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Document Version:
Published version

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THE REAL VALUE OF AN INFORMATION ASSET REGISTER

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ABSTRACT

Conducting an information asset audit, along with the creation of an information asset register (IAR), is a key step in understanding the information management needs of an organisation. The benefits of establishing and maintaining an IAR are well documented, specifically IAR use in the identification of a single source of truth for each information asset, and the allocation of responsibilities for each information asset. However, an IAR is also a rich dataset that can be tapped to make good business decisions and grow information management knowledge within an organisation. This case study discusses how the IAR established at the University of the Sunshine Coast (USC) has been used not only as a key tool in understanding the current information landscape, but also to enhance a number of other initiatives and projects throughout the University. The case study outlines a methodology for conducting an information asset audit and establishing an IAR in an Australian university environment, and presents various uses for IAR analytics both within the information management sphere and beyond.

KEYWORDS

Information asset, information asset register, information management.

INTRODUCTION

The University of the Sunshine Coast (USC) adopted a formal Information Management Framework and Strategy in 2012. The Strategy, endorsed by the Vice-Chancellor, aligns with and supports the University’s Strategic Plan and reflects an increasing need to manage information assets strategically. By providing a vision, priorities and plan for the best use of the University’s information assets, it aims to position the University for appropriate systems infrastructure, sound information governance, and an organisational culture of information sharing. Specifically the plan outlines the following:

- key information assets will be recorded and managed within an information asset register
- a single source of truth will be identified for each information asset
- processes and systems will be developed to ensure the quality and integrity of information throughout its lifecycle
- information asset custodians will be assigned responsibility for the management of information assets and the authorisation of user access.

Annual Information Management Implementation Plans support the Strategy through endorsed operational activities. The Plans are prioritised and governed by an Information Management Steering Committee, providing information and advice to an Information and Communication Technology (ICT) Governance Committee and senior staff meetings as required. The Plans are implemented by a newly established Information Management
Services Unit, specifically through the employment of an Information Management Coordinator and an Information Officer (Strategy).

In line with the Strategy, the 2013 Implementation Plan included an initiative to conduct an information asset audit to identify the information assets of the University and to establish an Information Asset Register to store this information.

BACKGROUND

Information asset registers
Information asset registers (IARs) are tools used to list and track information assets of an organisation and have been developed in response to organisational needs to record information assets and their value (Brimson, 2005). Information asset means information in any format which supports a business process (National Archives of Australia, 2014) and is recognised as having value to the organisation. IARs are populated via an information asset audit process, and maintained as a valuable organisational dataset and information asset itself. An information asset audit is the systematic examination of information assets within an organisation.

IARs can be scoped minimally, to include a high level granularity or specific type of information, or they can be more comprehensive and include information asset detail from entire enterprises (Brimson, 2005). In Australia, IARs are increasingly recommended by peak bodies for information management best practice. In 2009, the Queensland Government released ‘Information Standard 44: Information custodianship’, requiring Queensland Government agencies to establish and maintain an IAR. In 2011, the Office of the Australian Information Commissioner released principles on open public sector information, with principle 4 advising ‘robust information asset management’, requiring agencies to maintain an asset inventory or register of the agency’s information. Also released in 2011, the National Archives of Australia ‘Digital Continuity Plan’ identified information review (and subsequent information asset register) as key actions.

The purpose of an IAR is to record the relationship of information to the business (Brimson, 2013). Benefits include:

- identification of a single source of truth (and duplication avoidance) (Queensland Government, 2011)
- identification of information ownership/custodianship (Queensland Government, 2011)
- supporting business process improvements (Brimson, 2013; Griffiths, 2010)
- supporting information cleansing (Brimson, 2013)
- understanding information risks (Brimson, 2013)
- identification of key themes and patterns across organisational information use (Brimson, 2013).

The size of an IAR will relate directly to organisational information size, as well as the amount of detail or metadata recorded against each information asset. IARs grow quickly once the information asset audit process has commenced, so it is important to establish a
suitable IAR structure in the planning stages. The National Archives (n.d.) advises an IAR should be structured so that it is easy to see what information is affected by changes to business requirements or technical environment. The Queensland Government (2011), Stevens (2005) and the National Archives (n.d.) all provide (different) example structures of IARs that outline metadata fields for consideration. Organisations must ensure the chosen IAR structure aligns with organisational information needs, and only includes metadata fields that will be of value for the organisation to track. In terms of how much to capture, Stevens (2005) notes the idea of asset profiling is to capture just enough information so that the profile produces by the process is useful but not cumbersome to manage and change.

**Information asset audits**
The process for undertaking information asset audits to create IARs varies between organisations, however Stevens (2005) recommends an easy-to-follow approach with a six step iterative process for conducting an information asset profile. The steps include: 1. capture background information; 2. define information asset; 3. identify asset owner; 4. identify containers; 5. identify security requirements; and 6. determine the information asset valuation. In terms of the manner in which information asset audits should be conducted, Griffiths (2012) notes information audits should be collaborative and non-confrontational, and should deliver assurance and benefits that can be explained persuasively at corporate and team levels.

**USC CONTEXT**
USC’s information asset audit and the subsequent establishment of an IAR aligned with the University’s wider Information Management objective of establishing a sound information governance framework. The audit process, as well as identifying and capturing information assets, also provided Information Management Services staff the opportunity to raise awareness with USC staff about information assets, information management and associated issues.

A key objective of the IAR was to ensure that organisational information was identified, defined and organised in a way that facilitated access to and reuse of this information. It was also expected to enable other information management outcomes, including: the identification of a single source of truth for each information asset; and the allocation of responsibilities for each information asset.

Into the future, it is expected that the IAR would be used for University planning and decision-making through outcomes such as: the identification of information asset risks (to be managed using the University’s Risk Management Framework and Business Continuity Policy); the matching of information assets to organisational goals and objectives (with related values applied); the identification of information flow; the identification of information asset dependencies (both information and technology dependencies); and the planning for information business process improvements.

**METHODOLOGY**
The information asset audit was conducted in a phased approach. This included the following phases:

- planning
- collection of data
- data analysis
- reporting.

The planning phase included outlining the processes, resources and timelines of the audit, and the development of a project plan that was approved by the Information Management Steering Committee.

The collection phase involved the systematic examination of information assets within the University, identifying to an agreed level of granularity what information assets were held. The collection phase duration was eight months and was resourced with an Information Management Services staff member two days a week. All organisational business systems, including shared drives, the corporate website, and the staff intranet, were assessed as sources/containers for potential information assets. Communication with managers in each department was conducted prior to accessing relevant business systems. This was to ensure the department understood the purpose and expected outcomes of the information audit. This communication was undertaken face-to-face, touching on all the information management tasks underway, including the information asset audit. Overall, discussions were held with 19 departments across the University.

The IAR structure utilised at USC included 13 metadata fields in the first instance. These are
- Asset type
- Asset detail
- Creator
- Amount detail
- Original acquisition/creation date
- Location
- Source system
- Storage
- Storage format
- Content type
- Category
- Owner
- Custodian

The IAR was maintained in Microsoft Excel, with a list of asset types included in a separate worksheet.

The data analysis phase duration was one month and resourced with an Information Management Services staff member two days a week. Microsoft Excel pivot tables were used for data mining and data trend identification.

The reporting phase involved three aspects for reporting. Initial visual reports were provided to managers of departments once the information asset audit was completed for their area. These reports included asset, source, and asset type analysis as well as department observations. The reports were discussed in person with the manager and presented to the team leaders of the area when requested by the department manager. Comprehensive organisational reports were provided to the Information Management Steering Committee on completion of the audit process. This included both a comprehensive organisational information trend report, and a one page visual of ‘current state’ information assets at the
University. Finally, on request reporting was undertaken for organisational project managers on information states and trends related to organisational projects underway at USC.

**RESULTS**

The intended result of the information asset audit was to discover and identify the University’s information assets and to establish an Information Asset Register to facilitate better management of these assets.

At the end of the project in 2013, the IAR included more than 3,000 individual assets categorised by 168 different asset types. To date these asset types are not aligned with any endorsed classification scheme or thesaurus, having been developed through consultation with the different University subject matter experts. Assets were identified primarily across the University intranet, the external website and two shared network drives. University systems (e.g. PeopleSoft) were also included in the register as assets.

The project was limited by changes that occurred during the data collection phase. Information assets were originally collected at a high level of granularity. As the audit progressed it became evident that a lower level of granularity would be of more benefit.

Accessibility of information was also a limiting factor. Some information sources were deemed too sensitive to be included in the asset register at the same level of granularity as other sources. In some instances accessibility was limited because the exact sources were unknown, particularly where private folders had been established on the shared network drives.

The assets included in the register highlighted the amount of duplication across the University, both in terms of duplicated content and duplicated effort. There were a number of documents, forms in particular, that had been saved by different departments. In other instances, similar types of documents had been created in isolation by different departments.

The use of source systems, and the storage of information in them, was also inconsistent. Some departments used the intranet to store and disseminate information, other departments used the shared network drives. The storage location of information assets was department driven, not purpose or audience driven. This was primarily due to there being no formal guidance for staff on where or how to store, disseminate and publish information.

Seeking access to the University’s information sources also revealed issues with discoverability of information. One of the shared network drives was permission based (i.e. only those folders an employee had been granted permission to access would appear). Only a small proportion of this content was therefore included in the audit.

A number of problematic asset types were identified during the audit. These included forms, business process instructions, images and contact information. Primarily these issues surrounded the duplication, redundancy and/or inconsistencies in formatting and function. For example, over 400 forms were identified and included in the IAR. Although it was relatively easy to identify which forms had been duplicated, it was more difficult to differentiate between different versions of the same form.
DISCUSSION

Whilst the information asset review process populated the IAR for further information management application (what information assets are held, who was responsible for them, and where the assets are held), it also led to a clear picture regarding current organisational information state. This included intelligence on technology, information movement, asset type performance, and information behaviour.

The University works to a comprehensive enterprise architecture for information technology delivery and planning, and the results of the information asset review process augmented this by outlining information asset types within each business system, as well as the business areas engaging with each system. The process also identified other smaller sources in use at the University. From this, Information Management Services staff are able to look further to determine if an established central business system could meet the information need, or alternatively if a gap in centrally supported business systems functionality existed.

Whilst the information asset audit did not formally track information flow throughout the organisation, IAR analytics enabled basic information movement analysis. This included tracking the difference in locations for structured and unstructured information, as well as the heat spots for information duplication across the organisation (for both asset types commonly duplicated, and common sources of duplication). Highlighting these areas enabled the Information Management team to prioritize and target future activities, including an intranet replacement project.

The IAR also provided opportunity to data-mine specific information asset types, with asset types able to be mapped across the organisation. This led to a greater understanding of gaps in information asset type guidance at the University and flowed through to other information management activities planned for the future focusing on forms, contact information, guidelines, and business process methodology. Asset type analytics drawn from the IAR have been used by project managers for other central USC projects. This intelligence on current state information has been used by staff leading: data warehouse strategy project; intranet replacement project; managing information in shared drives project; website redesign project; and curriculum management system project.

Being able to cross-analyse asset types and their source systems was also valuable. For example, the majority of business process instructions (much of which would have been for general consumption) was located on non-public source systems. It enabled the Information Management team to collate a list of asset types that were locked up in secure source systems, when their use was broader.

The process also provided intelligence on organisational information behaviours. Differences in information behaviours of departments was noted, and where confusion or different practices existed, future information management support and training is planned to support organisational information management practices. A good example was some differences across the organisation on the correct place to store specific information asset types. To address this, plans are underway to outline information classification structures mapped to existing sources, with statements included in a new information policy supported by training material.

Essentially, whilst a key part of an information asset audit process and a key objective of an IAR is to allocate value to organisational information assets, the IAR itself is an information...
asset with high value to the organisation, providing intelligence on information state that can be used to inform current and future organisational projects. In the USC experience, taking analytics from the IAR need not wait until IAR population is completed, it can be undertaken to provide value along the way. For example, when added to the Stevens (2005) six step iterative process for conducting an information asset profile, IAR analytics can be conducted alongside steps 2-6.

Maintenance of the IAR is ongoing at USC, with the Director of Information Services as the asset owner, and the Information Management Coordinator as the asset custodian. Further expansion on the IAR is expected in the next twelve months including:

- Further work on defining information asset ownership (with related responsibility embedded in organisational information policy, and training to ensure these responsibilities are understood by staff).
- Allocating information security classifications to asset types.
- Defining an organisational methodology for valuing information assets.
- Expanding the information asset audit scope and analytics as required to support new projects at the University.
- Undertaking information management projects to address the information glut identified throughout the process that are not information assets.
- Transitioning the IAR from Microsoft Excel to a new system to provide further accessibility to staff and ensure scalability.

CONCLUSION

The USC Information Asset Register, and the information asset audit process, has provided the Information Management Services unit with qualitative and quantitative data on how information is being created, used and stored at the University. It has also highlighted issues around how information is stored and disseminated at the University, and identified information behaviours that have developed in response to these issues. The process undertaken by USC to audit its information assets and the establishment of the IAR provides a useful template for other institutions seeking a greater understanding of information asset management. This case study highlights the importance of the IAR in not only identifying and categorising information assets, but using the data provided to establish the context within which better information management practices need to take place.

BIBLIOGRAPHICAL NOTES

Chelsea Harper is the Information Officer – Strategy at the University of the Sunshine Coast. Kate Kirby is the Information Management Coordinator at the University of the Sunshine Coast. Sandra Jeffries is the Director, Information Services at the University of the Sunshine Coast.

REFERENCES


