Digital Records Transformation Initiative – Sourcing Strategy Discussion Paper

A new approach for records management technology sourcing

The Digital Records Transformation Initiative (the Initiative) is an Australian Public Service (APS) wide initiative focused on supporting the development of modernised digital records and information capability across Australian Government non-corporate Commonwealth entities. The Government has agreed to modernise the common function of recordkeeping by taking advantage of new technologies, particularly those that automate the capture and classification of records.

The Department of Finance (Finance) intends to establish an appropriate Whole-of-Government arrangement for entities to procure technology that supports modernised records management capabilities.

This Discussion Paper is not a formal approach to market. Finance, in consultation with the Digital Transformation Agency (DTA), is proposing an alternative approach to sourcing modernised records management products. Before it commits to an approach, Finance is seeking the views of the private sector and Commonwealth entities to determine the most effective and efficient way to source modernised digital records solutions. Before we begin to establish requirements and a sourcing approach, Finance is seeking feedback on:

1. the use of a co-design approach with industry and entities to determine the most appropriate sourcing arrangements and a statement of requirements; and
2. whether the capability maturity approach is a useful way to pursue modernisation of Australian Government records management.

Responses are invited from all sectors of the community who are in a position to provide constructive input to the delivery of the outcomes of the Initiative.

This paper is open for comment until **Friday, 23 November 2018**. Feedback can be provided by email to digitalrecordstransformation@finance.gov.au.

What is different in this sourcing approach?

The rationale for a different approach to sourcing comes from two main drivers. First, the rapid pace of change in the development and application of new technology can mean that traditional forms of sourcing arrangements struggle to keep up. Second, there is a risk of a single or small number of technological solutions locking the market down, stifling further innovation. Instead, Finance seeks an arrangement that supports innovative use of technology, encourages research and development by suppliers, and fosters both cooperation and competition in the marketplace.

Using co-design techniques

To do this effectively, Finance is seeking to undertake a co-design process with vendors of innovative modernised records management products, and with buyers (non-corporate Commonwealth entities) of these products. Co-design is an open design and collaborative method increasingly being used by both Government and the private sector. This approach brings together different stakeholders, i.e. different perspectives and ideas, in the design process to deliver an outcome that meets user needs. It will involve a number of

communities of practice or workshops to build and test concepts/ideas to deliver an innovative approach to sourcing modernised records management solutions. An appropriate sourcing mechanism that has the potential to encourage innovation and digital records management solution requirements will be determined through this process.

Using capability maturity for requirements

To develop requirements for an Approach to Market, Finance is developing a maturity model based on several dimensions of capability with the aim of improving government's information management, and enabling vendors to invest in and offer solutions that increase their ability to meet the changing business requirements of government. This capability model encompasses both agency (business) capability, and industry (technical) capability. Further information is at Attachment A.

To assist with automated decision-making, Finance will require the market to incorporate open data standards that will allow for the Australian Government Records Interoperability Framework (AGRIF). The AGRIF aims to support a federated view of the information created by, for, and sent to, the Australian Government and which describes the meaning and characteristics of information in a consistent way. Through the adoption of the AGRIF, a federated approach can be pursued regardless of the number of systems and entities that create information. Further information on the AGRIF is at Attachment B.

Finance expects that the co-design process will also result in additional requirements.

Why modernise records management?

The need to modernise records management to manage existing and new information with automated tools (that can make recordkeeping decisions) is an evolving theme in industry commentary.[1] While current tools have recordkeeping functionality, they are not easy-to-use and in many cases, not used at all. Evidence suggests that traditional records management practices that require users to undertake electronic filing in a separate records management system have insufficient impact and take-up. This results in mismanagement of government information, which poses a risk to government business, e.g. loss of evidentiary material from email and lost productivity or high costs associated with discoverability of poorly managed information. In these circumstances, there is no guarantee that all information is being captured and/or is managed in accordance with the regulatory framework.[2]

The use of automated tools to perform this function can overcome this issue and, as a result, the Australian Government is keen to invest in modernised digital records capability.

We would also like to invite interested parties to provide feedback on the proposed modernisation of records management.

Further background information is at Attachment C.

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[1] See *Evolving and Disruptive Technologies are Critical to Streamlining Records Management Programs*, 17 May 2017, Gartner, Mariano and Woodbridge.

[2] The regulatory framework includes the *Public Governance, Performance and Accountability Act 2013* and the *Archives Act 1983*.

Digital Records Transformation: Records management capability for the Australian Government

Capability-based planning is an architectural pattern that expresses the business needs of organisations in terms that are readily understandable by business and information technology areas. It is useful to think about an organisation's business in capability terms because it can identify common requirements across organisations – allowing for the identification of common and shared service requirements – and because it is possible to use capability planning as the basis for maturity modelling – so that the needs of diverse organisations with related requirements can be understood.

The capability dimensions for developing Australian Government records management maturity are still in draft form, but encompass attributes such as IT Infrastructure and Tools; Identity and Security; Use and Re-use; Culture, Governance, Data and Frameworks. The exact nature of these dimensions and how they might be developed within entities, and within products, will be a subject for the co-design process. At this stage, we expect that there will be an overall capability maturity framework and plan for the Australian Government, and individual entity maturity would be assessed against this.

Capability-based planning will break down the requirements for records management into dimensions, and then each dimension into increments. This makes it possible to identify where investment and efforts needs to be targeted, and permits a nuanced view of an organisation's maturity in a particular capability area. Different organisations are more or less mature in different dimensions and this means that they have different needs in order to improve (become more mature) in a particular organisational capability.

Articulating what should be done and what is needed to do it at a high level allows the identification of a target future state and describes the manageable increments that build towards this state. Organisations, such as Australian Government entities and technology sector companies, can then identify the current state of their organisation or their products in terms of capability maturity in order to create a common way of identifying technology requirements and a common set of expectations. The result of this will be better procurement outcomes for everyone involved.

Digital Records Transformation: Australian Government Records Interoperability Framework

Enabling a federated view of the information created by, for, and sent to, the Australian Government is central to achieving an effective transformation of records management practice.

Describing the meaning and characteristics of information in a consistent way makes it possible to achieve a federated view, despite the proliferation of systems and entities that create information. If this description is able to persist over time, and to be integrated into the everyday user experiences of the Australian Public Service, further innovation will become possible. This innovation will ideally include the ability to search and exchange data and information across all agencies, regardless of how something is described or where it is stored, subject to the legislation and other frameworks that exist.

The Australian Government Records Interoperability Framework (AGRIF, 'the Framework') is a system of related semantic ontologies that describe the structure, functions, and activities of the Australian Government, providing sufficient context for the effective use, including but not limited, to management of Australian Government information assets. It complies with the World Wide Web Consortium's Web Ontology Language (OWL2) recommendation and is compatible with other recommendations and existing domain ontologies for archival and preservation processes.[1]

The AGRIF is a key element for Digital Records Transformation. Adopting AGRIF will require changes in the technology provided, but will also allow for more effective integration.

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[1] See http://www.linked.data.gov.au/def/agrif/.

Digital Records Transformation: Background

The Australian Government announced the Digital Records Transformation Initiative in the 2017 Federal Budget. In September 2017, Finance hosted a series of Market Days to investigate the records management industry's capabilities to provide a Whole-of-Government platform based on the proposed approach found in the *Position Paper on the Indicative Strategy for the Development of a Whole-of-Government Digital Records Platform*.

Finance and panel members from partner agencies analysed submissions and Market Day presentations for the extent to which they were able to meet each of the elements of the proposed approach outlined in the position paper, and for the level of capability maturity demonstrated for each of these elements.

Strengths demonstrated at that time included connectivity to external systems, rules-based automation approaches, and the move in the market towards microservices architecture. Apparent gaps included the support for a machine learning auto-classification approach and support for ontology management. Automation capabilities were mainly demonstrated through rules-based classification rather than through Artificial Intelligence technologies.

The panel observed that ontology management capabilities were focussed on vocabulary management using non-open standards. Further, as this management took place in a non-graph environment, additional steps would be required when joining data from different government agencies.

From this analysis, the panel determined that no single potential supplier possessed an existing off-the-shelf offering that could address all of the elements at the maturity capabilities required by the proposed approach. However, a large number of interested parties were able to demonstrate partial maturity against most of the elements.

In early 2018, Finance undertook a 12-week Demonstration of Concept (the Demonstration) to test the concept of automating records capture and categorisation via machine learning and semantic data technologies. It tested a number of concepts gained from the Market Days, industry engagement, initiatives in other jurisdictions and studies that formed part of the Initiative.

Through the Demonstration, it was concluded that while the Government is best placed to describe its functions, industry is working towards automation and would be best placed to provide digital records management systems that would be compatible with the government-developed Australian Government Records Interoperability Framework (AGRIF).