



EAST-DRD-1293CF-004
REVISION R
EFFECTIVE DATE: 07/22/2013

DRD

Enterprise Applications Service Technologies (EAST)

Release and Deployment Management (RDM) Plan

REVISION R

Approved for Release; Distribution is Unlimited

APPROVING AUTHORITY

Signature	Name, Title	Org	Date

—CHECK THE MASTER LIST—
VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE

Enterprise Applications Service Technologies DRD		
Title: Release and Deployment Management (RDM) Plan	Document No.: EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 2 of 40

DOCUMENT HISTORY LOG

Status (Baseline/ Revision/ Canceled)	Document Revision	Effective Date	Description
Baseline		07/12/2004	Original submittal
Revision	A	10/07/2004	Added Standard Operating Procedure (SOP) draft outline.
Revision	B	11/23/2004	Added Capacity Mgmt Section and Appendix items
Revision	C	12/06/2004	Updated document to reflect quarterly release items
Revision	D	12/08/2004	Updated document to reflect changes to Capacity Management section
Revision	E	01/26/2005	Incorporated changes to Release Types, refined verbiage, and added Regression Testing placeholders to Section 5, Release Strategy and Scheduling
Revision	F	02/02/2005	Updated FY05 Release Schedule in Appendix, added a Technical Infrastructure reference section (STIIP) to Section 5
Revision	G	02/09/2005	Added an Appendix for Application-specific Release criteria.
Revision	H	04/26/2005	Added sections on regression testing for each release type, corrected typos, moved sections 5.10 and 5.11 to 6.8 and 6.9 respectively, and added acronyms
Revision	I	05/03/2005	Incorporated feedback comments from Integrated Financial Management Program (IFMP) Executive review on 5/2/05
Revision	J	05/05/2005	Integrated changes to capacity management section
Revision	K	05/05/2005	Document Baseline
Revision	L	05/01/2006	Updated IFMP references to NEACC, added wording on "Freeze" periods and bReady verbiage
Revision	M	06/10/2008	Document Re-baseline
Revision	N	04/17/2009	Out-of-Cycle Update to bring document into conformance with MSFC documentation regulations
Revision	O	11/25/2009	Document rework. Replaces the NEACC Configuration Management Plan.
Revision	P	02/11/2011	Document rework. Replaces NEACC Unified NASA Information Technology Services (UNITeS)

—CHECK THE MASTER LIST—
VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE

Enterprise Applications Service Technologies DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 3 of 40

			Enterprise Release Management Plan.
Revision	Q	02/11/2012	Document rework. Annual Review. Updated to reflect replacement of RRB with the Cross-Organizational Review (CORG).
Revision	R	07/22/2013	Document rework. Annual Review. Updated to include Production Release Date (PRD).

—CHECK THE MASTER LIST—
VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE

Enterprise Applications Service Technologies		
DRD		
Title: Release and Deployment Management (RDM) Plan	Document No.: EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 4 of 40

TABLE OF CONTENTS

- 1.0 INTRODUCTION..... 6**
 - 1.1 PURPOSE6
 - 1.2 APPLICABILITY.....7
 - 1.3 APPLICABLE DOCUMENTS.....7
 - 1.4 REFERENCES.....8
 - 1.5 DEFINITIONS.....8
 - 1.6 ACRONYMS/ABBREVIATIONS8
- 2.0 ROLES AND RESPONSIBILITIES..... 10**
- 3.0 GOALS AND OBJECTIVES..... 12**
- 4.0 SCOPE 14**
- 5.0 SOURCES OF CONFIGURATION CHANGES 15**
 - 5.1 USER REQUESTS.....15
 - 5.2 IT OPERATIONS CHANGES.....16
 - 5.3 VENDOR.....16
- 6.0 RELEASE STRATEGY AND SCHEDULING 16**
 - 6.1 CRITERIA.....17
 - 6.2 RELEASE PACKAGING STRATEGY17
 - 6.3 MAJOR RELEASES18
 - 1.1.1 *Major Release Integration Testing Requirements*20
 - 6.4 MONTHLY RELEASES21
 - 1.1.2 *Monthly Testing Requirements*.....22
 - 6.5 WEEKLY RELEASES.....23
 - 6.6 EMERGENCY RELEASES24
 - 6.7 RELEASE SCHEDULING25
 - 6.8 NON-RELEASE CONFIGURATION & CONTENT CHANGES25
- 7.0 RDM PROCESS AND PROCEDURES 25**
 - 7.1 TRIAGE, ASSESSMENT, APPROVAL AND BACKLOG PRIORITIZATION26
 - 7.2 SPRINT BACKLOG AND SPRINT RELEASE PACKAGING AND CROSS-PRIORITIZATION26
 - 7.3 PREPARE FOR THE RELEASE BUILD AND TEST27
 - 7.4 BUILD AND TEST RELEASE28
 - 7.5 CONDUCT RELEASE DEPLOYMENT REHEARSAL AND PILOT.....29
 - 7.6 PLAN AND PREPARE FOR DEPLOYMENT.....30
 - 7.7 DEPLOY RELEASE.....30
 - 7.8 REVIEW AND CLOSE RELEASE DEPLOYMENT.....31
- 8.0 NEACC GOVERNANCE 31**
- 9.0 PERFORMANCE MEASURES AND ONGOING IMPROVEMENT 32**
- 10.0 RELATIONSHIP TOUCHPOINTS 32**
 - 10.1 RELATIONSHIP AREAS33

—CHECK THE MASTER LIST—
VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE

Enterprise Applications Service Technologies		
DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 5 of 40

11.0 RECORDS 35

APPENDIX A: EXAMPLE CONSOLIDATED RELEASE SCHEDULE 37

APPENDIX B: EXAMPLE MID-YEAR MAJOR RELEASE SCHEDULE..... 38

APPENDIX C: EXAMPLE FISCAL YEAR-END MAJOR RELEASE SCHEDULE 39

APPENDIX D: POINTS OF CONTACT 40

LIST OF FIGURES

Figure 1 – RDM Ongoing Lifecycle Phases 13

Figure 2 – Release and Deployment Management Components 15

Figure 3 – Major Release Timeline Guide..... 20

Figure 4 – Monthly Release Timeline Guide..... 22

Figure 5 – MRB Process Timeline Guide..... 24

Figure 6 – Release and Deployment Management Relationships 32

Figure 7 – Consolidated Release Schedule 37

Figure 8 – Mid-Year Major Release Schedule 38

Figure 9 – Fiscal Year-End Major Release Schedule 39

LIST OF TABLES

Table 1 – Definitions 8

Table 2 – Acronyms and Abbreviations 8

Table 3 – Roles and Responsibilities 10

Table 4 – Release Categories 17

Table 5 – Recommended Release Schedule 25

Table 6 – Records Applicable to This Document 35

Table 7 – Points of Contact..... 40

—CHECK THE MASTER LIST—
 VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE

Enterprise Applications Service Technologies		
DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 6 of 40

1.0 INTRODUCTION

The NEACC Release and Deployment Management (RDM) Plan seeks to ensure a balanced and logical approach to managing the lifecycle of software and business process releases across the NEACC Enterprise. More specifically, this Plan addresses dependencies amongst and between many of the critical areas, both direct and indirect, in the software release and maintenance lifecycle.

The NEACC’s establishment of an effective, repeatable, and successful process approach to RDM will aid in the management of ongoing production support operations. Adequate measures for additional workload will settle into place – an inherent part of application support responsibilities associated with new initiatives (i.e., e-Government initiatives, Office of Chief Information Officer (OCIO) transitions, etc.).

The NEACC RDM’s goal is to protect the integrity of the production environment, manage risks associated with a release, provide for an integrated view across Lines of Business (LOB), and ensure changes are addressed as efficiently as possible; thereby, reducing deployment costs, meeting the customer’s demands, and increasing customer satisfaction.

NEACC’s strategy is to plan into the future; thereby allowing for sufficient development and testing time for ongoing production support and future initiatives. The RDM alignment of distinct functional and technical processes improves the efficiency of incremental and milestone releases, in turn yielding an environment where organizational priorities can be better managed and scarce resources can be better utilized.

Specifically, NEACC RDM seeks to integrate key dependency areas across the following disciplines with unique and heterogeneous processes:

- Application Landscape Management
- Technical Infrastructure Management
- Business Readiness (BR)
- Testing Strategy
- Software Release Strategy
- Ongoing System Maintenance
- Ongoing Production Support

1.1 Purpose

The purpose of the NEACC RDM Plan is to describe the approach for managing release packages and their deployment into production and establishing effective use of the NEACC-provided services. This document lays the foundation for NEACC’s production support and new initiative portfolio.

Enterprise Applications Service Technologies		
DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 7 of 40

This plan addresses the scope of RDM, sets forth the goals and objectives of NASA’s NEACC release efforts, defines the various types of releases, addresses roles and responsibilities, and investigates performance management and ongoing improvement opportunities. Governance outline details related to the software and business process changes are contained here. This plan provides a framework for the execution of release management in an organized and logical fashion.

1.2 Applicability

This RDM Plan applies to all parties associated or involved with the planning and execution of releases related to ongoing maintenance and production support activities as well as future initiatives. The RDM Plan’s intended audience is:

- NASA Senior Management
- NASA Program Office
- NASA Enterprise Application Competency Center Management
- Business Systems Management Board (BSMB)
- Information Technology Management Board (ITMB)
- Enterprise Applications Service Board (EASB)
- Agency Business Process Leads (ABPLs)
- Agency Business Process Owners
- Change Control Board (CCB) (Specific to LOB)
- Functional Control Board (FCB) (Specific to LOB)
- Steering Committee (Specific to LOB / Project)
- Center Business Process Leads (CBPLs)
- Center Business Intelligence Reporting Leads
- New Initiative Stakeholders
- NEACC Product Delivery Managers
- NEACC Product Leads
- NEACC LOB Management Team
- NEACC Service Delivery Management Team
- LOB Integrated Product Team (IPT)s
- NSSC Enterprise Service Desk
- Other I3P Contractors, including NEACC Computing Services
- NASA Information Support Center (NISC)

In support of fostering a strong working relationship between the parties identified above, the RDM Plan shall be highly visible to all NEACC stakeholders.

1.3 Applicable Documents

- EAST-DRD-1293MA-009 NEACC Operations Guide

—CHECK THE MASTER LIST—
 VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE

Enterprise Applications Service Technologies		
DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 8 of 40

- NEACC-FMS-PROC-OP-006, Preparation for MRB Production Release Packaging
- IS01-CC-CHRT-OPS-002, Functional Control Board Charter
- IS01-CC-CHRT-OPS-003, Cross-Organizational Review (CORE) Charter
- EAST-DRD-1293MA-007, Application Point Capacity Management (APCM) Plan
- IS01-NEACC-BW-PROC-SEC-001, SAP R/3/Business Warehouse (BW) Account
- IS01-CC-SEO-PROC-OP-002, Incident Escalation Procedure
- EAST-DRD-1293QE-002, NEACC Software Engineering Quality Plan (SEQP) Plan
- IS01-NEACC-CF-PROC-SEC-001, NEACC Segregation of Duties
- IS01-NEACC-PLAN-SEC-001, NEACC IT Security Contingency Plan
- EAST-DRD-1293CF-003, Service Asset and Configuration Management (SACM) Plan
- NEACC-FMS-PROC-OPS-004, NEACC Root Cause Analysis Procedure
- NEACC-FMS-PROC-OPS-005, NEACC Service Restoration Team (SRT) Procedure

1.4 References

N/A

1.5 Definitions

Table 1 – Definitions

Term	Definition
Major Release	A grouping of major application enhancement/upgrade functionality to be implemented at one time into production, typically at the beginning of a fiscal year (Release X.1) and mid-year (Release X.2).
Release	A grouping of functionality set for implementation into Production at one time.
Service Requests (SR)	A record in the NEACC change tracking system that documents a problem, issue or change request for an NEACC application.

1.6 Acronyms/Abbreviations

Table 2 – Acronyms and Abbreviations

Acronym	Description
ABPL	Agency Business Process Leads
ACA	Associate Contractor Agreement
BI	Business Intelligence
BR	Business Readiness
BSMB	Business Systems Management Board
CBPL	Center Business Process Leads
CCB	Change Control Board
CMDB	Configuration Management Database

—CHECK THE MASTER LIST—
 VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE

Enterprise Applications Service Technologies DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 9 of 40

Acronym	Description
CORe	Cross-Organizational Review
COTS	Commercial Off The Shelf
EASB	Enterprise Applications Service Boards
FCB	Functional Control Board
FMS	Factory Management Support
Func/Tech	Functional/Technical
FY	Fiscal Year
GOTS	Government Off the Shelf
HCW	Human Capital & Workforce
ICAM	Identity Credentials and Access Management
IPT	Integrated Product Team
IT	Information Technology
ITC	Integration Test Cycle
ITMB	Information Technology Management Board
LAN	Local Area Network
LOB	Line of Business
LOB Engineer	Line of Business Engineer
LOB LFA	Line of Business Lead Functional Architect
MRB	Migration Review Board
NEACC	NASA Enterprise Application Competency Center
OCFO	Office of Chief Financial Officer
OCIO	Office of Chief Information Officer
PII	Personally Identifiable Information
QA	Quality Assurance
RDM	Release and Deployment Management
RTC	Release Test Cycle
SAP	System Application Product
SBU	Sensitive But Unclassified
SLA	Service Level Agreement
SLM	Service Level Management
SOP	Standard Operating Procedure
SR	Service Request
UNITEs	Unified NASA Information Technology Services
WAN	Wide Area Network

—CHECK THE MASTER LIST—
VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE

2.0 ROLES AND RESPONSIBILITIES

This section identifies both the roles and responsibilities associated with most NEACC release efforts.

Table 3 – Roles and Responsibilities

Role	Responsibility
Business Systems Management Board (BSMB)	The BSMB shall: <ul style="list-style-type: none"> • Provide Agency Information Technology (IT) governance
Information Technology Management Board (ITMB)	The ITMB shall: <ul style="list-style-type: none"> • Provide Agency IT governance
Enterprise Applications Service Board (EASB)	The EASB shall: <ul style="list-style-type: none"> • Provide Agency IT governance
NEACC Internal Governance Board	The NEACC Internal Governance Board shall: <ul style="list-style-type: none"> • Define and assess new initiatives and set the priority for internal NEACC initiatives • Maintain a prioritized NEACC Strategic Roadmap across LOBs covering internal high priority initiatives
NEACC Management	The NEACC Management shall: <ul style="list-style-type: none"> • Assist in the cross-prioritization of requirements as needed to support the LOBs and CORE • Approve release schedules, including changes to release scope
Agency Business Process Leads (ABPLs)	The ABPLs shall: <ul style="list-style-type: none"> • Identify and prioritize LOB requirements • Chair FCBs to represent the needs of the LOB • Prioritize work from an Agency perspective through collaborative efforts with all ABPLs
Center Business Process Leads (CBPLs)	The CBPLs shall: <ul style="list-style-type: none"> • Serve as the primary interface to the NEACC from their Center • Validate their Center’s proposed process changes to application functionality before the proposed change is submitted to the NEACC
Functional Control	The FCB / CCB shall:

Enterprise Applications Service Technologies		
DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 11 of 40

Role	Responsibility
Board (FCB)/Change Control Board (CCB)	<ul style="list-style-type: none"> • Manage and maintain the full list of enhancement change request SRs (i.e., product backlog) associated with its functional area (e.g., Financial, Human Capital and Workforce (HCW), Logistics, Procurement, and Identity Credentials and Access Management (ICAM)) • Evaluate and prioritize enhancement CR SRs, and recommend priorities for upcoming releases
Cross-Organizational Review (CORE)	<p>The CORE shall:</p> <ul style="list-style-type: none"> • Review cross-organizational business, technical and operational priorities (including external and internal strategic roadmap initiatives) • Identify cross-LOB/delivery area capacity constraints/priority conflicts, and provide guidance/seek resolution of those conflicts and/or escalate if necessary, following defined escalation process
Migration Review Board (MRB)	<p>The MRB shall:</p> <ul style="list-style-type: none"> • Review SRs and associated transports / migrations to ensure transport dependencies are documented • Approve migrations to the staging environment and Production
Factory Management Support (FMS) Team	<p>The FMS Team shall:</p> <ul style="list-style-type: none"> • Develop an Integrated Release plan • Work with QA Team to define an integrated testing approach • Develop rules of engagement • Coordinate resources • Identify test facilities • Maintain build list • Report release status
NEACC Product Lead	<p>The NEACC Product Lead shall:</p> <ul style="list-style-type: none"> • Represent ABPLS, FCBs, CCBs or Strategic Roadmap for the NEACC • Provide the NASA NEACC Product Delivery Managers and LOB Managers with their individual prioritized backlog • Review open defects and documented workarounds with the user community
NEACC Product Delivery Manager	<p>The PDM shall:</p>

—CHECK THE MASTER LIST—
 VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE

Enterprise Applications Service Technologies		
DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 12 of 40

Role	Responsibility
(PDM)	<ul style="list-style-type: none"> • Examine the prioritized product backlog and recommends content for each sprint backlog based on defined criteria • Approve scope of monthly release • Review open defects and documented workarounds with the user community
Line of Business (LOB) Manager	<p>The LOB Manager shall:</p> <ul style="list-style-type: none"> • Examine the prioritized Product Backlog and recommends content for each Sprint Backlog and Sprint Release Package based on defined criteria • Identify and confirms scope of monthly and weekly Releases and approves changes to defined scope
Line of Business (LOB) IPTs	<p>The LOB IPTs shall:</p> <ul style="list-style-type: none"> • Assess and prioritize SRs • Determine capacity • Complete all design, development, build, testing and BR tasks associated with the release • Support release deployment and stabilization • Collect and distribute lessons learned.
Business Readiness (BR) Team	<p>The BR Team shall:</p> <ul style="list-style-type: none"> • Ensure that communications mitigate BR impacts of the release components and ensure job aides / user procedures are updated / created.
Quality Assurance (QA) Team	<p>The QA Team shall:</p> <ul style="list-style-type: none"> • Work with FMS Team to define an integrated testing approach • Package test sets in accordance to the release schedule, assign testers, manage defects, and ensure requirements are mapped/covered as part of the testing.

3.0 GOALS AND OBJECTIVES

The primary goal of the RDM Plan is to define a RDM strategy that aligns NEACC resources to account for release events, both foreseeable and for less predictable events. Further, it lays the foundation for a repeatable process, which supports operational stability and predictability of NEACC system components with respect to ongoing release management initiatives without affecting NEACC levels of service.

—CHECK THE MASTER LIST—
 VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE

Enterprise Applications Service Technologies		
DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 13 of 40

The specific goals of NEACC RDM are to:

- Manage the process for controlling/coordinating the release of business process/software changes needed to maintain/improve the IT services provided on the EAST contract.
- Define/agree on release and deployment plans with customers and stakeholders.
- Maintain the integrity of a release package and its constituent components throughout the build and deployment activities and recorded accurately in the application specific configuration management tool.
- Enable all release and deployment packages for tracking, installation, testing, verification, and/or uninstallation, or removed if appropriate.
- Manage the customer and stakeholder changes during release and deployment activities.

Figure 1 represents the four major lifecycle phases in defining an Enterprise Release Management or RDM Plan. **Note:** this document serves as the baseline point of reference for the RDM ongoing lifecycle phases in that it lays the groundwork for an approach that is specific to the needs of the NEACC:

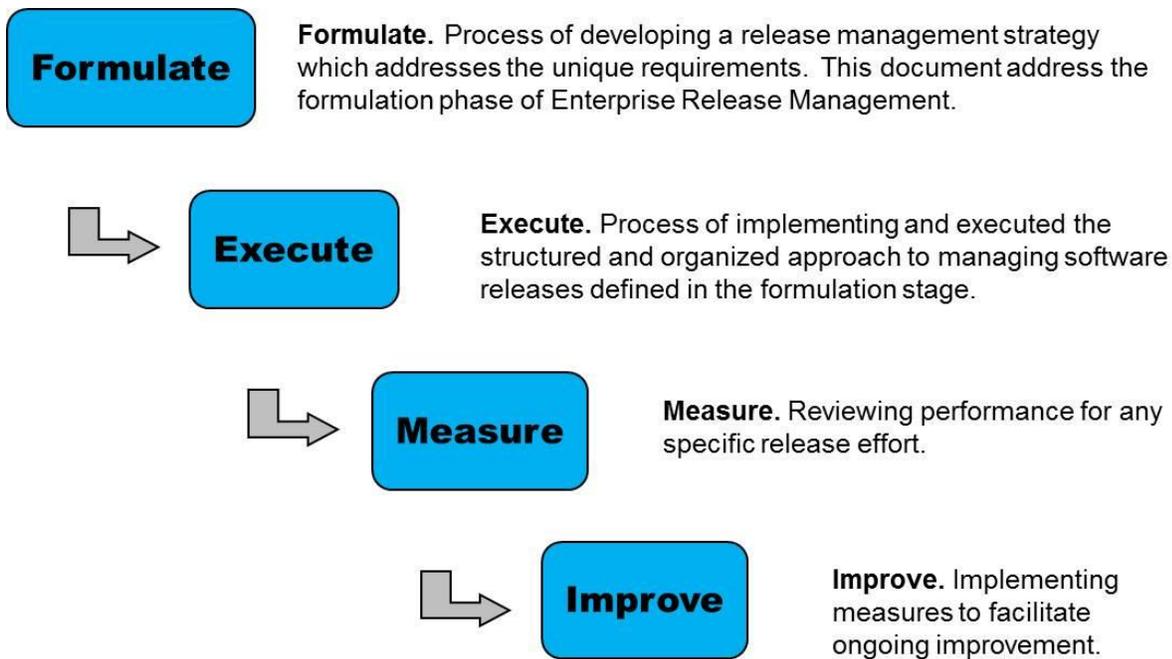


Figure 1 – RDM Ongoing Lifecycle Phases

The NEACC currently supports multiple production systems and pre-production initiatives. And considering that the great majority of NASA employees will, in some way, directly interact with or be affected by one or more of these systems, it is of critical importance to ensure that an effective, accurate, and timely approach to release management be implemented. It is widely accepted that changes to NEACC-managed systems will be occurring repeatedly on an

Enterprise Applications Service Technologies		
DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 14 of 40

incremental basis, so a plan that addresses enterprise concerns is necessary. Release package deployments are not permitted or implemented unless done through the formal process described in this document.

The RDM objectives are to:

- Develop a procedure based on a repeatable framework designed specifically for the NEACC
- Consolidate processes, procedures and solutions to support current NEACC application functionality and future initiatives
- Organize the scheduling of release deployment activities
- Identify links between initiatives to best serve all of our customers
- Increase awareness/knowledge between teams
- Reduce emergency changes
- Improve end user satisfaction
- Provide employees with the tools and the information that they need to do their jobs
- Ensure user communities stay abreast of upcoming changes / impacts

4.0 SCOPE

The scope addresses the NEACC Release Strategy and provides a framework for the execution of release management in an organized and logical fashion. This document addresses the critical areas of RDM, which the NEACC will need to address in order to be successful in managing the ongoing release requirements needed to support NEACC-managed systems. **Instead of addressing the scope of the competency-specific service delivery areas (e.g., BR, QA, etc), this plan gives a high-level reference/brief description of many relationship touch points that play key roles in the release management function.**

The NEACC RDM Plan includes the processes for:

- Performing RDM, in coordination and collaboration with Government, I3P Contractors, and other contractors.
- Notifying the Enterprise Service Desk regarding release and deployment activities.
- Building, testing, piloting (if required), packaging of installed releases and verifications.
- Planning for pass/fail situations and executing a back-out plan (if required).
- Verifying deployment, stabilizing service(s), and closing deployment.
- Ensuring that a release package and its components are maintained and recorded in the application-specific configuration management tool.

The four high-level components that comprise an effective RDM strategy:

1. Release Strategy (software updates, patches and business process changes)
2. Business Readiness (communication and training)
3. Testing Strategy (test formulation, planning, and implementation)

Enterprise Applications Service Technologies DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 15 of 40

4. Landscape Management (application and infrastructure)

Note: that an RDM plan needs to incorporate processes from all four of these areas and ensure that they work together toward the common goals of the release. Of these four areas, the scope of the RDM Plan addresses the *Release Strategy*, as outlined below in Figure 2. The other three areas are addressed in other NEACC processes and procedures.

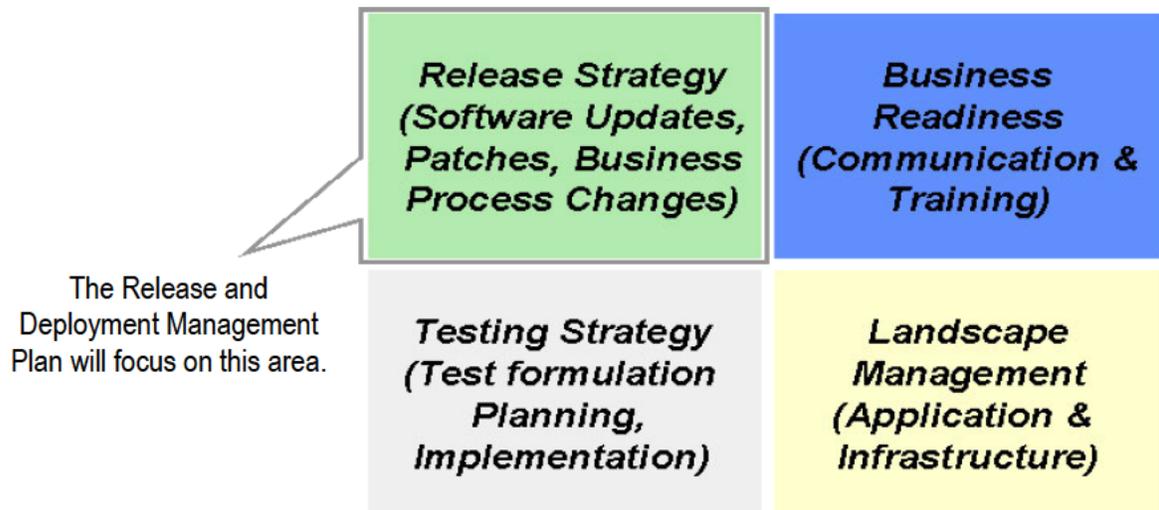


Figure 2 – Release and Deployment Management Components

While the other three areas noted above are extremely critical to the NEACC mission, this document does not address, in detail, the level of importance that each of these areas holds with respect to the NEACC’s mission.

5.0 SOURCES OF CONFIGURATION CHANGES

The three sources of configuration change that the RDM process manages are user requests, IT operations changes, and vendor changes. The changes that are an exception to the RDM process, like portal content changes, are documented in the MRB Exception List.

5.1 User Requests

By far, this category of change is the most pervasive. It is also the most complex, since the user community for each NEACC application is significantly different. User requests for change originate with individual users; however, those logged by Center users shall be reviewed by the CBPL (or acting CBPL), and in some cases the ABPL, to ensure that the proposed change meets Agency functionality and does not generate Intra-Center conflicts.

The CBPL shall serve as the primary interface to the NEACC from their Center and shall be the only authorized submitter of change requests (CRs) from the Center to the NEACC. The

Enterprise Applications Service Technologies		
DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 16 of 40

essential operational premise of this aspect of the RDM process is that each CBPL shall validate their Center’s proposed process changes to application functionality before the proposed change is submitted to the NEACC.

5.2 IT Operations Changes

The essential operating premise of this aspect of the NEACC RDM process is that potentially any IT operations changes to hardware, software or operating procedures that is initiated by any of the owners of the components may adversely affect the operating functionality of multiple NEACC applications. Therefore, end-to-end infrastructure changes made by any of the NEACC stakeholders shall be tightly coordinated with the NEACC.

Infrastructure includes all system components on which the NEACC applications operate: clients, servers, storage devices, Local Area Networks (LANs), Wide Area Networks (WANs), Control Centers, the software that supports their operation and the procedures that describe operational processes. These sources of potential change are also very complex, since there are multiple owners of infrastructure components that support the NEACC and many of the infrastructure components are highly integrated. The NEACC directly controls some of the infrastructure components. Each Center or Agency infrastructure service provider, including other I3P Contractors, shall be responsible for the management of their respective NEACC related IT infrastructure components and platforms.

The NEACC has established Associate Contractor Agreements (ACAs) with its I3P Contractor Partners to ensure continuity of service and provide transparency to the NASA end-users in accordance with defined Service Level Agreements (SLAs). SLAs serve as an agreement between the NEACC and its customers who use the NEACC-managed applications. This SLA defines the roles and responsibilities for the services to be provided, as well as service level commitments and associated performance standards.

5.3 Vendor

Many of the NEACC applications are Commercial-Off-The-Shelf (COTS) or Government-Off-The-Shelf (GOTS) products supported by external vendors or service providers. Although the NEACC does not oversee the vendor’s or service provider’s internal configuration management processes (such as documentation, development, unit testing, etc.) for changes they make to their vendor software, the RDM process does ensure those changes are fully incorporated into the NEACC’s RDM process as SRs once delivered to the NEACC for implementation.

6.0 RELEASE STRATEGY AND SCHEDULING

The foundation of an effective RDM plan is the classification and implementation schedule of ongoing NEACC releases. This section addresses the four major categories of NEACC releases (Major, Monthly, Weekly and Emergency Releases), and identifies naming conventions, scope definition dependencies, and change control approval levels associated with each release.

Enterprise Applications Service Technologies		
DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 17 of 40

The LOB IPTs group SRs into functional sprint release packages to allow for a more consistent and effective testing approach, while localizing the business area impact of the specific release. The integration complexity of the business/technical requirements, resource availability, and business criticality determines the scope of the release.

6.1 Criteria

LOB Managers and LOB IPTs shall use the following criteria to assess inclusion of a SR in a sprint release package:

- Urgency for functionality to be provided to the user community based on the FCB, CCB or Technical Roadmap priority
- Integration complexity of the change (i.e., standalone functionality versus impacting multiple areas thus requiring integrated testing)
- Possible risk to business continuity if compatibility errors were to be found
- Amount of work required to implement a particular change
- Resources available for designing, building, testing, distributing, implementing, and communicating the change
- Completeness of the functional business process requirements to make an informed and objective decision
- Complexity of the change to the technical infrastructure

6.2 Release Packaging Strategy

The NEACC Management Team shall review and approve the schedules for major releases, and any deviations thereof. The LOB Managers and IPTs assign LOB sprint release packages by release category. Completed LOB sprint release packages for a given release category are then integrated across the NEACC into a single production release package and scheduled for release based upon the predefined release schedule.

Based on how the LOBs choose to package releases, an LOB may have multiple sprint release packages for various release categories active at once and may have multiple sprint release packages included in a given production release package. These sprint release packages for a given release category can roll into a more stringent category of production release package, but not vice versa. Table 4 outlines the four major release categories and associated approval levels required for each.

Table 4 – Release Categories

Release Type	Description
Major	Major releases target major application enhancements / upgrades, which have significant technical and/or functional impact on the production system and require integrated testing.
Monthly	Monthly releases target minor application enhancements / upgrades which may have a significant technical and/or functional impact on the production system

Enterprise Applications Service Technologies		
DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 18 of 40

Release Type	Description
	and may require integrated testing or major application enhancements / upgrades which may have a significant technical and/or functional impact on the production system and do not require integrated testing.
Weekly	Weekly releases target minor application enhancements with standalone impacts, master data and break/fix changes which may have a technical and/or functional impact on the production system and do not require integrated testing.
Emergency	Emergency releases are scheduled on an “as needed” basis to account for critical system SRs where the core business functionality is unavailable / unusable for its intended purpose, large numbers of users are unable to perform their work or incorrect data is being populated resulting in material impact within the application.

During the major release cycle (and some monthly release cycles), it is common for “freezes” or controlled periods of change to be enforced prior to the production rollout. These periods 1) protect the integrity of the production system during the testing cycles of the major release, and 2) structure the availability of development and functional resources. All systems under a production freeze or within a controlled period of change shall adhere to the defined requirements. No authority shall be given to release changes to impacted applications beyond what is defined as acceptable into the production environment unless sufficient business justification exists to warrant such a change.

Changes or functionality rollouts for non-impacted applications are allowed during this time as long as no other system is impacted by the change.

The next sections explain the four release categories as described above.

6.3 Major Releases

Major releases target major application enhancements / upgrades that have significant technical and/or functional impact on the production system and require integrated testing. Major releases are scheduled as needed to support the various applications and integrated landscapes within the NEACC. The major releases for the System Application Product (SAP)/Business Intelligence (BI) integrated environment encompassing applications supporting the Financial, Procurement, Logistics and HCW LOBs typically occurs in late April to May timeframe and late September to October timeframe. Major releases can occur at any time throughout the year based on the NEACC and LOB’s specific requirements.

Major releases for the SAP/BI integrated applications, for instance, shall adhere to the following priority criteria unless a significant business justification exists which necessitates deviating from this priority hierarchy:

Enterprise Applications Service Technologies		
DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 19 of 40

- **Priority:** Major changes or new functionality that would not cause financial statement or year-end close impacts shall be reserved for the mid-year Major Release, typically occurring in the late-April to May timeframe (after second quarter financial statements are delivered). Major changes or new functionality that are required to be introduced on a fiscal year (FY) boundary shall be reserved for the year-end release, typically occurring in the late-September to October timeframe.
- **Secondary based on capacity:** Major new functionality, high and medium priorities that meet the major release criteria – a part of the backlog – and SRs with high organizational change impact.

Major releases for cross-LOB or integrated environments shall:

- Occur approximately six months apart for a given LOB or integrated environment
- Be referenced as follows: FY. Bi-Annual Period (e.g., The first major release in FY08 shall be named Release 8.1, whereas the second major release in FY08 shall be named Release 8.2)
- Name the sprint release packages according to the following convention: “LOB designator,” “Release Category” Sprint Release Package ## (e.g., the first Major Sprint Release Package for the Financial LOB would be FIN Major Sprint Release Package 01); currently the number designator has no smart coding associated with it and counts from 1 to n based on the number of releases for that particular release category
- Name the production release packages according to the following convention: Prod “Release Category” Release Package ## (e.g., the first Major Production Release Package for the NEACC would be Prod Major Release Package 01); currently the number designator has no smart coding associated with it and counts from 1 to n based on the number of releases for that particular release category
- Review and prioritize high-level / big ticket scope items via FCB / CCB approximately 8 months prior to the release date
- Release scope for high-level / big ticket items shall be baselined approximately 7 months prior to the release date
- Release scope for known items identified by CORE approximately 4 months prior to the release date
- Release content shall be locked down prior to the final Release Test Sprint, which is typically 2 months prior to the release date
- Include:
 - Complex SRs which require multiple integrated test cycles
 - SRs with high organizational impact
 - SRs with cross organizational impact
 - Patches / Service Packs
 - Application Upgrades
 - Major new functionality
 - Changes related to Infrastructure Upgrades

—CHECK THE MASTER LIST—
VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE

Enterprise Applications Service Technologies DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 20 of 40

- Other backlog SRs, as capacity allows
- Include a prepared scope that the FMS Team shall present to the various NEACC stakeholders for review and / or approval based upon each area’s governance process (i.e., Office of Chief Financial Officer (OCFO), Office of Procurement, Office of Human Capital, and OCIO).

The major release timeline in Figure 3 is a framework guideline for NEACC’s recommended major release schedule. Because business requirements are very fluid in nature, processes shall be in place to allow for flexibility where business criticality mandates a late entry into any specific release package. In addition, the FMS Team might remove other release items based on extenuating circumstances that would justify late scope changes to the release package as approved by the NEACC Management Team.

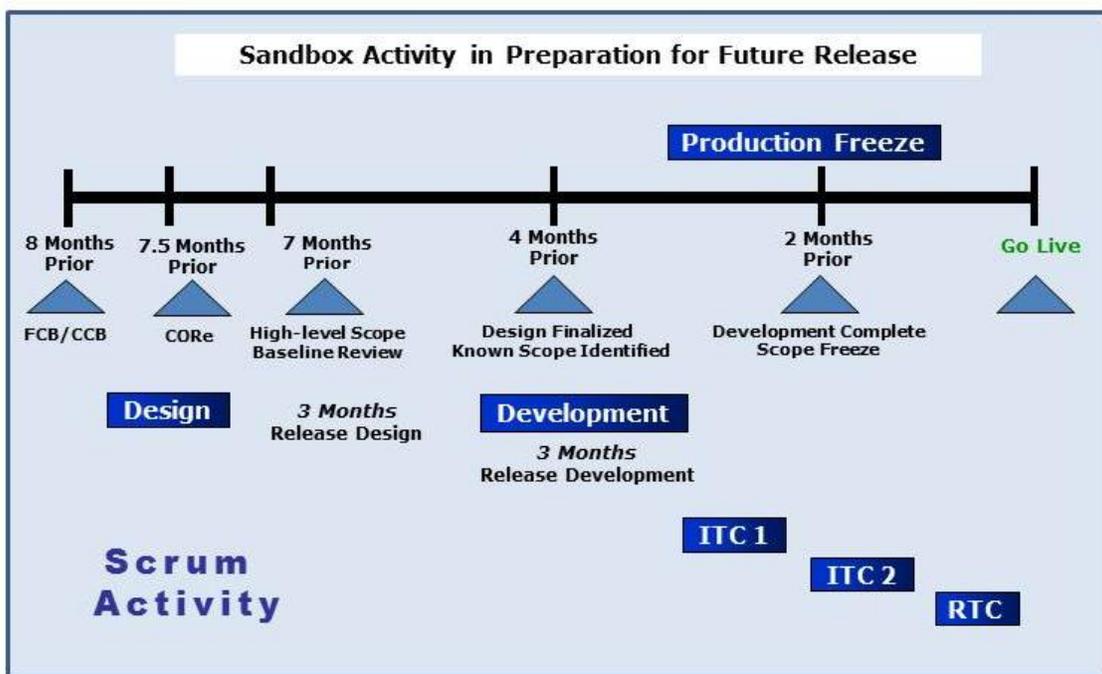


Figure 3 – Major Release Timeline Guide

1.1.1 Major Release Integration Testing Requirements

Design and development activities shall be homogenous across all release categories; that is, the approach used for design and development will remain the same, regardless of release category. In contrast, the approach used for release integration testing shall change based on the category and complexity of the release. As such, the RDM Plan calls out the different integration testing approaches associated with each release category.

Enterprise Applications Service Technologies		
DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 21 of 40

Integration testing ensures that the NEACC managed systems operate in accordance with the process design specifications for all business functions [existing or new]. This test covers business processes, system functions (standard and custom), application security, and user procedures & job aides; and also ensures that these aspects work together as an integrated whole.

The scope of integration testing for a major release will adjust as new functionality and technical and business process changes appear. The FMS Team shall review the testing scope for each release, and expand/reduce based on the complexity, extent, and reach of NEACC’s managed systems. It is also likely that additional test sets will be classified as defects and problem resolution efforts are addressed. In all cases where there is a major release scope change impacting the SAP / BW integrated environment, a complete end-to-end test of impacted functionality, as well as regression test, will be performed for all SAP / BW integrated applications.

Based on the above timeline guidance, major release integration testing can begin up to four months prior to the release rollout date with multiple passes of integration testing, each lasting several weeks in duration. As the scrum framework is incorporated across the NEACC, traditional integration testing (typically incorporating two or more formal integration and/or regression test passes) may be transformed to include integration testing as a standard component of each NEACC sprint iteration with a final release (regression testing) sprint prior to the major release deployment.

6.4 Monthly Releases

Monthly releases target minor application enhancements / upgrades, which may have a significant technical and/or functional impact on the production system and may require integrated testing.

Monthly Releases:

- Typically target the second or third Thursday of each month for monthly releases spanning across multiples LOBs, but can vary by LOB
- Based on business requirements or external stakeholder initiatives for a given application or LOB, the release may fall outside the normal monthly Cross-LOB release window (i.e., e-Government release schedules, Treasury Department-mandated changes, USA Jobs changes)
- Shall be referenced in accordance to the day of the scheduled release
- Sprint release packages adhere to a similar naming convention as major releases except for the release category designator: “LOB designator,” Monthly Sprint Release Package ##
- Production release packages adhere to a similar naming convention as major releases except for the release category designator: Prod Monthly Release Package ##
- FCB / CCB review and prioritization of enhancement CRs up to 10 weeks prior to the planned release

Enterprise Applications Service Technologies		
DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 22 of 40

- Release scope identified by LOB IPTs up to 9 weeks prior to the planned release
- Release scope confirmed up to 5 weeks prior to the planned release when testing and release coordination requirements are defined by the LOB IPTs
- Include minor application enhancements / upgrades which may require integrated testing or major application enhancements / upgrades which may have a significant technical and/or functional impact on the production system and do not require integrated testing.

The monthly release timeline in Figure 4 is a framework that serves as a guideline for NEACC’s recommended monthly release schedule. Because business requirements are very fluid in nature, processes shall be in place to allow for flexibility where business criticality mandates a late entry into any specific release package. In addition, the FMS Team might remove other release items from a release package based on extenuating circumstances, which justifies late scope changes to the release package as approved by the LOB Manager and/or NEACC Product Delivery Manager.

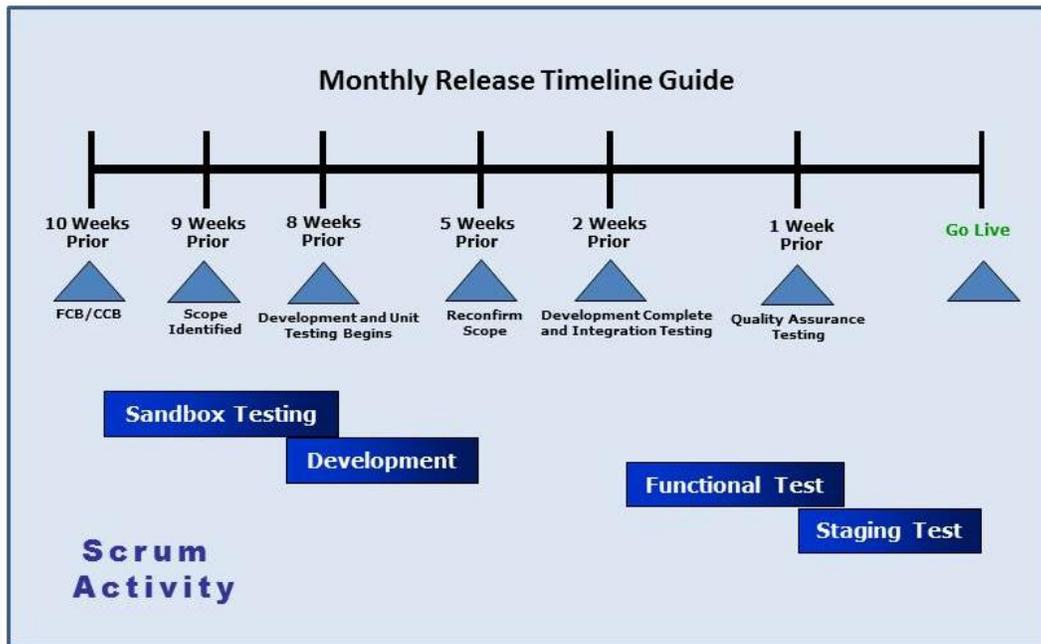


Figure 4 – Monthly Release Timeline Guide

1.1.2 Monthly Testing Requirements

The FMS Team bases testing requirements for a monthly release on the scope of the release. If a given configurable item(s) being considerably changed in the release impacts multiple applications in the NEACC integrated environment, integrated testing is required for the monthly release. Monthly release testing also involves specific SR test sets, as well as regression tests touching the impacted major/critical areas of the application(s). The monthly release integration

Enterprise Applications Service Technologies		
DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 23 of 40

testing effort normally lasts several weeks, although it is possible that the complexity of the release package could merit an extension or reduction.

If the release changes a given configurable item(s) and does not affect multiple applications in the NEACC integrated environment, integrated testing is not required for the monthly release, and the testing will be limited to specific SR test sets.

6.5 Weekly Releases

Weekly releases are targeted for minor application enhancements with standalone impacts, master data and break/fix changes which may have a technical and/or functional impact on the production system and do not require integrated testing.

Weekly releases shall:

- Occur as required, typically targeting Thursday night as the release window, but can vary by LOB based on specific timing requirements
- Be referenced in accordance to the day of the scheduled release
- Give sprint release packages a similar naming convention as major releases except for the release category designator: “LOB designator,” Weekly Sprint Release Package ##
- Ensure that the production release packages adhere to a similar naming convention as major releases except for the release category designator: Prod Weekly Release Package ##
- Include:
 - Break/fix CRs that do not require integrated testing
 - Master data changes that do not require integrated testing
 - Minor application enhancements with standalone impacts that do not require integrated testing

The MRB timeline in Figure 5 is a framework that serves as a guide for the MRB process leading up to a typical weekly release. Because business requirements are very fluid in nature, processes shall be in place to allow for flexibility where business criticality mandates a late entry into any specific release package. In addition, the FMS Team might remove other release items from a release package based on extenuating circumstances, which would justify late scope changes to the release package as approved by the LOB Manager and/or NEACC Product Delivery Manager.

Enterprise Applications Service Technologies DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 24 of 40

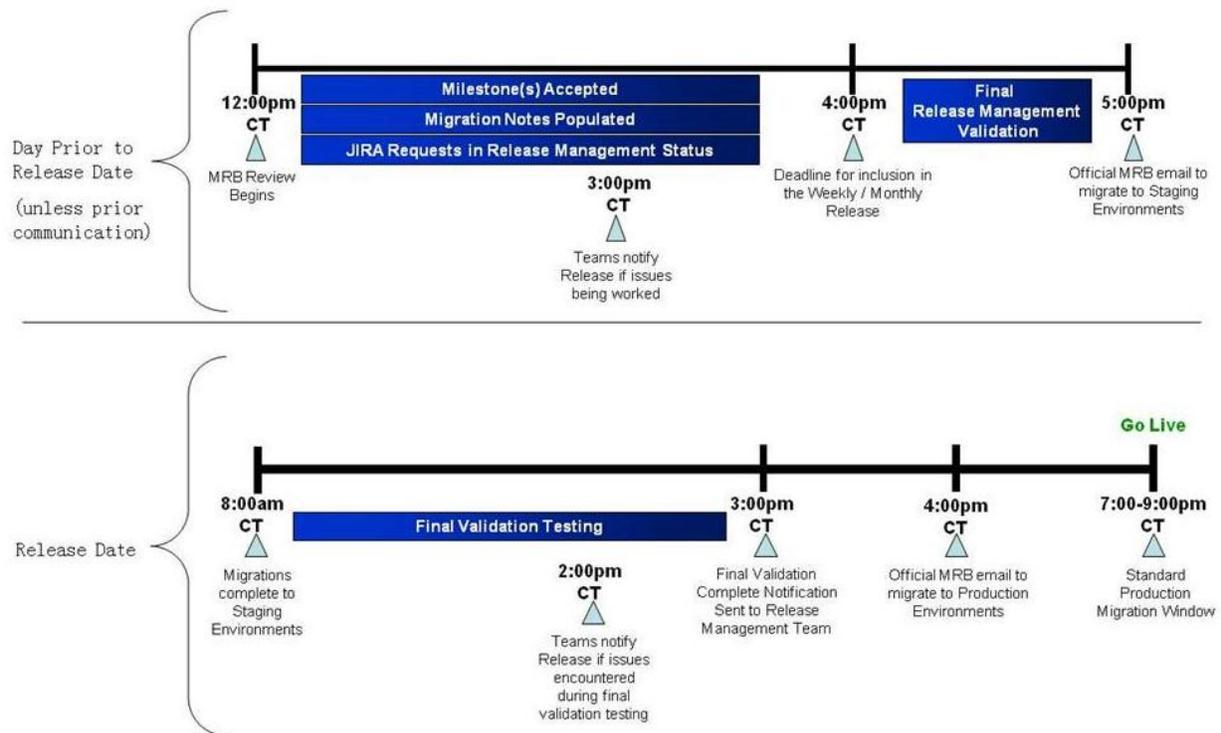


Figure 5 – MRB Process Timeline Guide

6.6 Emergency Releases

The FMS Team schedules emergency releases on an “as needed” basis to account for critical system SRs where the core business functionality is unavailable / unusable for its intended purpose, large numbers of users are unable to perform their work, or incorrect data results in material impact within the application.

Emergency Releases shall:

- Occur only as required
- Reference in accordance to the day of the emergency release
- Name sprint release packages according to a similar convention as major releases except for the release category designator: “LOB designator,” Emergency Sprint Release Package ##
- Name production release packages according to a similar naming convention as major releases except for the release category designator: Prod Emergency Release Package ##
- Requires NASA NEACC Management approval
- Include critical system SRs where:
 - The core business functionality is unavailable / unusable for its intended purpose
 - Large numbers of users are unable to perform their work

—CHECK THE MASTER LIST—
VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE

Enterprise Applications Service Technologies DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 25 of 40

- Incorrect data is being populated resulting in material impact within the application

6.7 Release Scheduling

Table 5 conveys the NEACC release strategy in the recommended release schedule to support release activities that will occur in any given calendar year:

Table 5 – Recommended Release Schedule

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Semi-Annual				X						X		
Monthly	X	X	X	X	X	X	X	X	X	X	X	X
Weekly/ Emergency	X	X	X	X	X	X	X	X	X	X	X	X

The FMS Team defines the release strategy this way to account for the release coverage requirements needed throughout the year. They can adjust it as needed to address the needs of the portfolio of applications supported by the NEACC. See examples of typical release schedules in the appendices.

6.8 Non-Release Configuration & Content Changes

Configuration and content changes that enter the production environment outside of a release cycle have to meet certain criteria. Allowance for configuration and content changes will take place outside of a standard release cycle only if:

- The configuration or content change is related only to the addition of new content for system users and does not have any direct impact to the production landscape (e.g., change will not impact production uptime or user access)
- The configuration or content change is related only to the addition of new content for system users and does not have any direct impact to systems which interface with the production landscape (e.g., change will not impact a link to an NEACC application)
- The configuration or content change has been implemented in a “production-like” environment and has been thoroughly tested

7.0 RDM PROCESS AND PROCEDURES

This standard process will govern the RDM process for the NEACC in coordination and collaboration with the NEACC’s I3P Contractor Partners. This section contains eight key areas of the end-to-end release process:

- Triage, Assessment, Approval and Backlog Prioritization
- Sprint Backlog and Sprint Release Packaging and Cross-Prioritization

—CHECK THE MASTER LIST—
VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE

Enterprise Applications Service Technologies DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 26 of 40

- Prepare for the Release Build and Test
- Build and Test Release
- Conduct Release Deployment Rehearsal and Pilot
- Plan and Prepare for Deployment
- Deploy Release
- Review and Close Release Deployment

While this document describes all elements in the release process, it is possible that other release management activities will facilitate the ongoing support of existing production applications, as well as future initiatives.

7.1 Triage, Assessment, Approval and Backlog Prioritization

The FMS Team shall log potential release items in the NEACC CR system as SRs. Sources for SRs include, but are not limited to, break / fix requests, verbal / written requests, user requested CRs, policy guidance and externally mandated initiatives. The appropriate LOB shall then triage the SR and assess it for complexity. After that, the SR shall be routed for approval to work based on the configurable item that is being impacted, following the required NASA approvals by SR Type and Service Area as denoted in the EAST-DRD-1293MA-009 NEACC Operations Guide.

The FMS Team shall present the business content of the SR to the various NEACC stakeholders for review and / or approval based upon each area’s governance (i.e., OCFO, Office of Procurement, Office of Human Capital, Office of Protective Services, OCIO, and Strategic Roadmap). Section 8 contains more details on the NEACC governance process. The FCB/CCB and/or ABPL priority shall be assigned and any implementation dependencies notated (e.g., needed prior to first quarter financial statements) as part of the approval process. The FMS Team then routes the SR to the LOB for incorporation and prioritization in the overall product backlog for that LOB.

7.2 Sprint Backlog and Sprint Release Packaging and Cross-Prioritization

The NEACC shall manage a set of available capacity for the various LOBs, given the anticipated demand. The NEACC management considers this allocation when planning a specific LOB’s sprint backlog and sprint release package(s). More information about the NEACC capacity management processes, procedures and tools, including the concept of breaking SRs into milestones, is contained in the EAST Application Point Capacity Management (APCM) Plan DRD (see EAST-DRD-1293MA-007, Application Point Capacity Management (APCM) Plan.

The product leads from each NEACC organizational area (representing ABPLS, FCBs, CCBs or Strategic Roadmap) shall provide the NASA NEACC Product Delivery Managers and LOB Managers with their individual prioritized backlog. Each LOB Manager, in coordination with the NASA NEACC Product Delivery Manager as appropriate, shall examine the prioritized product backlog and recommend content for each Sprint Backlog and associated sprint release package(s) based on the following criteria:

Enterprise Applications Service Technologies		
DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 27 of 40

- Business Criticality / SR Priority
- Integration Complexity
- Application Point Bands
- Logical Units of Work
- Available Capacity

Based on the above criteria and the release category guidelines, the LOBs can finalize the Sprint Backlog and proposed Sprint Release Package scope, providing feedback to the NEACC Product Leads, the ABPL Product Owners, and the FCB/CCB/Strategic Roadmap chairs. Additionally, a Production Release Date (PRD) will be provided for SRs requiring production migration and where external stakeholders have vested interest. The FMS Team assigns a PRD when work on the SR begins, reflecting the SR’s planned production migration date, and it can be changed as needed by the LOB manager or their designee.

CORE supports the NEACC RDM process and serves as a set of cross-organizational (Product Demand Management) representatives that assist in the cross-prioritization and approval of major release content. The CORE detailed roles, responsibilities, meeting structure, membership structure, and exceptions are contained in the CORE Charter (IS01-CC-CHRT-OPS-003_Cross-Organizational Review Charter). From a release perspective, CORE will ensure that the major release content determination is based on a cross-organizational view that examines proposed changes from a broad, rather than a stove-piped, perspective. The integrated testing requirements and timeline for the major releases are verified through the identification of impacted teams.

As the FMS Team assigns SRs/Milestones for high-level/big ticket scope items to a major release, they will add the information to a scope document for that release. The FMS Team shall manage the scope and discuss it in the Operational Support teleconference, and communicate / coordinate any changes to this scope to all involved. Relevant parties are the NEACC’s I3P Contractor Partners and the NSSC Enterprise Service Desk, which stay in touch with the FMS Team via daily status calls and additional as-needed meeting. A member of the FMS Team shall ensure the associated SRs/Milestones are associated with the major release in the EAST APCMS tool for ease of reporting and categorizing the planned content of the release.

7.3 Prepare for the Release Build and Test

Once the high-level scope content for a Major release is validated by CORE, and integration testing requirements are determined, a member of the FMS Team shall review all SRs/Milestones identified in the high-level scope to determine their deployment requirements and aggregate those into an integrated release deployment plan as needed. For SRs/milestones assigned to a Monthly or Major Release, the LOB IPTs will engage the FMS Team as needed to identify deployment requirements and aggregate those into an integrated release deployment plan. The integrated deployment plan will include a cutover plan and schedule that details all the tasks required to stage, confirm, and deploy the release to production and note all dependencies between tasks, as well as owners and timings of tasks. Tasks identified for the NEACC’s I3P

Enterprise Applications Service Technologies		
DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 28 of 40

Contractor Partners, or other Contractors, will be included and those tasks and schedule coordinated with the respective parties.

The FMS Team will support the RDM process by developing and maintaining an integrated landscape view for each release planned across the NEACC landscape for all platforms and applications for each LOB. The RDM process will make use of a promote-to-production landscape utilizing development, test and/or staging, and production environments for all platforms and applications. The Functional/Technical (Func/Tech) Forum will continue to be a tool for awareness and cross-NEACC discussion. The integrated landscape view is documented as described in DRD 1293MA-006 for the Integrated Landscape View Report and be periodically reviewed by the Functional/Technical Forum.

7.4 Build and Test Release

The FMS Team will assign SRs to the LOB IPT after defining the sprint backlog and proposed sprint release packages. The LOB IPTs will utilize the scrum framework to complete all work. When the configuration or development effort is complete, the changes shall be migrated to the initial test environment by the defined team points of contact generally within the ATOM service delivery area. Also for larger releases, the FMS Team shall be responsible for creating and maintaining the build list that keeps track of changes migrating to the various test environments as well as production.

The testing results will vary depending on the scope of the release (standalone changes versus integrated). Two passes of functional testing shall typically be required for monthly, weekly and emergency releases: SR functional testing and production release package verification. When the initial testing and all other required work for a given LOB sprint release package is completed, the FMS Team will help the LOB IPTs review the associated sprint release package and associated transports. This will ensure documentation of the transport dependencies and pertinent migration notes, as well as any other work or approval requirements prior to production migration are met (reference to the third approval column of EAST-DRD-1293MA-009 NEACC Operations Guide, Appendix A where NASA approval is required prior to production migration).

The LOB IPTs will then notify the FMS Team of the accepted sprint release package. The team will act as chairs of the MRB, consolidating the various LOB sprint release packages into the appropriate production release packages for final MRB validation and assign the release dates to the SRs/Milestones. After MRB review, the production release package will be approved for migration to the staging environment (when available) by the ATOM service delivery area; depending on the change, other service delivery areas may have migration related tasks. The SRs/Milestones that make up the production release package are then tested as part of a final validation; additional integration or regression tests may be requested depending on the release category and the content of the release. This final validation is often referred to as a Release Test Sprint under the scrum framework. Once the final validation effort is complete and the production transport package is verified, MRB approves the package to be migrated to the

Enterprise Applications Service Technologies		
DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 29 of 40

various production environments by the ATOM service delivery team or other appropriate resource.

The FMS Team will work with the QA Team for a major release to identify the integrated testing approach for the release. Items defined may include:

- Level of integration testing required throughout the sprint iterations that span the release
- Number integration test passes or release test sprints that may be included in the release and deployment schedule
- Entrance/exit criteria for integration testing
- Various checkpoints for the integration testing
- Listing of clients where the testing will occur
- Defect definitions and other pertinent information surrounding the required integrated testing.

The FMS Team works also with the appropriate technical teams during a major release to create a Rules of Engagement document that outlines the landscape required to support the release and defines required freezes or controlled periods of change and associated procedures for production support. Both the testing approach and landscape strategy are provided to NASA NEACC Management for review and approval.

To parallel the development and testing effort prior to release to the final staging environment, the FMS and LOB IPTs (BR resources) shall work to ensure that any communication or training activities get scheduled appropriately in accordance with the changes that will occur as part of the release. If a release includes business process changes, the LOB IPTs shall be responsible for providing new or updated user procedures and job aids.

The LOB IPTs will determine the appropriate level of user communications for a major release, including communication events. These communication events may include (but are not limited to) items such as weekly bulletins and workshops to define the release impacts. Depending upon the scope of the release, a detailed training plan may also be required.

7.5 Conduct Release Deployment Rehearsal and Pilot

As noted previously based on the scope content of the release, the FMS Team shall create an integrated deployment plan that captures important milestones and work items that need to occur to support the successful implementation of a specific release. The integrated release plan will include detailed tasks for all parties involved in the release (i.e., Agency, Centers, NEACC teams (functional, development and technical), NEACC I3P Contractor Partners, etc.). As part of the preparation for production go-live, the FMS Team shall execute the integrated plan for each test pass or sprint iteration, incorporating lessons learned during the iteration.

Enterprise Applications Service Technologies		
DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 30 of 40

Depending on the scope content of the release, it may also be determined that a pilot may be used as part of the rollout strategy. Just as with the release deployment, the FMS Team will coordinate any tasks with the related parties.

The Func/Tech Forum is often used to support the release execution and coordination process. The mission of the Func/Tech Forum, as facilitated by the FMS Team, is as follows:

- Identify owners of the NEACC landscape environments
- Develop a high-level roadmap for a holistic view of each integrated environment
- Maximize the efficiency and use of the environments by aligning cross-organizational activities
- Keep environments synced and ensure the NEACC integrated landscape maintains its consistency
- Ensure adequate testing and release plans/paths for cross-organizational activities
- Increase cross-organizational activity awareness between the teams.

7.6 Plan and Prepare for Deployment

Depending upon the scope of the release, a stabilization period may be required. During the stabilization period, there is added emphasis on the release components that were migrated to production. The stabilization period may include more flexible release criteria and / or the usage of a support room setup where key resources are co-located – both shall allow for more rapid response to issues or questions that may arise. Stabilization periods vary depending on release complexities; the standard operational release criteria are implemented once that period is over.

The FMS Team, in coordination with the impacted LOB IPTs, shall identify the need and help to coordinate any preparation related to the stabilization support room (including location and participants). Coordination with the NSSC ESD and the NEACC I3P Contractor Partners relative to the anticipated support shall also be completed during this phase.

As part of preparing for deployment, the team reviews any open defects and shares the documented workarounds with the user community via the NEACC Product Lead and Product Delivery Manager. The team documents any risk mitigation and back-out plans as part of release and deployment preparation.

7.7 Deploy Release

The FMS Team shall coordinate with all parties that have identified tasks in the plan, as part of the deployment plan execution, even those outside of the NEACC such as the NEACC I3P Contractor Partners in coordination with the EAST I3P Manager. This coordination effort shall include hand-offs for each of the tasks and insurance of successful execution prior to moving forth. As part of the monitoring of the plan, the FMS Team shall schedule and lead communication events to keep all parties abreast of the status.

Enterprise Applications Service Technologies		
DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 31 of 40

During the release stabilization period, each LOB IPT will have to validate the release in the production environment to ensure successful implementation. The stabilization period processes defined during the release preparation phase will help to address any issues, and the NSSC ESD will be involved if necessary. Once the requestor accepts the SRs/Milestones, they are accepted and closed out. Further description of the MRB Preparation Phase is contained in NEACC-FMS-PROC-OP-006, Preparation for MRB Production Release Packaging.

In the event of significant issues cause a need to back out of the release, the FMS Team shall move forward to activate the preparation phase process, with prior NASA NEACC Management Team approval for major releases and LOB Manager and/or NASA NEACC PDM approval for Monthly and Weekly Releases.

7.8 Review and Close Release Deployment

Ongoing evaluation of release successes and failures is a critical part of RDM strategy support. A forum will take place to address the positive and negative items that surfaced during the release process.

Lessons learned for major and large monthly releases will include feedback from Agency, Center and NEACC customers, clearly documented to avoid vague references to generalized concepts (e.g., “implement better communication”). Furthermore, the FMS Team shall carry any potential improvements forward into the planning phases for a subsequent release to correct and account for previous mistakes. Things that worked well in a specific release will also move forward into subsequent releases to ensure NEACC release resources continue to build and improve upon successes of prior release efforts.

Finally, as part of release and deployment close-out, the FMS Team shall ensure all auditable documentation related to the release is updated and/or archived for future reference including but not limited to all related testing or defect documentation, the integrated deployment plan and schedule, and the build list and related migration documents.

8.0 NEACC GOVERNANCE

The NEACC governance model is built on the premise that authority to approve changes to NEACC configurable items is strictly reserved to specific bodies and levels of approval as determined by the category of the proposed change and related SR Type and Service Area as defined in EAST-DRD-1293MA-009 NEACC Operations Guide, Appendix A. The NEACC Product Lead determines the change category and level of approval required once the SR has been triaged and initially assessed. Based on Agency IT Governance, the change category may require one or more of the following approvals:

- Business Systems Management Board (BSMB)
- Information Technology Management Board (ITMB)

—CHECK THE MASTER LIST—
 VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE

Enterprise Applications Service Technologies DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 32 of 40

- Enterprise Applications Service Board (EASB)
- Functional Control Board (FCB) / Change Control Board (CCB)
- NEACC Internal Governance Board

9.0 PERFORMANCE MEASURES AND ONGOING IMPROVEMENT

As noted earlier, it is critically important to evaluate ongoing release successes and failures that surface during the release process. As the NEACC continues to mature, this defined and repeatable process will provide a platform for future releases, where chances for success are high, and potential negative impacts to production systems can be mitigated with proper steps. This provides a well-defined performance measurement and improvement process. The FMS Team defines and establishes this procedure by utilizing open dialogue for ongoing improvement, and lessons learned from Agency, Centers, NEACC and other stakeholders. Activating these metrics will enable the NEACC to continually measure and assess the effectiveness of the RDM process including the volume or throughput of the releases, the quality of the release scope planning, and the quality of the deployment planning and execution.

10.0 RELATIONSHIP TOUCHPOINTS

The effective implementation and execution of NEACC’s RDM strategy requires an understanding of the areas that play a role in the RDM process. There are currently 11 areas impacted by ongoing NEACC release management initiatives: QA/Test Management, Problem/Incident Management, Change Management, Configuration Management, Security Management, Service Level Management, Capacity Management, Availability Management, IT Service Continuity Management, Financial Management, and Infrastructure Support Management. Figure 6 demonstrates these relationships:

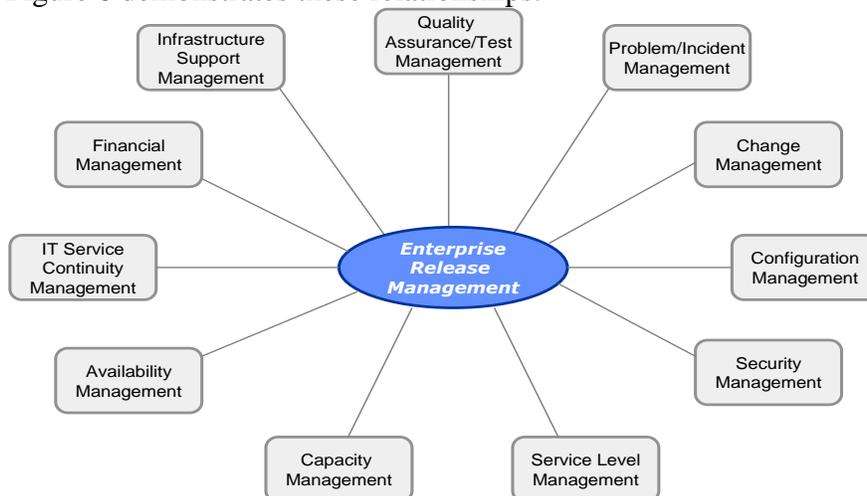


Figure 6 – Release and Deployment Management Relationships

—CHECK THE MASTER LIST—
 VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE

Enterprise Applications Service Technologies		
DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 33 of 40

10.1 Relationship Areas

QA/Test Management: This area’s key business function is to be responsible for the ongoing management and implementation of a formalized testing strategy. This function integrates with Release Management in the areas of coordination and project planning (see DRD-1293QE-002, NEACC Software Engineering Quality Plan (SEQP) Plan).

Problem/Incident Management: This area centers on production issues that surface in existing production systems. Incidents that are reported come primarily from the helpdesk/call center (see IS01-CC-SEO-PROC-OP-002, Incident Escalation Procedure; IS01-NEACC-PROC-OPS-004, NEACC Root Cause Analysis Procedure; IS01-NEACC-PROC-OPS-005, NEACC Service Restoration Procedure).

Change Management: This is a critical area for communicating changes to production systems, and providing any applicable end-user training (see EAST-DRD-1293MA-009, NEACC Operations Guide).

Configuration Management: Discipline centered on ongoing technical changes and object migrations needed to move necessary technical modifications into the production system (see EAST-DRD-1293CF-003, Service Asset and Configuration Management (SACM) Plan).

Security Management: This area involves specific functions to the administration of security-related activities such as new user setup, group/role definitions, etc. The security function represents a key touch point area since a production release might affect existing security definitions (see IS01-NEACC-CF-PROC-SEC-001, NEACC Segregation of Duties and IS01-NEACC-BW-PROC-SEC-001, SAP R/3/Business Warehouse (BW) Account Management Procedure).

Service Level Management: This area manages outstanding SRs that eventually feed into one of the release categories. This process area manages Service Level Agreements (SLAs) and Service Level Standards that measure the NEACC’s performance with regard to pre-defined SLA performance metrics (see IS01-NEACC-AGR-SLA-001, NEACC Service Level Agreement).

Capacity Management: Capacity Management refers to infrastructure-specific functions that manage the NEACC’s system (hardware and software) and infrastructure (bandwidth) thresholds for user support (see EAST-DRD-1293CF-006, Capacity Management Plan).

Availability Management: Availability Management is concerned with the design, implementation, measurement, and management of IT services to meet the stated business requirements for availability. Availability Management requires an understanding of the reasons why IT service failures occur and the time taken to resume service. Incident Management and

Enterprise Applications Service Technologies		
DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 34 of 40

Problem Management provide a key input (see EAST-DRD-1293CF-008, Availability Management Plan).

The measurement and reporting of IT availability ensures that the level of availability delivered meets SLAs and SLSs. Availability Management supports the Service Level Management process in providing measurements and reporting to support service reviews.

IT Service Continuity: IT Service Continuity Management is concerned with managing an organization’s ability to continue to provide a pre-determined and agreed level of IT Services to support the minimum business requirements following an interruption to the business. Effective IT Services Continuity requires a balance of risk reduction measures such as resilient systems and recovery options including back-up facilities. Infrastructure and business changes shall be assessed for potential impact on continuity plans, and IT and business plans will be subject to Change Management procedures. The Service Desk has an important role to play if business continuity is activated (see IS01-NEACC-PLAN-SEC-001, NEACC IT Security Contingency Plan).

Financial Management: Financial Management is responsible for accounting for costs of providing IT service and for any aspects of recovering these costs from the customers (charging). IT requires good interfaces with Capacity Management, Configuration Management (asset data) and SLM to identify the true costs of service. The financial manager is likely to work closely with the customer relationship manager and the IT directorate during negotiations of budgets and individual customer’s IT spend.

Infrastructure Support Management: Infrastructure Support Management functions are involved in most of the processes of Service Support and Service Delivery where more technical issues are concerned.

**Enterprise Applications Service Technologies
DRD**

Title: Release and Deployment Management (RDM) Plan

Document No. EAST-DRD-1293CF-004

Revision: R

Effective Date: 07/22/2013

Page 35 of 40

11.0 RECORDS

Table 6 – Records Applicable to This Document

Name of Record	Storage Location	SBU/PII*	Retention Schedule	Responsible Party	Email	Phone No.
Build Lists	Release Management Shared Drive located at msnaf01C/NEAC C/Competency Center/Release Planning	No	2/27/C/a (2800)	FMS Team	[REDACTED]	[REDACTED]
Func/Tech Forum Meeting Minutes	Release Management Shared Drive	No	2/26/E (2800)	FMS Team	[REDACTED]	[REDACTED]
Integrated Release Plan (Cutover plan)	bReady & Release Management Shared Drive	No	2/26/A (2800)	FMS Team	[REDACTED]	[REDACTED]
Lessons Learned	bReady & Release Management Shared Drive	No	2/26/E (2800)	LOB IPTs	[REDACTED]	[REDACTED]
Migration Review Board (MRB Exception List)	Release Management Shared Drive	No		FMS Team	[REDACTED]	[REDACTED]
Migration Review Board (MRB) Spreadsheet	Release Management Shared Drive	No	2/26/A (2800)	FMS Team	[REDACTED]	[REDACTED]

—CHECK THE MASTER LIST—
VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE

**Enterprise Applications Service Technologies
DRD**

Title: Release and Deployment Management (RDM) Plan

Document No. EAST-DRD-1293CF-004

Revision: R

Effective Date: 07/22/2013

Page 36 of 40

Name of Record	Storage Location	SBU/PII*	Retention Schedule	Responsible Party	Email	Phone No.
Release Scope	Release Management Shared Drive	No	2/26/A (2800)	FMS Team	[REDACTED]	[REDACTED]
Release Timelines (Monthly & Major)	bReady & Release Management Shared Drive	No	2/26/A (2800)	FMS Team	[REDACTED]	[REDACTED]
CORe Meeting Minutes	bReady	No	2/26//E (2800)	FMS Team	[REDACTED]	[REDACTED]
Rules of Engagement	Release Management Shared Drive	No	2/26/A (2800)	FMS Team	[REDACTED]	[REDACTED]
Testing Kick-off presentation	Release Management Shared Drive	No	2/26/A (2800)	FMS Team	[REDACTED]	[REDACTED]
DRD 1293MA-006 for the Integrated Landscape View Report	EPMS	No	2/26/B (2800)	FMS Team	[REDACTED]	[REDACTED]

*SBU = Sensitive But Unclassified / PII = Personally Identifiable Information

—CHECK THE MASTER LIST—
VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE

APPENDIX A: EXAMPLE CONSOLIDATED RELEASE SCHEDULE

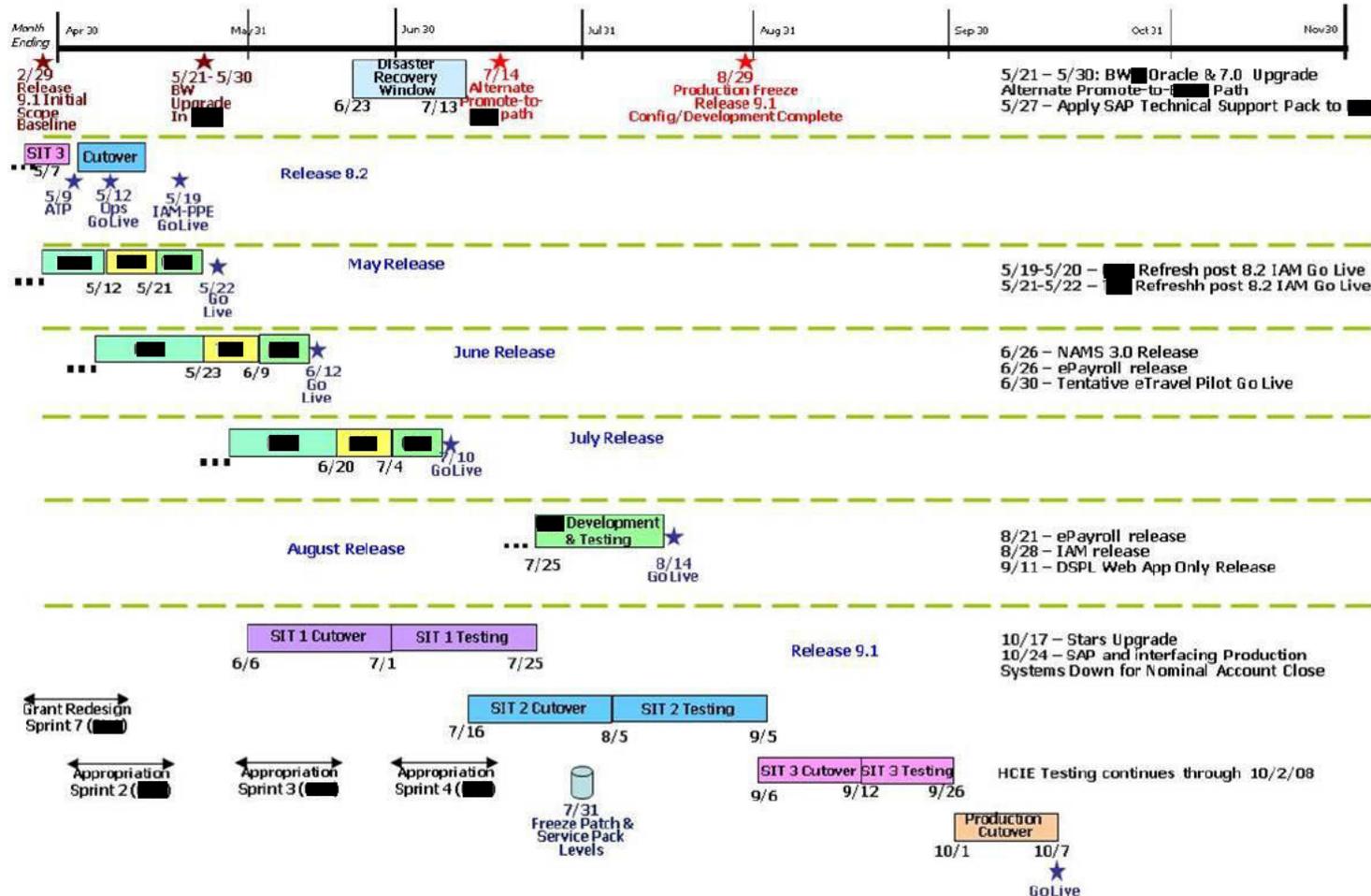


Figure 7 – Consolidated Release Schedule

—CHECK THE MASTER LIST—
 VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE

**Enterprise Applications Service Technologies
DRD**

Title: Release and Deployment Management (RDM) Plan

Document No. EAST-DRD-1293CF-004

Revision: R

Effective Date: 07/22/2013

Page 38 of 40

APPENDIX B: EXAMPLE MID-YEAR MAJOR RELEASE SCHEDULE

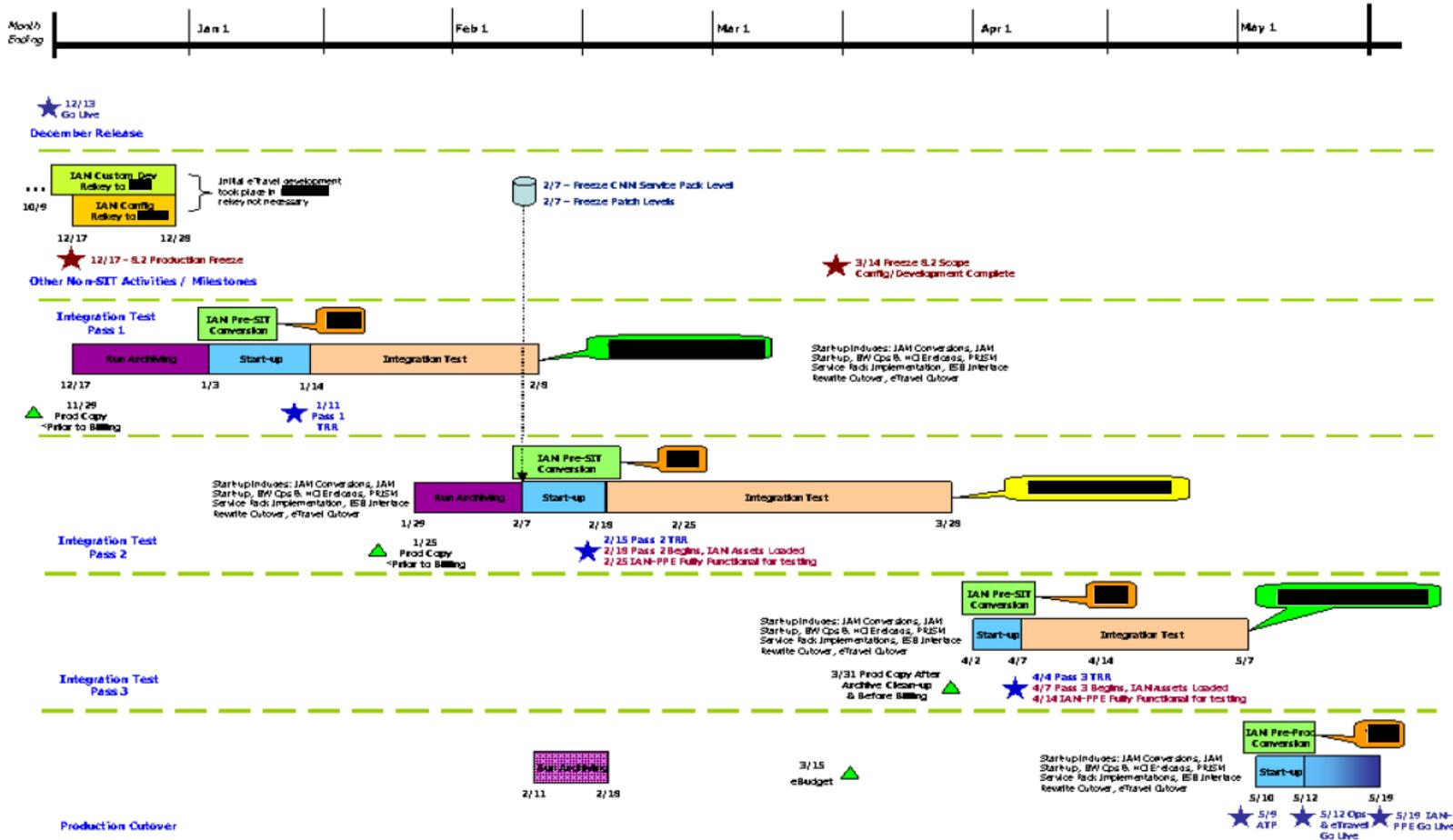


Figure 8 – Mid-Year Major Release Schedule

—CHECK THE MASTER LIST—
VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE

APPENDIX C: EXAMPLE FISCAL YEAR-END MAJOR RELEASE SCHEDULE

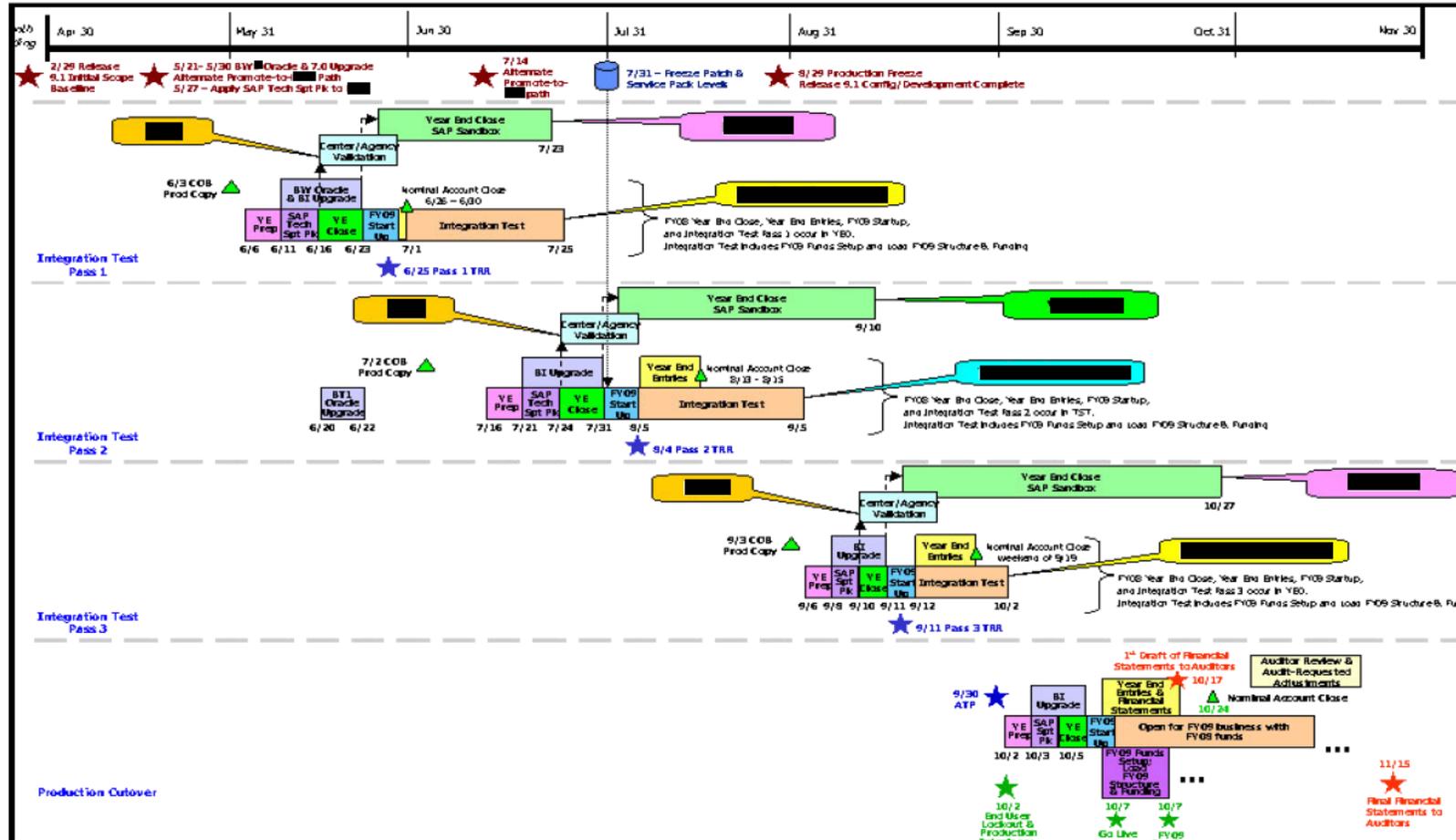


Figure 9 – Fiscal Year-End Major Release Schedule

—CHECK THE MASTER LIST—
VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE

Enterprise Applications Service Technologies DRD		
Title: Release and Deployment Management (RDM) Plan	Document No. EAST-DRD-1293CF-004	Revision: R
	Effective Date: 07/22/2013	Page 40 of 40

APPENDIX D: POINTS OF CONTACT

Table 7 – Points of Contact

Name	Position	Center	Phone Number
██████████	██████████	██████	██████████
██████████	██████████	██████	██████████

—CHECK THE MASTER LIST—
 VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE