

# ENTERPRISE CONTENT MANAGEMENT : A BRIDGE TOO FAR

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# INTRODUCTION

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External forces and internal drivers have reshaped the Enterprise Content Management (ECM) market in terms of what the industry calls it, what providers sell, and how Application leaders will buy products and services in the future. The context for this is that significant leaps in technology over the last 3-4 years have enabled a more holistic response

to unstructured data needs i.e documents, records, videos, drawings etc... and business requirements are changing regularly to reflect these new technologies.

Better software, faster and more integrated technology and better use of content have now meant an increase in focus and response to these data and information types is possible. Whilst the structured data world has a long history of vendor technology uplift, legislative and risk management demands are now also driving a need to track content, maintain privacy and meet user accessibility and collaboration requirements.

With shifting business requirements comes the technology challenge to respond in a different more agile approach that doesn't require large scale platform projects but rather a more iterative approach to building business ECM capabilities.

In this white paper, I will explore the journey towards delivering your ECM capabilities and outline why it is important not too overstretch on meeting business requirements and manage your stakeholder expectations to enable a phased approach to delivering ECM outcomes.

*'Better software, faster and more integrated technology and better use of content have now meant an increase in focus and response to these data and information types is possible.'*

# DEFINITIONS

A model that positions the core capabilities in context is the ECM wheel below. It highlights 10 key capabilities that contribute to ECM and is a useful planning tool for scoping and sizing your organisational responses to each of these capabilities. NSW Transport has been able to use this model to understand and position business requirements, validate deployment options and identify technology and platform standards to be adhered to.

Below is a summary of definitions that have been endorsed at NSW Transport for each of the core ECM capabilities:

## Document Management

- Services (e.g. check-in/check-out, version control, security and library services) for the management of business documents (e.g. MSWord, PDF, emails).

## Records Management

- Long-term archiving, automation of retention and compliance policies, and ensuring legal, regulatory and industry compliance

## Web Content Management

- Controlling a website's content (creation, templates, workflow, change management etc)

## Image Processing Applications

- Capturing, transforming and managing images of paper documents

## Social Content

- Content sharing and interaction support (e.g. blogs, wikis other online interactions)

## Content Workflow

- Support for content related business processes ( e.g. routing content, assigning work tasks and states, and creating audit trails)



Figure 1 : Enterprise Content Management Capability Model

## Digital Asset Management

- Management of rich media (e.g. photographs, animations, videos)

## Specialist Content

- Management of specialist content (e.g. engineering drawings produced during infrastructure delivery projects etc.)

## Business Rules Management

- Software system used to define, deploy, execute, monitor and maintain decision logic that is used by operational systems within an organization or enterprise.

## Collaboration

- Collaboration is a working practice whereby individuals work together to achieve a defined and common business purpose.

## DEFINITIONS (cont...)

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These definitions provide a useful set of boundaries when discussing ECM capabilities across all stakeholder groups. The Gartner definition for ECM provides useful insights as follows:

“*ECM is a set of services and micro-services, embodied either as an integrated product suite or as separate applications that share common APIs and repositories, to exploit diverse content types, and serve multiple constituencies and numerous use cases across an organization.*”

Whilst it is a reasonably generic definition it does allude to the enormity of diverse content types with multiple constituencies and numerous use cases. To attempt to address all 10 ECM capabilities at once is to invite a project or program that is mired in constant change requests, regular technology upgrades and simply too broad a scope for a successful deployment.

Source: NSW Transport ECM definitions



## STRATEGIC CHOICES AND APPROACH TO ECM

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It is critical that your organisation has a documented and endorsed ECM Strategy which supports the timely strategic business and technology choices and a Roadmap that enables you to track your progress and make adjustments as required. The value of an endorsed strategy and roadmap is in the engagement process where multiple stakeholders are engaged to agree on the organisational response to ECM.

As you can imagine, addressing all of the business requirements in a single ECM Program is a significant organisational undertaking and in many respects business operating models are not setup to manage each of these capabilities effectively across the organisation.

Many organisations break down the ECM set of capabilities by focusing on one or two of the more critical capabilities in a first phase approach. Not only is a technology solution required but the functional requirements, change management, service model and business ownership are just as important to ensure that a combined organisational uplift in capabilities can be delivered.

In my experience, Records and Document Management capabilities are often the first capabilities addressed in the ECM uplift journey as they have very similar business requirements required by a broad range of functions such as Procurement, Finance, Human Resources, Sales and Service Operations and Legal. A more detailed definition of these capabilities is as follows:

- Records management is the professional practice of managing records to a lifecycle from creation to disposal. They are a key part of government risk and compliance activities and preserving public knowledge for reference and reuse. The state records management requires that they are valued as critical to business operations; are 'trustworthy', implying immutability and are legislatively required.
- Document management is the capture, storage and sharing of, often digital, files. It is intended to reduce duplication, enable search and retrieval, provide structure and improve processes and efficiency through the use of workflows. Improving processes and efficiency through workflows.

Source: NSW Transport Records and Document Management definitions

# BUSINESS DRIVERS

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There are many different internal and external business drivers creating the need for ECM capabilities such as Document and Record Management including:

- Legislation – Privacy and traceability often drive legislation responses;
- Agility – ability to access ECM capabilities anywhere, anytime and with anyone. The way of the future as more employees work from home, facility costs increase, team dynamics and technology enable greater collaboration;
- Typical ECM based requirements also target:
  - Physical Records management
  - Electronic Document management
  - Controlled Access management
  - Document workflow processes
  - Archival and Disposal rule sets
- Some business units have specific document life-cycle management with:
  - Collaborative or co-authoring requirements;
  - Document class dependant workflows;
  - Controlled access by third-party partners;
  - Controlled publication to third-parties and/or public;

These drivers provide a strong basis for investing specifically in your Document and Records Management capabilities and generating compliance for Government agencies or managing risk and business continuity outcomes for private or public organisations.



*'These drivers provide a strong basis for investing.'*

# TECHNOLOGY DRIVERS

A sample of key ECM business problems experienced by your organisation may reflect the following:

- **Problem 1:** Multiple information repositories.
  - A proliferation of different information repositories in use - means not only that it is difficult to find information created by someone else, but that it is hard for employees to get a picture of what information it owns.
- **Problem 2:** Existing environments do not enable document and information collaboration and sharing with partners;
- **Problem 3:** Poor usability features of eDRMS systems results in lower user adoption.
  - Significant contributing factors are the lack of an intuitive information architecture, outdated user interfaces and lack of mobile access; and
  - From the user's perspective there are too many fields to fill in; it is difficult and time consuming to file / find documents; and no generic folder structure for filing documents.
- **Problem 4:** Poor behaviours and culture for valuing information as a shared asset.
  - Poor information management technology which perpetuates the current state of individual practices for capturing and filing information and hard for staff to find information;
  - Inadequate leadership and role-modelling of good information behaviours;
  - Lack of business clarity on what constitutes State Records Act compliance;
- **Problem 5:** Existing environments do not enable the ECM Strategy and Roadmap to be realised i.e locked down and unable to scale to support enterprise search.

Undertaking an ECM impact assessment is a vital tool to help draw out your key business requirements and support structuring your business case including:

- Cost Overheads incurred due to:
  - Multiple Licensing regimes – no uniform cluster Enterprise cost model
  - Multiple Support points – lack of consistency
  - Some products unsupported – some no longer available
  - Multiple archiving locations
- Reduced Efficiency and ability to meet future demand due to:
  - Lack of a Global design and bespoke development and use of products;
  - User training and functional familiarity low;
  - Restrictive silos of information and business behaviour;
  - Minimal sharing between systems; no sharing between Agencies;
  - Lack of cluster wide search facility;
  - Lack of integration with Office and other collaboration apps;
  - No collaboration with Transport and/or external parties;
  - No deployed mobile capability;
  - Increased complexity due to deployments being program and project specific and people and functions are performing non-core roles in support of the evolving ECM demand;

# VENDOR POSITIONING AND TECHNOLOGY RESPONSES

I have included the Gartner Magic Quadrant as a means of positioning the technology vendors in the ECM market which has started to contract as ECM vendors generate more value with their product offerings, competition increases and merger and acquisitions take place.

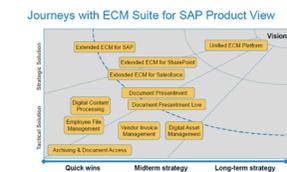


Figure 1 : Gartner Enterprise Content Management Magic Quadrant

Recognising there is a broad range of technology responses available technology teams should consider tailoring the technology response to meet specific functional groups of users. This may include turning on ECM capabilities for specific user groups across a transition planning horizon so that big bang deployments do not place the business at risk and many ECM processes can be contained within business units.

One of the primary benefits of transitioning your ECM capabilities by user group is it enables a tracking of progress in change management and user experiences with lessons learned to be applied to subsequent deployments. An example of the planning horizons for different stakeholder groups is below with delivery planning for ECM capabilities to address Finance, Procurement, Human Resources, Infrastructure projects and IT specific projects:

## Technology response for Programs and Infrastructure Projects



## Technology response for Finance



## Technology response for Procurement and Contract Management



## Technology response for Human Resources



## Technology response for Information Technology



Source: NSW Transport response to ECM needs across Divisions

# BENEFIT STATEMENTS FROM ECM DEPLOYMENTS

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A range of further benefits will accrue if you can define and plan your ECM journey including:

- Deliver efficiencies and productivity gains by making it easier to find and share information;
- Improve the ability to collaborate and share information within the Transport Agency and with its business partners;
- Provide an enterprise-wide single authoritative repository of documents and records;
- Enable users to access their documents remotely, using smart devices e.g. Android and IOS Apple devices;
- Reduce the risk of information and knowledge being lost or inaccessible;
- Support better decision making through improved quality of information and data;
- Reduce storage costs through better management of information;
- Ensure legislative compliance;
- Deliver technology 'as a service', that is reliable, scalable and provides high availability/disaster recovery capability.



# ARCHITECTURE RESPONSE – ENTERPRISE SERVICE DEFINITION

Technology teams have an opportunity to industrialise the response to ECM business requirements through creation of Enterprise Technology Services which are essentially a catalogue of Technology Services that business units can leverage more quickly and effectively. This negates the need to setup up new projects with the accompanying project overheads and instead the critical project inputs are already defined and available for business consumption.

An example of the key inputs required for your “ECM as a Service” is as follows:



*'Technology teams have an opportunity to industrialise the response to ECM business requirements through creation of Enterprise Technology Services.'*

## Service Definition

- Business Rationale / Business Drivers / Business Needs / Business Position
- Business Capabilities supported
- Logical Business Functions supported
- Logical Data Entities supported
- Integration Architecture and Services strategy
- Security profile, Single Sign On and User Experience
- Supporting Technology view / Application Modules / Vendor Support profile
- Infrastructure hosting required / options available

## Service Delivery Considerations – inputs for business case

- Delivery Options – Retain, Replacement, Upgrade Paths
- Key Resources and roles within Transport Cluster incl Stakeholder Map
- Cost Guidance
- Governance Path
- Learnings / Issues / Risks
- Benefits statements – patching, maintenance, projects, resources
- Technology Roadmap

# LAST WORD ON ARCHITECTURE & ECM CAPABILITIES AND SERVICES

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It is important to engage your stakeholders early and often when planning out your ECM Strategy and Roadmap as they have certain basic expectations regarding the manner in which they are serviced. Business stakeholders need to be agile and responsive to market opportunities and technology teams need to be able to grow and respond to support this agility.

The shift from Documents and Record Management to ECM to content services is an evolution and the technology market is changing and new capabilities are expected, resulting in additional considerations for applications leaders planning content services strategies.

By tailoring your ECM delivery roadmap to specific ECM capabilities you have the opportunity to establish key milestones in that journey, change course or fast track delivery and embed your key capabilities in the organisational DNA at an absorption rate that is more in line with business performance.





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