NASA Enterprise Applications Competency Center (NEACC) Real Property Management
NASA Enterprise Applications Competency Center (NEACC)

- Operates and maintains a broad spectrum of NASA’s Enterprise Applications, with an emphasis on fully integrating business process expertise with application and technical know-how.
- Comprised of small team of civil servants and approximately 300 support contractors.
- Sustains operations, implements new applications and capabilities, and provides business readiness support to stakeholders and end users.
- Nine lines of business are served by over 50 applications and a multitude of integration services.

Real Property Management

- Addresses Agency business priority to integrate the identification, tracking, and valuation of NASA’s real property portfolio with the Agency’s financial system, SAP.
- Manages NASA’s real property portfolio, which contains 4,856 buildings and other structures spanning 102 unique NASA sites totaling 45 million square feet with a total book value of $8.9 billion.
The RPM Project developed a comprehensive and integrated solution design that satisfies requirements of the Office of Strategic Infrastructure (OSI) and Office of the Chief Financial Office (OCFO)

Effective usage of the Agile Scrum Process combined with Center involvement during the Project Sprints drove the solution design discussions/decisions which were successfully addressed and documented while working closely with OSI & OCFO.

The integrated RPM solution supports Core Business Processes for the Agency and all Centers and focuses on Real Property Accountable Officers (RPAOs), Facility Utilization Officers (FUOs), Mission Dependency Index (MDI) Users, Property Accountants (PAs), HQ Administrative Users, and View Only Users.

The RPM SAP System was introduced into production on October 4, 2010.
# Why SAP RPM?

## Background & Scope of the RPM Project

### Background
- The 2009 Ernst & Young audit of NASA internal controls over property, plant and equipment (PP&E) identified PP&E systems as a material weakness by the independent financial auditors (Ernst & young), contracted by the Office of the Inspector General.
- NASA lacked the integration and functional capabilities needed to produce timely, reliable financial and real property information to effectively manage program and mission assets.

### Problem /Root Cause
- Management Business Systems Integration Group (M/BSIG) GAP 59 - NASA does not have a real property system that is fully integrated with NASA's financial system to identify and track NASA's real property portfolio and its value.
- NASA’s Financial and Real Property Systems were not integrated with Core Financial.
- Inability to have easy access to the right information at the right time.
- Disparate databases made reporting manual and time-consuming.

### Purpose
- Implement Real Property business processes within existing Agency Enterprise Resource Planning System (ERP) (SAP).
- Activate the Flexible Real Estate Management (RE-FX) capability in SAP.
- Convert the NASA Real Property Inventory (RPI) system data to SAP RPM database.
- Provide an intuitive end user interface.
- Retire RPI.

### Scope
- Contained to current NASA RPI system:
  - Include tracking and inventory of buildings, land, and other structures.
  - Facility utilization reporting requirements.
  - Provide source financial data for real property assets.
  - Provide Mission Dependency Index (MDI) capability.
Executive Summary
FY2009 Material Weakness Disposition

The FY2009 Ernst & Young Report identified one Material Weakness and one Significant Deficiency related to NASA PP&E

<table>
<thead>
<tr>
<th>#</th>
<th>MATERIAL WEAKNESS: Ernst &amp; Young Recommendations for Enhancements Needed for Controls over Legacy PP&amp;E and Materials Contracts</th>
<th>RPM Dispositions</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Continue to actively improve implementation of SFFAS No. 35. Areas for particular focus include: (1) appropriate approaches in critically assessing prior recorded amounts for legacy assets, and (2) the extent to which the entity must associate ongoing outlays with individual items of PP&amp;E versus recording amounts based on contractor-provided estimates in bulk.</td>
<td>Not in scope</td>
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<tr>
<td>2</td>
<td>Develop an overarching key control activity that provides for a robust and rigorous review that both validates and challenges the adequacy of estimation techniques used and the sufficiency of documentation supporting those conclusions.</td>
<td>Not in scope</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>#</th>
<th>SIGNIFICANT DEFICIENCY: Ernst &amp; Young Recommendations for Financial Management Systems Not in Substantial Compliance with FFMIA</th>
<th>RPM Dispositions</th>
</tr>
</thead>
</table>
| 1 | a) Move forward to integrate government-held real property transactions into the Asset Accounting Module of SAP in May 2010  
b) Continue efforts to integrate recording of PP&E transactions contemporaneous with their occurrence | a) Not in scope – (NEACC SR #147662)  
b) In scope |
| 2 | Resolve issues identified during our IT procedures in our audit related to access and change management surrounding its financial management systems. | Not in scope |

*Reference NASA FY2009 PAR; Page F-52 – F58
Ernst & Young Audit Recommendations
FY2008 vs. FY2009 Summary

- In the FY2008 PAR, Ernst & Young reports a Legacy PP&E and Materials Contracts Weakness consisting of 4 component recommendations, of which the PP&E integration with the Core Financial Module was a subcomponent (Note: this subcomponent recommendation was not a standalone material weakness)

- As of the FY2009 PAR, Ernst & Young reports that the Financial Systems, Analyses, and Oversight weakness reported in the FY2008 PAR as being resolved

  - In the Statement of Assurance (FY2009 PAR, page MD&A 28), NASA states “Legacy PP&E valuation has been updated using alternatives under the new applicable standard” which is the core component to resolving the material weakness based on Ernst & Young’s recommendation from FY2008 Audit
  - This material weakness remains due to a timing issue between the end of FY2009 and the October 2009 publication of SFFAS No. 35 (e.g., no retroactive applicability to FY2009)

- In the FY2009 PAR, Ernst & Young reports that the real property system is not integrated with the Core Financial Module, resulting in a Significant Deficiency entitled “Financial Management Systems Not in Substantial Compliance with Federal Financial Management Improvement Act of 1996 (FFMIA)” (FY2009 PAR, page F-57)
Benefits to End User Community

- **Integration** – Stakeholder organizations (FERP and OCFO) will benefit from having a real property and financial system/business process that is integrated (e.g., improvement of the process to include closer interaction of functional components, contributes to resolution of audit recommendation)

- **Automation** – Tasks that were completed manually in the past will now be automated with electronic storage of supporting documentation (e.g., elimination of the manual voucher process, electronic scanning/storage of supporting documents, and system reminders to complete building inventory functions)

- **Provides future expansion/growth opportunities** – The SAP ERP system offers standard functionality to extend and build upon current capabilities (e.g., elimination of RPI manual voucher, data elements not previously visible, capturing roles for reporting)

- **Agency-wide Tracking and Reporting** – With the implementation of RPM, standard Agency organization codes will be mapped to Center-unique organization codes, which will enable Agency-wide reporting and enhanced MDI tracking capability

- **Reporting Improvements** – Utilization of the SAP Business Warehouse (BW) significantly extends user-level reporting functionality which broadens and deepens end-user reporting capabilities
RPM Project Status
High-Level Timeline - Baseline October 2009

As of 4/14/10

Formulation
Solution Design & Development (Scrum Approach)

Onsite Center Support (Testing/Mock Conversion Validation)

Mock Data Conversion

Re-Key

Testing

Stabilization

Operations

Communications & Change Mgmt

Legend

Sprint Reviews = ▲ RPM Lifecycle Reviews = ▲ Readiness Reviews = ▲

*TBD dates based on NEACC 11.1 Release Planning

As of 4/14/10
## RPM Solution Components
### High-Level Solution Design

### Solution Components *(Where)*

<table>
<thead>
<tr>
<th>Capabilities <em>(What)</em></th>
<th>SAP ERP</th>
<th>BW</th>
<th>Web</th>
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<tbody>
<tr>
<td>• Transactional System of Record</td>
<td>• Information Delivery Repository</td>
<td>• MDI Front-End</td>
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<td>• User Friendly System Interface</td>
<td>• RPI /FUS historical data</td>
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<tr>
<td>• Inventory of Buildings &amp; Land</td>
<td>• Reports</td>
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<td>• Lease Administration</td>
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<td>• Facility Utilization</td>
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<tr>
<td>• Core Financial Asset Accounting Integration</td>
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<tr>
<td>• Mission Dependency Index (MDI)</td>
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<table>
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<th>User Groups <em>(Who)</em></th>
<th>SAP ERP</th>
<th>BW</th>
<th>Web</th>
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</thead>
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<tr>
<td>• Real Property Accountable Officers (RPAOs)</td>
<td>• RPAOs</td>
<td>• MDI Users</td>
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<td>• Facility Utilization Officers (FUOs)</td>
<td>• FUOs</td>
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<tr>
<td>• Property Accountants (PAs)</td>
<td>• PAs</td>
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<tr>
<td>• HQ Administrative Users</td>
<td>• HQ Admin Users</td>
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<td>• View Only Users</td>
<td>• View Only Users</td>
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<tr>
<td>• JPL Users</td>
<td>• JPL Users</td>
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</tbody>
</table>
RPM High-Level System Design

MDI Web Front End

Web Pages to perform NASA Mission Dependency Activities

MDI retrieves and stores information from the SAP database

User Role: MDI Users

SAP

RPM SAP Front End

Flexible Real Estate Module

Link Building Master Record (BMR) to Work Breakdown Structure (WBS) – *Optional

• Transactional System of Record
• Inventory of Buildings & Land
• Lease Administration
• Facility Utilization

SAP Database store:
• Images
• Attachments
• etc.

BW

• Standard Reports
• Ad Hoc Reporting
• Legacy Data

Project Systems Module

Asset Accounting

• Link BMR to AMR
• Link AMR to BMR

User Roles: RPAOs, FUOs, PAs, HQ Admin. Users, View Only Users
The integrated RPM solution includes customization (vendor endorsed) to standard SAP functionality that was required to meet solution design requirements.

Agile Scrum approach facilitated the design of the solution integrations based on collaboration with the RPM community.

The NEACC RPM Team worked with Process and Product Owners to determine the final design of the integrated solution.

This collaboration resulted in the creation and concurrence of four whitepapers and one Future Capabilities Report was written to highlight future capabilities of RE-FX available to NASA.

- Organizational Reporting Structure
- Core Financial Integrations - Accounts Payable/Accounts Receivable
- Asset Accounting Integration - Asset Master Record (AMR/BMR) Integration
- Work Breakdown Structure (WBS) Integration
Organizational Reporting Structure / Controlling Integration

- New Cost Centers were created at the Agency-Level specifically to support Agency Reporting of Space Utilization at the Directorate level
  - RPM Added a new Agency-Level Cost Center Group
  - RPM Added 42 Directorate-level Cost Centers
- Structure will only be used for Agency Reporting
- Standard General Ledger (SGL) postings will not be allowed against the Cost Centers
- Track and report Internal Occupancy
Core Financial Integration – Accounts Payable/Accounts Receivable

- Creation of the Customer/Vendor Master Records when the Tenant/Landlord Business Partner is created in RE-FX
  - Creation of Tenant Master Record within RE-FX Lease Administration triggers the automatic creation of a Customer Master Record in SAP
  - Creation of Landlord Master Record within RE-FX Lease Administration triggers the automatic creation of a Vendor Master Record in SAP
  - Two new RPM unique Account Groups were created for the Customer and Vendor Master records, in order to exclude these Master Records from all other processes
Asset Accounting Integration

- Assignment of Asset Class via NASA Property Code
  - Defaults the correct asset class code to the record based on the NASA Property Classification Code selected

- Creation of AMR directly from the RPM Building Record
  - An AMR is created by clicking on the Create Asset button on the Assignments Tab of the Real Property Record. When this occurs, the system will automatically pass the following fields to a newly created AMR:
    - Asset Class
    - Business Area
    - Building Number
    - Building Description

- Link of AMR to the Real Estate Object/Link WBS element to the Real Estate Object
  - AMR can be updated automatically via custom capability to include the building number from the Real Property Master Record at the time that the Asset Record is assigned to the Real Property Record
    - This linkage is optional
RPM Integrated Solution
RPM to Asset Accounting Data Element Integration

Flexible Real Estate Module (RE-FX)

Four RE-FX Data Elements automatically passed from BMR to the AMR in Asset Accounting when created/updated

- BMR
  - Building Number
  - Building Description
  - Business Area
  - Asset Class

BMR / AMR Link

Asset Accounting (FI-AA)

Two FI-AA Data Elements linked to BMR when AMR created/updated

- AMR
  - Asset Number
  - Asset Sub Number

AMR Shell Created

BMR / AMR Link
The RPM Solution is based on core business processes:

<table>
<thead>
<tr>
<th>RPM Business Process</th>
<th>RPAO</th>
<th>FUO</th>
<th>PA</th>
<th>MDI</th>
<th>HQs Agency</th>
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<td>Create Business Entity Process</td>
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<tr>
<td>Facilities Utilization Process</td>
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</tbody>
</table>

NOTES:
1. Each role will also have view and reporting capability for all business processes.
2. Major Facilities Utilization Business Process was removed. HQ determined that the 1400A Major Facilities Utilization Report was no longer needed.
RPM Functional Configuration
RE-FX Structure Overview

Site

Facility

Utilization
RE-FX Master Data is used to represent NASA’s Real Property and their attributes

- **Business Entity = Site**
- **Building Object = Facility (Building, Structure, or Land)**
  - General Data – e.g., Legal Interest, NASA Classification Code, Asset Class
  - Characteristics – e.g., Sustainability, Construction, ADA Compliance, LEED Certification
  - Measurements – e.g., NASA, GSA, Operating & Maintenance Costs, Deferred Maintenance
  - Property Values
  - Attachments – e.g., Images, Forms
- **Rental Units = Utilization**
  - Measurements – e.g., Personnel Headcount, Net Usable Area
- **Contracts = In-Grants, Out-Grants, Internal Occupancy**
- **Business Partners**
  - NASA Roles – i.e., Real Property Accountable Officers, Facility Utilization Officer, Property Accountant, Building Manager, Account Manager
  - External Roles – i.e., Landlord, Tenant, Contractor Held
### Flexible Real Estate Management (RE-FX)

**Business Partners**
- Roles - RPAO, FOU, PA, Building Manager, Contractor Held, and Account Manager
- FI-Integrated Roles - Landlord and Tenant

**Master Data**
- Measurements
- Business Entity
- Building Object - Buildings, Structures, and Land Characteristics
- Rental Unit - Internal and External Usage

**Contracts - In-Grants, Out-Grants, and Internal Occupancy**

**Conditions (Charge Types)**

**Other Settings**
- Screen Dialogs
- Resubmissions (Reminders)
- Authorization Groups
- PDF-Based Forms - Property Card
- Report Profiles

### Other Modules and Settings

**Units of Measurement**

**Accounts Receivable and Accounts Payable (FI-AR, FI-AP)**
- Account Groups and Screen Layout - Tenant and Payee

**Asset Accounting (FI-AA)**
- Screen Layout for Asset Master Data

**Business Data Toolset (BDT)**

**Cross-Application Components (CA)**
- Postprocessing Office (Error Log Processing)
- Master Data Synchronization (Partner-Customer/Vendor Integration)

**Cost Center Accounting (CO-CCA)**
- Cost Center Categories - Directorate

**Logical Database Selection Views**

**Translations (F1 Help Texts)**

**Transaction and Screen Variants**
RPM Project Design Overview
NASA Custom Development Objects

- Reports – BW Reports and SAP Asset Accounting Reports
- Interfaces / Extracts
  - Federal Real Property Profile (FRPP) Annual data extract
  - NETS Integration (Historical Status Update)
- Data Conversion Programs
- Custom Property Card
- Web Application - MDI
- Other Custom Objects
  - Addition of 14 Property Record Fields
    - Business Entity - Business Area, CRV Region, GSA Location Key, GSA Agency Bureau Code
    - Building Object – Property Classification Code, Asset Class, Building Number, GSA Recipient, Long Text, Memo for Measurements, As of Date for Historical Status
    - Rental Unit – MDI Response to question 1, MDI Response to question 2
    - Contract – Long Text
Custom Objects (Continued)

- Tables
  - GSA Agency Bureau Codes
  - GSA Locations
  - Authorization Group to Business Area
  - Property Values table

- Tabs & Screens
  - Property Value tab

- Transaction Codes and Programs
  - Upload Program
    - NETS Historical Status Upload
    - Facilities Utilization Upload
    - Operating and Maintenance Cost Upload
    - Deferred Maintenance, Facility Condition Index and Sustainability Upload
  - Property Accountant Access/View of Building Record
  - Property Accountant Update functionality within Building Record
RPM Reporting
Information Delivery – Strategy

- Legacy data is being stored in Business Warehouse (BW) and includes:
  - Legacy data includes facility utilization data of fiscal year 2009 and prior

- Active data is being stored in SAP R/3 & BW and includes:
  - Master data of all real property; buildings, land, and structures
  - Transactional data such as property values and measurements for each property record
  - MDI data
RPM Reporting
Information Delivery – Business Warehouse

- 12 Real Property Management BW Reports
  - Ad-hoc Real Property Report
  - NASA Land Summary Report by Center
  - NASA Classification and GSA Usage Code Report
  - Real Property Summary Report
  - FCI-MDI Data Report
  - No. 4 Standard Report
  - Average Age of Facilities Report
  - Proposed Status Change Report
  - Status by Fiscal Year Report
  - Removed Property Report
  - In-Out Grant Report
  - Capitalized Property Report

- 2 Facility Utilization BW Reports
  - 1400 Space Utilization Report - FY 2009 & Prior
  - 1400 Space Utilization Report - FY 2010 & Forward
RPM Reporting
Information Delivery – Strategy Continued

- **BW Master Data** – SAP BW Business Content Extractors are used to extract from SAP and load into BW for the following master data:
  - Business Entity
  - Building
  - Rental Object
  - Org./Cost Center

- **BW Transactional Data** – SAP BW Custom Extractors (with delta capability) are built to extract from SAP and load into BW for the following transactional data:
  - Measurements of Building
  - Characteristics of Building
  - Cost of Building
  - Measurements of Rental Objects

- **BW Long Text Document Storage** – BW Function Module is built to extract from SAP and load long text document for Building Status into BW
18 Real Property Management SAP Reports

- REISBP Objects by Business Partner
- REISBPBD Business Partners for Usage Objects
- REISBE Business Entities
- REISBU Buildings
- REISRO Rental Objects
- REISROOC Occupancy of Rental Objects
- REISBDOA Object Assignments
- RECARS Resubmission Dates
- REISMSBD Measurements for Master Data
- REISCN Contract Overview
- REISCNPE Term
- RECARSCN Resubmission Dates
- REISCDCN Conditions for Contracts
- RECPA170 Master Data Summary (Buildings)
- RECARG Update Objects
- RECARSGEN Generate Resubmission Dates
- REBDCARP Usage Objects
- RECNRP Contracts
RPM Data Conversion – RPI to RPM Data Conversion Approach

- **Conversion Strategy**
  - Using proven conversion approach successfully used on previous NEACC implementations
    - Conversion strategy was to convert RPI and MDI data into SAP RPMRE-FX
    - Link Real Property Records to Asset Records in SAP
    - FUS historical data was to be stored in BW
    - FUS current data was loaded via automated load process

- **Conversion Data Sources**
  - NRPI: Access database containing majority of data, including buildings and property
  - MDI: Access database containing mission criticality score of buildings and property

- **Center Involvement**
  - Minimal cleanup required
  - Centers used converted data during Sprint testing and SIT testing
  - Centers were involved in data validation after each mock conversion
## Mock Conversions

- All data was converted from the source system NRPI to SAP RPM numerous times
- 6 Mock Conversions occurred during Project Sprints - plus 3 additional System Integration Testing Conversions

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<th>Conversion</th>
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<tr>
<td>External Lease Out</td>
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<tr>
<td>External Rental Units</td>
<td>✔️</td>
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</tbody>
</table>
The RPM Solution FBS is based on five feature components and fourteen feature sub-components:

<table>
<thead>
<tr>
<th>Feature Component</th>
<th>Sub-components</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 Real Property Management</td>
<td>1.1 Property Management Administration, 1.2 Upload Property Information, 1.3 Property Information, 1.4 Property Information Reporting</td>
</tr>
<tr>
<td>2.0 Lease Administration</td>
<td>2.1 In Grants, 2.2 Out Grants</td>
</tr>
<tr>
<td>3.0 Facilities Utilization</td>
<td>3.1 Facilities Utilization Management Administration, 3.2 Maintain Facilities Utilization Information, 3.3 Upload Facilities Utilization Information, 3.4 Facilities Utilization Reporting</td>
</tr>
<tr>
<td>4.0 Mission Dependency Index</td>
<td>4.1 MDI Login Security, 4.2 Capture Responses to MDI Questions, 4.3 MDI Score</td>
</tr>
<tr>
<td>5.0 External Integration</td>
<td>5.1 GSA Integration/File</td>
</tr>
</tbody>
</table>
Operational Support

- The RPM solution utilizes standard SAP & BW functionality to deliver an Agency-wide system
- RPM solution is being supported within the NEACC Logistics line of business
- The NEACC RPM Support Team manages/coordinates the following operational support functions:
  - SAP & BW Functional
  - SAP & BW Application Development & Testing
  - Enterprise Application Integration (EAI) and MDI Web Application Development
  - Technical Infrastructure
  - Quality Assurance
  - Business Readiness
  - Enterprise Release Management
Security Overview

- Core RPM user groups include RPAOs/FUOs/HQ Admin/PAs/MDI Users/View Only Users
  - RPAO – Center Real Property Accountable Officer
  - FUO – Center Facility Utilization Officer
  - HQ Admin – Agency Real Property Accountable Officer
  - PA – Center/Agency Property Accountants
  - MDI – Mission Dependency Index View and Update Users
  - View Only – SAP & BW - Reporting Only Users
- Segregation of Duties (SOD) analysis was completed and documented during the RPM Project
- A Role Mapping Matrix was used to track individual users and their SAP RPM role assignments
RPM Business Readiness Overview

- **RPM Business Readiness**
  - The RPM user community is encouraged to utilize bReady as the link to Operational Support information
    - EPSS - Documentation repository for all Real Property Management Documentation including:
      - End User Procedures, Process Flows, Job Aids, Tips & Tricks, etc
  - The NEACC RPM Team hosts a RPM SUPER USERS telecom bi-monthly
  - Purpose of the RPM Super User Telecom
    - To promote open communication between Agency, RPM user community and the NEACC RPM Support Team
    - To demonstrate SAP, BW & MDI functionality/uploads/enhancements
    - Discuss any RPM related business process & system questions/issues
    - Communicate general info to the RPM user community
NASA Enterprise Applications Competency Center (NEACC)

Real Property Management Team

**Functional Team**

Suzie Sanderson……………………….lori.s.sanderson@nasa.gov                        256-961-9546
Debbie Hendon……………………....debbie.hendon@nasa.gov                           256-544-1436
Casey F. Hot…………………………c.f.hott@nasa.gov                                256-961-0502
Danielle Bender…………………….danielle.n.bender@nasa.gov                        256-961-2516

**Business Readiness**

Carter Castle………………………..carter.e.castle@nasa.gov                           256-961-1044
Backup
### Baseline User Stories

**1.0 Theme – Track & Manage Real Property Assets**

#### 1.1 - Create and Maintain Real Property Records for Land and Facilities.

<table>
<thead>
<tr>
<th>User Action</th>
<th>User Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.1</td>
<td>As a Real Property Management (RPM) user, I want access to all active real property records and all the associated information (vouchers, images, &amp; attachments) that was available in the RPI system (Conversion).</td>
</tr>
<tr>
<td>1.1.2</td>
<td>As a Real Property Officer (RPO), I want the ability to add new property / facility record and capture all the attributes associated with Land.</td>
</tr>
<tr>
<td>1.1.3</td>
<td>As a Real Property Officer (RPO), I want the ability to add new property / facility record and capture all the attributes associated with buildings, structures and other appurtenances.</td>
</tr>
<tr>
<td>1.1.4</td>
<td>As a Real Property Officer (RPO), I want the ability to change, revise and update property information.</td>
</tr>
<tr>
<td>1.1.5</td>
<td>As a Real Property Officer (RPO), I want the ability to create a voucher (RPI Voucher) to be able to add the following: voucher number, value, unit of measure, date placed in service, status, remarks about a property.</td>
</tr>
<tr>
<td>1.1.6</td>
<td>As a Real Property Officer (RPO), I want the ability to record inventoried Real Property by updating the inventory date and providing a comment in SAP.</td>
</tr>
<tr>
<td>1.1.7</td>
<td>As the Real Property Officer (RPO), I want the ability to record the beneficial occupancy date.</td>
</tr>
<tr>
<td>1.1.8</td>
<td>As an Real Property Officer (RPO), I need the ability to retrieve and view project real property costs from the financial system.</td>
</tr>
<tr>
<td>1.1.9</td>
<td>As an HQ Admin user, I have the ability to add new property for any center (Same functionality as RPO).</td>
</tr>
<tr>
<td>1.1.10</td>
<td>As an HQ Admin user, I have the ability to update and manage the Current Replacement Value (CRV) index factor.</td>
</tr>
<tr>
<td>1.1.11</td>
<td>As a view only user, I want the ability to view data in SAP, print, and/or generate ad-hoc or standard reports in BW or SAP for one or all centers.</td>
</tr>
<tr>
<td>1.1.12</td>
<td>As a Headquarters user, I want the ability to create additional NASA sites or business entities.</td>
</tr>
<tr>
<td>1.1.13</td>
<td>As a Headquarters user and/or a Real Property Officer (RPO), I want the ability to update information about NASA sites or business entities.</td>
</tr>
</tbody>
</table>

#### 1.2 - Create and Maintain In/Out Grant Records

<table>
<thead>
<tr>
<th>User Action</th>
<th>User Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2.1</td>
<td>As a Real Property Officer (RPO), I want the ability to record property leased by NASA (In Grants).</td>
</tr>
<tr>
<td>1.2.2</td>
<td>As a Real Property Officer (RPO), I want the ability to record property leased to NASA (Out Grants).</td>
</tr>
</tbody>
</table>
### Baseline User Stories

#### 1.0 Theme – Track & Manage Real Property Assets (continued)

| 1.3.1 | As a Real Property Officer (RPO), I want the ability to run ad-hoc Real Property reports to be able to provide data to HQ, Centers, Finance, and Auditors. |
| 1.3.2 | As a Real Property Officer (RPO), I want the ability to print a property record or "Card" that includes the building image. |
| 1.3.3 | As the Real Property Management (RPM) system, I have the ability to provide a report/view in order to reconcile the capitalized value of Real Property (WBS) with the General Ledger. |
| 1.3.4 | As the SAP Flexible Real Estate application, I want the ability upload the FRPP annual report to GSA in accordance with the FRPP process as requested by Headquarters. |
| 1.3.5 | As a Headquarters User, I want the ability to track and report deferred maintenance cost. |
| 1.3.6 | As a Headquarters User, I want the ability to report information as needed to OMB by each real property line item. |
| 1.3.8 | As a Property Accountant (PA), I want the ability to execute Real Property Reports from Asset Accounting and RE-FX in SAP. |
| 1.3.9 | As a Property Accountant, I want the ability to view/display Real Property Records in RE-FX. |
| 1.3.10 | As a Real Property Management (RPM) user, I want to access RPM data and historical real property data via a flexible reporting tool such as Business Warehouse. |
| 1.3.12 | As a Real Property Management (RPM) user, I want the ability to generate and view Snap shot at the end of fiscal year reports for 1400 reports. |

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| 1.4.1 | As the Real Property Officer (RPO), I want the ability to upload operating costs for the center or site. |
| 1.4.2 | As the Real Property Officer (RPO), I want the ability to access a standard Excel format for the upload of center or site data. |

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| 1.5.1 | As a Real Property Officer (RPO), I want the ability to add and update photos for a real property record. |
| 1.5.2 | As the Real Property Officer (RPO), I want the capability to electronically attach supporting documentation with required approvals (NASA Forms 1046, 1509, etc.) to the real property record. |
### Baseline User Stories

#### 2.0 Theme – Provide Mission Dependency Index Capabilities

<table>
<thead>
<tr>
<th>2.1 - Maintain Mission Dependency Index Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2.1.2</strong></td>
</tr>
<tr>
<td><strong>2.1.3</strong></td>
</tr>
</tbody>
</table>
Baseline User Stories
3.0 Theme – Provide Facility Utilization Management & Reporting Capabilities

<table>
<thead>
<tr>
<th>3.1 - Create and Maintain Facilities Utilization Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1.1 As the Facilities Utilization Officer, I want access to the previous Facilities Utilization data in the legacy system for reporting</td>
</tr>
<tr>
<td>3.1.2 As the Facilities Utilization portion of RPM, I want to capture all the fields required for facilities utilization reporting based on the buildings in the SAP real estate module.</td>
</tr>
<tr>
<td>3.1.3 As the Facilities Utilization Officer (FUO), I want the ability to manually input center facilities utilization information (square footage) into the RPM system in order to capture data for utilization reporting</td>
</tr>
<tr>
<td>3.1.4 As the Facilities Utilization Officer (FUO), I want the ability to upload center facilities utilization information to the RPM system in a specific format in order to capture data for utilization reporting in SAP.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.2 - Report Facilities Utilization Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2.1 As the Facilities Utilization portion of the RPM system, I want the ability to generate the 1400 report or the &quot;Building Space Utilization Report&quot;.</td>
</tr>
<tr>
<td>3.2.3 As the Facilities Utilization portion of the RPM system, I want the ability to generate the 1400B report or the &quot;Facilities Not Needed/Under Utilized Report&quot;.</td>
</tr>
<tr>
<td>3.2.5 As the Facilities Utilization Officer (FUO), I want the ability to download all 1400 reports to Excel.</td>
</tr>
<tr>
<td>3.2.12 As the Facilities Utilization Officer (FUO), I want the ability to generate Facilities Utilization reports on historical data. (BW)</td>
</tr>
</tbody>
</table>
### Baseline User Stories

#### 4.0 Theme – Integrate Real Property Management with Agency Core Financial System

<table>
<thead>
<tr>
<th><strong>4.1 - Link Real Property Master Records to Asset Accounting Master Records</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4.1.1</strong></td>
</tr>
<tr>
<td><strong>4.1.2</strong></td>
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<td><strong>4.1.3</strong></td>
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<td><strong>4.1.4</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>4.2 - Notify Property Accountant of beneficial occupancy date</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4.2.1</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>4.3 - Notify Property Accountant when capitalized vouchers are created</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4.3.1</strong></td>
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</table>

<table>
<thead>
<tr>
<th><strong>4.4 - Transfer of Real Property to Personal Property</strong></th>
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<tbody>
<tr>
<td><strong>4.4.1</strong></td>
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<table>
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<tr>
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### Business Process Theme 1.0: Track and Manage Real Property Assets

#### Epic 1.1: Create and Maintain Real Property Records for Land and Facilities

<table>
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<tr>
<th>User Stories</th>
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<tr>
<td>1.1.12 As a Headquarters user, I want the ability to create additional NASA sites or business entities</td>
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<tr>
<td>1.1.13 As a Headquarters User, and/or a Real Property Accountable Officer (RPAO), I want the ability to update information about NASA sites or business entities</td>
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</tbody>
</table>
## Business Process Themes, Epics and User Stories

### User Story Impacts as of 1/11/2010 – Ten Deleted

<table>
<thead>
<tr>
<th>Business Process Theme 1.0: Track and Manage Real Property Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Epic 1.3: Report and Analyze Real Property System Data</strong></td>
</tr>
<tr>
<td>1.3.7 As a Headquarters User, I want the ability to report information as needed to FRPP.</td>
</tr>
<tr>
<td>1.3.11 As a Real Property Management (RPM) system, I want the ability to electronically generate data for the GSA 1166 (Energy Intensity).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Business Process Theme 3.0: Provide Facility Utilization Management and Reporting Capabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Epic 3.2: Report Facilities Utilization Data</strong></td>
</tr>
<tr>
<td>As the Facilities Utilization portion of the RPM system…</td>
</tr>
<tr>
<td>3.2.2 I want the ability to generate the 1400A report or the &quot;Major Facilities Utilization Report&quot;.</td>
</tr>
<tr>
<td>3.2.4 I want the ability to generate the 1400C report or the &quot;Facility Data Summary&quot;.</td>
</tr>
<tr>
<td>As the Facilities Utilization Office (FUO)…</td>
</tr>
<tr>
<td>3.2.6 I want the ability to generate the Composite Summary Report.</td>
</tr>
<tr>
<td>3.2.7 I want the ability to generate the Multi-year composite summary report.</td>
</tr>
<tr>
<td>3.2.8 I want the ability to generate the summary Major Facilities Utilization Report.</td>
</tr>
<tr>
<td>3.2.9 I want the ability to generate the summary Under Utilized Major Facilities Utilization Report.</td>
</tr>
<tr>
<td>3.2.10 I want the ability to generate the Major Facilities availability Summary report.</td>
</tr>
<tr>
<td>3.2.11 I want the ability to generate the Property Closure report.</td>
</tr>
</tbody>
</table>
Business Process Themes, Epics and User Stories
User Story Impacts as of 3/30/2010 – Six Deleted

Business Process Theme 2.0: Provide Mission Dependency Index Capabilities

Epic 2.1: Maintain Mission Dependency Index Information

2.1.1 As an Mission Dependency Maintainer, I want the ability to view facility information about a building and/or property ("card") from RPM.

Business Process Theme 3.0: Provide Facility Utilization Management and Reporting Capabilities

Epic 3.1: Create and Maintain Facilities Utilization Records

As the Facilities Utilization Officer ...

3.1.5 I need the ability to add major facilities information to the RPM system through in order to capture data for reporting.
3.1.6 I need the ability to modify major facilities information in the RPM system.
3.1.7 I need the ability to delete major facilities information in the RPM system.
3.1.8 I want the ability to upload/attach a narrative document (word document) in the RPM system.
3.1.9 I want the ability to view narrative report document.
RPM Business Process
Create / Update Business Entity

Real Property Management: Create / Update Business Entity

Headquarters Real Property
- New or Changed Business Entity
  - New
  - Update NASA Business Entity
  - New NASA Business Entity (Site) Identified
  - New Site belongs to existing Authorization Group
  - Notify NEACC that New Auth Group is needed for new Business Entity & relationship to Center
- Changed
  - Update NASA Business Entity
  - New Site belongs to existing Authorization Group

NEACC
- Configuration: New Authorization Group
- Update the ZRE.AUTHGRP table to map Auth group to associated Business Area
- Notify HQ Auth group and Business Area are set up

Real Property Accountability Officer
- Review / Update Business Entity
  - Review
  - Update

SAP Flexible Real Estate Module
- Execute T-Code RSEDBE and create new Business Entity
- Update or Assign RPAO to Business Entity
- Create or Assign PJO to Business Entity

Note: Flow does not reflect scenarios where a Business Entity is created new Center (Business Area)
RPM Business Process
Modify / Update Building Value

Real Property Management: Modify/Update Building Value

Real Property Accountability Officer

1. Receive 1046 for Modification to a building
2. Execute T-code RE3DBU to Update building
3. Add Property Value Adjustment for Building
   - If value greater than or equal to 100,000
     - Link to WBS on Assignment Tab if applicable
   - If value less than or equal to 100,000
4. If value is between 100,000 and negative 100,000
5. End

Property Accountant

1. Execute the Real Property to Asset Master Report
   - Does a new Asset or Sub Asset Need to be created?
     - Yes
     - Create New Asset or Sub Asset
     - Link New Asset or Sub Asset to Building
     - Select Asset on Property Value Tab for associated Value line
     - End
     - No
     - End
RPM Business Process

Upload Building Attributes Program

Real Property Management: Upload Building Attributes Program

Real Property Accountability Officer
- Receive Operation and Maintenance Cost Data
- Receive NETS Historical Data

Correct Data Errors and resubmit

Head Quarters Real Property
- Receive Deferred Maintenance, Facility Condition Index, Sustainability Data

SAP
- Execute Upload Program in SAP
- Select Type of Data to upload
- Run Upload Test Mode
- Data Errors?
  - Y: Historical? (Update General Data for Building)
  - N: Sustainability? (Update Characteristics for Building)
- Operating, Maint., Def. Maint., Fcl. Cond. Index?
  - Y: End
  - N: Update Measurements for Building
RPM Business Process
Facilities Utilization Upload

Real Property Management: Facilities Utilization Upload

Facilities Utilization Officer
- Receive/Create Facilities Utilization Data Spreadsheet for Buildings
- Execute Facilities Utilization Upload Program for buildings and process entire file (code TEB)
- Enter the Effective FY for the load on the Selection Screen

Facilities Utilization Officer checks organization codes on the uploaded file.
- All Organization codes valid?
  - Yes: Display Organization code errors
  - No: Validate organization codes on the uploaded file

Facilities Utilization Officer checks if the organization is listed in SAP but not in Spreadsheet.
- Yes: Terminate the Internal Occupancy Contract for the Organization in the Building
- No: Populate the Valid To Date on the Rental Unit / General Data Tab

Facilities Utilization Officer checks if the organization is listed in both SAP and Spreadsheet.
- Yes: Update the Internal Occupancy Contract for the Organization in the Building
- No: Find all the Measurements on the Rental Unit for the Organization that have changed

Facilities Utilization Officer checks if the organization is not listed in SAP but listed in Spreadsheet.
- Yes: Create Internal Occupancy Contract and Rental Unit for the Organization in the Building
- No: Display Errors and Write to Speed file

SAP Flexible Real Estate
- Create New Internal Rental Unit for Building with FY Valid From date
- Populate Measurement Types from Spreadsheet for Organization
- Populate Valid From Date the FY date
- Create New Internal Occupancy Contract and assign Organization
- Assign Internal Rental Unit to Internal Occupancy Contract
- Insert a new row for each Measurement change
- Populate new measurement with the amount and FY valid from date

End
RPM Business Process
Create In Grant

Real Property Management: Create In Grant

Real Property Accountability Officer
- Request Received to Lease Space
  - Create Business Case to Lease Space
  - Present Business Case to Headquarters
    - Headquarters Approval?
      - N
        - Acquisition of Space through Procurement Office
      - Y

SAP Flexible Real Estate
- Create a Building Object with Property Value (T-code REBIDBU)
  - General Data
  - Characteristics Data
  - Measurement Data
- Create In Grant Contract (T-code RECON)
- Add Landlord, Rent, Terms and Renewal Options to In Grant
- Assign the Building Object on the In Grant Objects Tab
- Assign Lease Condition Types on the In Grant Conditions Tab
  - Any Leasehold Improvements?
    - N
    - Y
      - Assign Leasehold Improvements Condition Type and Specify Amount
        - End