

# ECM Project Delivery Methodology (EPDM): An EMC Consulting Approach to ECM Programs

*Best Practices Planning*

---

## **Abstract**

Enterprise content management (ECM) solutions can have an impact on business that exceeds that provided by enterprise resource planning (ERP) solutions. An ECM methodology, therefore, should reflect the scope and strategic impact of ECM. The EMC<sup>®</sup> ECM Project Delivery Methodology (EPDM) is novel in its ability to provide the breadth and depth required to address ECM programs—from strategy through to managed services—and to incorporate the full range of competencies—from technical ones to those involved in business transformation. This white paper provides an overview of EPDM and outlines the benefits of using EMC Consulting.

February 2009

---

---

Copyright © 2009 EMC Corporation. All rights reserved.

EMC believes the information in this publication is accurate as of its publication date. The information is subject to change without notice.

THE INFORMATION IN THIS PUBLICATION IS PROVIDED “AS IS.” EMC CORPORATION MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND WITH RESPECT TO THE INFORMATION IN THIS PUBLICATION, AND SPECIFICALLY DISCLAIMS IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Use, copying, and distribution of any EMC software described in this publication requires an applicable software license.

For the most up-to-date listing of EMC product names, see EMC Corporation Trademarks on [EMC.com](http://EMC.com)

EMC<sup>2</sup>, EMC, and where information lives are registered trademarks of EMC Corporation. All other trademarks used herein are the property of their respective owners.

Part Number h4615

---

## Table of Contents

<b>Executive summary .....</b>	<b>4</b>
<b>Introduction .....</b>	<b>4</b>
Audience .....	4
<b>The structure of EPDM .....</b>	<b>4</b>
<b>Use of industry standards.....</b>	<b>5</b>
<b>The program context .....</b>	<b>6</b>
<b>The Project Management Framework .....</b>	<b>6</b>
<b>Streams and ECM program expectations .....</b>	<b>7</b>
<b>Overview of principal project types .....</b>	<b>9</b>
ECM roadmap study .....	9
Solution development .....	10
Solution deployment .....	12
Solution support .....	13
<b>Practice materials .....</b>	<b>15</b>
<b>Conclusion: The benefits of EPDM .....</b>	<b>16</b>

---

## Executive summary

The purpose of the EMC<sup>®</sup> ECM Project Delivery Methodology (EPDM) is to define a repeatable, industry-leading approach to providing solutions and services that assures high-quality delivery and customer satisfaction. The methodology significantly enhances the ability of EMC to deliver enterprise deployment programs and extends the breadth and value of EMC service offerings beyond the traditional technical focus of the ECM marketplace. The EMC methodology is unique in its combination of ECM best practices and a wide range of relevant and targeted industry standards.

The principles of EPDM are:

- EPDM is comprehensive, adaptable, and scalable to the range and size of projects and services EMC Professional Services provides.
- EPDM uses collaborative techniques to continually incorporate EMC knowledge and experience from all parts of the consultancy organization.
- EPDM is delivered, maintained, and presented in a way that makes it extensible, functional, and maintainable.
- EPDM draws on techniques that have been proven to ensure best-of-breed quality that is respected within EMC and by its clients.

The problem with traditional methodologies is that they are often either too generic (so offer nothing to the consultant within a specific competency area) or are too specific (focused on a particular solution or industry domain). Examples of traditional methodologies that are not broadly applicable to ECM include:

- **“Me Too”**: Dealing with generic aspects of any design process (analyze, design, build) and project management. Focused on process rather than content, and lacking “how to” for specific contexts within ECM
- **“By Numbers”**: A numbered step-by-step approach (101, 102, etc.) that is neither flexible nor extensible
- **“Service Packaged”**: Associated with a specific service offering or point solution, often including a bundle of project management as well as guidance on execution. Not scalable to the full range of ECM program needs

## Introduction

This white paper provides an overview of EPDM, including its structure, use of industry standards, and solution development, deployment, and support. It also outlines the benefits of using EMC Consulting.

## Audience

This white paper is intended for prospective and existing EMC enterprise content management customers, as well as ECM consultants and partners.

## The structure of EPDM

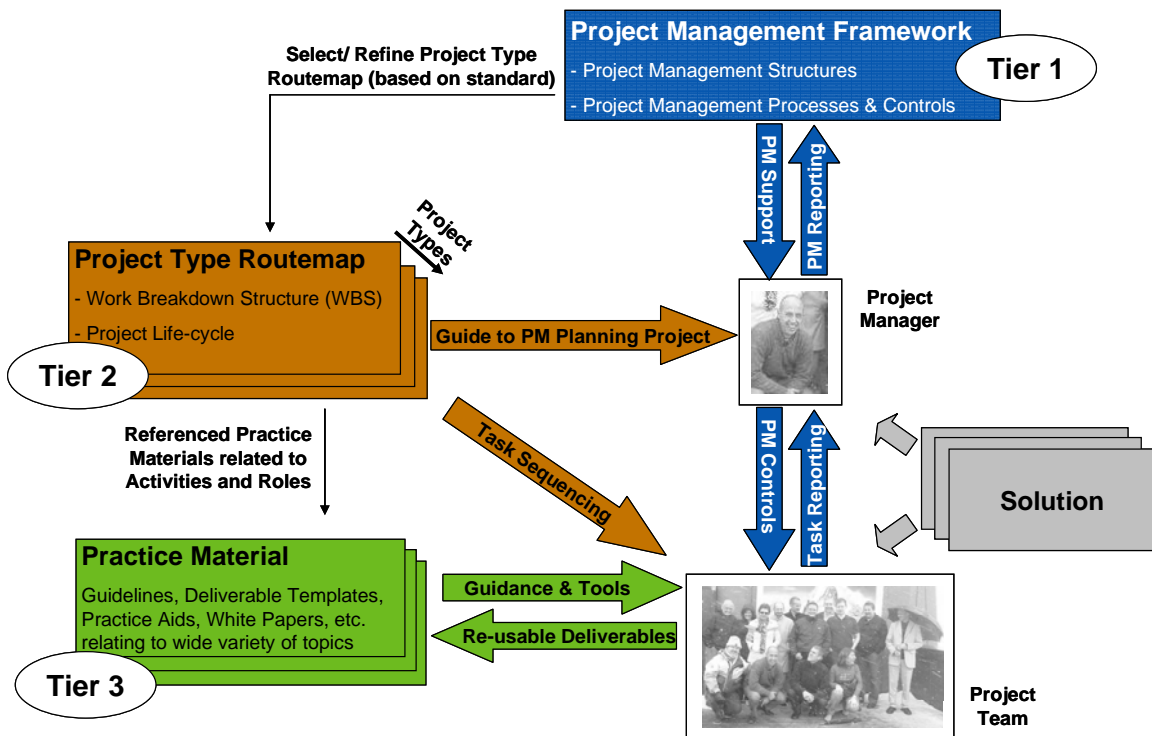
The ECM Project Delivery Methodology uses a novel three-tiered approach combining the following elements:

- **Project Management Framework (PMF)**: The controls applicable to any project type, based on the industry standard Project Management Institute (PMI).

- **Project-type routemaps:** These routemaps include work breakdown structures (WBS) for principal project types (the “what”) and key overall guidance on use of these routemaps. The aim is to reuse wherever possible, but also to refine when necessary.
- **Practice materials:** The evolving body of knowledge (the “how to”), including critical elements in the methodology such as activity guidelines (see the “Practice materials” section on page 15).

EPDM is designed to be relevant, flexible, and scalable. Project types can evolve and practice materials can expand or diversify to deal with a wide range of project type variables: activity, competency/discipline, role, sector, solution, and others.

The EPDM structure is illustrated as follows:



**Figure 1. EPDM three-tier structure**

Most methodologies focus on project management (i.e., Tier 1), and therefore offer too little on the “what” and “how to,” or provide an overly prescriptive “by numbers” approach to the latter two elements that is neither flexible nor scalable.

## Use of industry standards

Where appropriate, the aim is to reuse external as well as internal standards and best practices. External generic standards (not specific to ECM) include:

- PMI: Used as basis for the Project Management Framework
- IT Infrastructure Library (ITIL): Used for processes related to support and associated management
- Modern or “agile” approaches to software development applicable in a COTS environment: Examples include Dynamic Systems Development Method (DSDM)

---

External standards highly relevant to ECM include:

- Records management standards such as MoReq
- Controlled vocabulary standards such as for a mono-lingual thesaurus (ANSI/NISO Z39.19-2005 or ISO 2788)
- Markup standards such as XML

Some standards are industry-specific and have significant ECM implications. For example:

- Schemas used to model content: XBRL, NewsML and eCTD are examples of XML schemas for business reporting (accounting sector), multi-media news (media sector), and the Common Technical Document for dossier submissions (pharmaceuticals sector)
- Regulatory compliance: Basel II in Finance; 21 CFR 11 in Pharmaceuticals; and SOX as cross-industry regulation

Often, as above, ECM-related requirements are embedded in a broader set of standards.

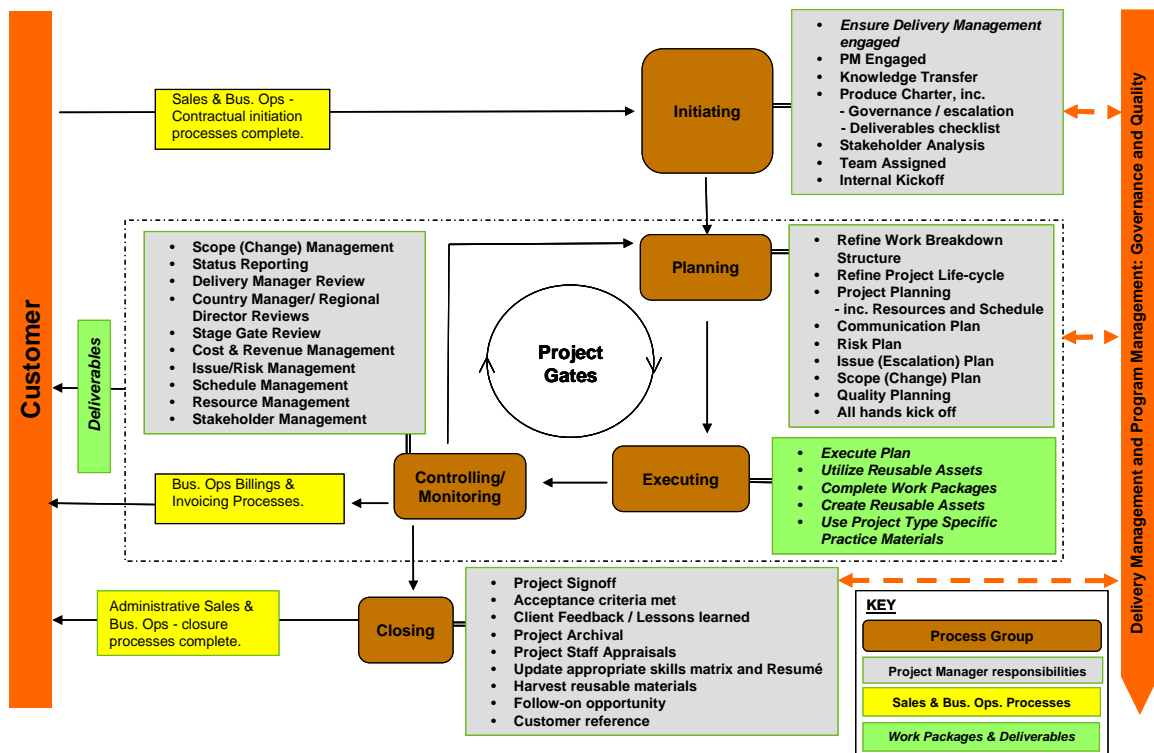
## The program context

Projects should have clear outcomes and deliverables. Programs that encompass multiple projects that have been clearly scoped also contain broad aims and objectives that will only be fully met by yet-to-be-defined projects. The program manager has to deal with ambiguity, uncertainty, and complex environments where stakeholders and governance are in flux. However, the program manager can still use the PMF when managing a program under EPDM.

## The Project Management Framework

The PMF is based on the international standard PMI ([www.pmi.org](http://www.pmi.org)). It includes a wide range of processes organized into five process groups:

- Initiating
- Planning
- Executing
- Controlling/monitoring
- Closing



**Figure 2. PMI process groups and deliverables**

Each process group includes artifacts related to:

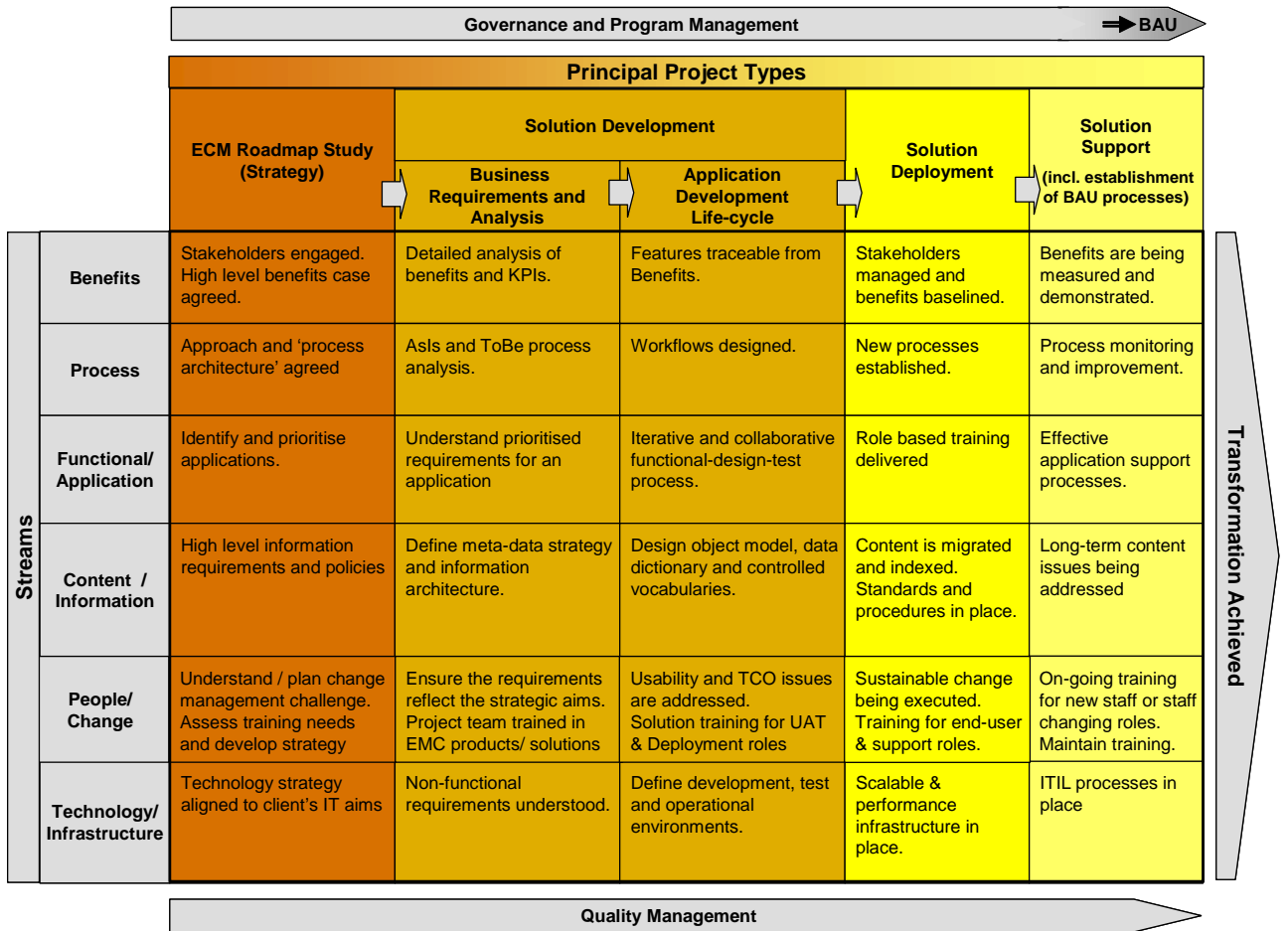
- Processes (for example, budget management)
- Deliverables (for example, risk plan)
- Key events (for example, project sign-off)

Some of the processes are internal to the project—helping the project manager get a good result—but are not necessarily project management deliverables intended for the client.

## Streams and ECM program expectations

Any project (or program), and in particular those associated with enterprise content management solutions, is comprised of a number of elements in addition to the technical ones. EPDM goes beyond the normal triad of “people, process, and technology” to include the following streams:

- Benefits
- Process
- Functional/application
- Content/information
- People/change
- Technology/infrastructure



**Figure 3. Program streams**

Each stage in the program lifecycle addresses these streams to refine details related to the different streams. A rush to build should be avoided. For example, designing an object model, or even a metadata strategy, prior to IM policies engages the wrong stakeholders too early.

Figure 3 summarizes the key objective of each stream for each (principal) project type. Varying emphasis may be applied (for example, process stream has greater weight for BPM solutions) but all streams are important to consider in all cases.

---

## Overview of principal project types

The principal project types enable an ECM program to evolve from strategy to managed support and services, and are illustrated as follows:

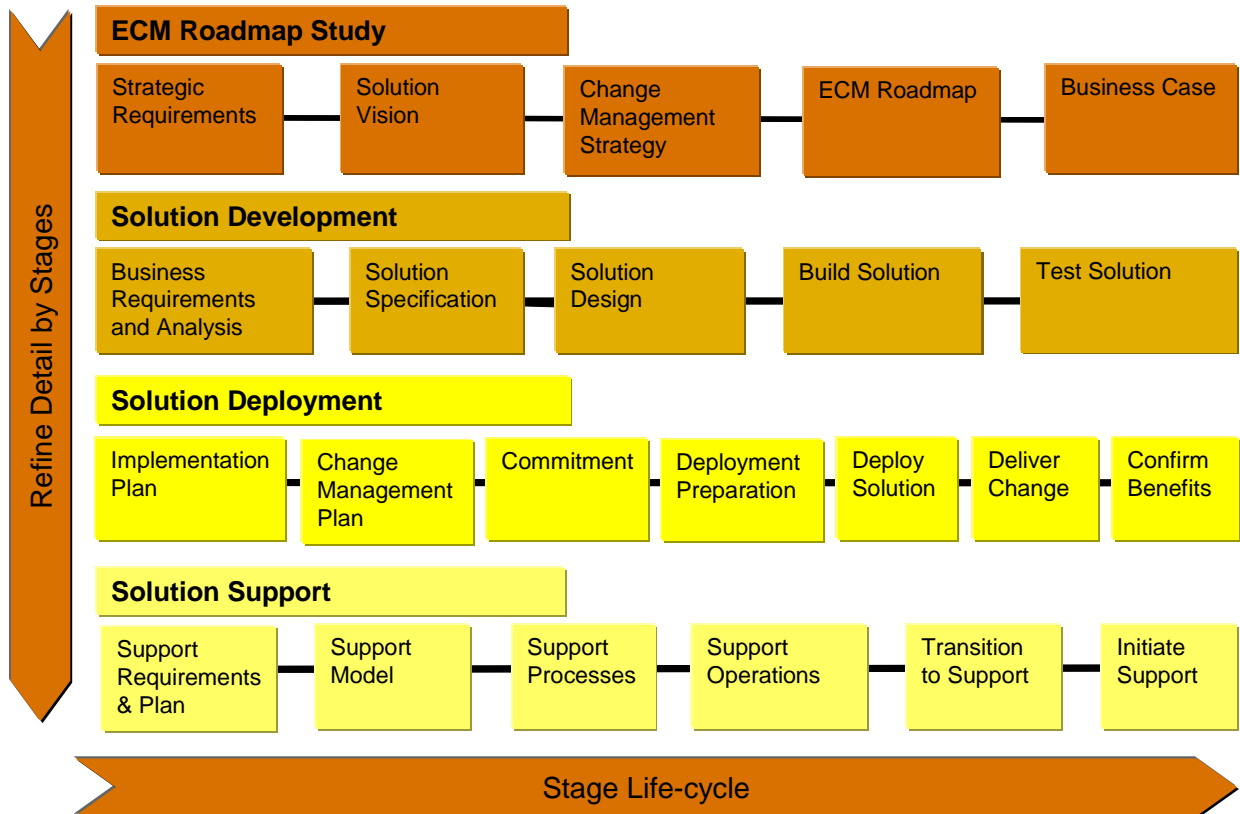


Figure 4. Principal project types

### ***ECM roadmap study***

The aim of an ECM roadmap study is to answer the key questions:

- Why are you doing this ECM program?
- What will the “future state” and “success” look like in business terms (over of the planning horizon you have set)?
- How do you get there (what initiatives and projects, and when)?

Example questions that a business must answer in relation to an ECM program:

- Are you struggling to develop a roadmap to implement ECM across the business?
- Are you developing point solutions that are re-creating information silos?
- Are your projects locked into technical issues that are obscuring the key business questions?
- Have you over-customized your applications and made it costly to roll out and maintain?
- Are you interested in using EMC content management and archiving (CMA) best practices, embodied in a solution, as a starting point?

If the answers are “yes” to these types of questions, then a strategic approach provided by an ECM roadmap study may well be the next step needed to take the ECM program forward.

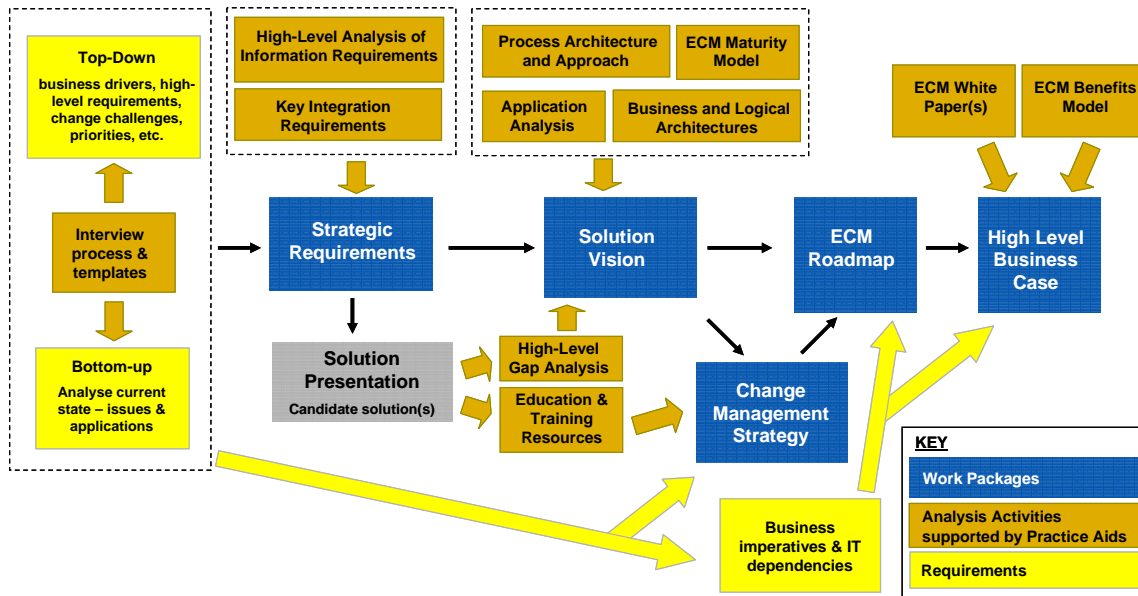


Figure 5. ECM roadmap study

## Solution development

The aim now is to develop the application or solution. Ideally, it is one that has been identified in an ECM roadmap study and is required to achieve an overall solution vision.

The solution development project type, while superficially similar to a traditional IT development project, differs in three key aspects:

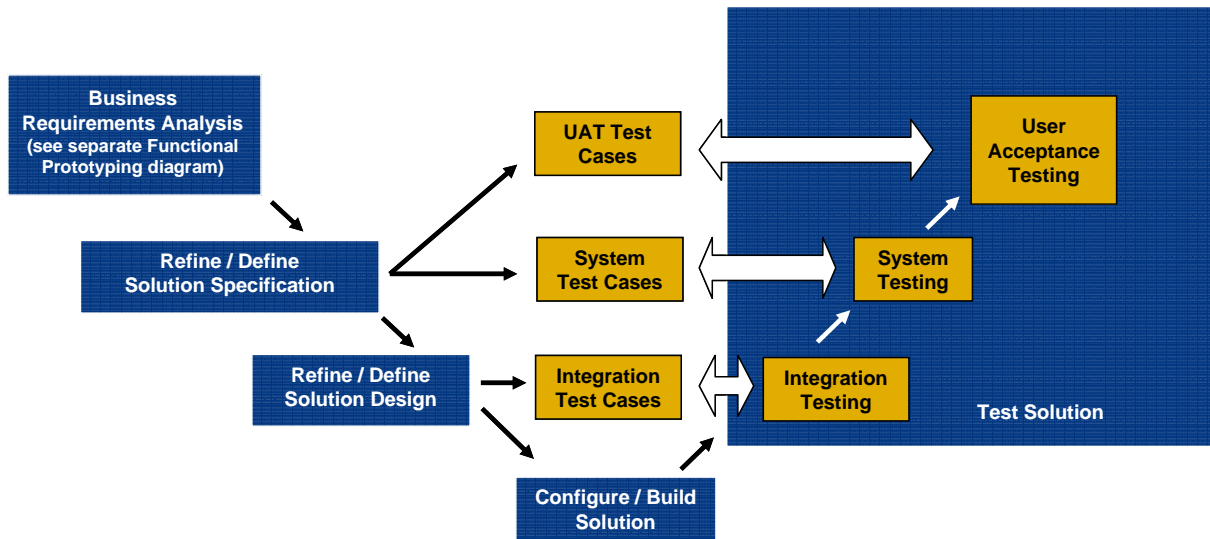
- Being a COTS project, based on an initial CMA solution, the philosophy is to blend business requirements and best practices (for example, using a gap analysis), using expertise on the art of the possible and solution capabilities. The alternative—defining requirements from scratch—can lead to excessive customization without a commensurate business benefit.
- The emphasis is to refine rather than define the solution specification and other project artifacts related to a solution.
- Key aspects that relate to the domain of ECM (for example, information architecture as opposed to data model) take on an ECM-centric view of the traditional lifecycle artifacts.

Our approach to solution development applies whether it is a point solution or an enterprise application. It also applies even where the client has decided to stay very close to an existing CMA PS solution, because the aim of the process is to validate that there are no gaps that need to be addressed and that the solution is refined to address these gaps. The development process for an application or solution applies to each of the identified solutions (in turn). It is important not to skip steps in the process even when only minor refinement is needed.

A high-level view of the main work packages:

- Business requirements analysis (BRA)
  - Includes functional prototypes or mock-ups

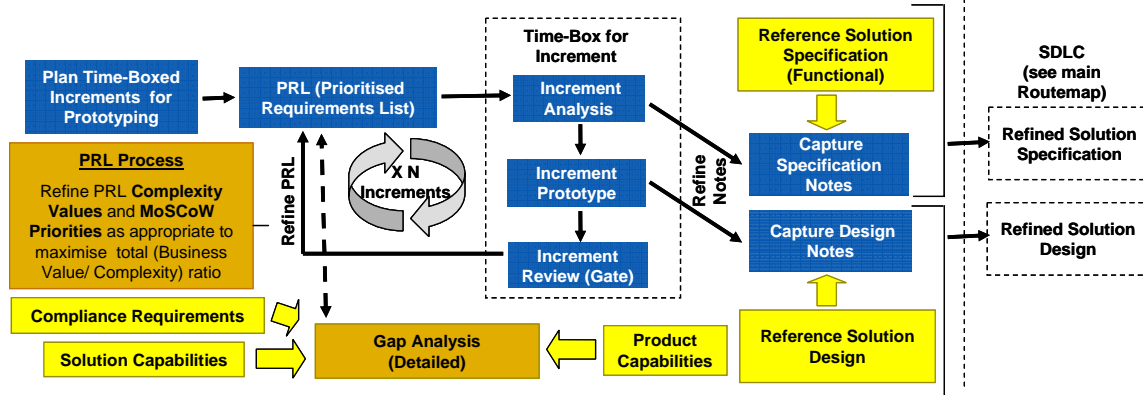
- Refine/define solution specification
- Refine/define solution design
- Configure/build solution
- Test solution



**Figure 6. Solution development**

Focus should not be placed exclusively on the functional/application stream. A balanced approach should be taken to all streams. For example:

- The benefits case for a solution can be undermined if it becomes more complex than is required (for example, failure to address the 80/20 rule) and this then has an impact on the acceptance of the solution or subsequent adoption, and may also cause maintenance issues.
- The lack of the right mix of skills to address both process and content issues can manifest itself in various ways (for example, a process solution that reflects best practices in BPM terms but then fails to leverage product capabilities in the content management area).
- Specific effort is required in ensuring a rigorous approach to non-functional testing, and requires suitably scaled test environments and properly prepared and sufficient volumes and/or transaction rates for test data and content.
- A failure to involve people and change issues even during this predominantly software-focused phase of work can undermine confidence in the solution.



**Figure 7. Functional prototyping or mock-ups**

The purpose of functional prototyping is to support the business requirements analysis stage of the solution development phase. This can be done by using working prototypes, but if the clarification can be achieved using white boarding, story boarding, or mock-ups, then that is a valid approach if it is supported by practitioners who fully understand the art of the possible.

The recommended approach to functional prototyping is to use an iterative project lifecycle, but to do so within a structured environment with the following features:

- **Time-boxed:** Each iteration has clear objectives and the imperative is to complete the iteration within the specified time-box and therefore reduce or defer functionality if needed.
- **Multi-disciplinary:** The relevant skills and expertise from both EMC and the client, including those who understand the software (product and/or solution), business process, content/metadata, non-functional requirements, scope of testing, and others, are involved in the process.
- **Business-focused:** Any changes to a solution or underlying software are only performed if they can be justified on cost-benefit grounds. The more complex a customization, the greater the level of benefit needed to justify the change.

## ***Solution deployment***

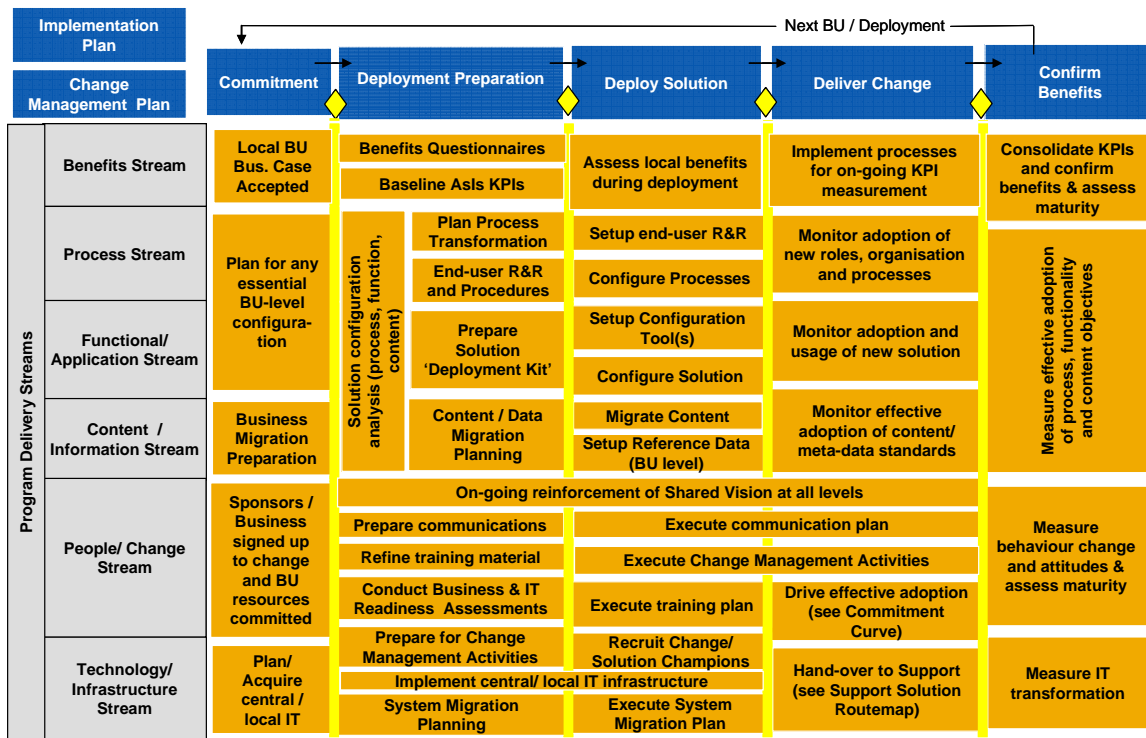
The deployment itself may be phased according to geographical, functional, and other factors affecting the organization, its management, and governance. We shall use the term “business unit” (for example, an asset or function) as a generic term for deployment purposes. A high-level view of the main work packages are as follows.

At a global or central team level:

- Implementation plan
- Change management plan

At a level related to each business unit deployment team:

- Commitment
- Deployment preparation
- Deploy solution
- Deliver change
- Confirm benefits



**Figure 8. Solution deployment**

To promote knowledge sharing and ongoing improvement in the deployment process, each business unit deployment will learn from and feed back to the central team or centre of excellence.

Ideally, the solution will have been developed in such a way that no development activity is required on the solution for successive business units (although there may be development associated with local essential integration or migration tasks, for example, due to variations in regional/local line-of-business applications).

Also, while the solution will have been designed to be relevant across the business, some business unit-level configuration will be required. For example, in the CMA core solution, setting up the business unit stewards, document profiles, and others is required—although some key aspects (for example, the object model) are global, managed by the central team, and not revisited at each business unit.

Much of what is required for successful deployment is non-technical and relates to behavioral change, content migration, and stakeholder management.

## ***Solution support***

As with deployment, solution support is a multi-stream phase of work. It covers all aspects of an ongoing sustainable solution and must cover not only application support, but maintenance of best practice ECM standards within the organization, ongoing support to business units, and others. A key component of the ongoing support is a centre of excellence, which would form part of the overall support model.

Technical support is expected to be covered by the wide range of processes under the umbrella of the IT Infrastructure Library (ITIL) ([www.itil.org](http://www.itil.org)). This includes processes such as capacity planning, change control, performance monitoring, and many more.

The high-level work packages involved in solution support are as follows:

- Support requirements and plan
- Refine/define support model
- Refine/define support processes
- Establish support operations
- Execute solution transition to support
- Initiate support

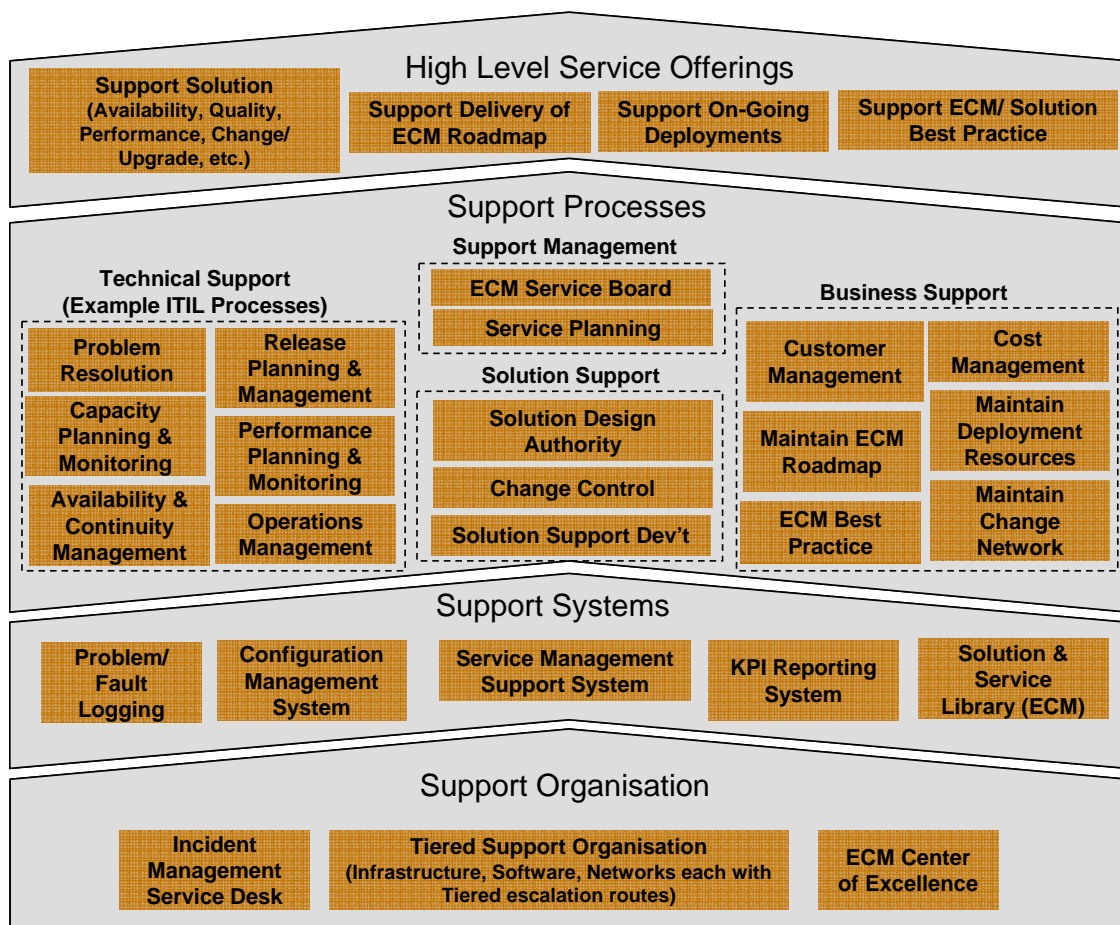


Figure 9. Reference model for support

---

There are many risks associated with the overall program. The key ones commonly associated with support are:

- The leaders and visionaries involved in the conception and implementation of an enterprise solution move onto other projects.
- The ball is dropped in the transition to support (for example, key project assets or knowledge is not transferred).
- Weak support systems and processes lead to degradation in the quality of the solution over time.
- The original solution vision is diluted or distorted, creating problems in ongoing delivery and support.

For these reasons, it is crucial that support is both valued as an important part of the overall success of the solution and is treated as rigorously as prior phases.

## Practice materials

Practice materials detail the “how to” related to the activities within a project and provide the tools needed to support the practitioner doing the work. This can be very specific to the kind of work done or slightly more generic. There are hundreds of guidelines, templates, and tools that together (when linked to the project routemaps) form a powerful body of knowledge and best practices available through EMC Professional Services. These materials will evolve and grow over time.

The types of practice materials are:

- **Guidelines:** The definitive guide on how to execute an activity (for example, creating a business case), who should do the activity, and what assets (other practice materials) will assist in doing the work and how one will know if it is a quality job. Since an activity may result in a number of deliverables, these are listed in the guidelines.
- **Deliverables (templates):** This is a practice material template. It is a named/recognized deliverable resulting from an activity. The template contains a table of contents (TOC) and guidance on how to use sections, but no content. Any drafting or editorial guidance provided is complementary to that provided in the relevant guidelines.
- **White Papers:** White papers provide an educative point of view on any topic, large or small. They are designed to help consultants, but may be a useful tool with clients.
- **Practice Aids:** Practice aids come in different forms and are documents or tools designed to support the consultant in capturing data (for example, a non-functional requirements questionnaire) or analysis (for example, functionality prioritization), to help ensure best practices are followed (for example, a checklist) or to provide a productivity tool (for example, a core solution configuration tool).

---

## Conclusion: The benefits of EPDM

The benefits of EPDM can be summarized as follows:

- General framework for best practices techniques to be applied
  - A scalable approach for flexibility and growth
  - Multiple streams include both “hard” and “soft” aspects of ECM
- Program approach to ECM
  - Addressing all phases from strategy to managed support
  - Scalable to enterprise multi-phase deployments
- Extensible set of specific guidelines and other relevant assets
  - Something useful to consultants, not just project managers
  - Clear structure for the “what” and the “how”
- Leveraging solutions so you are not working from a blank sheet
  - Clients benefit from realizable best practice
  - Accelerators for a variety of project artifacts
- Leveraging industry standards in targeted areas (PMI, ITIL, AIIM, and others)
  - Not reinventing wheels
  - Extending expertise where there are gaps in industry standards
- Inclusion of a complete set of competencies for effective ECM programs
  - Offering breadth of capability to clients and career development to staff
  - Enabling staff to feed back learning and best practices