

Project Phases and Activities

(Prepared by the ECM Industry Standards Working Group 2: Trustworthy Document Management & Assessment)

This document provides a list of recommended project phases and activities related to records and electronic/physical record/document environment reviews and projects (also referred to as ECM, ERM, EDM, etc.).

There are 6 distinct functions to the recommended steps organizations should consider. This holds true for all ECM projects large and small:

- Part 1: Gain executive sponsorship and agreement that the environment needs to be evaluated; then
- Part 2: Assessment to the level determined appropriate; then
- Part 3: Identifying/selecting technology related tools identified as needed for use with updated processes; then
- Part 4: Solution design through rollout; then
- Part 5: Solution planning and rollout; then
- Part 6: Ongoing governance, sufficient support levels, and training.

Each of these activities and processes are described at a summary level within this document, and defined in detail within the ISO 18829, *Document management – Assessing ECM/EDRM implementations - Trustworthiness* (Trustworthy Assessments) and ISO/TR 22957, *Document management – Analysis, selection and implementation of enterprise content management (ECM) systems* (Implementation Guidelines). The information below has been prepared to assist organizations who understand or are concerned about the current state of their information and records management. For those that are not sure of all the phases and activities associated with reviewing the existing environment and the associated tasks/activities to address identified (or known) issues, this is described below. This document provides summary information for those seeking a project road-map of the recommended steps and activities when reviewing the overall records and information management environment through appropriate rollout of both non-technology-based change and required technology-based change.

Part 1: Strategic Alignment: Senior Management Participation

The most important contribution senior executives can make early in the project lifecycle is to participate in strategic planning sessions. The purpose of these sessions is to clearly articulate desired project goals, concerns, and objectives and the desired organizational change. Most organizations develop a technology strategy which includes ECM. Usually this is tied to a business strategy as one of the components of this strategic triangle.

Another component of this strategic triangle is the organizational change strategy. In many cases, this critical strategy is non-existent. Failure to articulate an organizational change strategy can lead to failure to manage the human and organizational impact of ECM. Trying to manage the human and organizational issues without a coherent strategy will result in an unfocused and ineffective change management effort, or the absence of change management altogether.



Strategic Planning Sessions should focus on answering, or considering, the following types of questions:

- What aspects of how we create, use, and manage information in our business culture are effective?
- What aspects of our business culture are ineffective regarding how we create, use, and manage information in our business?
- How will content/records management related technologies and practices impact our internal and external stakeholders?
- What structural changes in the organization are likely to result from ECM?
- How much change, and of what types, can we accommodate in this organization at this time? When examining the continuum of control versus commitment, where are we now regarding management style? Where do we want/need to be?
- What technology-based change is appropriate for the organization? What can we reasonably sustain?
- How should the effort be phased to allow adequate time for change management and organizational acceptance of the selected technologies and practices?
- Do we want to automate existing processes, or do we want/need to fundamentally change” how we work”?

The third component of the ‘triangle’ is related to the technology strategy of the organization. This relationship ensures the content /records management environment remains in compliance with organizational policies and procedures. This component also includes the proper identification and selection of the appropriate technologies required by the business and management teams.

Site Visits and Project Identification

The first step in the process is to clearly identify the scope and intent of the project along with the anticipated budget, resource requirements, and timeline to achieve senior management support to perform an assessment of the current records and information management within the organization.

Once senior management support is received, the second step is to organize and plan the work that needs to be accomplished to complete the required level of records assessment. The third step is related to collecting information needed by the “assessment team” to prepare an achievable project plan. In order to prepare an achievable plan of activities, the organization should collect the following type of information:

- Copy of the current retention schedule;
- Information related to existing record or ECM software (systems of record);
- Information related to any management, staff, and other stakeholder’s concerns or issues;
- Results of a visual review of the file areas and the work areas for those processes being assessed; and
- Information from all affected departments/business units, related to infrastructure and other ongoing efforts that will consume IT and/or department/business units resource availability.

This information is typically collected by the “assessment team” through onsite visits, or verbal discussions or video conferences. While this could be partially achieved by relying primarily on questionnaires and forms, the industry has found that it is always better to enable the assessment team to begin with the above types of questions in-person, and then expand the discussion as needed to collect the appropriate level of information via phone and/or other methods of

communication. These visits (or calls) would then typically include a meeting with the organizational project leaders, representatives from IT, and representatives from the departments/business units to be assessed.

As most organizations utilize either inhouse or external legal counsel to advise on the overall records management program, policies and procedures, these policies should be reviewed related to the collection of information associated with the organizational record keeping requirements and procedures. This allows not only the “assessment team” to collect sufficient information to prepare a project plan and outline how the assessment would progress, but also allow the organization to evaluate the “assessment team” in relation to the level of thoroughness anticipated/expected for a standardized assessment.

If multiple ‘assessment teams’ are being considered, the organization should allow a site visit for each potential team to collect information noted above, which should take no more than a few hours to a full day depending on organizational size and level of complexity of the current records management program and associated records/documents.

The purpose of recommending one-on-one meetings, rather than one with all potential consultants, is that the “all together” approach almost always eliminates any variance in what is asked or discussed preventing alternative ideas that potentially are a better solution for the organization. Keeping options open for the organization while following the standardized assessment approach has been shown to produce sufficient information for successful project selection and implementation.

The outcome of these meetings should be clearly stated objectives for change management and a set of guidelines for change that can be used by implementation teams. For example, are there any processes or procedures that cannot be changed due to regulatory requirements? Can we re-purpose or redirect certain positions; alternatively, should all job titles remain in the organization? Do we want to increase employee participation? Alternatively, do we want to move toward self-managed work teams?

Part 2: Strategic Project Assessment and Planning (ISO 18829)

Following the strategic alignment with senior management and identifying the scope of the required assessment and related timelines and resource requirements, the actual assessment begins with a ‘kick-off’ presentation to all team members and those stakeholders/participants who will be interviewed and/or affected by the process to have a view of the overall effort and related scheduling. This typically allows for everyone to work with changes to the schedule to better accommodate the organization and reduce adverse impact on daily activities.

The output of this standardized assessment is a detailed report providing sufficient information allowing the organization to determine how to best address any areas identified as not having sufficient staffing, sufficient budget, or other conditions which prevent the department or business unit from being in full compliance. The report should also include, with detailed technology (if appropriate) recommendations and records/document management related policies and procedures required to come into full compliance.

A key element of this assessment standard is to provide detailed information to the organization related to the overall trustworthiness of their ECM environment along with recommendations on how to address those areas evaluated that do not follow the associated ECM and records management related standards.

Stage 1: Prepare an assessment report

Upon conclusion of any compliant ISO 18829 assessment, the assessment team prepares a detailed report containing, at a minimum:

- A business needs and/or business case. This stage includes a description of the records assessment process followed, a summary of findings for physical records and electronic records, and business-related issues identified through the assessment.
- An analysis stage that provides detailed information following the standard records maturity models established by ISO 15489-1, *Information and documentation – Records management – Part 1: Concepts and principles*. This analysis provides information related to Accountability, Transparency, Integrity, Protection, Compliance, Availability, Retention and Disposition (also known as ARMA's Generally Accepted Recordkeeping Principles® (The Principles)).
- A technology gap analysis section provides a description of all relevant ECM, records management, and other document/record related storage or creation technologies currently in use by the organization.
- Staffing constraints, budgetary constraints, or other constraints (e.g., employees resistant to implementation). This may include the need to negotiate with bargaining units (labor unions.)
- A description of technical and records related recommendations associated with changing the existing state of records management to establish a Trustworthy ECM environment in compliance with ISO/TR 15801, *Document management – Electronically stored information – Recommendations for trustworthiness and reliability*, ISO 15489-1 and other relevant ISO and national standards and good/best practices.
- An analysis of the data privacy requirements. Identify the security requirements of who should have access to the data and whether there are requirements to isolate and insulate the data to safeguard the privacy of sensitive information. The assessment should take into consideration any regulations or requirements to protect or obfuscate PII (Personally Identifying Information).
- A security gap analysis to determine the vulnerability of the data to access by unauthorized users. Data security should not be an afterthought, but rather a fundamental requirement to determine the scope of vulnerabilities and the required measures that must be implemented to eliminate unauthorized access.
- Storage assessment and requirement analysis to evaluate the storage needs and TSS (Trusted Storage Subsystem) immutability requirements as defined in ISO/DIS 18759, *Document management – Trusted storage sub-system (TSS) functional and technical requirements*. This portion of the assessment help define the organizational requirements for secure trusted storage and evaluate the viability the storage architecture from a disaster recovery and immutability perspective. Trusted storage may be required to enforce data immutability, retention and resiliency requirements.
- Disaster recovery gap analysis to assess and determine the viability of existing backup and disaster recovery processes and procedures. The assessment has to take into consideration whether the implementation and the architecture can survive any failures or disaster and the ability of the organization to recover from such conditions. The assessment will also have to evaluate the procedures to determine whether the organization incorporates regular testing of the disaster recovery capabilities.

Within this report the following topics must be addressed, at least to a minimal level, if that topic is not currently relevant. To achieve this, the assessment team must perform the following activities and take the following into consideration:

➤ **Architectural/operational gap analysis**

Identify all systems, including staffing and budgetary modifications, that are vital to the success of the ECM project and map out the potential integration points. Define functionality desired to reach end state and determine if it is functionality that is part of the software package(s) or if it is a customization. Determine how workflow, rules, analytics and compliance play into the project and departmental requirements. Evaluate the (SME) (Subject Matter Experts) role and how they perform their job on a daily basis to identify areas of process improvement and/or automation.

- **Define business/organizational objectives from management perspective**
Business objectives should determine the ultimate objectives of the organization. This may include service level improvements, increased productivity, quality of service, or to simply move the organization to prepare for an electronic environment.
- **Identify organizational goals from management perspective**
The management team should provide input and help define the goals of the organization in relation to expectations for the ECM project. Commonly seen goals include: increased profit, stakeholder value, global presence, service quality excellence, streamline processing, etc.
- **Define how project success or failure will be measured**
The introduction of new technologies can result in higher costs to the organization. In order to assess whether organizational objectives are met, project deliverables should have measurable criteria which may include service level improvements such as reduced complaints from clients, reduction in cost of operation, cost containment on system deployment, or reduced time to complete processing.
- **Technical objectives and goals**
Apart from the business objectives and goals, the technical objectives and goals should be determined based on organizational IT capability to launch the system, and cost of new technologies, including changed or increased staffing or other organizational changes.
- **Document business requirements and expectations**
Clearly define and capture the business requirements and expectations to be used to determine whether the solution produces the anticipated results. Examples of these requirements and expectations include: Improving service, ability to track and monitor the activities of work, increase the efficiency of resources to meet organizational and/or government regulations related to document retention, lowering the cost of manual handling documents, etc.
- **Define technology requirements**
Identify the technical targets that are favorable to the organization, such as scalability of the solution, migration route, modularity, access via Web, use of industry-standard components, etc.

Stage 2: Technology Identification and Project Scope Definition

During this stage of the assessment, the information collected is examined and further data may be collected as identified during the analysis. The information, including baseline and process-related activities, need to be identified along with potential areas where non-technology actions would benefit the organization and where technology would benefit and improve the processes. The following activities and items must be considered for a standardized assessment as this information is then used to prepare potential project “road-maps that are actionable”.

- **Current technology evaluation and assessment**
Investigate the technologies available in the market for document handling that can contribute to the objectives and business requirements, such as, document imaging, document services/library, workflow, OCR/ICR and full text search, COLD/ERM, automation of the data capture, automatic identification of documents, forms management, components of web publishing, digital signatures, etc. Additionally, the TSS (Trusted Storage Subsystem) needs to protect the data against data loss, malicious users and ransomware. See ISO/DIS 18759 for more information regarding TSS (Trusted Storage Subsystem).
- **Identify non-technology-based change**

A common outcome of the process analysis is the identification of processes, activities, or procedures that are either no longer required by the organization, or need to be changed, which may include the creation of new positions or changed responsibilities. Typically, when these processes, activities or procedures are identified, the organization changes the process to eliminate or streamline where possible without the use of technology, as the problem was not technology based.

- **Identify technology-based change**
Along with identifying areas of non-technology-based change, the organization should consider what portions of the process could be improved and/or streamlined using various components of ECM technology. This technology-based change commonly includes either document imaging or document/library services and quite often includes workflow and forms processing, digital signatures, along with web publishing.
- **Establish "champion user" team**
The success of any system is dependent on the people who execute the project activities. This will require a champion or champion user team to be identified who will carry out the overall project objectives.
- **Develop high level process baseline**
The process baseline may change to accommodate new technologies. In order that we take advantage of the new/changed processes, a high-level process baseline should be developed from current processes to be able to compare with new/changed processes.
- **Prepare detailed process baseline**
As you examine the high-level process baseline, the detail process baseline should emerge. The detailed process baseline should be recorded for subsequent examination of the system design and contain sufficient level of detail not only of tasks and processes, but also of how information moves between tasks, how information is handled, processed, tracked, logged, etc.
- **Prepare anticipated ("to-be") process steps/activities**
Identify all tasks that support the goals of the project and show the scope in detail, while help in measuring development progress of the project.
- **Document specific processing metrics**
Documenting metrics to help display the advantages of implementing new technology versus the current state: such as cases processed per unit of time, time required to locate a document, information requests served within a period of time, etc.

Part 3: Vendor / Solution Selection / Procurement

Once the assessments are completed and the organization determines the best approach, the next part of the process would be the selection of the vendor and integration team through a formalized process including the industry standard activities noted below:

- **Develop detailed request for information (RFP, RFI, RFO, etc.)**
Organize and prepare all information collected in Part 2 and incorporate with detailed technical requirements clearly defining what you expect the solution to provide and what functions and features that are required. The level of technical detail should consider various functions and capabilities identified and discussed within the technical sections of this guideline. This includes both the ECM and the TSS (Trusted Storage Subsystem). Purchasing policies in many organizations require an RFP (Request for Proposal), RFI (Request for Information), and/or an RFO (Request for Order), or other competitive information gathering and bidding mechanisms.

- **Identify potential vendor/solutions to be considered**
The organization should evaluate various vendors/suppliers to identify those solutions that have a proven track record within the specific line of business associated with the business unit along with sufficient resources to support any selected products/solutions. While there are numerous vendors/suppliers in the industry, the organization should consider those vendors/suppliers that have a demonstrated track record in successful solution implementation and long-term support. Vendor/Supplier financial stability and local team resources to the organization are also often of significant importance along with technical knowledge and "strength" of the resources assigned to the project.
- **Evaluate vendor/solution responses (create "shortlist")**
The organization should evaluate the list of vendors identified through the processes described above, to create a "short-list" of vendors/suppliers considered to be capable of addressing previously identified project objectives, goals, and requirements. Pricing may be a primary concern to your organization, although the lowest cost solution is not necessarily the best solution. Another consideration for the vendor/supplier "shortlist" is the vendor methodology and ability to work with the organization. One way to evaluate this is by speaking with client references within the vertical market that is the primary focus of the organization. This should include both ECM and TSS (Trusted Storage Subsystem).
- **Request vendor/solutions demonstrations/briefings**
Each vendor/supplier on the "shortlist" should provide a detailed demonstration of how their product/solution could be used to meet the organizational objectives and goals, and should ideally include a group of stakeholders that will be using the technology. The demonstrations should focus on how the solution is used by other similar organizations and how the solution met similar client objectives and goals, with a minor emphasis on vendor/supplier marketing and sales literature. Vendor/Supplier financial stability and resources available to the organization (via teleconference, remote support, and/or on-site support) are also often of significant importance. This includes both ECM functionality and immutability of a paired TSS (Trusted Storage Subsystem) to meet the business or organization needs
- **Select desired vendor/solution**
Including stakeholder representatives from the user community(ies) and IT, the project team should select the vendor/solution that will best meet the objectives and goals and will be able to operate within the organization. A good match between pricing, functionality, and methods of operation between organizations is typically of value.
- **Establish vendor statement of work including acceptance criteria**
Prepare a complete agreement with the selected vendor clearly defining expectations and how the deliverables will be reviewed and accepted.

Part 4: Solution Design Through Rollout

Solution Design

- **Establish project team oversight and management procedures**
The team to oversee the project should include individuals with experience implementing these technologies and able to provide subject matter expertise to the organization. The team should include senior management, information technology, records management, and end-user champions/stakeholders. Depending on the size and complexity of the organization, the team might also consider legal, risk management, privacy and security, and other governance representatives. The oversight resources should work with the organization's management team to monitor the work of the vendor/solution providers ensuring the solution is being designed following industry best practices and standards and will meet the objectives, goals, and requirements of the organization.

- **Vendor prepares system and detailed design documents**
The vendor should prepare a full system design document describing all the functions and configuration options of the system and how they will operate. After the system design is agreed upon, the vendor/solution provider should prepare the detailed design documents that will be used by the developers and configuration/installation staff, as applicable, to build all aspects of the system.
- **Organization finalize detailed user acceptance criteria**
The organization and SMEs should develop a detailed user acceptance document based on the system design documentation and anticipated functionality ensuring that all components requested in the RFI/RFP/RFO and those bid by the vendor have been developed and/or configured/implemented as expected by the organization.
- **Vendor develops prototype system**
The vendor/solution provider should develop the solution in a non-production environment. As the solution nears completion, the vendor should establish the prototype system enabling the client organization to fully evaluate the functions and features. This should be functionality testing and not testing to resolve programming/configuration issues. The vendor should ensure that full and detailed testing is completed prior to the client evaluating the prototype system's functionality.
- **Organization evaluates prototype system**
As the organization reviews the prototype system, the stakeholders should note those areas that meet their expectations and those areas that are not functioning correctly, or need to be updated or changed. It is important to note that because many users may not have utilized these technologies previous to accessing the prototype solution, that it is common for the users to require changes after reviewing the prototype.
- **Vendor updates as needed and completes system development**
The vendor should complete system development and ensure that all design documentation is updated and continue updating the test environment to enable the organization to continue a process of review and feedback. This will greatly eliminate re-work due to misunderstandings after the system has been fully developed.
- **Vendor and stakeholder team fully test all aspects of solution**
It is very important for the vendor and stakeholder team to fully test all aspects of the solution ensuring that the solution functions as planned and expected by the organization. This testing should verify that all configurable components have been configured as planned, along with full testing of all functions or capabilities that were developed. Along with detailed unit testing, the vendor and stakeholder team should perform detailed end-to-end system testing.

Part 5: Solution Planning and Rollout

Each of the following steps are typically executed in a repetitive fashion throughout the rollout of the selected solution. This is important to consider especially if the organization desires to implement these technologies to store and manage information upon receipt or utilize these technologies solely as an archival solution. While both approaches provide value from different perspectives, the following steps represent those activities that the rollout or implementation team need to consider and continue to monitor throughout project rollout and technology expansion.

- **Implementation planning and change management considerations**
Throughout all aspects of the project the organization should include representatives from all stakeholder groups to plan and discuss all the specifics of how the solution will be implemented and what type of process and organizational change is required to support the new approach to conducting business. This planning is critical to the success of the project and should consider establishing "stepping stones" to implement the technologies in phases

thereby reducing potentially adverse impacts to ongoing or daily business activities that need to continue.

➤ **Technical and user training**

All required stakeholders should be fully trained in the use of the system. The technical training should be sufficient to enable the technical staff to support the day-to-day end-user activity with the support of vendor/solution provider. The users should be trained in detail prior to final system testing and during the final implementation planning phases of the project. The closer the user training is to the actual implementation date, the better for the overall project experience. Training may also be provided in a phased approach, so employees retain what they learn at a higher rate.

➤ **Business practice documentation preparation**

The organization should develop a detailed business process document that clearly documents roles and responsibilities, how information is received, quality checked, indexed (metadata standards), stored, and managed along with the processes, policies and procedures that will be followed. This business practice documentation should be completed when the system goes into production and should be updated if the processes change.

➤ **Organizational policy creation/updates**

The organization should ensure that all organizational policies are current and accurately reflect how the users will utilize the solution. These policies and procedures should be identified in the business practice documentation along with a description of how the organization ensures all affected stakeholders are notified of the policy and/or procedure.

➤ **User Acceptance Testing**

The organization should ensure that adequate time is set aside for full solution and full user acceptance testing. Full solution testing typically includes actual users loading, searching and retrieving content. As users begin this process, users and organizations often identify areas of the solution that need to be modified and/or updated prior to further production rollout. As this process continues, it is important for the vendors to recognize that the organization still has other ongoing activities which may result in greater time being required for full user acceptance than initially planned. There may be components that are not fully rolled out during the production startup which should be noted and completed as appropriate. For detailed information on testing plans and user acceptance testing, please reference ISO/TR 22957, *Document management – Analysis, selection and implementation of enterprise content management (ECM) systems* (Implementation Guidelines).

Part 6: Ongoing Governance, Sufficient Support Levels, and Training

The solution will likely require ongoing staffing and budgetary resources during the life of the solution. Insufficient support will result in inefficiencies, frustrated users, and lack of utilization of the solution's functionality.

➤ **Governance/expansion plans**

Many solutions provide a robust suite of functionality, and different stakeholders may have different ideas about their utilization. Policies, procedures, plans and standards (collectively, governance documents) should be developed and modified to reflect the goals of the organization as a whole, and compliance with legal requirements. An approval process should be identified so that when a stakeholder wishes to modify any portion of the governance documents, they are required to gain approvals. This should ensure the budget and resources are adequate to support any changes in use of the solution, in addition to continued legal compliance.

➤ **Solution administration - time and training**

Sufficient time to support, and adequate time to train, system administrators should be provided. It is always advisable to have multiple system administrators trained in all functions of system administration for continuity of systems if a systems administrator is

not available. It is common to have one or more staff outside of the organization's technology function/department, which may be a role such as the records manager, go through the same solution administration courses as IT, to best be able to validate the impacts of the configuration option choices they make.

- **Help desk/service desk -sufficient time and training to adequately support the solution**
Training of all help desk/service desk staff, appropriate for supporting the functionality utilized by the organization, should be provided to all help desk/service desk staff, including any new employees in the help desk/service desk function. The vendor may provide this service to users, in support of, or replacing employees providing this service. This is typically referred to as a managed service.

- **New user and ongoing training**
New employees who are going to use the solution should receive training on the organizational policies, procedures and standards. It is also important to provide training for users on a recurrent basis, possibly annually. It is hard to overcome bad habits and an unfavorable reputation for the solution within the user community(ies), and constant training is valuable to ensure the solution is efficient. This will ensure they are educated about policies, procedures and standards for the solution, the solution and database remain efficient, and the user is successful.

- **Annual audits of solution, and users**
An annual audit should include, at the minimum, a review of:
 - a) Solution configuration (users, groups, metadata, etc.)
 - b) Overall ECM/records environment to evaluate areas of the technology implementation that should be reviewed for update and/or inclusion in the overall environment
 - c) Identification of users that require retraining
 - d) Adequate support levels and training in IT, records management and the user community(ies)
 - e) Enhancements issued by the vendor that can be deployed to make the solution more efficient.

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