some point, but you can minimise the frequency with which you have to do this and the ease with which you do it. We need to start with solid records, created to agreed standards, with good resource descriptions.

Stakeholder support and lobbying is helpful in persuading government to invest in recordkeeping and digital access eg people interested in lighthouses.

In order to gain more public support, we need to promote the benefits of digitisation – eg tracking areas the Murray Cod inhabit through 4,000 Trove records; a family who found out what happened to a missing person through the digitisation of police records; breaking down of silos and pattern matching, eg for child protection in the UK. NAA digitised all WWI records and now students can look up people who lived in their hometown from their classroom. A funded awareness campaign; which means a deep-pocketed philanthropist.

We need to demonstrate a return on investment in digital access. Ancestry.com has become a multi-billion-dollar business, digitising, aggregating, indexing and ultimately monetising information. A key lesson is the value of aggregation, which makes it so much easier and more convenient for researchers. Trove is an aggregator at the national level and has great potential as a one-stop search. Individual collections have exponential value as part of a national or international aggregated resource. We can learn from Ancestry.com.

Key themes

- The scale of the challenge and the need to prioritise; while AI can undoubtedly help, there will still be a need for human intervention and decision-making.
- It is not enough to create a digital file (digitisation), we also need to make it open and discoverable (digital access).
- There is exponential value generated by data aggregation, which means agreed international standards.
- We need to sell the benefits in order to attract investment eg due diligence for government; access to collections from your desk or classroom (students and researchers).



Digital archiving: challenges to moving forward

Hosted by the Australian Society of Archivists (ASA)

Digital archives require a dedicated program for accepting, preserving, and providing access to born digital archives and records (as well as digital content produced through digitisation programs) in all their complexity.

GLAM students and representatives of cultural institutions, government departments, and archival institutions discussed the following questions

- What is the current state of digital archiving in Australia?
- Which organisations are leading the way?
- What are the skills and resources needed to improve our capacity in this area?
- What can we do in our own organisations to help drive change?
- What are the key challenges when developing effective digital archival programs?

The key theme that emerged from the roundtable was that improving capacity in digital archives involves more than just technology – it involves people, capability development, funding and a shared understanding of the problem. This theme aligns closely with the results of the ASA's recent digital archives benchmarking survey.

Though the discussion highlighted the passion and interest of individuals, and a handful of organisations, even traditionally well-funded state and federal institutions are still grappling with the challenge of digital archives. An ongoing issue is the lack of funding available for organisations to create digital archives programs, with most attempting to tackle this within their standard budgets or on a project basis.

The need for bottom-up change in many institutions was clearly apparent, with senior management often felt to have an inadequate understanding of the urgency and seriousness of the issue. The lack of training options for people at all stages of their careers (including for current students) was also noted, leaving people with few options to gain necessary skills.

Participants talked about their experiences implementing new digital archives programs, with many sharing anecdotes of issues faced at different stages of the process and discussing the need for more guidance in the area. There was consensus around the absence of available standards and policies, and a lack of resources to help advocate, leaving the community looking for leadership in this area.

Despite the challenges, there is a real interest in moving to digital archiving systems, and to do so without simply replicating physical systems in a digital environment. People are looking for solutions which will preserve all archival records, including long-term temporary records, and systems which can be shared across agencies.

Collaboration is key to success. As proven by the roundtable, sharing experiences and discussing shared opportunities is vital to help us move forward.

Key themes

- Funding arrangements for digital archive programs are often project based or non-existent.
- Effective change management is critical in the transformation to digital archival systems.
- People are enthusiastic and interested, but lacking skills and support to enact change.
- There is a shortage of resources to help people advocate for change, funding and for further or ongoing resourcing.
- Collaboration is critical to future success.
- Education and training programs must be developed to increase capabilities within individuals and organisations.



The importance of data modelling

Hosted by Data Management Association (DAMA) Australia

Data models communicate data and information requirements. They are an effective tool to engage executives and business in defining the relationships in their data that are valuable. Within IT they are equally important. Analysts, modellers, architects, database designers and developers use data models to understand the business at a micro-level and craft solutions. Defining data relationships allow organisations to provide better customer service, make less risky decisions, reduce waste and more.

Data models and data modelling skills enable

- A deep understanding of the organisation by helping to achieve consensus on information needs.
- Gathering more complex requirements to expand business intelligence reporting, leverage predictive analytics and support process automation.
- Capability to deal with information complexity and meet industry standards, the European Union's General Data Protection Regulation (GDPR), data security, ethical and privacy expectations.
- Trusted data holdings by exposing gaps in data quality, data lineage and data governance.
- Technology driven change that requires well defined and quality data, including the cloud, big data, machine learning and artificial intelligence.

Current state:

Before 2005, most Australian government agencies would have a data management section responsible for quality outcomes. A belief that technology would solve data issues took hold since. Enterprise resource planning (ERP) systems (eg SAP) and similar tools were adopted on the promise that they would provide a comprehensive approach to integrating and managing data.

Today, few agencies have data modellers and data modelling is often considered to be solely for designing databases. Decisions on data are largely left to developers in agile projects with no understanding of the strategic requirements of the data.

While some language has changed, the fundamentals of information management has not. When talking about digital transformation and artificial intelligence, we still need agreement on the scope of projects, target audiences and how to bring new team members up to speed on hundreds of data tables.

The fact that few organisations have data modelling skills may indicate that agencies are not attempting anything complex by way of information management. Data is still maintained in stovepipes around programs and projects.

Outcomes:

- Participants understood the importance of data modelling and provided examples for how their agencies are looking to use taxonomies, standards and communicate with stakeholders.
- DAMA will continue to promote data modelling skills development, but there are limited training options available.
- The DAMA Data Modelling Special Interest Group is organising webinars and meetings to increase understanding of data modelling.

Key themes

- Data modelling is central to data management, information management and as consequence, digital transformation.
- Whilst data modelling is recognised as important, data modelling skills are limited.
- Conceptual data models provide a simplified view of an agency's complex information environments.



Impacts of artificial intelligence on our ability to innovate

Hosted by the Institute for Information Management (IIM)

Artificial intelligence (AI) is not a product, nor a technology. AI is a computer science discipline that deals with the simulation of intelligent behaviour in computers and machines. John McCarthy, who coined the term back in 1956, defined it as 'the science and engineering of making intelligent machines'.

A true artificially-intelligent system perceives its environment and takes actions to maximise its chance of success. It is able to learn and continuously optimise its recommendations, decisions and actions.

From digital assistants like Siri, Alexa and Cortana, smart navigation systems, self-driving cars and aircraft, to influencing elections, providing suggestive searches and recommendations, predicting customers' behaviour, machine failures and market moves, AI is progressively affecting our style of living and working.

There is an increasing concern in many areas of science that the results and predictions of AI algorithms are possibly wrong, sometimes misleading and very often hard or nearly impossible to reproduce in the real world.

AI is transforming the relationship between people and technology. It provides the foundation for the next generation of human-machine collaboration. It automates decision making processes. It enhances our working capabilities with speed, precision, accuracy and consistency.

Current State:

- AI is not a product, nor a technology.
- Distinguishing between AI and Machine Learning.
- AI is already here, affecting our style of living and working.
- Human intervention and feedback are still essential.
- AI is simulating the human brain which evolved over millions of years, it will take many iterations for AI to "evolve" to be useful, accurate and trustworthy.
- AI is influencing the way people perceive and utilise technology.

Emerging Practices:

- AI is a tool – how we use it is up to us.
- It is expected that AI decisions will be challenged, the same way decisions by humans are questioned.
- AI is used for automating process-driven activities, for their consistent implementation.
- AI is perceived to be very hard – it does not have to be hard.
- Using AI to do 'dirty jobs' – profiling data, recommending data processing and enrichment of data features.

Advantages:

- AI will assist people to work more efficiently.
- AI can provide consistency of approach in comparison to people doing things in different ways.
- AI is enhancing our working capabilities.
- AI should be able to achieve what humans cannot (processing more information, much faster, more accurately).

Challenges:

- How can we use AI to find answers, before the questions are asked?
- Decisions often include bias – how to ensure that AI algorithms detect and do not automate bias.
- How is AI going to be consistently applied across the government?
- Some organisations already had bad experience with AI making wrong decisions.
- Risks of AI algorithms being wrong, misleading or unreproducible in the real world.
- Is reliance on AI limiting our ability to innovate?

Solutions:

- Intelligent navigation systems.
- Computer vision.
- Autonomous cars, ships, aircrafts and spacecrafts.
- Profiling voters / influencing elections.
- Medical diagnosis / discovery of symptoms and prevention of diseases.
- Recommendation engines – suggesting products and services.
- Managing traffic.
- Profiling customer's behaviour / intelligent selection of favourite books, movies, music.
- Predictive maintenance of expensive machinery.
- Detecting fraud and criminal activities.

Key themes

- | | | | |
|-------------------------|----------------|---------------|-----------------|
| • Trust | • Ethics | • Feedback | • Fear for jobs |
| • Decision process bias | • Efficiency | • Consistency | • Risks |
| • Innovation | • Optimisation | • Automation | • Choices |



Information governance

Hosted by Information Governance ANZ

The themes from the roundtable discussions around information governance and security of information in the context of data as a strategic national resource included:

- The importance of strong top-down leadership.
- Up-to-date governance policies and procedures to govern and secure information.
- Continuous training to embed good governance and security.
- Focus on long-term requirements and invest accordingly.
- Building capabilities and skills needs to be a priority.
- Deliver short term wins to demonstrate value of data related projects and outcomes.
- Accuracy and reliability of data is key.
- Data sharing requires clear guidelines of when and how it can be shared.

The discussions highlighted the importance of data to enable effective decision-making by government and non-government, and the fundamental requirements of accuracy, security and availability. Government accountability, via its records and data, maintains democracy, therefore good governance and security of data and information helps secure our freedoms and civil liberties. Governments and agencies need to properly govern and secure data, particularly data containing personal information, so that the public can trust the need for governments to collect and use their data.

The key to implementing effective governance and security is strong leadership. Agencies who are leading the way in digital transformation are those that have leaders who support and resource governance and security of data. The sheer volume of data as well as understanding both the value and the risk of sharing data also needs to be considered by senior leadership in the context of an overall Agency strategy.

Good information governance requires robust and clear policies and procedures that are clearly understood and embedded to ensure data is governed and secured across organisational silos. Policies need to set out the principles and be high-level and procedures need to set out the details that need to be understood by everyone throughout the organisation. This needs to be complemented with regular reviews

of the framework and ongoing training that ensures policies and procedures continue to remain embedded.

Collaboration across within and across agencies and government between information professionals including, records & information management, information technology, data, privacy and other subject matter experts is essential. A common language, terminology and taxonomies would assist in breaking down these domain and professional silos.

A back to basic approach would address some of the frustrations emanating from problems in projects and technology implementation – as one person said, 'save time, by getting the basics right'. The core need is for accurate data and fit-for-purpose technology solutions that will enable real-time access to data, data sharing and interoperability.

There is a lack of confidence within some agencies about the reliability of some data repositories. There is also a risk averse culture within many agencies, which leads to a reluctance to share data both within agencies and across agencies. This can be overcome with dedicated resources to verify the accuracy of data and develop clear guidelines for how and when the data can be shared.

Moving forward, key developments will need to include:

- Building the capabilities and skills to deliver on short-term and long-term digital agendas and requirements to govern and secure data.
- Data sharing and release legislation expected this year.
- Development of government-wide minimum metadata standards.
- Annual reviews of governance policies and procedures for information security and governance – including data and privacy policies and procedures.
- Building public trust through demonstrated good governance and security of personal information.
- Encouraging technological innovation and overcoming the inherent risk aversion by agencies through appropriate resourcing and planning with various stakeholders so that the Australian Government can truly be a digital government.



We thank the hosts from each professional organisation who facilitated the table discussions and recorded the main points of discussion presented in this booklet.

- **Australian Library and Information Association:** Kate Bunker and Sue McKerracher
- **Australian Society for Knowledge Management:** Roxanne Guesnon, Nerida Hart, Amanda McCormick and David Williams
- **Australian Society of Archivists:** Dr Mike Jones and Nicola Laurent
- **Data Management Association:** Andrew Smailes and Simon Wall
- **Information Governance ANZ:** Susan Bennett
- **Institute for Information Management:** Vladimir Videnovic
- **Records and Information Management Professionals Australasia:** Anne Cornish, Thomas Kaufhold, Tim Newbegin and Lisa Read-White

This booklet is intended to continue the discussion into the future, and we all hope that this initiative is an annual event.

