2.5.2 Critical Success Factors with Key Performance Indicators

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 BMC Analytics:

Table 4. RDM Critical Success Factors with Key Performance Indicators

CSF #	Critical Success Factors	KPI #	Key Performance Indicators	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 Process Owner. Authoritative process guide control is under the purview of the Process Owner.

While the end goal is to have a single RDM Process Owner residing at the Enterprise Level, the USMC will initially use a shared process ownership framework. There will be a RDM Process Owner for the Acquisition sector inclusive of all USMC IT Programs of Record, as well as a RDM Process Owner for the Operational sector inclusive of all other USMC organizations at the enterprise, regional, and local levels.

Management (i.e., responsibility) of a process may also be shared; generally, a single manager exists at the MCNOSC, MARCORSYSCOM and at each MITSC. However, as with many other processes within Service Design and Service Transition, Project Officer also exist within MARCORSYSCOM and MCNOSC. . RDM Coordinators will be at the enterprise and at MITSCs who will work in coordination with the Projec 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 (AOR), 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 process guide defines all *mandatory* roles.

3.1 Roles

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

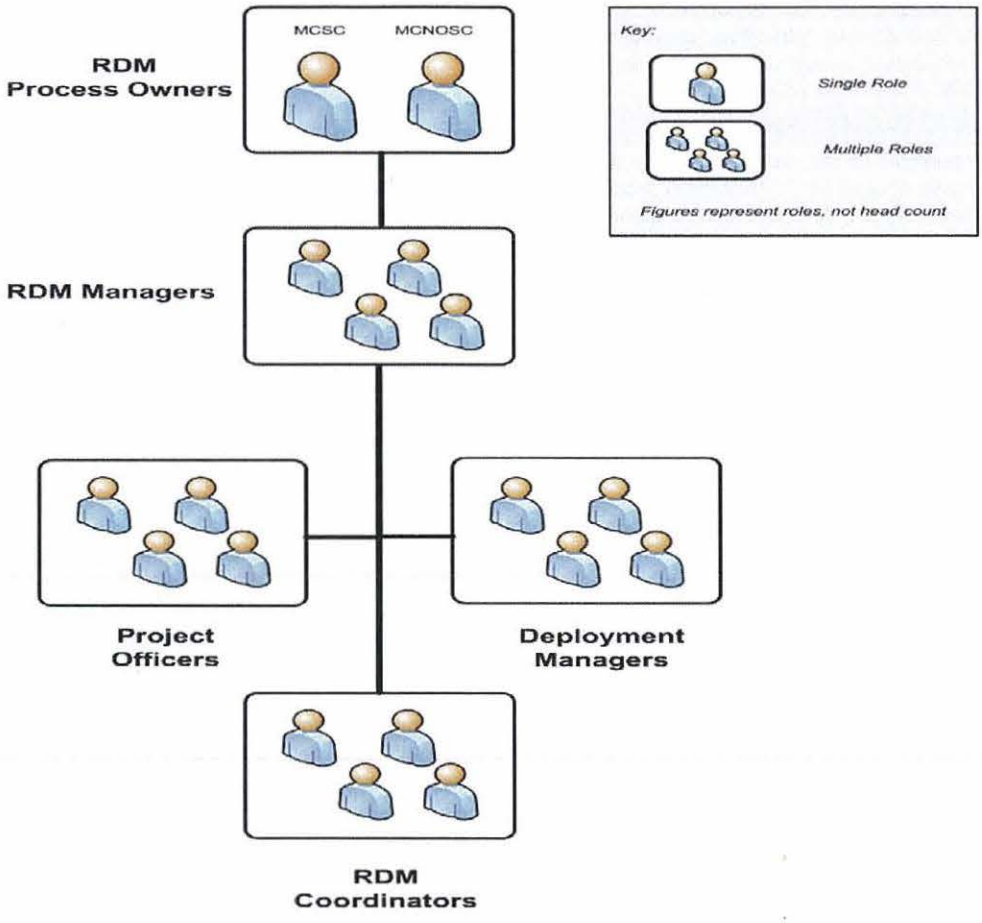


Figure 4. RDM Roles

Table 5. RDM Defined Roles and Responsibilities

Description	Overall Responsibilities
Role #1 RDM Process Owner	
The Process Owner owns the process and the supporting documentation for the process. The primary functions of the Process Owner are oversight and continuous process improvement. To these ends, the Process Owner oversees the process, ensuring that the process is followed by the organization. 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 Process Owner is responsible for the approval of all proposed changes to the process, and development of process improvement plans.	• 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

Description	Overall Responsibilities
May delegate specific responsibilities to another individual within their span of control, but remains ultimately accountable for the results of the RDM process.	
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 Deployment Manager and the Project Officer. The RDM Manager communicates regularly with the other RDM managers, coordinators, the RDM Process Owner, and other process managers as needed.	• Manages all aspects of the end-to-end release process • Represents RDM on the CAB • Updates CfM and ChM 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 process owner • Reviews and maintains 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 RDM process
Role #3 Project Officer	
Large projects have full releases and for releases coming from a program of record, a Project Officer is required to support the deployment activities. The Project Officer ties the release into the overall project goals.	• Includes plans for the deployment of solutions in the overall project plan • Shepherding the release through the RDM and EEVE 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.Reponsible for ensuring that the release is sent for certification and accreditation • Identifying the implementation, technical risks, and impacts of a release • Identiying potential project risks for the schedule

Description	Overall Responsibilities
	• Identifying potential training for users • Responsible for determining the implementation planning required for the release • Responsible for briefing the project status to stakeholders • Manages the deployment of the solution on a day-to-day basis • Utilizes relevant standards, procedures, and components as used within MCSC and MCNOSC • Identifies potential team members that will help implement change • Facilitate stakeholder management and possible communications • Needs to coordinate with EEVE to ensure that changes are design, built, and tested • Maintains and communicates status reporting as specified by the project plan • Becomes liaison between RDM process and the POR
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 Coorindators at MITSCs • Conducts a quality check to review the release package within the Tier 0 (staging environment) • Works to deploy release package through additional tiers • Quality check on hardware and software before and after the implementation of release package • Monitors the implementation plan for success or failure • Conducts Early Life Support activities • Participates in the Post Implementation Review • Communicates with Change and Configuration Management 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 Incident Management to determine if release have caused incidents • Opens incident/problem management tickets as needed • Verifies the success of the installation or opens RFCs to improve the release 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 RFC assessment and reviews the Change Schedule (CS)
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 RDM process throughout the lifecycle of a service package.	• Coordinates projects and programs • Communicates with Change and Configuration Management on the status of releases • MITSC Coordinators will communicate deployment activities with users • Integrates the deployment management activities with the

Description	Overall Responsibilities
	associated development teams • Ensures all projects achieve project hand-off and acceptance criteria • Develop and implement adhering to process standards • Conducts and coordinates post-implementation reviews of all major projects and major deployments

3.2 Responsibilities

Processes may span departmental boundaries; therefore, procedures and work instructions 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 Process Owner is accountable for ensuring process interaction by implementing systems that allow smooth process flow.

The Responsible, Accountable, Support, Consulted, Informed, Participant (RASCI) model is a method for assigning the type or degree of responsibility that roles (or individuals) have for specific tasks. Table 6 displays the department-level RASCI model for RDM.

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. 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.

Table 6 establishes responsibilities for high-level process activities by organization.

Table 6. Organizational Responsibilities for Enterprise RDM

RDM Process Activities	MCNOSC	HQMC (C4)	MCSC	MCCDC	RNOSC	MITSC	Application Owner	Tenant/Supported Command
Plan and Prepare	S	C	RA		I	I	C	I
Design Release	S	I	RA		I	C	S	I
Build Release	S	I	RA		I	C	S	I
Service Validation and Testing	S	I	RA		I	C	S	I
Plan and Prepare for Deployment	RA	I	C		S	S	C	S
Deploy & Verify	RA	I	C		S	S	C	S

Early Life Support	RA	I	C		S	S	C	S
Review and Close	RA	I	C		S	S	C	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: 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: Only one department can be accountable for each process activity.

Table 7. Role-Based Responsibilities for Enterprise RDM

RDM Process Activities	RDM Process Owner	RDM Process Manager	Projecct Officer	Deployment Manager	RDM Coordinator
Plan and Prepare	C	I	RA	I	S
Design Release	I	C	RA	I	S
Build Release	I	C	RA	I	S
Service Validation and Testing	I	C	RA	I	S
Plan and Prepare for Deployment	C	S	RA	S	S
Deploy & Verify	C	S	RA	S	S
Early Life Support	C	S	RA	S	S
Review and Close	C	S	RA	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

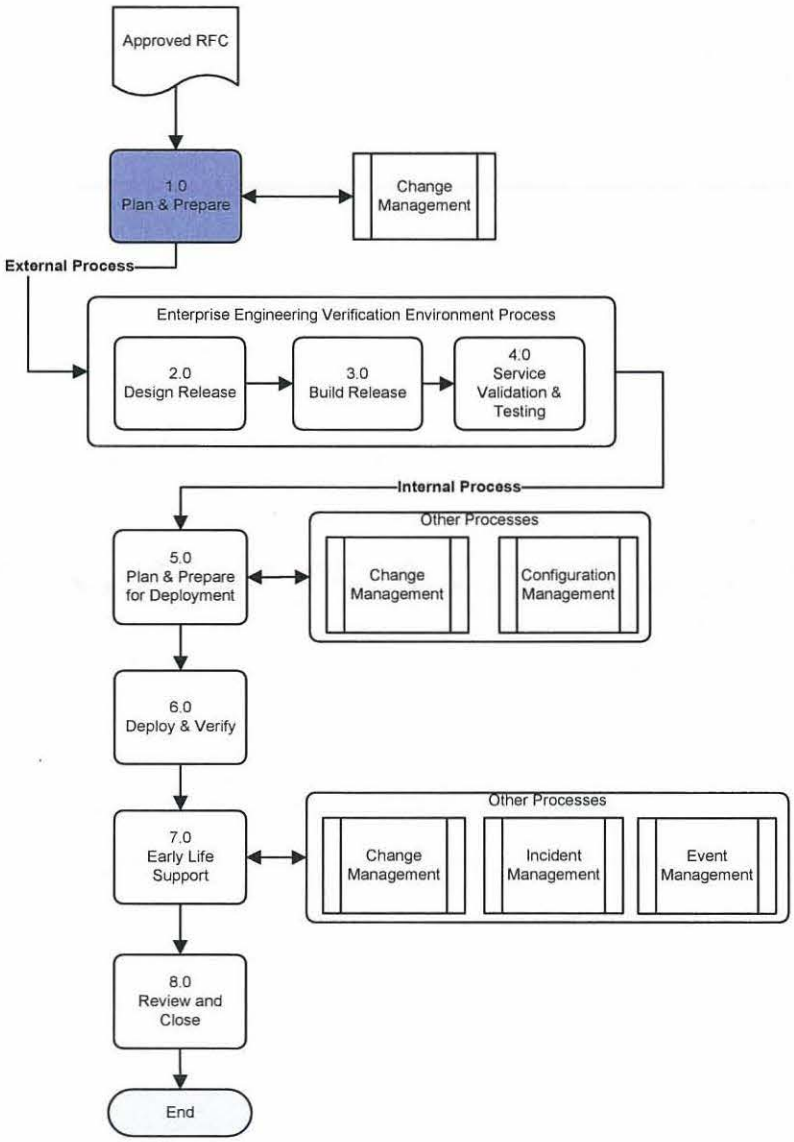
Note: Any department that is designated as Responsible, Accountable, Consulted, or Participant is not additionally designated as Informed because being designated as Responsible, Accountable, Consulted, or Participant already implies being in an Informed status. A department is designated as Informed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

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

4.0 SUB-PROCESSES

The RDM process for 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 RFCs 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. RFC approvals are managed in ChM with input from RDM. The release plan is developed by the RD Manager.

Approval requirements for the release plan will vary depending on the release size (Full, Package or Delta), complexity, risk, and urgency.

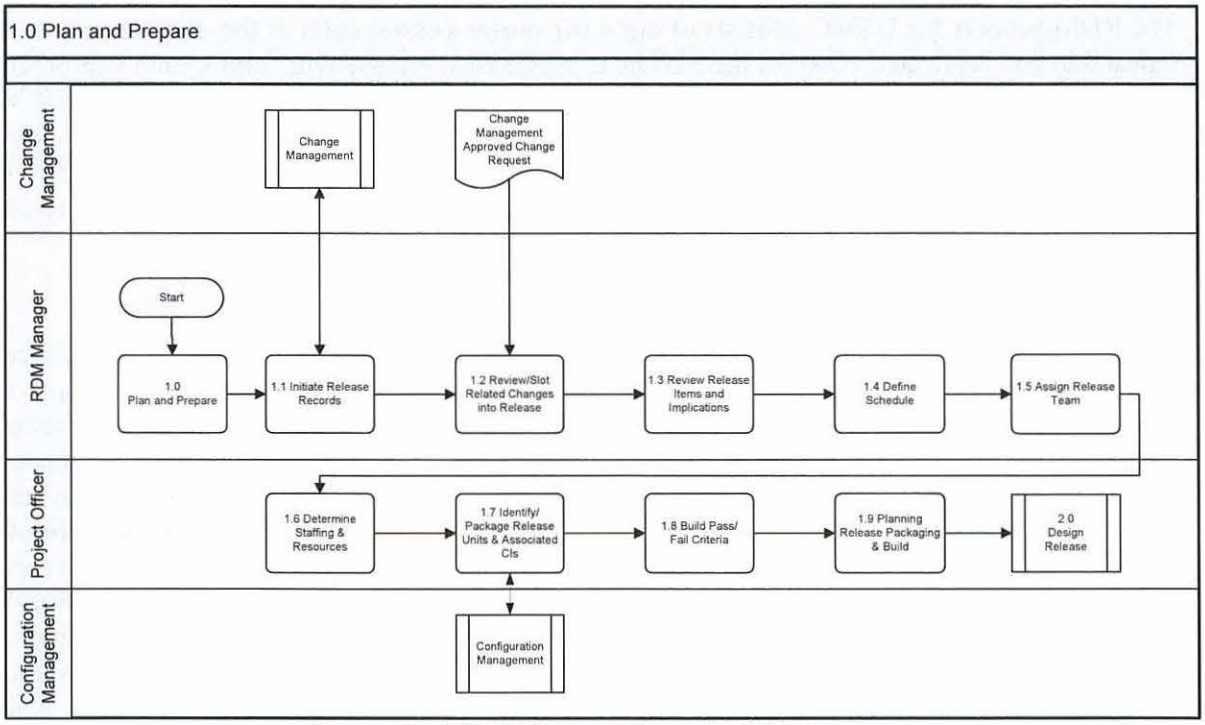


Figure 5. RDM Plan and Prepare Sub-Process

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

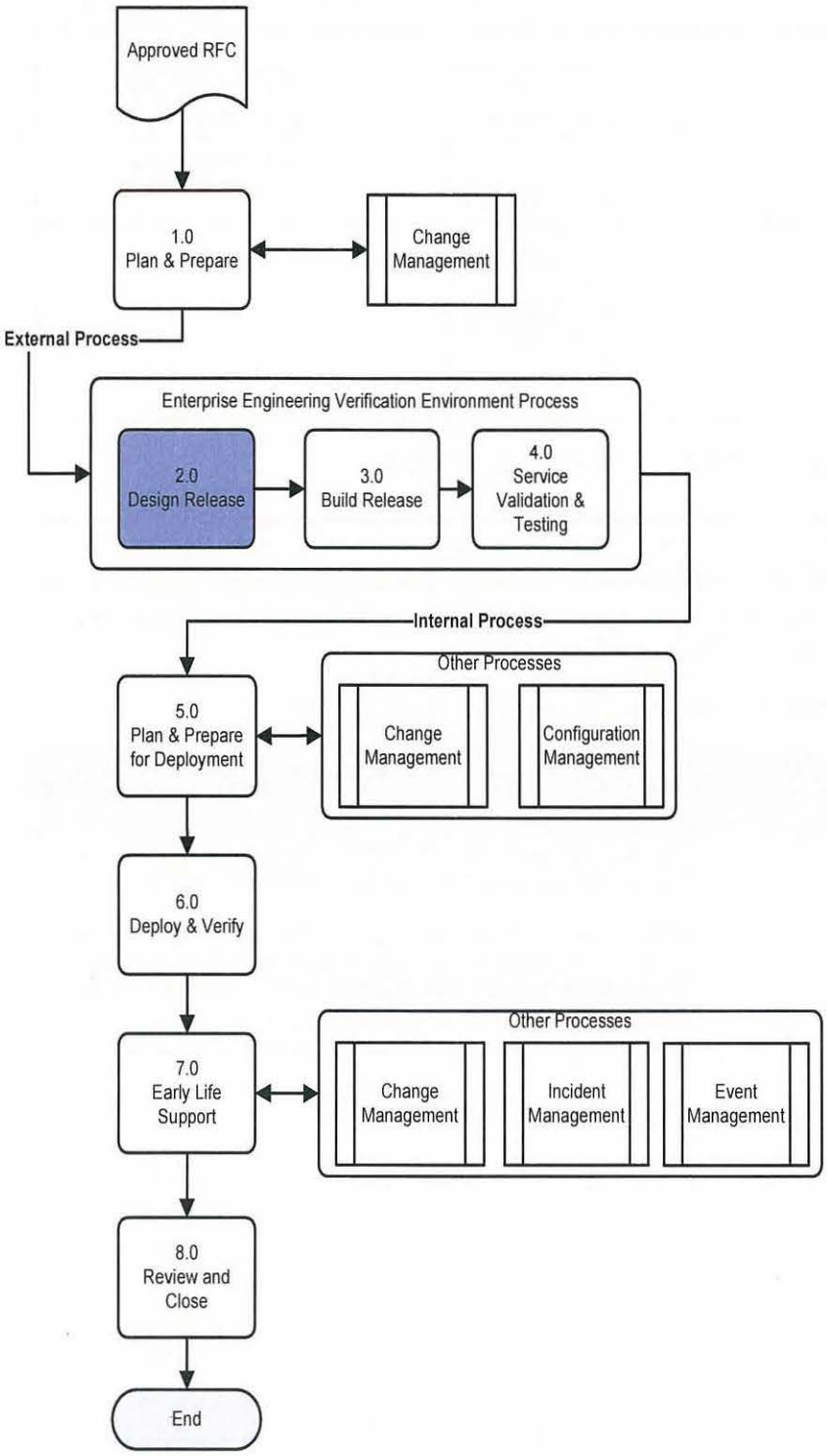
Table 8. RDM Plan and Prepare Sub-Process Descriptions

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 defines 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 change requests. The RD Manager coordinates with the Project Officers to determine if there are similar change requests 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 RD 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 units and 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 RD Manager allows sufficient time within the release schedule to support rework and back-out plans, if required. Project Officer will coordinate with the RD 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 negotiates 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 RFC should identify the impacted CIs; however, the RDM Manager will communicate with CfM to analyze all new,changed, or impacted CIs for inclusion in the release.

1.0 Plan and Prepare		
Number	**Process Activity**	**Description**
1.8	Build Pass /Fail Criteria	Project Officer and RDM Manager will work with the Requirements Team to develop the release pass/fail criteria is built sufficient 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 (IPRs). 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.

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 the Service Validation and Testing process. Draft remediation procedures are developed as backup if the deployment is unsuccessful.

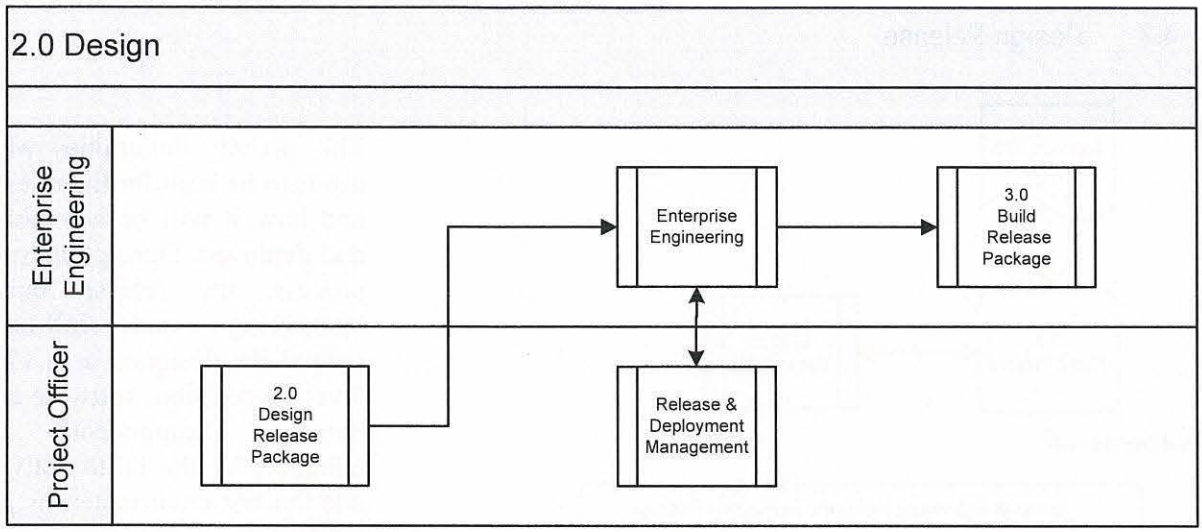


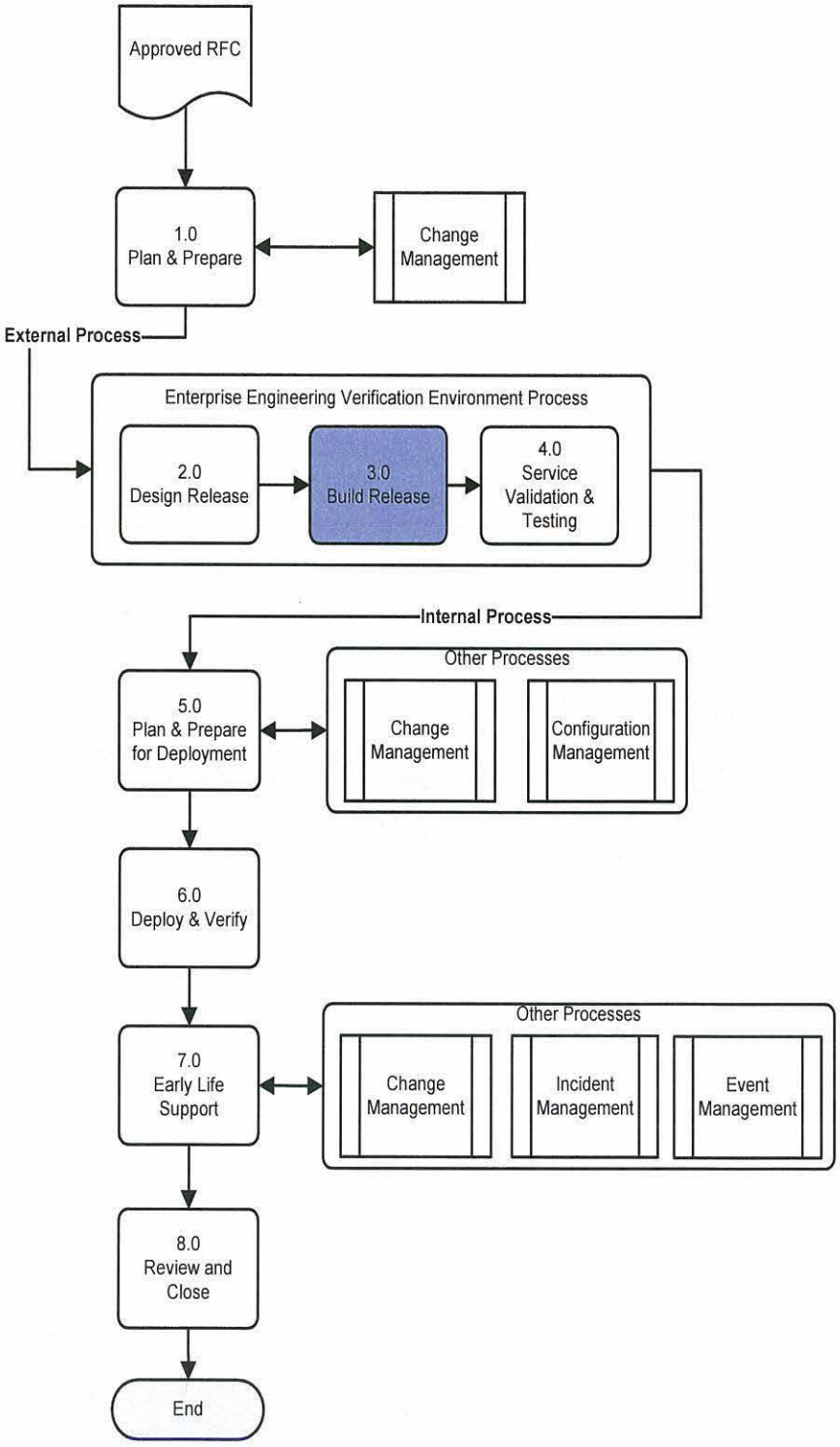
Figure 6. RDM Design Release Sub-Process

Table 9 describes the Design Release sub-process steps as depicted in Figure 6. Note: 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 EEVE 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



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 Definitive Media Library (DML)
- Creating support, training, and deployment documentation
- Notifying CfM to update the CMDB with information about the release package

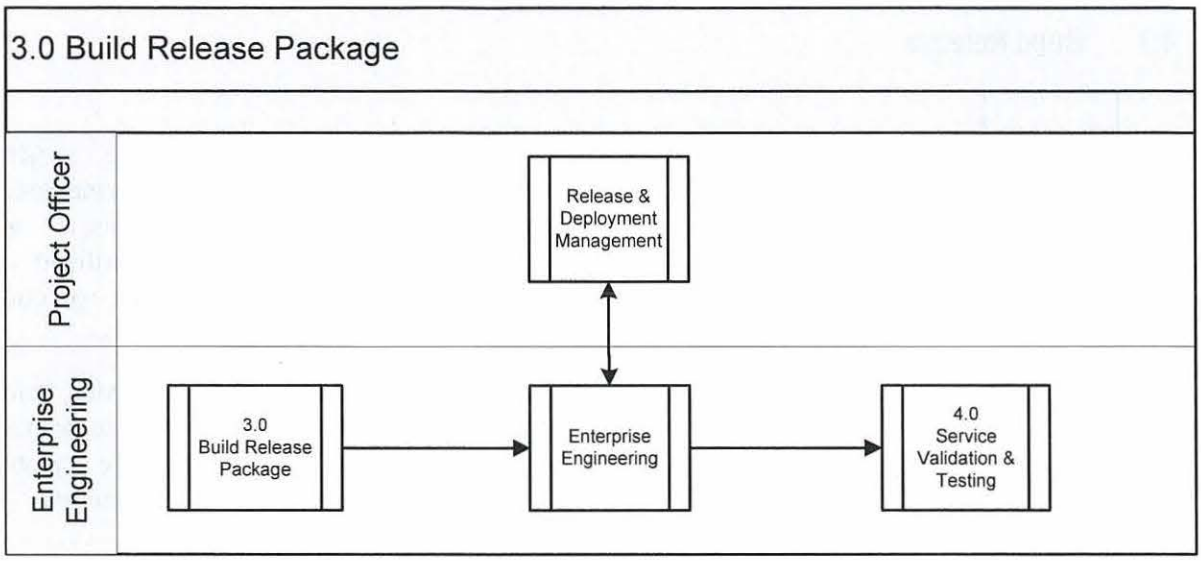


Figure 7. RDM Build Release Sub-Process

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 EEVE team will utilizing build management procedures, tools, and checklists to provide repeatable practices.