From: Director, Command, Control, Communications and Computers (C4)

Subj: ENTERPRISE INFORMATION TECHNOLOGY SERVICE MANAGEMENT RELEASE AND
DEPLOYMENT MANAGEMENT PROCESS GUIDE

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1. <u>PURPOSE</u>. The purpose of the Enterprise Information Technology Service
Management (E-ITSM) Release and Deployment Management Process Guide is to
update the previously defined foundation for process implementation and
execution across the Marine Corps Enterprise Network (MCEN). Process
implementation and execution at lower levels (e.g., Regional, Local, and
Programs of Record) must align with and adhere to directives and schema
documented within this guide. This guide enables USMC Information Technology
(IT) activities through promoting standardization of work instructions and
operating procedures across a continuum of document specificity.

2. <u>CANCELLATION</u>. IRM-2300-07B

3. <u>AUTHORITY</u>. The information promulgated in this publication is based upon
policy and guidance contained in reference (a).

4. <u>APPLICABILITY</u>. This publication is applicable to the Marine Corps Total
Force.

5. <u>SCOPE</u>.

   a. <u>Compliance</u>. Compliance with the provisions of this publication is
required unless a specific waiver is authorized.

   b. <u>Waivers</u>. Waivers to the provisions of this publication will be
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C. O. URBINA
By direction

Enterprise IT Service Management
Release and Deployment Management
Process Guide

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Document Approval / Major Revision Change History Record

This table is used for initial release and subsequent revisions. Major revisions are indicated by the number to the left of the decimal point while minor revisions are indicated by the number to the right. Major revisions are required when the intent or process is changed rendering the prior version obsolete or when the number of minor releases total twenty (20). Changes to this document shall be recorded, described, and approved using the table below:

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1.0   INTRODUCTION

1.1   Purpose

The purpose of this process guide is to establish a documented and clear foundation for process implementation and execution across the Marine Corps Enterprise Network (MCEN). Process implementation and execution at lower levels (e.g., Regional, Local, and Programs of Record (PORs)) must align with and adhere to directives and schema documented within this guide. The use of this guide enables United States Marine Corps (USMC) Information Technology (IT) activities through promoting standardization of work instructions and operating procedures across a continuum of document specificity as represented in Figure 1.
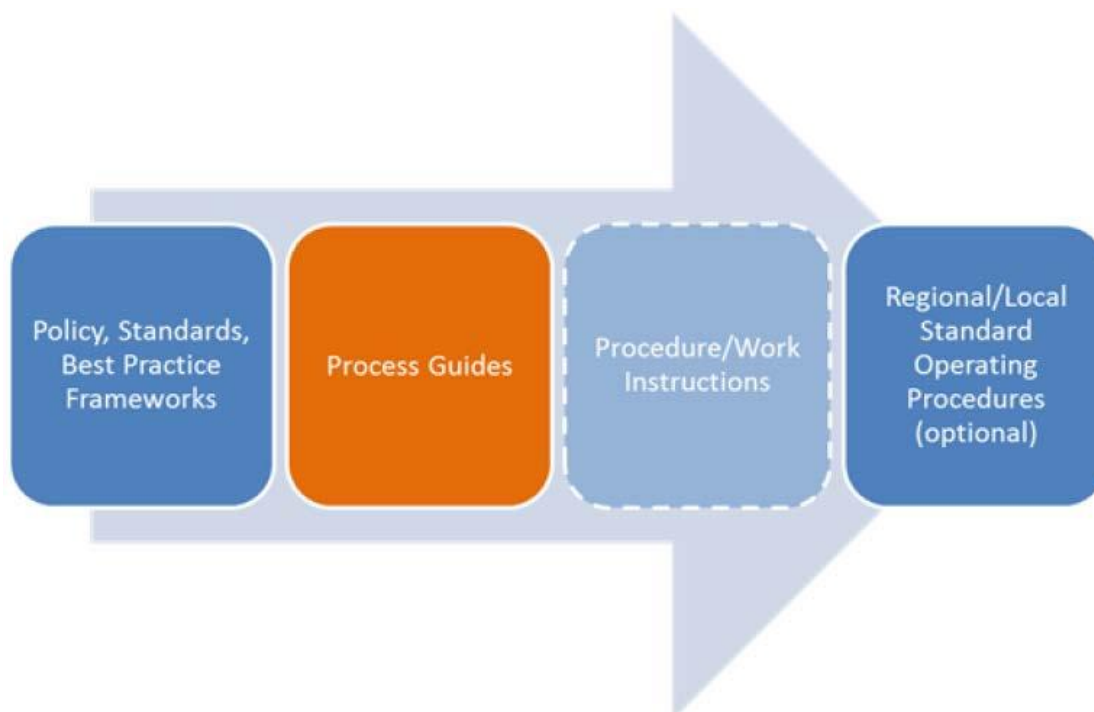
Figure 1. Process Document Continuum

The scope of this document covers all services provided in support of the MCEN for both the Secret Internet Protocol Router Network, and the Non-Secure Internet Protocol Router Network. Information remains relevant for the global operations and defense of the MCEN as managed by Marine Corps Cyberspace Operations Group (MCCOG) including all Regional Network Operations and Security Centers (RNOSC) and Marine Air Ground Task Force Information Technology Support Center (MITSC) assets and supported Marine Expeditionary Forces, Supporting Establishments organizations, and Marine Corps Installation commands.

Table 1 depicts the various layers of document design. Each layer has discrete entities, each with their own specific authority when it comes to promulgating documentation. This enterprise process operates at Level B, sub processes such as procedures and work instructions are not included within the scope of this document.

Table 1. Document Design Layers

	ENTITIES	DOCUMENTS GENERATED
LEVEL A	Federal Govt DoD DoN CMC/HQMC	Statutes/Laws DoD Issuances DoN Policies Marine Corps Orders/IRMS
LEVEL B	HQMC C4 MCCOG MCSC	MCOs IRMs (Process Guides) Directives MARADMINS
LEVEL C	RNOSC MITSC	Regional Procedures Work Instructions
LEVEL D	MCBs POSTS STATIONS	Locally Generated SOP's

1.2   Process and Document Control

This document will be reviewed annually for accuracy by the Enterprise Process Owner with designated team members. Questions pertaining to the conduct of the process should be directed to the Enterprise Process Owner. Suggested Changes to the process should be directed to USMC C4 CP in accordance with Marine Corps Order (MCO) 5271.1C Information Resource Management (IRM) Standards and Guidelines Program.

2.0   PROCESS OVERVIEW

2.1   Process Management Description

Release Management is responsible for planning, building, testing, and controlling the release of a new or changed service or capability in engineering and test environments. In the pre-production environment, the integrity of the new or changed service is tested and validated as a quality function before deployment into the production environment.

Deployment Management is the process that follows Release Management by which a new or changed service/capability is moved to the production environment once testing is complete.

The scope of Release and Deployment Management (RDM), therefore, includes the enterprise processes, systems, and functions to package, build, test and deliver a release into production, establishing the service specified in the Service Design Package before a hand-off to service operations.

The Enterprise RDM process supports:

- Implementation planning, including the back-out plan of a release as well as required resource plans
- Release preparation, including the distribution of hardware, software and support tools
- Preparation training, including the customer/user, operations, service desk and implementation team for the release deployment to include Early Life Support (ELS)
- Testing plans, supporting production testing, end user acceptance testing and back-out testing procedures
- Controlled introduction testing (beta testing) after a cutover

The Enterprise RDM process adds value to the USMC by:

- Delivering change faster with minimum risk
- Assuring customers/end users can use the new or changed service as designed to support the mission
- Improving consistency in implementation approach across the USMC environment
- Contributing to the auditing requirements for traceability
- Provided metrics/reporting capabilities to enhance the efficiencies of the release of a new or changed service/capability

2.2   Relationships with Other Processes

All IT Service Management (ITSM) processes are interrelated. The other enterprise processes in Figure 2 were selected due to the strength of the relationships and dependencies between them and the degree to which they underpin USMC near-term objectives. While any one of the other processes can operate in the presence of an immature process, the efficiency and effectiveness of each is greatly enhanced by the maturity and integration of all ITSM processes. Figure 2 depicts key relationships that exist between RDM and the other processes. This figure is not all-encompassing and the relationships shown can be direct or indirect.
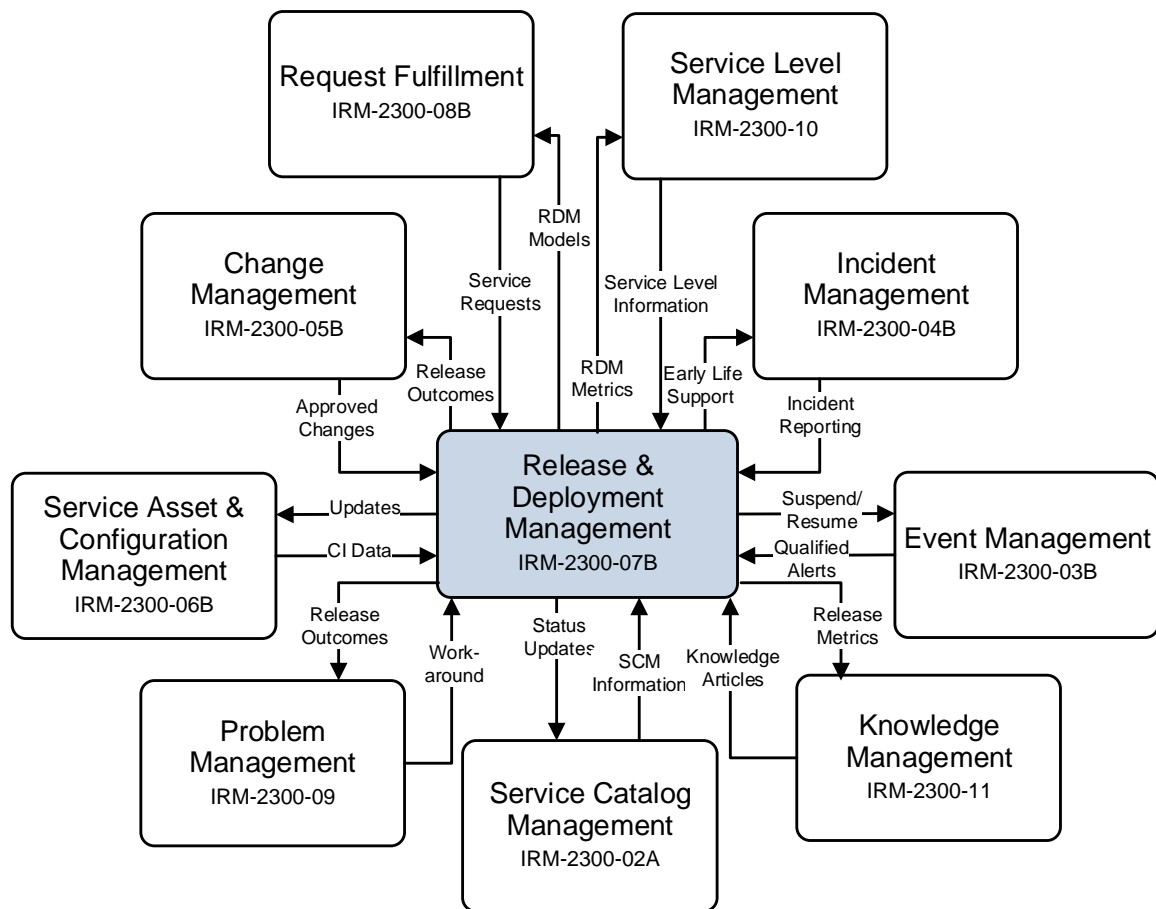
Figure 2. RDM Relationship with other ITSM Processes

The following list describes the RDM relationship (inputs/outputs) to other Initial Processes, as depicted in Figure 2:

2.2.1 Direct Relationships

Service Catalog Management

— Service Catalog Management (SCM) Information: SCM provides rapid, at-a-glance views into key service attributes.

— Status Updates: The Service Catalog's value is dependent on the accuracy of its contents. As releases are deployed, service updates are received from RDM and implemented in the Service Catalog (based on approved Change Requests (CRQs)).

Incident Management and the Service Desk

— ELS: ELS is the additional expert service support provided immediately after deployment to ensure service continuity and stakeholder satisfaction. RDM proactively supports deployment activities in the ELS process step by providing Incident

Management (IM) an advanced level of training, documentation, and high-touch support as the new service is introduced into production.

— Incident Metrics: Incident metrics associated with releases are critical to continual process improvement.

Event Management

— Suspend/Resume: RDM notifies Event Management (EM) to suspend monitoring of services or service components that will be interrupted or otherwise affected for the duration of the deployment activity. This ensures that false incidents are not triggered. RDM also notifies EM to resume monitoring once deployment activities have completed.

— Qualified Alerts: EM notifies RDM about unusual events occurring after a release.

Change Management

— Approved Changes: RDM will not deploy a release in the absence of a corresponding and authorized CRQ. Additionally, any constraints associated with the authorization, such as the start and end time of the release, are provided by this input.

— Release Outcomes: RDM "closes the loop" on authorized changes by informing the Enterprise Change Management (ChM) process with the outcome of the release. For example, was the release successfully deployed within the approved window or did it extend beyond this window? What was the outcome of post-implementation testing? Did the release result in any incidents? This vital information enables ChM to determine how best to position the CRQ associated with this release.

Service Asset and Configuration Management

— CI Data: Service Asset and Configuration Management (SACM) is responsible for maintaining Configuration Item (CI) relationships and data. The Configuration Management Database (CMDB) and supporting processes provide invaluable information for the purposes of planning, preparing, and designing a release. In the presence of an accurate CMDB, it is not necessary to inventory the environment to predict work effort and manpower required to propagate a large-scale enterprise release.

— Updates: The Definitive Media Library (DML) will be the centralized storage for all certified solutions from engineering entities.

2.2.2 In-Direct Relationships

Request Fulfillment

— Service Requests: Calls that originate as incidents may be rerouted to Request Fulfillment (RqF) if they involve standard, low-risk changes.

— Templates: RDM may employ RDM or RqF templates to efficiently execute standard changes.

Problem Management

— Release Outcomes: Release outcomes are important input for investigation of root cause. Release outcomes are analyzed over periods of time to identify trends that may indicate previously unidentified problems.

— Work-arounds: Work-arounds enhance the effectiveness and efficiency of Release and Deployment. Work-arounds are validated upon successful root cause analysis.

Service Level Management

— RDM Metrics: Metrics from RDM enables Service Level Management (SLM) to define measurable responses to service disruptions. It also provides reports that enable SLM to review Service Level Agreements (SLAs) objectively and regularly.

— Service Level Information: RDM is able to assist in defining where services are at their weakest, so that SLM can define actions as part of the service improvement plan.

Knowledge Management

— Release Metrics: All data, metrics, and information useful for RDM activities must be properly gathered, stored and assessed within Knowledge Management Portals.

— Knowledge Articles: Careful documentation of steps needed to support the RDM process can result in standardization and enhance efficiencies.

2.3   High-Level Process Model

The Enterprise RDM process consists of eight distinct sub-processes and is highly integrated with Enterprise ChM, SACM, EM and IM processes. Figure 3 depicts these processes and sub-processes that collectively enable and underpin RDM. See Section 4.0 for complete descriptions of the sub-process activities.
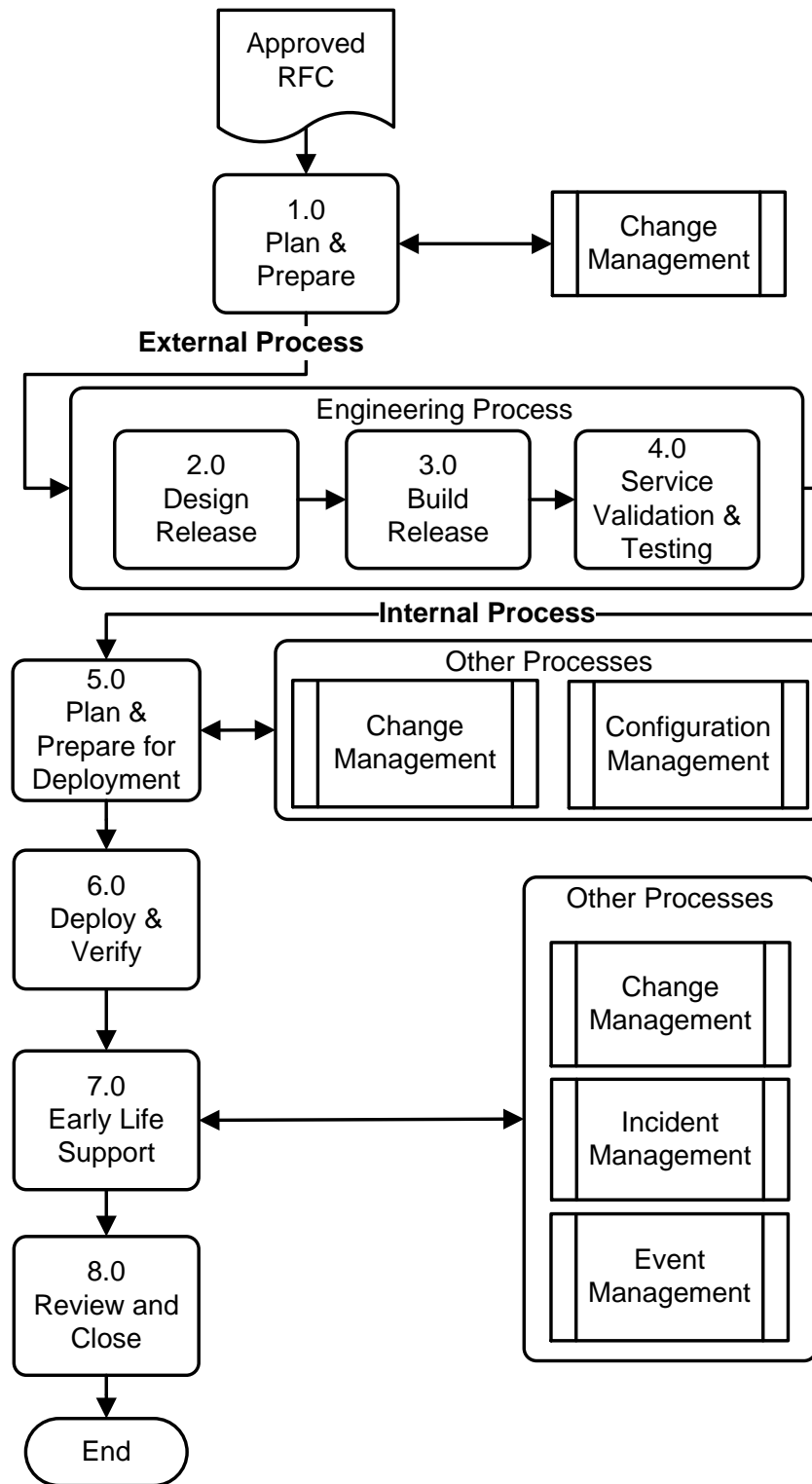
Figure 3. High-Level RDM Workflow

Table 2 contains descriptions of each sub-process. Each sub-process number is hyperlinked to its detailed description in Section 4.0, Sub-Processes.

Table 2. RDM Process Activity Descriptions

Number	Process Activity	Description
1.0	Plan and Prepare	A release plan, high-level test plans and acceptance criteria are documented in the CRQ. Approvals are managed in ChM with input from RDM. The release plan is developed by the Project Officer. Approval requirements for the release plan will vary depending on the release size (Full, Package, or Delta), complexity, risk, and urgency.
2.0	Design Release	What needs to be built for the release and how it will be assembled and deployed is defined providing the overall testing approach for the Service Validation and Testing process through early build to final deployment. Necessary install scripts and mechanisms for testing and monitoring the install are designed at a high level. All Release documents are drafted in the design phase. Remediation procedures are developed for back-out if the deployment is unsuccessful. Marine Corps Systems Command (MCSC) provides for the acquisition of IT and is involved with the full lifecycle.
3.0	Build Release	Procedures, tools, and checklists that come from the Design Release are utilized to provide repeatable practices and expected results. The deploying software capabilities are utilized. Baselines are recorded before and after the release package build to provide restore capability if needed in production. The proposed solution and test results are recorded and handed over to Service Operations for use in future releases.
4.0	Service Validation and Testing	Service Validation and Testing performs a number of iterations throughout the Release and Deployment lifecycle: • Verifies that the deployment team, tools, and procedures can deploy the release package into a target deployment group or environment within the estimated timeframe. • Ensures the release package contains all the service components required for deployment by initiating in a test environment and performing a configuration audit. • Validates the defined Service-Level Requirements for deploying into production are achievable and sustainable. • Ensures the proposed changes do not adversely affect authorized systems in the production environment. • Ensures authorized configurations and systems in the production environment do not have an adverse impact on the proposed application or change. • Tests the deployment team, tools, and procedures can install the release package into a target environment within the estimated timeframe. • Tests a deployment has completed successfully and that all service assets and configurations are in place as planned and meet their quality criteria. • Executes cybersecurity validation in accordance with Enterprise Cybersecurity Manual 018 to ensure Risk Management Framework Security Controls, Security Technical Implementation Guides, Information Assurance Vulnerability Alerts and Bulletins, and other vulnerabilities that are identified and documented in a Plan of Actions and Milestones. The Systems Integration Environment (SIE) managed by MCSC, provides a test and integration function for systems, applications, or services destined for or residing in the Enterprise IT Center.
5.0	Plan and Prepare for Deployment	The Project Officer will obtain an Authorization to Operate/Connect from HQMC C4 Cybersecurity. Then, he/she will present the Service Validation and Testing report to the ChM Enterprise Solution Board (ESB) for review. The ChM Deployment Change Advisory Board (CAB) approves the release to be deployed. Deployment resources are assigned. Readiness assessments are conducted. Risks are identified and assessed in terms of potential disruption. Detailed

Number	Process Activity	Description
		implementation and backout plans are finalized and verified. When the detailed deployment plan is complete and readiness tests performed, the service is ready for deployment. The MCSC works with MCCOG for implementation of the infrastructure.
6.0	Deploy and Verify	Deploying the release is the execution of the detailed deployment plan. A deployment can be installing of materials (hardware or software) and processes, the transfer of a service, the deployment of a new or changed service, the decommissioning or retirement of services, and/or the removal of assets. When complete, the RDM Manager verifies the release with the stakeholders. Successful validation of the deployment triggers the launch of ELS. The MCSC works with MCCOG during deployment of a new service or major upgrade.
7.0	ELS	ELS is the additional expert service support provided immediately after deployment to ensure service continuity and stakeholder satisfaction. Resources from IT Operations introduce the new service capability and resources to operations in a controlled manner. Resource support scope is determined by the release content delivered.
8.0	Review and Close	The RDM Manager conducts a review to ensure all RDM requirements for the CRQ were met. The entrance and exit criteria for each stage of the process has been assessed and met. Project Officer(s) updates the CRQ in ChM and issues a close notification with the final review. All release participants and end users are notified of the final review results for the release.

2.4   Key Concepts

The following is a description of concepts unique to RDM:

2.4.1   Requirements of a Release

The requirements cover release numbering, frequency, and the level of infrastructure that may be controlled by a definable release.

Table 3 shows the RDM release requirements.

Table 3. RDM Release Requirements for a Release Plan

Item	Description
Release Unit	Describes the portion of the service or IT infrastructure to be released. The unit may vary in type or size of asset or CI, such as hardware or software. The size and impact of the release unit varies. Factors to be considered include ease and amount of change necessary; the amount of resources and time needed to build, test, distribute, and implement; the complexity of the interfaces affected by the release unit; and the storage available in the environment to perform the release activities of build, test, distribution, and going live. When building release units, the biggest factor to be considered is the potential impact to the user/customer. If the release unit can cause an outage to a critical system, the risk will need to be identified and planned for accordingly.
Release Identification	This is the unique release identification scheme and can be defined as: • Major release • Minor release • Emergency fix

Item	Description
Type of Release	**Full** – A release that includes all components of the release unit. These components will be built, tested, distributed, and implemented together. This release is a completely new version of an application (e.g., Windows XP replaced by Vista). All components of the release unit are purchased (or built), tested, and distributed together.

Delta – A delta, or partial, release is one that includes only CIs within the release unit that have actually changed or are new since the last full or delta release.

Package – A combination of a delta release unit and/or full release to reduce the frequency of roll-outs or to build, test, and roll-out related releases which can influence each other. Individual changes (to software and/or hardware) may be grouped together into package releases in every instance where it is beneficial to do so without undue risk to the production environment. Each technical domain determines the specific requirements to identify those changes that can be safely grouped together. |
| Category of Release | **Major** – Contains a large planned upgrade of an IT service with major new functionality.

Minor – Contains a smaller update between major releases with small improvements or corrections.

Emergency – Contains an urgent release, for example, a fault in the infrastructure that causes multiple or major incidents. An emergency fix cannot wait until the next major or minor release. |
| Release Design Options | **Big Bang vs. Phased Option** – Big Bang: a new or changed service is deployed to all user areas in one operation (introducing an application). Or, phased approach: the service is deployed in phases, and the deployment is incrementally repeated until the service is fully deployed (by unit, or base).

Push–Pull – The push approach is executed when a service is deployed from the center (a headquarters organization), followed by deployment to target locations. The push approach is used for updating service components. A pull approach is employed for software releases where software is made available at a central location and users can access the location to pull down the software at their convenience (i.e., software version upgrades). Pull is optimal when the software is restricted by licensing to a select group of users.

Automated vs. Manual – The deployment choice of automation or manual is determined in release planning. When a release can be automated, the benefit of repeatable and consistent actions, along with the efficient use of release resources is realized. Automated deployment requires extensive testing to avoid unnecessary problems but completes quicker and more efficiently since it does not require as many resources as a manual deployment. Manual deployments require closer monitoring, but sometimes are unavoidable. |

2.4.2   Designing Release and Deployment Packages

The scope and content of each release package is defined within the Release Plan for that release. The release and deployment team must understand the relevant architecture to plan, package, build and test a release. This knowledge helps to prioritize the release and deployment activities and manage dependencies. The dependencies can be identified by viewing service architectural elements in the Technical Service Catalog. The dependencies are built and tested by Service Validation and Testing. Coordination with the POR team occurs during the design phase.

2.4.3   Release and Deployment Models

Service Design selects the most suitable release and deployment model including the approach, mechanisms, processes, procedures and resources required to build and deploy the release on time

and within budget. Elements of the release and deployment models include: the release structure for building a package and target environments, the exit and entry criteria for each stage, the controlled environments for building and testing each release level, the roles and responsibilities for each CI, the release promotion and configuration baseline, the release and deployment schedules, support activities for documenting and tracking the release activities, and the hand-off activities and responsibilities during ELS.

2.4.4 Release and Deployment Plans

Release and deployment plans must be reviewed and approved by the ESB. They include:

- Scope and content of release
- The Implementation Plan
- Risk assessment of the release based on the release plan and operational test results
- Organizations and stakeholders affected
- Project Officer responsible for the release plan
- Approach for working with the stakeholders and the deployment groups to develop the delivery and implementation strategy, resources and amount of change that can be supported.
- The goal of the communications plan is to continuously inform all stakeholders at critical gates of relevant issues at each stage of the release.

The release plan identifies the modifications or updates to the catalog along with the release objectives in relation to the mission's goals. Release components and specific deliverables must be captured in detail in the plan. A release plan is developed with consensus of all stakeholders.

2.5 Quality Control

2.5.1 Metrics, Measurements and Continual Process Improvement

Effective day-to-day operation and long-term management of the process requires the use of metrics and measurements. Reports need to be defined, executed, and distributed to enable the managing of process-related issues and initiatives. Daily management occurs at the Process Manager level. Long-term trending analysis and management of significant process activities occurs at the Enterprise process owner level.

The essential components of any measurement system are Critical Success Factors (CSFs) and Key Performance Indicators (KPIs).

2.5.2 CSFs with KPIs

CSFs are defined as process- or service-specific goals that must be achieved if a process (or IT service) is to succeed. KPIs are the metrics used to measure service performance or progress toward stated goals.

The following CSFs and KPIs can be used to judge the efficiency and effectiveness of the process. Results of the analysis provide input to improvement programs (i.e., continual service improvement).

Table 4 describes the metrics that will be monitored, measured, and analyzed and is just a sample of reports that can be utilized using the analytics capability of the Enterprise-IT Service Management (E-ITSM) tool:

Table 4. RDM CSFs with KPIs

CSF #	CSFs	KPI #	KPIs	Benefits
1	Releases are implemented efficiently and effectively	1	% of release success rate Calculation:1 minus (the number of failed releases divided by the total number of releases implemented)	Minimal risk and service disruption. A release package can be built, installed, tested, and deployed efficiently, successfully, and on schedule.
2	Releases are of high quality	2	Release Incident Rate Calculation: The number of releases resulting in Incidents divided by the total number of releases implemented	Satisfied stakeholders and end users. Production services are protected from adverse impacts of change. There is minimal unpredicted impact on production services, operations, and support organizations.
		3	Service Validation and Testing shows % of releases that do not result in a defect Calculation: Releases with no linked defects over all releases.	
		4	Average number of known errors per release. Calculation: The number of known errors by category by release over time	
3	Production services are protected from adverse impacts of change	5	% of Approved releases that do not result in an incident Calculate: Releases with no linked incidents over all releases	Minimal unpredicted impact on production services, operations, and support organization.
4	Releases implemented in a timely manner	6	% of releases implemented in the approved release implementation window Calculation: Release work orders marked "complete" within the approved implementation window	A higher percentage of on-time release deployments delivers a greater percentage of expected functional performance on time and ensures resources required to support the release are used effectively and efficiently.

3.0   ROLES AND RESPONSIBILITIES

Each process has roles and responsibilities associated with design, development, execution and management of the process. A role within a process is defined as a set of responsibilities. Process Managers report process deviations and recommended corrective action to the respective Enterprise Process Owner. Authoritative enterprise process guide control is under the purview of the Enterprise Process Owner.

Best Practices indicate that enterprise process ownership should reside with a single individual to ensure clear accountability. The Enterprise Process Owner role is critical for the successful design and ongoing management and support of the process. Management (i.e., responsibility) of a process may be shared; generally, a single manager exists at the MCCOG, MCSC and at each MITSC. However, as with many other processes within Service Design and Service Transition, Project Officers also exist within MCSC and MCCOG. RDM Coordinators will be at the enterprise and at MITSCs who will work in coordination with the Project Officers. Process roles do not equate to billets; there will be instances where roles are combined or a person is responsible for multiple roles. Factors such as Area of Responsibility, size of user base, and size of the process support team dictate exactly which roles require a dedicated person(s) and the total number of persons performing each role. This enterprise process guide defines all *mandatory* roles.

3.1   Roles

The abstract drawing shown in Figure 4 depicts the mandatory enterprise process roles for the USMC, followed by a description of these roles in Table 5.
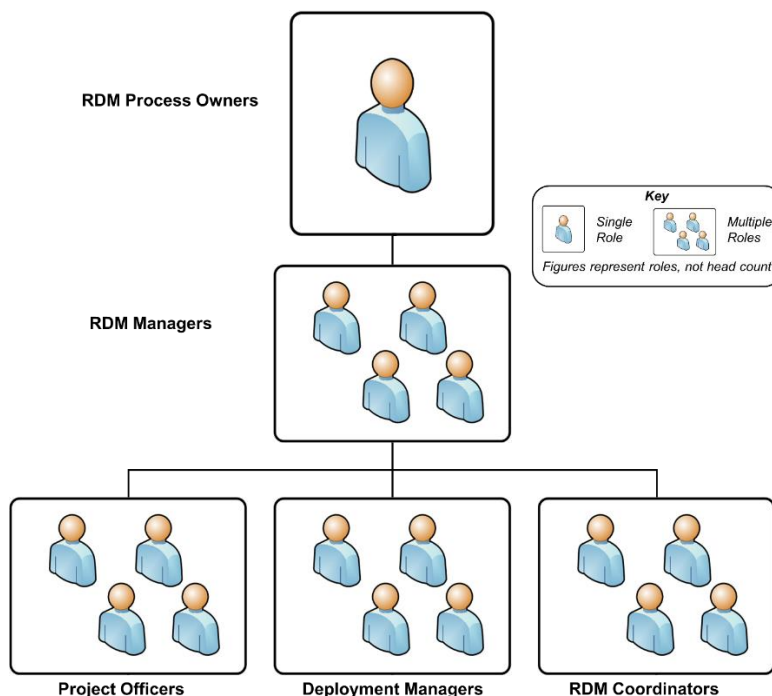
Figure 4. RDM Roles

Table 5. RDM Defined Roles and Responsibilities

Description	Overall Responsibilities
Role #1 RDM Process Owner	
The Enterprise Process Owner owns the enterprise process and the supporting documentation for the process. The primary functions of the Enterprise Process Owner are oversight and continuous process improvement. To these ends, the Enterprise Process Owner oversees the process, ensuring that the process is followed across the MCEN. When the process is not being followed or is not working well, the Process Owner is responsible for identifying and ensuring required actions are taken to correct the situation. In addition, the Enterprise Process Owner is responsible for the approval of all proposed changes to the process, and development of process improvement plans. May delegate specific responsibilities to another individual within their span of control, but remains ultimately accountable for the results of the RDM process.	• Identifies and manages the process CSFs • Defines and communicates process purpose, goals, policies and procedures, responsibilities, and accountabilities • Facilitates the process to produce user satisfaction • Approves measurements, targets, and reporting to improve the efficiency and effectiveness of the process • Reports on and communicates process performance • Decision maker on any proposed enhancements to the process • Consults with release and deployment managers • Manages and Leads the USMC Enterprise RDM Coalition group

Description	Overall Responsibilities
Role #2 RDM Manager	
Responsible for the detailed tasks of running an effective release and deployment process. This includes a plan, design, build, configuration, and test of the hardware and software involved in the package on the release side. The RDM Manager decides what resources are needed, especially with a full or major release which may require the involvement of the Deployment Manager and the Project Officer. The RDM Manager communicates regularly with the other RDM managers, RDM coordinators the RDM Enterprise Process Owner, and other process managers as needed.	• Manages all aspects of the end-to-end release process • Represents RDM on CABs • Updates CfM and SACM through notifications • Ensures coordination of build and test environment with the release teams • Ensures teams follow the organization's established policies and procedures • Provides management reports on release progress, service release and deployment policy and planning • Deals with the release package design, build, and configuration • Facilitates release package acceptance, including the authorized sign-off • Deals with service roll-out planning, including the method of deployment • Signs off the release package for implementation • Deals with release communication, preparation, and training • Quality check on hardware and software before and after the implementation of release package changes • Handles the storage and traceability/audit ability of controlled software in both centralized and distributed systems • Assigns, categorizes, and prioritizes release requests • Updates the request status • Maintains a listing of the master release schedule • Collects and maintains process metrics data • Facilitates resource commitment and allocation • Resolves escalated process issues with documented corrective actions • Escalates unresolved exceptions to management as required • Conducts post-implementation review meetings • Identifies problems and improvements to the Enterprise Process Owner • Reviews and maintains Enterprise RDM process documentation • Monitors the effectiveness of the process and generates improvement plans • Communicates release and deployment plans, release and deployment status, issues with time-stamped recovery actions, project performance, testing results, stakeholder acceptance and status, and notification on any activities related to the Enterprise RDM Process

Description	Overall Responsibilities
Role #3 Project Officer	
Large projects have full releases and for releases coming from a POR, a Project Officer is required to support the deployment activities. The Project Officer ties the release into the overall project goals.	• Includes plans forth deployment of solutions in the overall project plan • Shepherding the release through the RDM and Enterprise Engineering Verification Environment (Engineering) process • Creation and the development of the release plan and the priority of the release. • Provides training guidance associated with the release plan • Identify the type of the release based on the change type. • Responsible for ensuring that the release is sent for certification and accreditation • Identifying the implementation, technical risks, and impacts of a release • Identifying potential project risks for the schedule • Identifying potential training for users • Responsible for determining the implementation planning required for the release • Ensures the ELS checklist is completed prior to submission to the ESB • Responsible for briefing the project status to stakeholders • Coordinates with the RDM Manager and Deployment Manager on preparations for ELS activities • Manages the deployment of the solution on a day-to-day basis • Utilizes relevant standards, procedures, and components as used within MCSC and MCCOG • Identifies potential team members that will help implement change • Facilitate stakeholder management and possible communications • Needs to coordinate with Engineering to ensure that changes are design, built, and tested • Maintains and communicates status reporting as specified by the project plan • Becomes liaison between Enterprise RDM process and the POR

Description	Overall Responsibilities
Role #4 Deployment Manager	
Responsible for the deployment and verification of new or changed components in the production environment. This resource is an existing specialist coming from the project staff and is determined by the release content. The Deployment Manager adheres to the release schedule and provides appropriate updates to the RDM Manager and Project Officer.	• Executes the implementation according to plan • Works with Deployment Managers and Coordinators at MITSCs • Conducts a quality check to review the release package • Works to deploy release package through additional reviews • Performs quality check on hardware and software before and after the implementation of release package • Monitors the implementation plan for success or failure • Conducts ELS activities • Participates in the Post Implementation Review • Communicates with ChM and SACM on the success and failures of releases • Manages the installation – defines the duration, coordinates the geographic requirements, and manages the vendor involvement • Documents the results of the installation • Works with IM to determine if the release has caused incidents • Verifies the success of the CRQ or initiates the back-out plan if required • Assesses current infrastructure performance and capacity • Integrates automation tools as required with other environments • Validates infrastructure modifications • Assesses prioritized release requests for technical content and impacts • Provides training guidance associated with the release package • Ensures all management processes are followed • Ensures suitable environment exists at designated locations • Performs CRQ assessment and reviews the Change Schedule
Role #5 RDM Coordinator	
Supports the RDM Manager, Deployment Manager, and Project Officer. Manages records, tracks action items, and provides process-related reports. Ensures quality control of the entire Enterprise RDM process throughout the lifecycle of a service package.	• Coordinates projects and programs • Communicates with ChM and SACM on the status of releases • MITSC Coordinators will communicate deployment activities with users • Integrates the deployment management activities with the associated development teams • Ensures all projects achieve project hand-off and acceptance criteria • Adheres to process standards when developing and implementing releases • Conducts and coordinates post-implementation reviews of all major projects and major deployments

3.2   Responsibilities

Enterprise Processes span departmental boundaries; therefore, procedures and work instructions (PWIs) within the process need to be mapped to roles within the process. These roles are then mapped to job functions, IT staff, and departments. The Enterprise Process Owner is accountable for ensuring process interaction by implementing systems that allow smooth process flow.

The Responsible, Accountable, Support, Consulted, Informed (RASCI) model is a method for assigning the type or degree of responsibility that roles (or individuals) have for specific tasks.

Responsible – Completes the process or activity; responsible for action/implementation. The degree of responsibility is determined by the individual with the 'A'.

Accountable – Approves or disapproves the process or activity. The individual who is ultimately answerable for the task or a decision regarding the task.

Support – Resources allocated to support Responsible. Support helps complete the task

Consulted – Gives needed input about the process or activity. Prior to final decision or action, these subject matter experts or stakeholders are consulted.

Informed – Needs to be informed after a decision or action is taken. May be required to take action as a result of the outcome. This is a one-way communication.

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Table 6 displays the department-level RASCI model for RDM. Table 7 establishes responsibilities by role.

*Table 6. Organizational Responsibilities for Enterprise RDM*

RDM Process Activities	MCCOG	HQMC (C4)	MCSC	RNOSC	MITSC	Application Owner	Tenant/Supported Command
Plan and Prepare	S	I	R*	I	C	S	I
Design Release	S	I	R*	I	C	S	I
Build Release	S	I	R*	I	C	S	I
Service Validation and Testing	S	I	R*	I	C	S	I
Plan and Prepare for Deployment	R	I	C	S	S	C	I
Deploy & Verify	R	I	C	S	S	C	I
ELS	R	I	C	S	S	C	I
Review and Close	R	I	C	S	S	C	I

Legend:
Responsible (R) – Completes the process or activity, or who ensure that it is done as per Accountable
Accountable (A) – Authority to approve or disapprove the process or activity
Support (S) – Resources allocated to Responsible. Support helps complete the task
Consulted (C) – Experts who provide input
Informed (I) – Notified of activities
* See Note 2 below

Note 1: Any department that is designated as Responsible, Accountable, Consulted, or Participant is not additionally designated as Informed because being designated as Responsible, Accountable, Consulted, or Participant already implies being in an Informed status. A department is designated as Informed only if that department is not designated as having any of the other four responsibilities.

Note 2: Release development Responsibilities reside with the organization developing the release and is situational. This chart depicts a release that is planned and developed within MCSC. If the release was being developed by the MCCOG, then MCCOG would be responsible and MCSC would be supporting during the Plan and Prepare, Design Release, Build Release, and Service Validation and Testing Activities

Note 3: Release development Responsibilities reside with the organization developing the release and is situational. This chart depicts a release that is planned and developed within MCSC. If the release was being developed by the MCCOG, then MCCOG would be responsible and MCSC would be supporting.

Note 4: Only one department can be accountable for each process activity.

Table 7. Role-Based Responsibilities for Enterprise RDM

RDM Process Activities	RDM Process Owner	Project Officer	RDM Process Manager	Engineering Technical Lead	Deployment Manager	RDM Coordinator
Plan and Prepare	C	R	I	S	I	S
Design Release	C	R	I	S	I	S
Build Release	C	R	I	S	I	S
Service Validation and Testing	C	R	I	S	I	S
Plan and Prepare for Deployment	C	R	S	C	S	S
Deploy & Verify	C	R	S	C	S	S
ELS	C	R	S	C	S	S
Review and Close	C	R	S	C	S	S

Legend:

Responsible (R) – Completes the process or activity, or who ensure that it is done as per Accountable

Accountable (A) – Authority to approve or disapprove the process or activity

Support (S) – Resources allocated to Responsible. Support helps complete the task

Consulted (C) – Experts who provide input

Informed (I) – Notified of activities

Note 1: Any department that is designated as Responsible, Accountable, Consulted, or Participant is not additionally designated as Informed because being designated as Responsible, Accountable, Consulted, or Participant already implies being in an Informed status. A department is designated as Informed only if that department is not designated as having any of the other four responsibilities.

Note 2: Release development Responsibilities reside with the organization developing the release and is situational. This chart depicts a release that is planned and developed within MCSC. If the release was being developed by the MCCOG, then MCCOG would be responsible and MCSC would be supporting during the Plan and Prepare, Design Release, Build Release, and Service Validation and Testing Activities

Note 3: Only one department can be accountable for each process activity.

4.0   SUB-PROCESSES

The Enterprise RDM Process for the USMC consists of eight (8) sub-processes; each of these processes can be repeatable and replicated down to the MITSCs. While each release will follow each sub-process on some level, not every activity within each sub-process is utilized for every USMC organization or type of release. For example, under normal circumstances, minor releases unique to a particular MITSC will not utilize every phase or type of testing associated with Service Validation and Testing. Therefore, to understand RDM in its entirety, examination at the sub-process level is required.
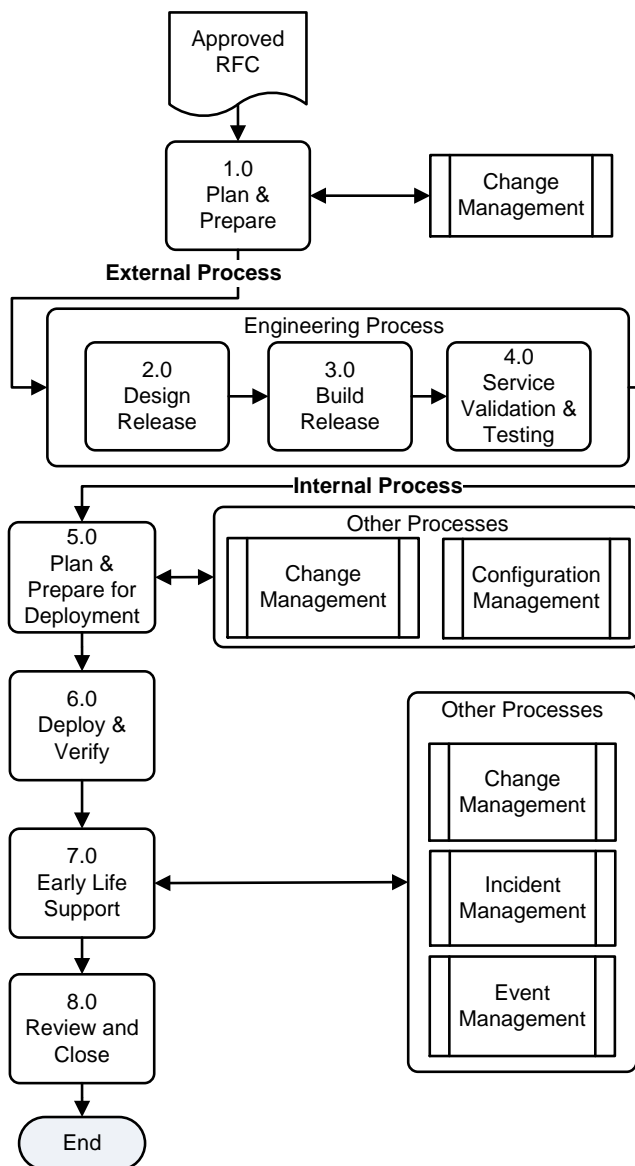
4.1   Plan and Prepare

This first sub-process determines the strategy for how each release is defined and brought into existence in a state ready for deployment. It includes understanding the components of the release (from one or more Service Packages) and considering the impact of the one or more authorized CRQs which relate to the release contents in order to create the overall plan for the release. The planning covers building, testing, and verifying the release (including the possible need for pilot deployments), as well as establishing a model for how the finalized release should be deployed.

All plans and acceptance criteria are documented in the ChM Plan for the specified project and approved by ChM. CRQ approvals are managed in ChM with input from RDM. The release plan is developed by the RDM Manager. Approval requirements for the release plan will vary depending on the release size (Full, Package or Delta), complexity, risk, and urgency.
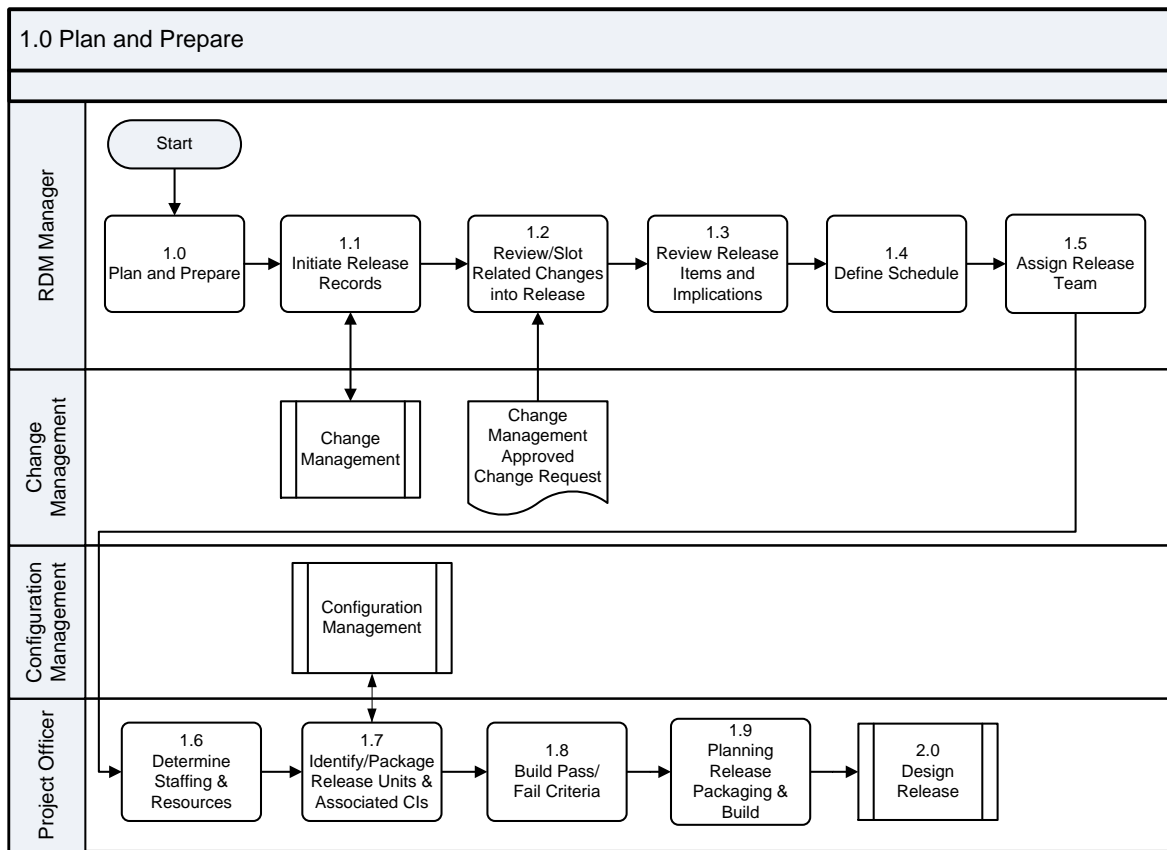
Figure 5. RDM Plan and Prepare Sub-Process

Table 8 describes the Plan and Prepare sub-process steps as depicted in Figure 5.

Table 8. RDM Plan and Prepare Sub-Process Descriptions

1.0 Plan and Prepare		
Number	**Process Activity**	**Description**
1.1	Initiate Release Records	Collaborate with ChM to create the initial release structures based on Release Category (Major, Minor, or Emergency), Release Type (Full, Delta, or Package) and maturity of scheduling. The release requirements define the release type and category.
1.2	Review/Slot Related Changes into Release	The change request is reviewed as related to the release as well as recent CRQs. The RDM Manager coordinates with the Project Officers to determine if there are similar CRQs that can be supported in the same release, preventing replication in multiple releases.

1.0 Plan and Prepare		
Number	**Process Activity**	**Description**
1.3	Review Release Items and Implications	The items to be included in the release plan are reviewed. The items in the release plan are assessed to determine whether they can be supported within a single deployment or require multiple deployments. Items are also assessed to identify the implications of supporting the release to other processes, services and teams that could be affected by the release. With the assessment complete, the RDM Manager documents the release package proposal. Using the Implementation Plan, the Project Officer gathers the logistics required to build the detailed deployment plan. Some but not all of the information required covers the following areas: • The release units and service components to be delivered • The lead times required with impacts if delayed • The status plan for tracking deliveries and confirmations • The resource requirements and availability • If staging environments are required, detailed requirements • Detailed international, national and regional considerations and impacts. • Supplementary plans for the retirement, decommission and/or disposal of service components out of scope as a result of the deployment. These plans can include software and licenses, hardware, support contracts, and any accommodations no longer needed. Implementation and retirement plans for any interim service and equipment requirements required to run in parallel during the deployment transition.
1.4	Define Schedule	Schedule planning and definition is conducted. The RDM Manager allows sufficient time within the release schedule to support rework and back-out plans, if required. Project Officer will coordinate with the RDM Manager and the Change Initiator for scheduling.
1.5	Assign Release Team	Project Officer assesses the release scope and content, assigns a team, works with impacted stakeholders to develop a strategy, and secures the resources. The RDM Manager determines if there is sufficient capacity to absorb the change, and scales the release plan to the release size. Resources are assigned based on the release type and category. The RDM Manager determines and engages the appropriate resources needed to support the release.
1.6	Determining Staffing and Resources	The Project Officer determines the staffing and resources required for the release. The RDM Manager and the Project Officer negotiate resource availability with support teams and test partners. Resource trade-offs and risks to the testing and deployment schedules are documented in the issues list.
1.7	Identify/Package Release Unit and Associated CIs	The release units and associated CIs to be included in the release package are identified. The CRQ's identify the impacted CIs; however, the RDM Manager will communicate with SACM to analyze all new, changed, or impacted CIs for inclusion in the release.

Number	Process Activity	Description
1.0 Plan and Prepare		
1.8	Build Pass /Fail Criteria	Project Officer and RDM Manager will work with the Requirements Team to develop the release pass/fail criteria, and to ensure that the release is built for operability standards in Service Operations. Pass/fail criteria is specific to the release. Pass/fail criteria is developed for each gate in the release and negotiated with the stakeholders. Pass/fail criteria encompasses each approval point through the release and deployment stages, starting with release planning through testing, up to and including user acceptance. When the pass/fail criteria negotiations are complete, the final acceptance criteria negotiated is communicated to all stakeholders by the Project Officer.
1.9	Planning Release Packaging and Build	In planning the release packaging and build, the Project Officer and RDM Manager: • Develops mechanisms, plans, and procedures to verify exit and entry criteria • Manages stakeholder communications • Trains people and transfers knowledge • Establishes services and service assets • Negotiates schedules • Develops service management capabilities and resources, assesses readiness of target deployment groups • Defines and negotiates exit criteria To implement the release packaging process, the RDM Manager needs sufficient information and capabilities required to build, copy, promote, distribute, audit, install, and activate procedures, and to purchase software licenses and Intellectual Property Rights. The RDM Manager is expected to have the expertise in new, change, retirement, disposal procedures, and building exit criteria templates to support the release requirements. The finished product is the planned Release Package.

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4.2   Design Release
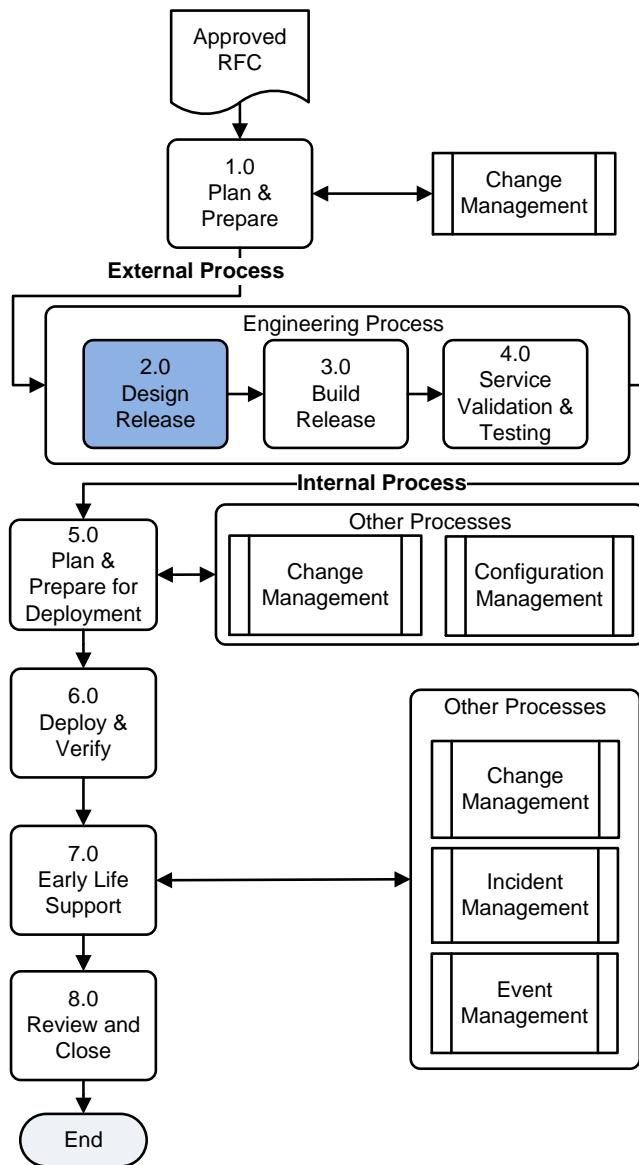
This activity determines what needs to be built for the release and how it will be assembled and deployed. During this sub-process, the release build, installation, and roll-back scripts are designed at a high level. In addition, software and hardware components are obtained for the build activity and the test environment is put in place.

The test strategy is defined providing the overall testing approach for Service Validation and Testing (SV&T). Draft remediation procedures are developed as backup if the deployment is unsuccessful.
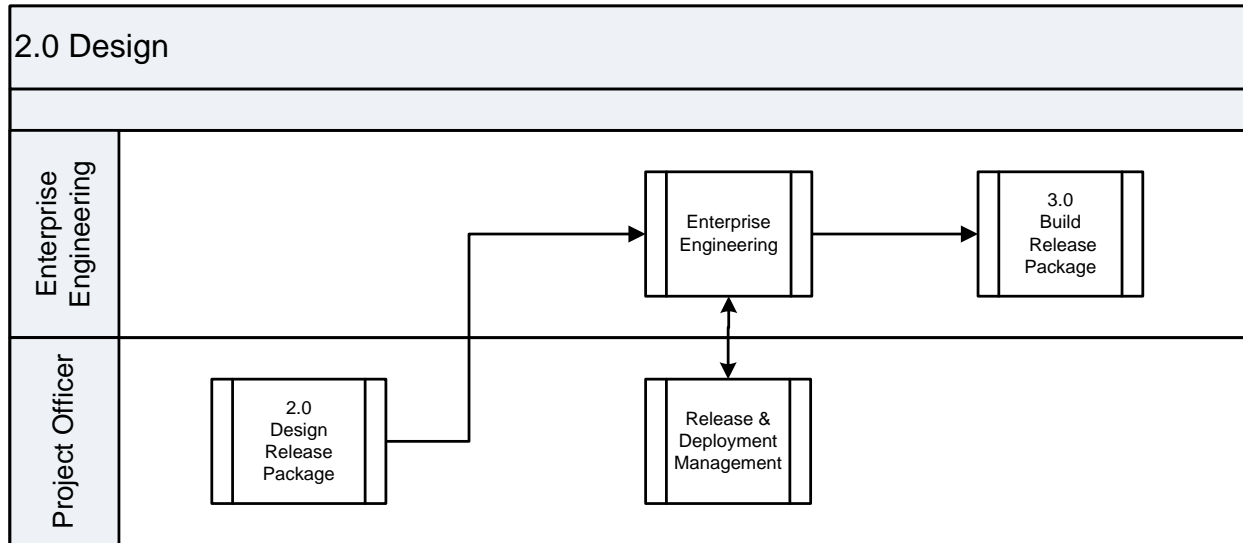
2.0 Design

Figure 6. RDM Design Release Sub-Process

Table 9 describes the Design Release sub-process steps as depicted in Figure 6. This is the first of many times that RDM processes interface with Enterprise Engineering. Entrance and exit to and from Enterprise Engineering occurs at the same point. For more information, please review the Enterprise Engineering and Testing Process Guide.

Table 9. RDM Design Release Sub-Process Descriptions

2.0 Design Release		
Number	**Process Activity**	**Description**
2.0	Design Release	Service Design defines the approach for transitioning from a current service to a new or changed service or service offering. The Project Officer will transition the preliminary documentation to the Engineering team to design the release package according to the requirements and specifications of the approved change request. The intended release package is designed and will be tested for its accuracy in sub-process block 4.0.

4.3   Build Release

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        ┌──────────┐          ┌──────────────┐
        │   1.0    │◄────────►│    Change    │
        │  Plan &  │          │  Management  │
        │ Prepare  │          └──────────────┘
        └──────────┘
      External Process
```

External Process

Engineering Process

| 2.0 Design Release | 3.0 Build Release | 4.0 Service Validation & Testing |

Internal Process

```
5.0 Plan & Prepare for Deployment    Other Processes
                                     Change Management   Configuration Management

6.0 Deploy & Verify                  Other Processes
                                     Change Management
7.0 Early Life Support               Incident Management
                                     Event Management
8.0 Review and Close

End
```

In building the release package, build management procedures, tools, and checklists are utilized to provide repeatable practices and expected results.

Baselines are recorded before and after the release package build to provide restore capability if needed in production.

The proposed solution and test results are recorded and handed over to Service Operations for use in future releases.

After the release has been designed, this activity builds the scripts and other aspects needed to assemble and to deploy the release. This includes:

•   Creating the build environment
•   Creating build, install, and roll-back scripts
•   Placing software in the DML
•   Creating support, training, and deployment documentation
•   Notifying SACM to update the CMDB with information about the release package

3.0 Build Release Package
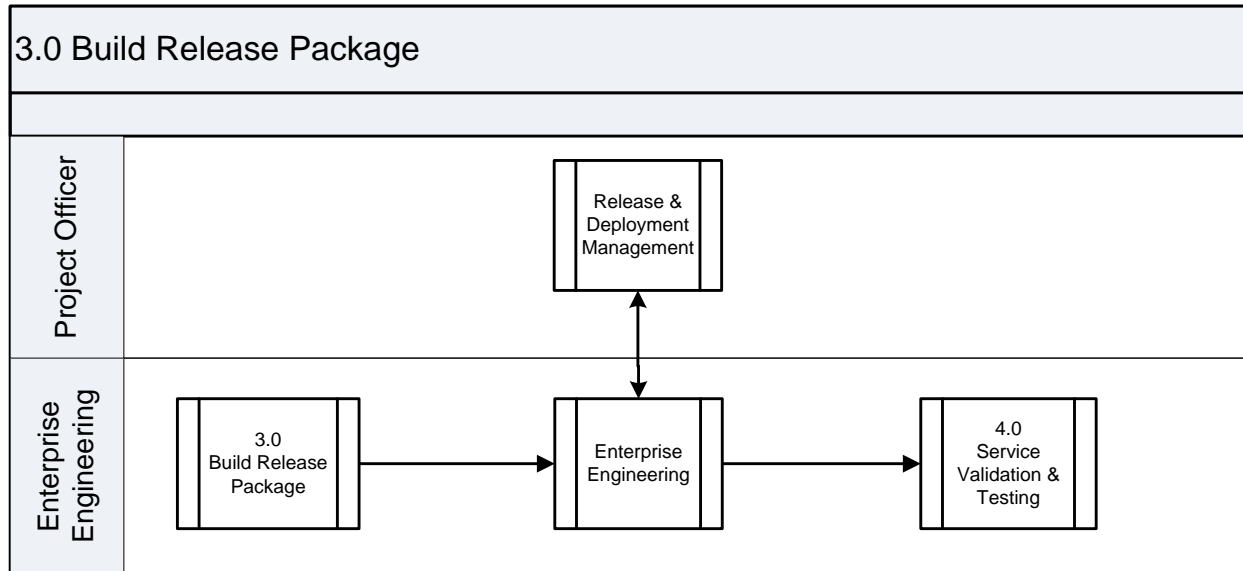
Figure 7. RDM Build Release Sub-Process

Table 10 describes the Build Release Package process as a part of Enterprise Engineering as depicted in Figure 7. For more information, please review the Enterprise Engineering and Testing Process Guide.

Table 10. RDM Build Release Sub-Process Descriptions

3.0 Build Release		
Number	**Process Activity**	**Description**
3.0	Build Release Package	In building the release, the Enterprise Engineering team initially assembles and integrates the release components into a release package. When building the release, the Engineering team will utilize build management procedures, tools, and checklists to provide repeatable practices.

4.4   Service Validation and Testing

SV&T activities are performed a number of times throughout the Release and Deployment lifecycle, specifically SV&T:

- Verifies that the deployment team, tools, and procedures can deploy the release package into a target deployment group or environment within the estimated timeframe.
- Ensures the release package contains all the service components required for deployment (e.g., by performing a configuration audit).
- Validates that the defined Service-Level Requirements are achievable and sustainable.
- Ensures the proposed changes do not adversely affect authorized systems in the production environment. Ensures authorized configurations and systems in the production environment do not have an adverse impact on the proposed application or change.
- Tests the deployment team, tools, and procedures to ensure they can install the release package into a target environment within the estimated timeframe.
- Tests to ensure a deployment has completed successfully and that all service assets and configurations are in place as planned and meet their quality criteria.

All or some of the testing activities required are determined by the release plan and the implementation plan. These documents are validated, and verified by the Service Test Managers and the Certification Test Managers.

Certification testing provides a recommendation to ChM for release approval or remediation of the release package.

4.0 Service Validation & Testing
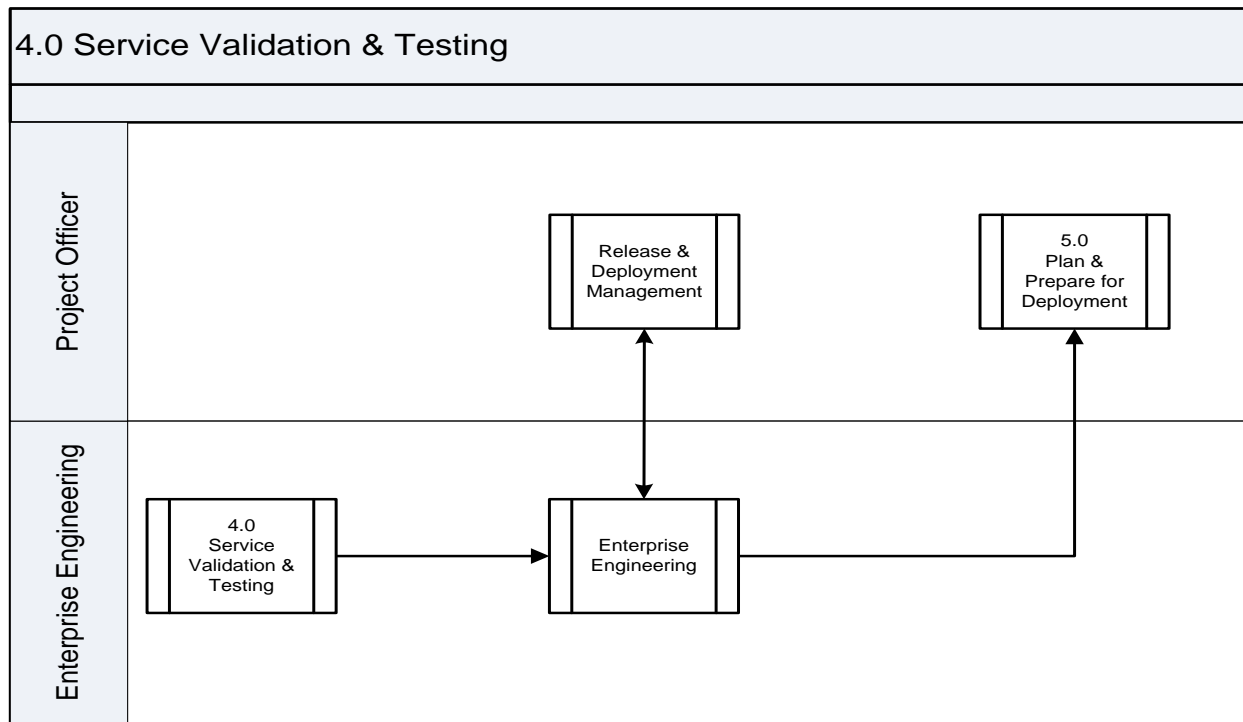
Figure 8. RDM Service Validation and Testing Sub-Process

Table 11 describes Service Validation and Testing as a part of Enterprise Engineering steps as depicted in Figure 8. For more information, please review the Enterprise Engineering and Testing Process Guide.

Table 11. RDM Service Validation and Testing Sub-Process Descriptions

4.0Service Validation & Testing		
Number	**Process Activity**	**Description**
4.0	Service Validation & Testing	The test strategy defines the overall approach to organizing testing and allocating testing resources.
		The Engineering Team will build Test environments to the requirements specifications established to successfully test the build.
		The Engineering Team will execute the tests using standardized manual or automated procedures. Testers record findings while testing. Tests are performed according to the test plans and cases.
		The Engineering Team will develop the testing summary document based on results discovered during test execution. The actual test results are compared to the expected test results and recorded in the summary document. These reports are reported to the Project Officer and to ChM.
		After ChM Approval, RDM will assume the release has been validated and tested pulling from the DML in order to deploy into the production environment.

4.5 Plan and Prepare for Deployment
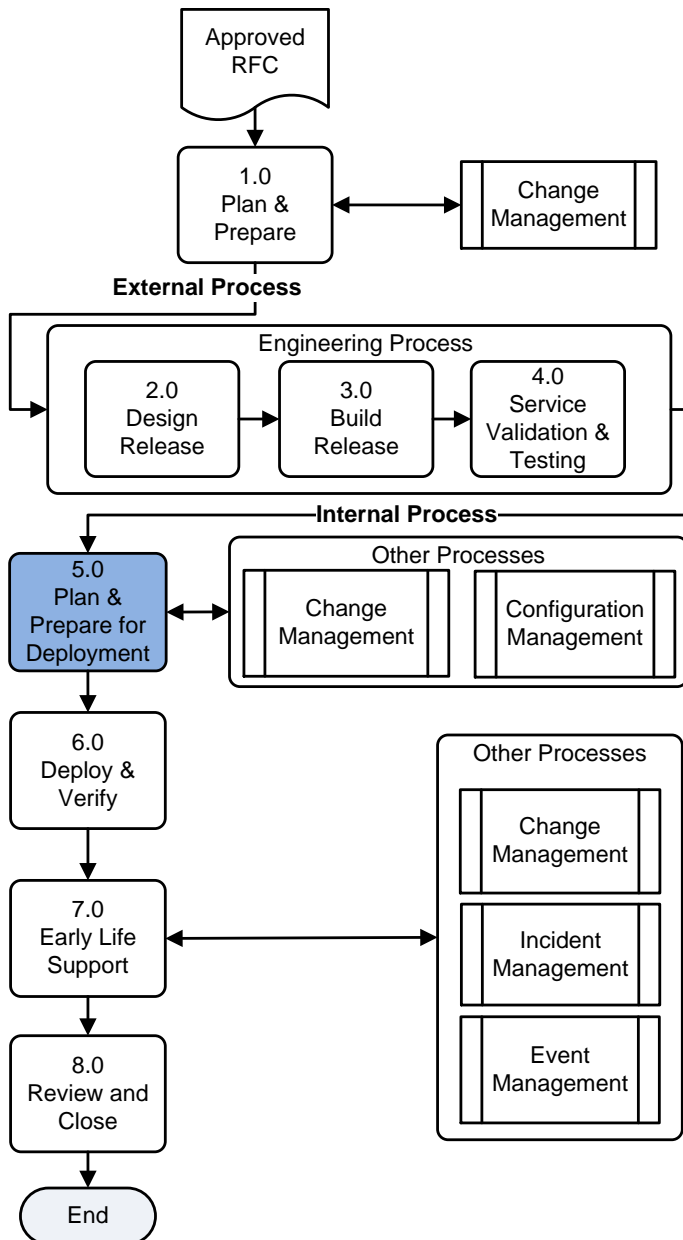
With the resulting recommendations from the SV&T presented to the MCEN ESB for review, the MCEN CAB approves the release to be deployed. MITSCs will participate in the MCEN CAB, as needed. Deployment resources are assigned. Readiness assessments are conducted. Risks are identified and assessed in terms of potential disruption. Detailed implementation plans are developed and verified.

When the detailed deployment plan is complete and readiness tests have been performed, the service is ready for deployment.
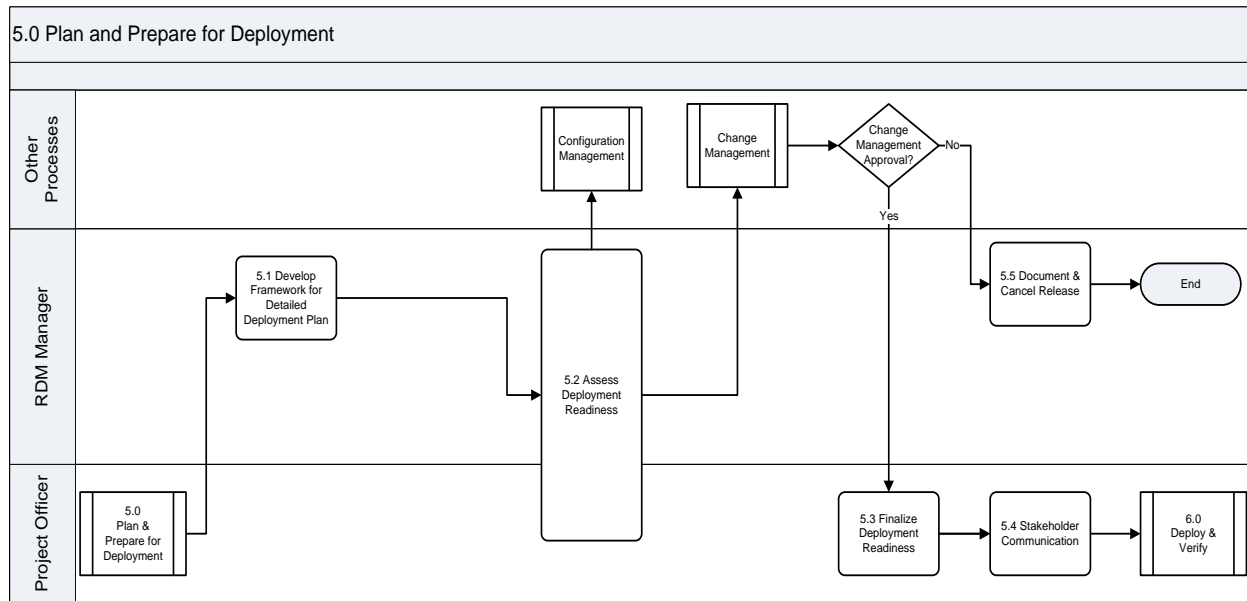
Figure 9. RDM Plan and Prepare for Deployment Sub-Process

Table 12 describes the Plan and Prepare for Deployment sub-process steps as depicted in Figure 9.

Table 12. RDM Plan and Prepare for Deployment Sub-Process Descriptions

5.0 Plan and Prepare for Deployment		
Number	**Process Activity**	**Description**
5.1	Develop Framework for Detailed Deployment Plan	The RDM Manager and RDM Coordinator will utilize the Implementation Plan (associated with the Release Plan) and perform a quality check on the release package. The RDM Manager will assesses and validate the corresponding questions below: • What needs to be deployed? • Who are the users? • Where are the users located? • Are there location dependencies? • Who needs to be prepared in advance of the deployment? • Has any necessary training been prepared • Date the deployment must be completed by. • Why is the deployment happening? • Is ELS in place? • What are the CSFs and exit criteria? • What is the current capability of the service provider? The answers to the questions provide the framework for the logistical details required in the final deployment plan. In this framework, the RDM Manager will determine if staging the environment is required. If so, the RDM Manager will provide staging environment requirements as part of the logistics plan developed in the next sub-process step. Verify detailed implementation and backout plans are finalized.

5.0 Plan and Prepare for Deployment		
Number	**Process Activity**	**Description**
5.2	Assess Deployment Team Readiness	The RDM Manager confirms the entry criteria for planning and preparing a deployment with the stakeholders, customers, and service provider teams. Readiness assessments are conducted as early in the release process as possible. Release readiness assessments are revisited at scheduled intervals to ensure the readiness level is maintained. All testing results and the deployment recommendation from 4.0 Service Validation and Testing are forwarded to ChM along with the deployment readiness assessment. ChM is a participant in the deployment readiness assessment and aware of the status at every stage. ChM has the final approval for release deployments. Notification will be sent to SACM in order to update corresponding CIs within the CMDB. Note: Final notification will be sent once the release has been successfully deployed.
5.3	Finalize Deployment Readiness	A deployment approval is received from ChM. The RDM Manager and Deployment Manager verify detailed deployment plans and finalize deployment readiness tests. The release deployment is promoted to Deploy and Verify.
5.4	Stakeholder Communication	The RDM Manager and RDM Coordinator issue a formal notification to all stakeholders consulted in building the deployment plan.
5.5	Document and Cancel Release	If ChM rejects the deployment based on the testing results, the deployment recommendation and deployment readiness assessment, the RDM Manager documents the rejection and cancels the release record.

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4.6   Deploy and Verify

Deploying the release is the implementation of the detailed deployment plan. A deployment can be the deployment of materials (hardware or software) and processes, the transfer of a service, the deployment of a new or changed service, the decommissioning or retirement of services, and or the removal of assets.

This activity performs the physical, technical, and other tasks (such as delivering training and registering users) which move the capabilities deployed into production. This includes distribution and installation of hardware and software, and ensuring appropriate data is provided for asset and configuration updates.

When the deployment is complete, the integrity of the solution is verified with stakeholders validating the capability of using or operating the service.

The RDM Manager verifies the release with the stakeholders, which can include:

•   Service assets and capabilities are in place
•   Documentation updates are completed
•   Learning material has been made available to stakeholders
•   Users are prepared/trained to operate the new or changed service
•   Measurements and reporting systems are established
•   Successful validation of the deployment triggers the launch of ELS
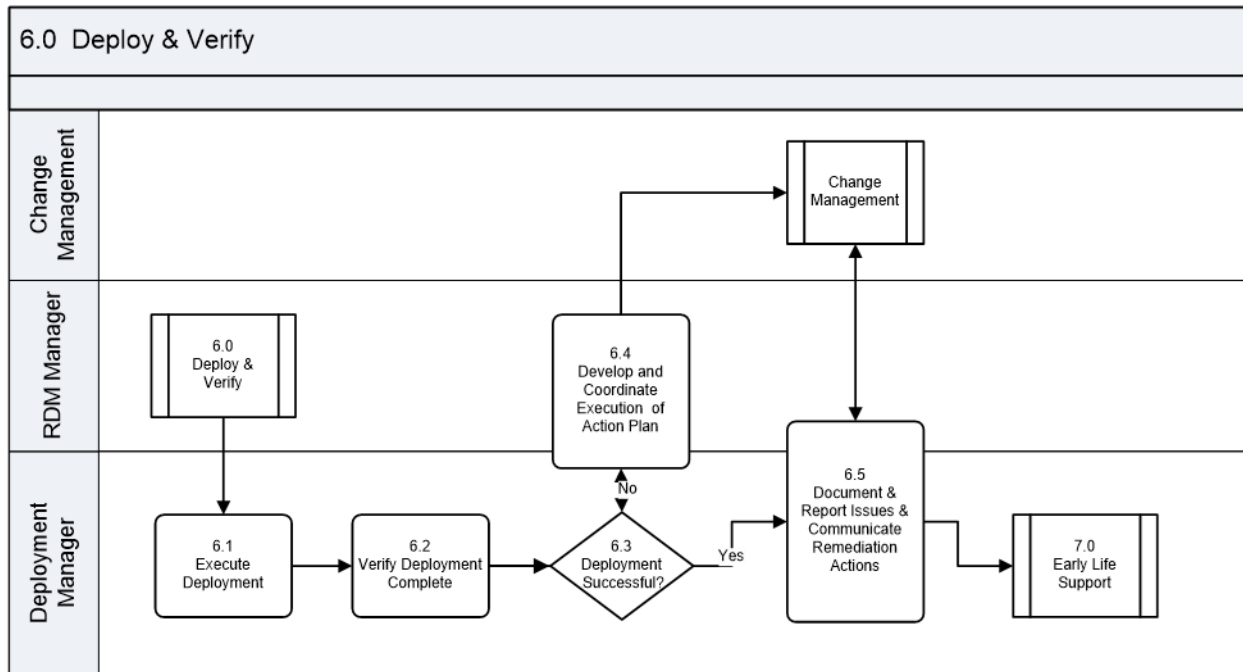
Figure 10. RDM Deploy and Verify Sub-Process

Table 13 describes the Deploy and Verify sub-process steps as depicted in Figure 10.

Table 13. RDM Deploy and Verify Sub-Process Descriptions

	6.0 Deploy & Verify	
Number	**Process Activity**	**Description**
6.1	Execute Deployment	When adding a service, decommissioning, retiring a service or service asset, the Deployment Manager will deploy the service release package in accordance with the established PWIs.
6.2	Verify Deployment Complete	Validations will be executed by the deployment team in accordance with established PWIs.
6.3	Deployment Successful?	ELS entrance criteria met? If yes go to step 6.5, Document and Report Issues and Remediation Actions. If no, go to step 6.4, Develop and Coordinate Execution of Action Plan.
6.4	Develop and Coordinate Execution of Action Plan	The deployment is not successful. The Deployment Manager may recommend up to and including the implementation of the back-out plan. The Deployment Manager will coordinate the execution of the action plan with the deployment team. The Deployment Manager notifies ChM of the execution of the action plan.
6.5	Document and Report Issues and Communicate Remediation Actions	The deployment team will document the results from each deployment step and develop remediation activities, as required. If no remediation is required, then the deployment is promoted to ELS.

4.7 ELS

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          │ 1.0         │◄─────►│ Change      │
          │ Plan &      │       │ Management  │
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            External Process
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Engineering Process

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  │ 2.0     │───►│ 3.0     │───►│ 4.0          │
  │ Design  │    │ Build   │    │ Service      │
  │ Release │    │ Release │    │ Validation & │
  │         │    │         │    │ Testing      │
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              Internal Process
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Other Processes

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  ┌─────────────┐    ┌──────────────┐  ┌──────────────┐
  │ 5.0         │◄──►│ Change       │  │ Configuration│
  │ Plan &      │    │ Management   │  │ Management   │
  │ Prepare for │    └──────────────┘  └──────────────┘
  │ Deployment  │
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Other Processes

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  ┌─────────────┐
  │ 6.0         │
  │ Deploy &    │
  │ Verify      │        ┌──────────────┐
  └─────────────┘        │ Change       │
         │               │ Management   │
         ▼               └──────────────┘
  ┌─────────────┐
  │ 7.0         │◄──────►┌──────────────┐
  │ Early Life  │        │ Incident     │
  │ Support     │        │ Management   │
  └─────────────┘        └──────────────┘
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  ┌─────────────┐        │ Event        │
  │ 8.0         │        │ Management   │
  │ Review and  │        └──────────────┘
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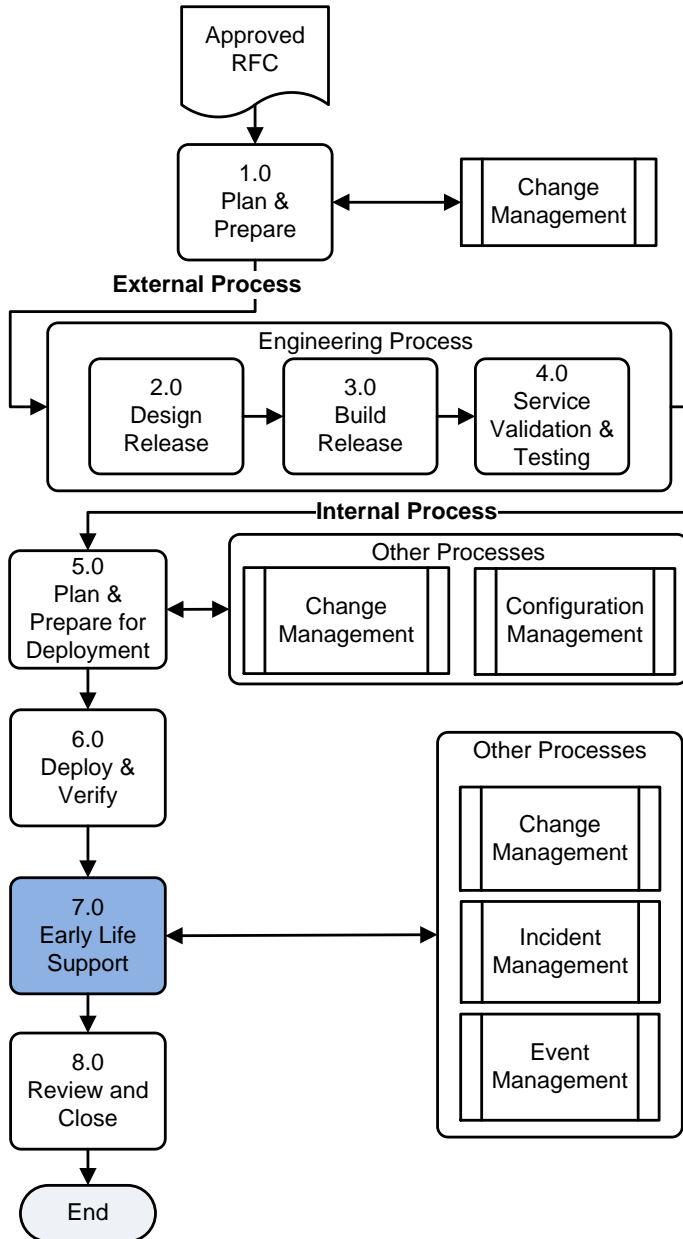
ELS is the additional expert service support provided immediately after the deployment to ensure service continuity and stakeholder satisfaction. Resources from IT Operations introduce the new service capability and resources to operations in a controlled manner. Resource support scope is determined by the release content delivered. ELS should be made up of qualified and trained technicians. Depending on the type of deployment, on-site support for a period of time may be beneficial

In Service Design, the stakeholders have agreed to the entry and exit criteria for ELS, but it may be necessary to renegotiate the performance targets and exit criteria early in the ELS stage as performance results are generated in the production environment. The RDM Manager negotiates with the stakeholders for release approval. Release approval may include known errors with interim work-arounds or back-out plans are invoked if a satisfactory release is not possible.
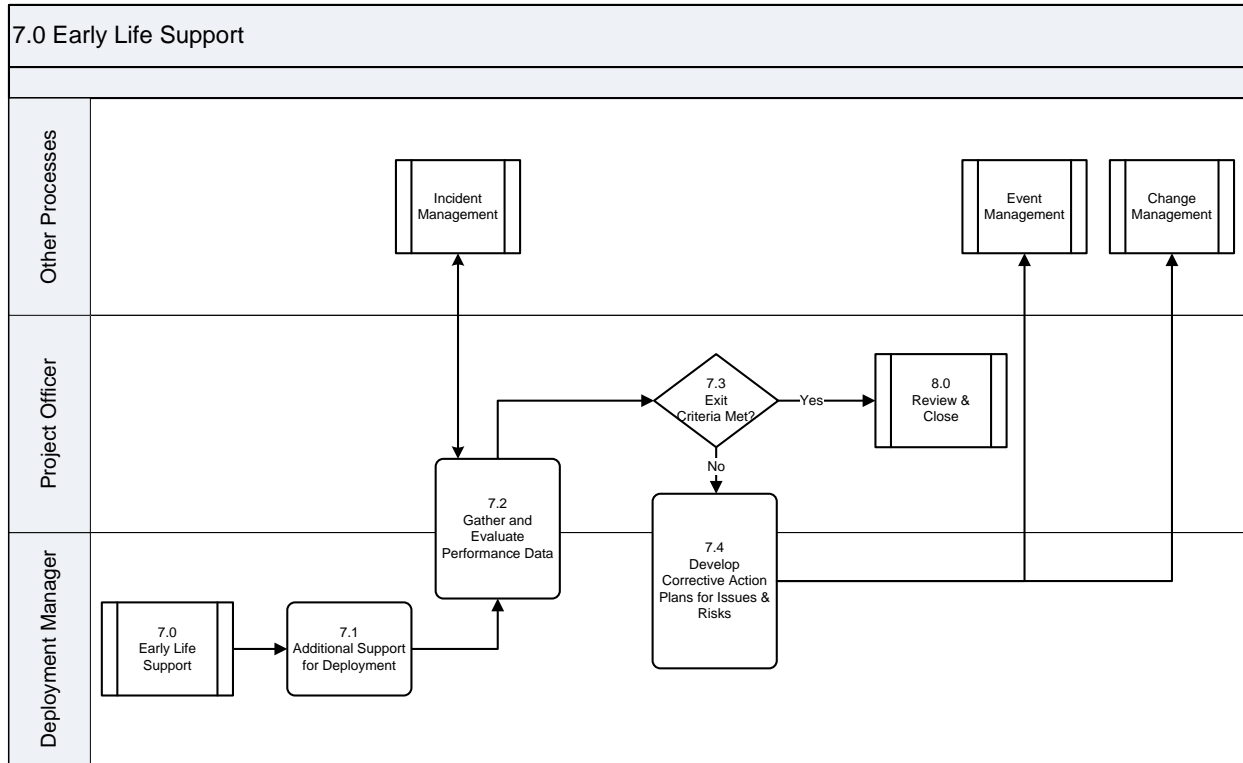
Figure 11. RDM ELS Sub-Process

Table 14 describes the ELS sub-process steps as depicted in Figure 11.

Table 14. RDM ELS Sub-Process Descriptions

7.0 ELS		
Number	**Process Activity**	**Description**
7.1	Additional Support for Deployment	As the transition is initiated, the deployment team alerts users where issues may surface and provide direction for roles and responsibilities, funding requirements, raising incidents and CRQs, escalation procedures, complaint procedures using tools and aids, and software licensing rules. The exit criteria and performance targets are finalized with the stakeholders. The transition of the new or changed service to Service Operations is initiated in a controlled manner.
7.2	Gather and Evaluate Performance Data	Performance data (number of incidents and problems by type) is collected as soon as possible after the transition begins. Results are analyzed. Improvements are implemented. If appropriate, performance data between different deployment groups is compared.
7.3	Exit Criteria Met?	Exit criteria are defined in the PWIs. When ELS exit criteria is met, the release is promoted to Review and Close. If the exit criteria are not met, then move to 7.4 Develop Corrective Action Plans.
7.4	Develop Corrective Action Plans for Issues and Risks	If exit criterion is not met, corrective action plans are developed and implemented and forwarded to ChM for review and disposition. Once a release has been successfully deployed into the environment, the deployment outcome is sent to both Event and ChM.

4.8 Review and Close
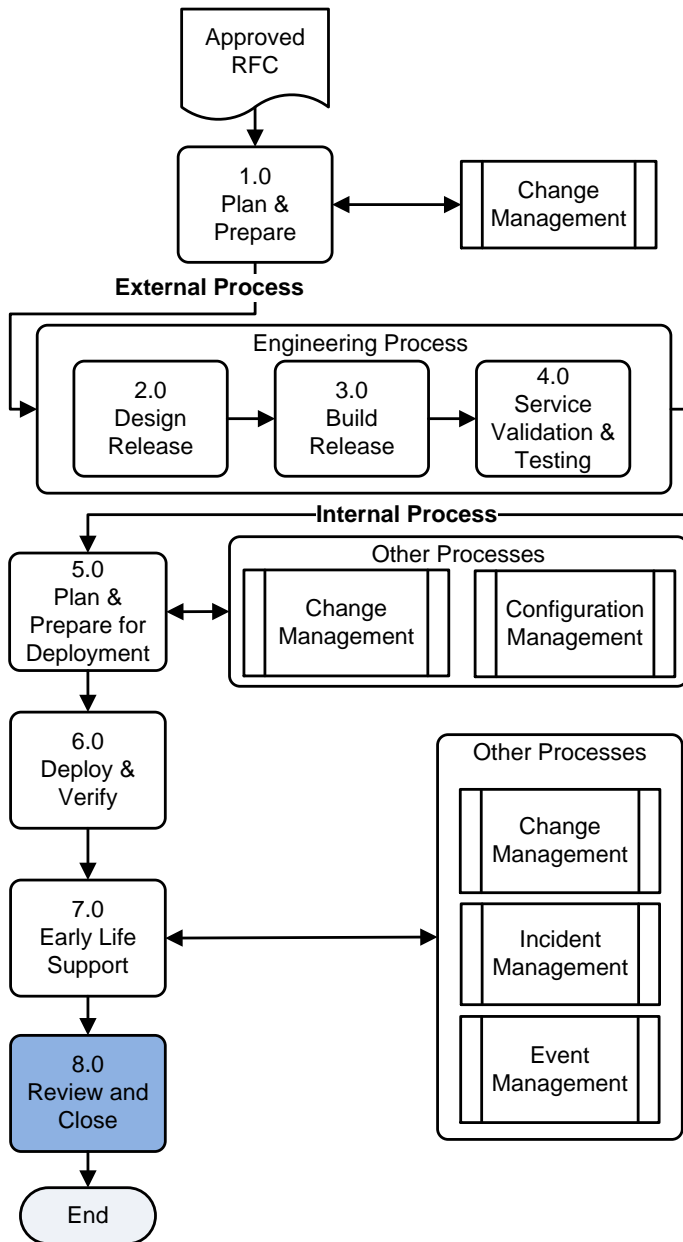
The RDM Manager conducts a review to ensure appropriate and thorough knowledge transfer, training, and documentation is delivered to the stakeholders and end users. All fixes and changes are complete and have been presented to the customer for risk acceptance. Coordinate with Problem Management (PbM) to ensure that all problems and known errors are identified and documented with known work-arounds. The entrance and exit criteria for each stage of the process has been assessed and met.

The RDM Manager reviews the tasks completed (Operational CRQs) during deployments and determines that all objectives of the deployment plan were met. A management plan is established for outstanding risks, issues, incidents, and known errors before the deployment is closed.

The RDM Manager notifies the Project Officer who then issues a close notification as the last step in the review. All release participants and end users are notified of the final review results for the release.
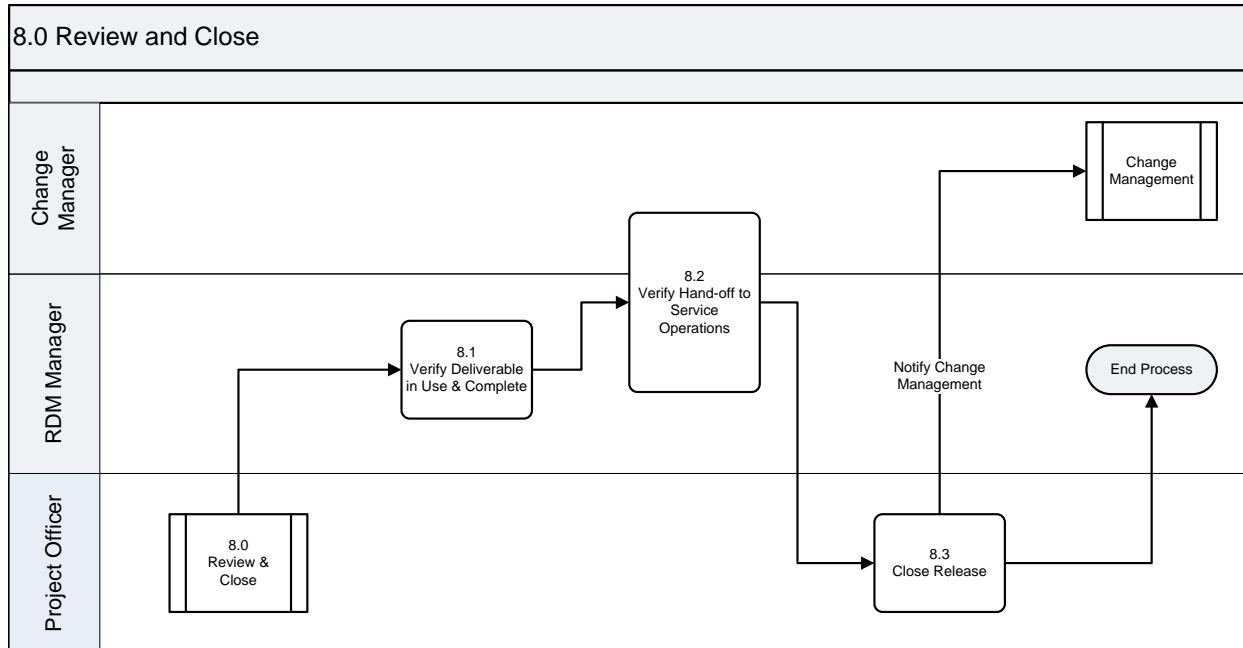
Figure 12. RDM Review and Close Sub-Process

Table 15 describes the Review and Close sub-process steps as depicted in Figure 12.

Table 15. RDM Review and Close Sub-Process Descriptions

8.0 Review and Close		
Number	**Process Activity**	**Description**
8.1	Verify Deliverable in Use and Complete	A deployment review is conducted, assessing the deliverable in accordance with established PWIs.
8.2	Verify Hand-off to Service Operations	Coordinate the transition of deployment group support to Service Operations with ChM.
8.3	Close Release	The Project Officer closes the release, and ChM is notified that the release has been transitioned to Service Operations.

Appendix A – ACRONYMS

Acronym	Description
CAB	Change Advisory Board
ChM	Change management
CI	Configuration Item
CMDB	Configuration Management Database
CMS	Configuration Management System
CRQ	Change request
CSF	Critical Success Factor
DML	Definative Media Library
ELS	Early of Life Support
EM	Event Management
ESB	Enterprise Solution Board
IM	Incident Management
IRM	InformatioN resource Management
IT	Information Technology
ITSM	IT Service Management
KPI	Key Performance Indicator
MCCOG	Marine Corps Cyberspace Operations Group
MCEN	Marine Corps Enterprise Network
MCO	Marine Corps Order
MCSC	Marine Corps Systems Command
MITSC	Marine Air Ground Task Force Information Technology Support Center
PbM	Problem Management
POR	Program of record
PWI	Procedures and Work Instructions
RASCI	Responsible, Accountable, Support, Consulted, Informed model
RDM	Release and Deployment Management
RNOSC	Regional Network Operations and Security Center
RqF	Request Fulfillment
SACM	Service Asset and Configuration Management
SCM	¾ Service Catalog Management
SIE	Systems Integration Environment
SLA	Service Level Agreement
SLM	Service Level Management
SV&T	Service Validation and Testing
USMC	United States Marine Corps

Appendix B – GLOSSARY

Term	Definition
Asset Management	Asset Management is the process responsible for tracking and reporting the financial value and ownership of assets throughout their lifecycle.
Back-out Plan	A Back-out Plan is developed in the Release planning phase. This plan provides a recovery plan to return to the original configuration or process if the release fails to achieve the planned outcome.
Change Schedule	A Change Schedule is a document that lists all approved changes and their planned implementation dates.
Configuration Item	A Configuration Item (CI) is any component that needs to be managed in order to deliver an IT Service. Information about each CI is recorded in a Configuration Record within the Configuration Management System (CMS) and is maintained throughout its lifecycle by Configuration Management. CIs are under the control of ChM. CIs typically include IT services, hardware, software, buildings, people and formal documentation such as process documentation and SLAs.
Configuration Management Database	A Configuration Management Database (CMDB) is a database used to store configuration records throughout their lifecycle. The Configuration Management System (CMS) maintains one or more CMDBs and each CMDB stores attributes of CIs and relationships with other CIs.
Configuration Management System	A Configuration Management System (CMS) is a set of tools and databases used to manage an IT service provider's configuration data. The CMS also includes information about incidents, problems, known errors, changes, and releases and may contain data about employees, suppliers, locations, units, customers and users. The CMS includes tools for collecting, storing, managing, updating and presenting data about all CIs and their relationships. The CMS is maintained by Configuration Management and is used by all ITSM processes.
Deployment	Deployment is the activity responsible for movement of new or changed hardware, software, documentation, process, etc. to the production environment. Deployment is part of the RDM Process.
Deployment Readiness Test	A Deployment Readiness Test is conducted to ensure that the deployment processes, procedures, and systems can deploy, install, commission, and decommission the release package and resultant new or changed service in the production/deployment environment.
Early Life Support	ELS involves Technical Management or IT Operations providing support for a new or changed IT service for a period of time after it is released. During ELS, the IT service provider may review the KPIs, service levels, and monitoring thresholds and provide additional resources for IM and PbM (when implemented).
Environment	Environment is a subset of the IT infrastructure used for a particular purpose (e.g., production environment, test environment or build environment). It is possible for multiple environments to share a CI (e.g., test and production environments may use different partitions on a single mainframe computer). In the term physical environment, environment can be defined as the accommodation, air conditioning, power system, etc. Environment can be used as a generic term defined as the external conditions that influence or affect something.
Escalation	Escalation is an activity that obtains additional resources when needed to meet service-level targets or customer expectations.
Event	An Event is a piece of data that provides information about one or more system resources. Most events are benign. Some events show a change of state which has significance for the management of a CI or IT service. The term 'event' is also used to define an alert or notification created by any IT service, CI, or monitoring tool. Events typically require IT operations personnel to take actions and often lead to incidents being logged.
Exit and Entry Criteria (Pass/Fail)	These are criteria (defined well in advance and accepted by the stakeholders) defined at authorized points in the Release and Deployment Process to set expectations of acceptable/unacceptable results.

Term	Definition
Key Performance Indicator	A KPI is a metric used to help manage a process, IT service, or activity. Many metrics may be measured, but only the most important of these are defined as KPIs and used to actively manage and report on the process, IT service, or activity. KPIs are selected to ensure that efficiency, effectiveness, and cost effectiveness are all managed.
Known Error	A Known Error is a problem that has a documented root cause and a work-around. Known errors are created and managed throughout their lifecycle by PbM. Known errors may also be identified by SIE or suppliers.
Monitoring	Monitoring is the process of repeated observation of a CI, IT service, or process to detect events and to ensure that the current status is known.
Notification	Notification is a communication that provides information.
Process	A Process is a structured set of activities designed to accomplish a specific objective. A process takes one or more defined inputs and turns them into defined outputs. A process may include any of the roles, responsibilities, tools, and management controls required to reliably deliver the outputs. A process may define policies, standards, guidelines, activities, and work instructions, if needed.
Role	A Role refers to a set of connected behaviors or actions that are performed by a person, team, or group in a specific context.
Service Design Package	A Service Design Package is composed of a document(s) defining all aspects of an IT service and its requirements through each stage of its lifecycle. An SDP is produced for each new IT service, major change, or IT service retirement.
Service Validation and Testing	Service Validation and Testing is the process responsible for validation and testing of a new or changed IT service. Service Validation and Testing ensures an IT service matches the design specification and will meet the needs of the business. Service Validation and Testing during release conducts testing in the pre-production SIE and during deployment in the pilot production environment.
Test	A Test is an activity that verifies that a CI, IT service, or process meets its specification or agreed requirements.
Test Environment	A Test Environment is a controlled environment used to test CIs, builds, IT services, and processes.
User Acceptance Testing	User Acceptance Testing is a testing activity conducted by the user intended to verify a CI, IT service, or process meets a specification. It is also used to validate whether agreed requirements have been met.
Work-around	Work-arounds for problems are documented in known error records and are intended to reduce or eliminate the impact of an incident or problem for which a full resolution is not yet available. Work-arounds for incidents that do not have associated problem records are documented in the incident record.
Work Instruction	The Work Instruction is a document containing detailed instructions that specify exactly what steps are followed to carry out an activity. A work instruction contains much more detail than a procedure and is only created if very detailed instructions are needed.