Enterprise Content Management - ECM Program for New Mexico State Government

a.k.a. ELECTRONIC DOCUMENT MANAGEMENT SYSTEM (EDMS)
      ELECTRONIC RECORDS MANAGEMENT SYSTEM (ERMS)

Informational Presentation to the Information Technology Commission (ITC)

September 19, 2006
Agenda

- Overview – NM ECM Program
- ECM (EDMS/ERMS) Definitions
- Implementation Strategy for ECM
- Proposed ECM Application Standards
- ECM - Enterprise Architecture Design
- ECM Strategic Roadmap
NM ECM Project Overview

- Three agencies, HSD, TRD & SRCA submitted project requests in 2004 for document & records management
  - OCIO combined these into a multi-agency project due to their obvious synergies
  - A multi-agency Executive Steering Committee (ESC) oversees the project
    - Vision to establish an enterprise model
    - Framework that other agencies can plug into
Strategic Objectives

- Lower the Cost of Government
- Improve Service Delivery to Constituents
- Enterprise Model
  - ECM strategy and framework that supports all content types and formats over their entire life cycle
- Centralized Electronic Records Repository
  - Integrated approach for the capture, maintenance, storage, access, disposition and preservation of electronic records
- Business Process Management
  - Content, documents & document management are inherent within Agency business processes
  - Reengineering business processes in State Government is fundamental to implementing ECM
Tactical Objectives

- Two current tactical projects:
  - HSD Child Support Payments
    - Capture and image payments and manage Child Support paper documents
  - MVD Citations
    - Capture MVD Citations, payments and manage paper documents
What is ECM (aka EDMS/ERMS)?

- NM project conceived when generally accepted industry terms were:
  - Electronic Document Management System (EDMS)
  - Electronic Records Management System (ERMS)
- **Enterprise Content Management (ECM)** has now become the industry standard name for these solutions including:
  - EDMS/ERMS
  - Web Content Management
  - Email Archiving
What is ECM?

- Enterprise Content Management
  - Document Imaging
  - Document Management
  - Records Management
  - Workflow Management
  - Web Content Management
  - Document-centric Collaboration
    - Integrated Document Archive & Retrieval
    - Digital Asset Management
    - e-Forms Processing
    - Email Archiving

Figure 1: ECM Components
What is Content?

- **Content** encompasses:
  - document images, papers, books, text, reports, maps;
  - email, web sites, HTML, XML forms including e-forms;
  - photographs, audio, and video.
What is Enterprise about ECM?

- All Agencies Process Documents & Content
  - Content, documents inherent in Agency business processes
- Proposed IT Consolidation at GSD
  - Opportunity for centralized data center service provider
- Centralized Electronic Records Repository (CERR)
  - SRCA Records Repository for all agencies enterprise-wide
- Proposed ECM Application Standards
  - Provides support & guidance for all agencies
- Security and Identity Management
  - Protects content and documents state-wide
- Business Continuity and Disaster Recovery
  - For all state agency’s content and documents
Public Record defined

- A Public Record is Content
  - regardless of physical form or characteristics -
- Made or received by any agency in pursuance of law or in connection with the transaction of public business
- And preserved, or appropriate for preservation, by the agency or its legitimate successor
  - as evidence of the organization, functions, policies, decisions, procedures, operations or other activities of the government
  - or because of the informational and historical value of data contained therein.
Records Management defined

- Records Management is the systematic control of Public Records -
  - from creation or receipt,
  - through processing, distribution, maintenance and retrieval,
  - to their ultimate disposition.

- Records Management is the preservation, retrieval and non-alteration of Public Records -
  - for the purpose of auditing
  - or potential litigation

- **Records Management is a statutory requirement that every executive is responsible for within each Agency!**
ECM (EDMS/ERMS) Basics

Document scanning

- This can be batch scanning,
  - where documents are centralized and batched,
  - scanned in bulk through a high speed scanner

- It can also be desktop scanning at locations such as field offices
ECM (EDMS/ERMS) Basics

Optical Character Recognition (OCR)

- Also known as ICR (Intelligent Character Recognition)
  - a process where the contents of the document are retrieved through sophisticated software
  - while the document is scanned
ECM (EDMS/ERMS) Basics

Document Storage Management

- Once captured, the electronic document need to be physically saved in storage devices.
- Since digitized image can be sizable, large volume of disk space might be required.
ECM (EDMS/ERMS) Basics

Electronic Document Management (EDMS)

- In addition to storage management,
  - the document image needs to be managed

- Management activities include
  - indexing
  - providing security
  - the checking in/out of documents
ECM (EDMS/ERMS) Basics

Document association

- Documents do not exist in isolation -
  - They need to be associated with the State Constituent and/or the State Agency
  - They need to be associated with the business process and/or subject matter
- Indexing or metadata supports the ability to access documents
  - Document retrieval is possible only by those items specifically entered as indices
ECM (EDMS/ERMS) Basics

Workflow management

- A technology that uses electronic systems to control business processes
  - manage the flow of work through an agency or across multiple agencies
  - move electronic documents among departments and workers based on a set of pre-defined rules
- Workflow is an integral part of document processing as it enables electronic documents to be shared and passed through the business process
ECM (EDMS/ERMS) Basics

Electronic Records Management (ERMS)

- Refers to the management of documents through their lifecycle
- It is a series of controls based that are exercised over the
  - Creation
  - Distribution
  - Retention, and
  - Disposition of electronic documents
Project Implementation Strategy

Developed from the perspective of products to be delivered

- ECM Implementation Activities
  - Broken down into project work categories
  - Also known as the Work Breakdown Structure (WBS)
  - Each WBS has specific deliverables
Project Work Categories

■ Project Management
  ■ Planning, team building, issue and risk management, communication, quality assurance, procurement and certification

■ Business Needs Assessment
  ■ Gathering basic information on what content, documents and records the system will (and will not) manage
  ■ Determining project priorities and scope

■ Agency Infrastructure Assessment
  ■ Identifying the unique agency architecture that could result in unique requirements for the ECM system
  ■Aligning with enterprise-wide IT architecture
Project Work Categories

- **Business Process Management**
  - Mapping the ‘As-Is’ Workflow
  - Designing the ‘To-Be’ Workflow
  - Change Management

- **Analyze Agency Record Series**
  - Reviewing NMAC policies and statutes and Federal policies
  - Analyzing Agency specific Record Series
  - Recommending Schedule updates - Disposition & Retention

- **Define Agency Specific Metadata Standards**
  - Establishing all the necessary index values
  - Complying with CERR standards
  - Greatly improves the value and quality of content
Project Work Categories

- **Design ECM solution to meet Business Needs**
  - Mapping the ‘To-Be’ workflow
  - Integrating the ECM software solutions must be contracted to experts in ECM solution design
  - Pre-requisites include ‘As-Is’ workflow mapping, records analysis and Agency specific metadata standards

- **Design Agency Specific Application & Technology Infrastructure**
  - Based on ‘To-Be’ workflow mapping
  - Meeting Business Needs
  - Integrating with IT Enterprise Architecture
Project Work Categories

- Imaging System Plan Approved by SRCA
  - Describing system goals and objectives; managerial planning for policies, procedures, future migration and disaster recovery; and technical specifications

- Integration, Implementation and Training
  - Purchasing ECM hardware and software
  - Installing & integrating with existing infrastructure
  - Setting up automated workflow
  - Testing to meet quality assurance standards
  - Training for system users, system administration and technical support staff

- Independent Validation & Verification (IV&V)
Scalable ECM WBS

ECM Work Categories are Scalable
- Expanded for large complex projects
- Simplified for small well-defined projects

For example:
- Agency Needs Assessment may be complete
- Agency may have an established ECM
  - Minimum requirements to plug into the CERR
    - Analyze Agency Specific Metadata Standards
    - Compliance with the metadata standards for the CERR
ECM Application Standards

Proposed Standards include ECM Application Standards, Guidelines, and NMAC Rules for:

- Metadata
- Document Imaging
- Document Management (EDMS)
- Records Management (ERMS)
- Electronic/Digital Signatures
- Workflow Management
- Web Content Management
- Digital Asset Management
- Email Archiving
Proposed ECM Application Standards include:

- A framework that overlays, or cross-cuts, the inter-related Information Technology Enterprise Architecture (ITEA)

- A framework for incorporating
  - statutory records management requirements
  - and sound records management principles
  - seamlessly into agency
    - work processes
    - enterprise architectures
    - information systems
ECM and the NM ITEA

EDMS/ERMS Interrelation to the IT Enterprise Architecture

Business Domains

Constituent Services | Justice | Resource Management | Education | Government Operations

EDMS - Electronic Document Management Systems

ERMS - Records Management & the Centralized Electronic Records Repository

Security and Identity Management

Business Continuity and Disaster Recovery

Technology Architecture includes servers, storage devices, network infrastructure, operating systems and application software

Figure 2: ECM & ITEA
ECM – Enterprise Architecture

- Enterprise-wide ECM architecture
  - Designed for the State of New Mexico in June 2006
  - Enterprise model defines ECM strategy that supports all content types and formats over their entire life cycle

- Centralized Electronic Records Repository (CERR)
  - Central to an integrated approach for the capture, maintenance, storage, access, disposition and preservation of electronic records

- SRCA serves as the CERR Administrator
  - SRCA has the authority to create centralized records rules
  - replicated in records libraries at Agency hosted document repositories
ECM – Enterprise Architecture

- Agency records classified at creation or capture
  - Virtually managed
  - SRCA controlled file series and retention schedules

- Agency records predicatively transferred to CERR
  - Their “sister” SRCA repository
  - Based on chronological or vital requirements

- Agency staff able to search
  - Agency hosted libraries for documents and records, AND
  - SRCA hosted libraries for records
  - Based on their authorizations
  - Using web access

- Knowledge Management
  - think of this as ‘Google’ ability for all NM documents and records
  - Improved service delivery to constituents
ECM – Enterprise Architecture

- **Identity Management and Security**
  - Fundamental for the CERR
    - Agency users must first be authenticated, proving they are who they say they are
    - An authenticated user is then authorized to work with selected content or records
    - User’s permissions determine their authority to view, change, delete or add content within the repository

- **Disaster Recovery and Business Continuance**
  - Architecture design foundation for ECM & CERR
### ECM Strategic Roadmap

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<th>TIMELINE</th>
<th>FY07</th>
<th>FY08</th>
<th>FY09</th>
<th>FY10</th>
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<td>HSD SRCA TRD GSD/RMD OSE DPS others TBD</td>
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ALL PRIOR DEPENDENCIES MUST BE COMPLETE
ECM FY08 Proposed Projects

- HSD – Human Services Department
  - Child Support Enforcement Division (CSED)
- SRCA – State Records Center and Archives
  - Centralized Electronic Records Repository (CERR)
- TRD – Taxation and Revenue Department
  - REAL ID ACT - digital document management federal requirement
- GSD – Risk Management Division
  - Workers’ Compensation
- OSE – Office of the State Engineer
  - Needs Assessment
  - Water Administration Technical Engineering Resource requirements
  - Integration with the OSE Geographical Information System (GIS)
- DPS – Department of Public Safety
  - Needs Assessment
  - Law Enforcement Records Management
ECM Project Dependencies

- Statewide Standards for Data Center Service Provider to support IT Consolidation
- Statewide Identity Management Program
- Business Process Management (BPM) Standardized at Statewide Level
- Enterprise Licensing for ECM software
- IT Strategic Roadmap for Statewide Web Content Management
- Statewide Standards for Service Oriented Architecture (SOA)
- National and Statewide Standards for Interoperability
  - Content ownership needs to be managed across Federal and State domains - Executive, Judicial, Education and Legislative
ENTERPRISE CONTENT MANAGEMENT (ECM) PROGRAM

QUESTIONS?

DISCUSSION