

Mission

We transform the world through courageous discovery and innovation.

Vision

PNNL science and technology inspires and enables the world to live prosperously, safely and securely.

DISCOVERY

in action

CREATIVITY
integrity *Values* courage Impact
COLLABORATION



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NATIONAL LABORATORY

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Integrated Management System Improvement Project

DONNA RASSAT

April 18, 2012

2012 DOE CFMA Conference

- ▶ PNNL Integrated Management System (IMS)
- ▶ IMS Improvement Project Overview
 - Multi-year roadmap
 - Project approach
 - Team structure
- ▶ Critical Success Factors
- ▶ ERP Platforms
 - Oracle Fusion
 - IBM Maximo
- ▶ Questions

The IMS Defines Our Approach to Managing and Operating PNNL

- ▶ Laboratory stewardship, mission accomplishment, program delivery, and operational and financial management are delivered through PNNL's IMS.
- ▶ The IMS describes how fundamental management and operating elements work together as a coherent system to accept business and strategic inputs and produce customer-driven outputs, while executing the mission of the Laboratory.



The IMS Enables the Conduct of Research and Accelerates Mission Accomplishment

► Objectives

- Efficient operations that enable PNNL to maximize national impact
- Operational resources and tools focused on enabling the conduct of research
- Effective balancing of performance and compliance risks
- Clarity of operational processes.

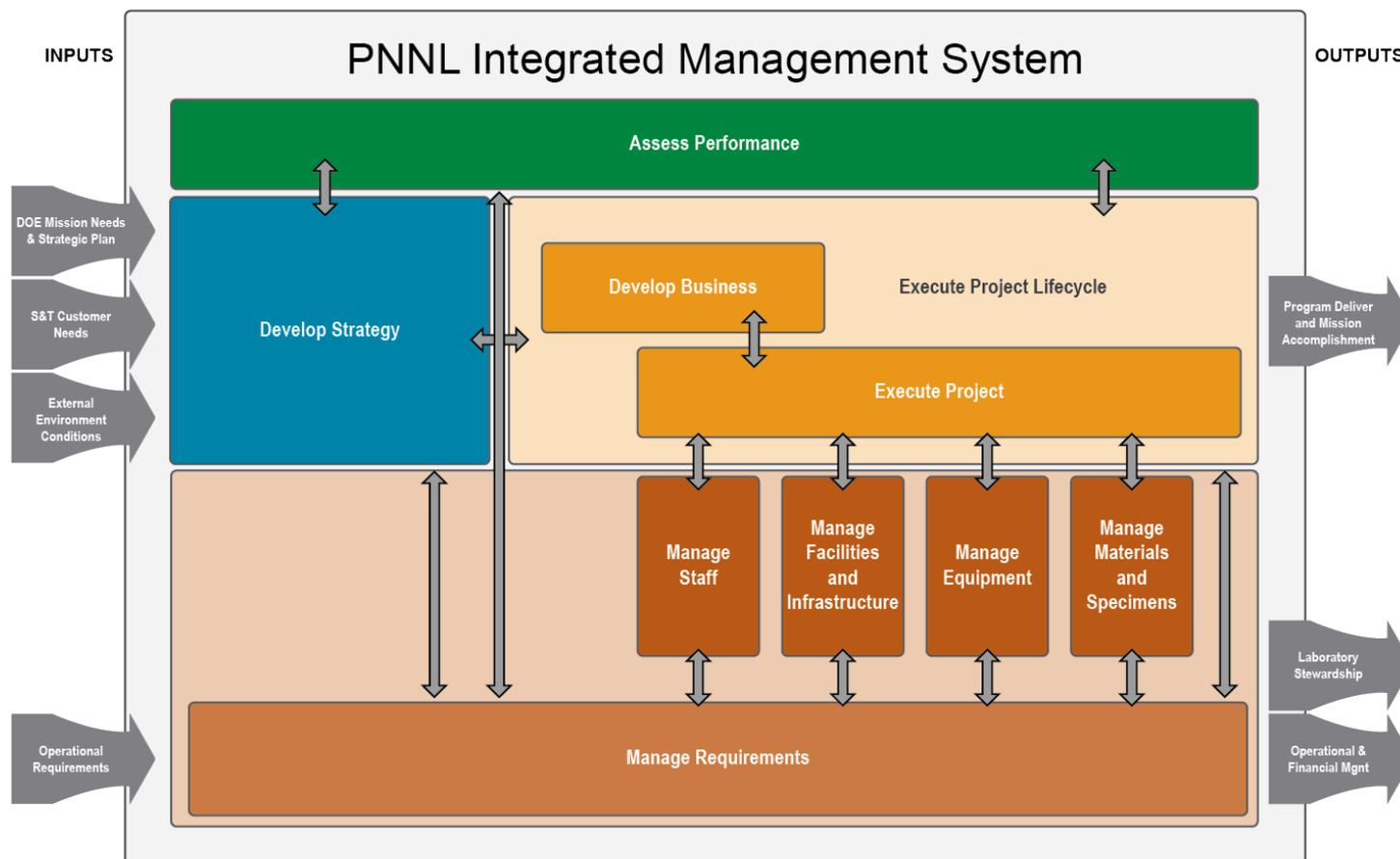


► Benefits

- Increased productivity
- Decreased costs
- Reduced operational non-compliance
- Reduced staff frustration.

IMS Improvement Project Purpose

Accelerate IMS-driven performance improvement via project management rigor for the following elements: business processes, business systems, and people change management

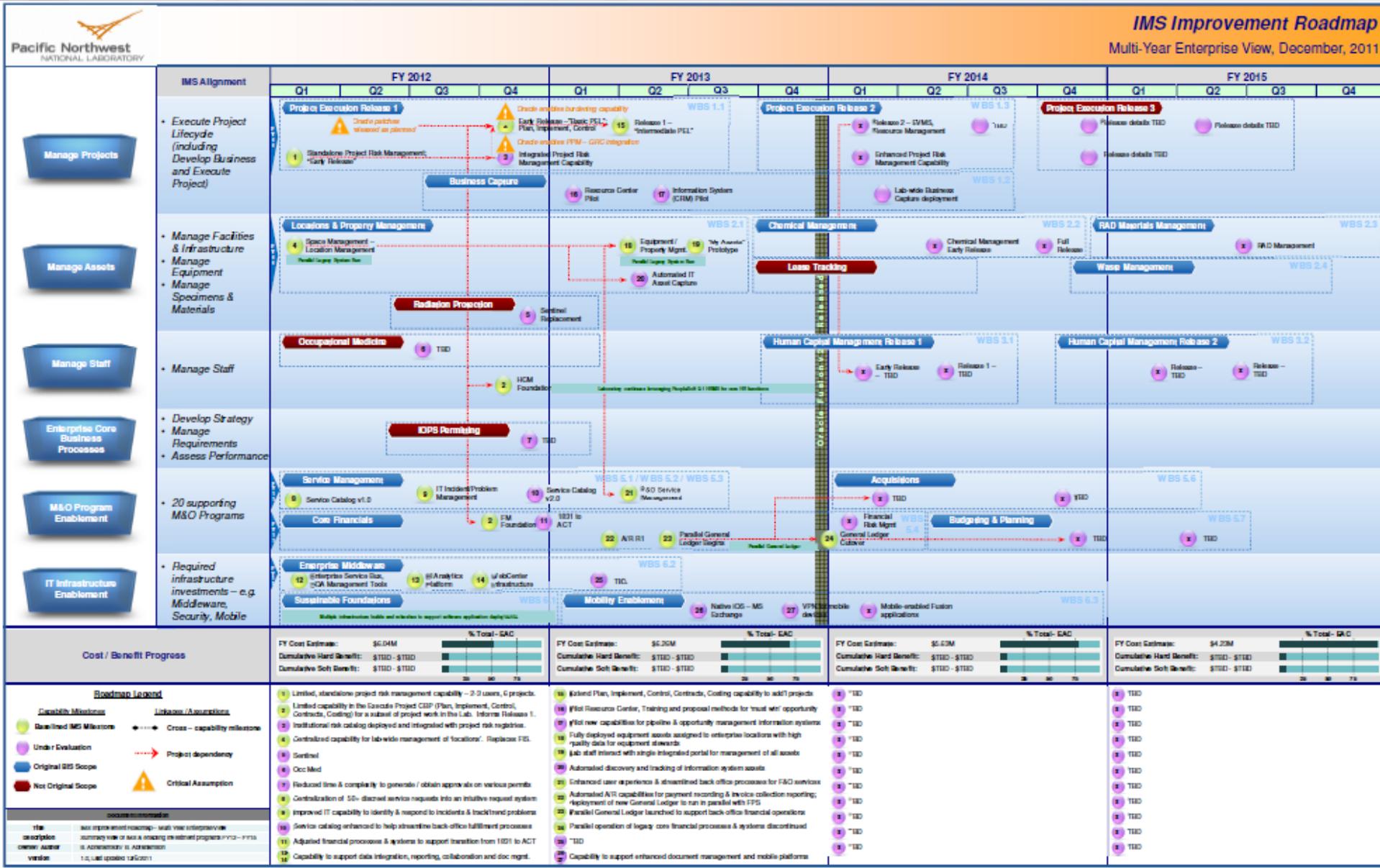


IMS Improvement Project Objectives, Outcomes and Performance Measures



IMS Multi-Year Roadmap Defines Project Scope Based on Business Needs

IMS Improvement Roadmap Multi-Year Enterprise View, December, 2011





IMS Improvement Priorities for FY11-FY13

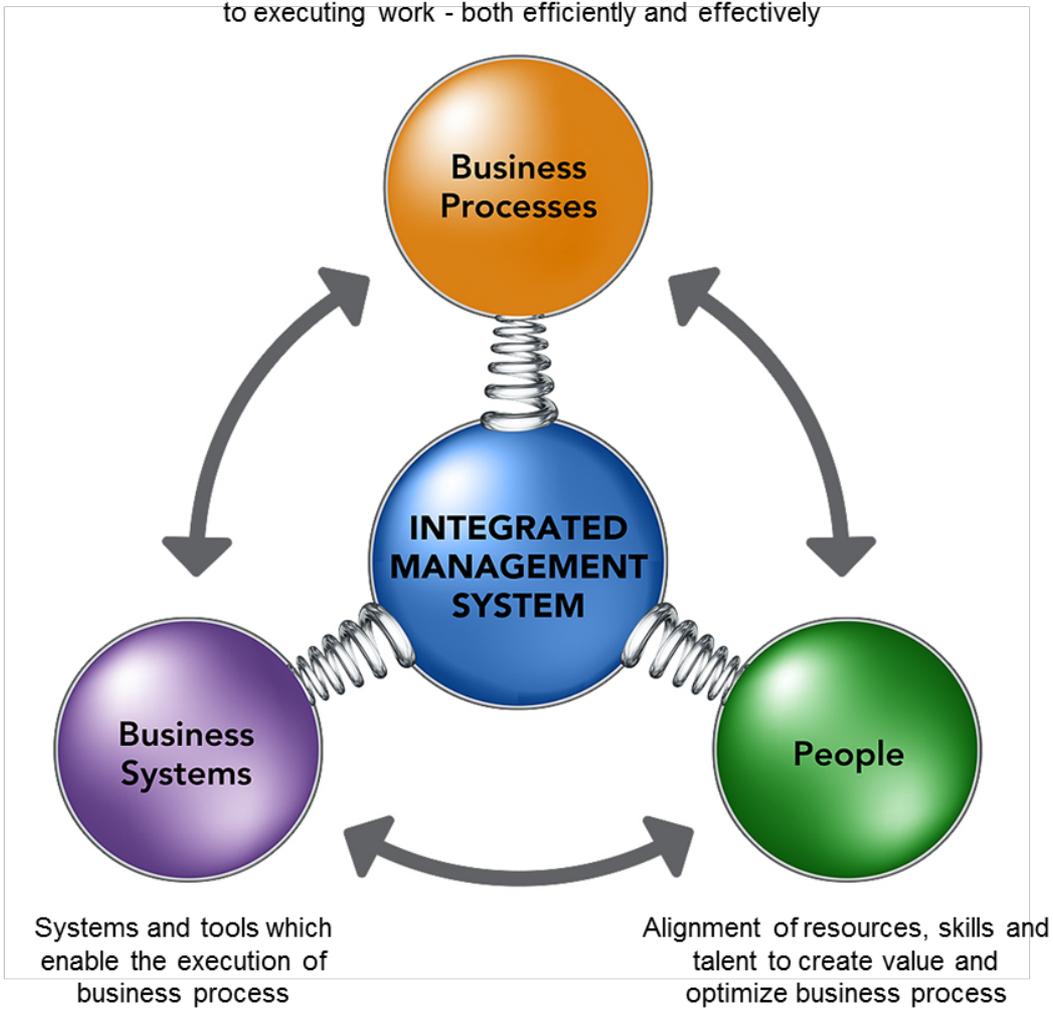
- ▶ **Project Managers experience higher-value plans and reports with less effort**
 - Enable modern, commercial-based financial and project/portfolio management tools to initiate, plan, execute, monitor and control, and close all types of project work.
- ▶ **Project Managers identify, assess, and mitigate risks more easily and completely**
 - Enable project risk and compliance with initial project risk focus.
- ▶ **Staff request all services from one system, where delivery is consistently managed and reported**
 - Centralized service catalog
 - Service request workflows and automated fulfillment
 - Incident and problem tracking.
- ▶ **Staff receive a single intuitive tool to manage inventory throughout lifecycle**
 - Centralizing facility locations and deploying tagged property with enterprise solutions.



IMS Improvement Project Approach Addresses Three Critical Elements for Success

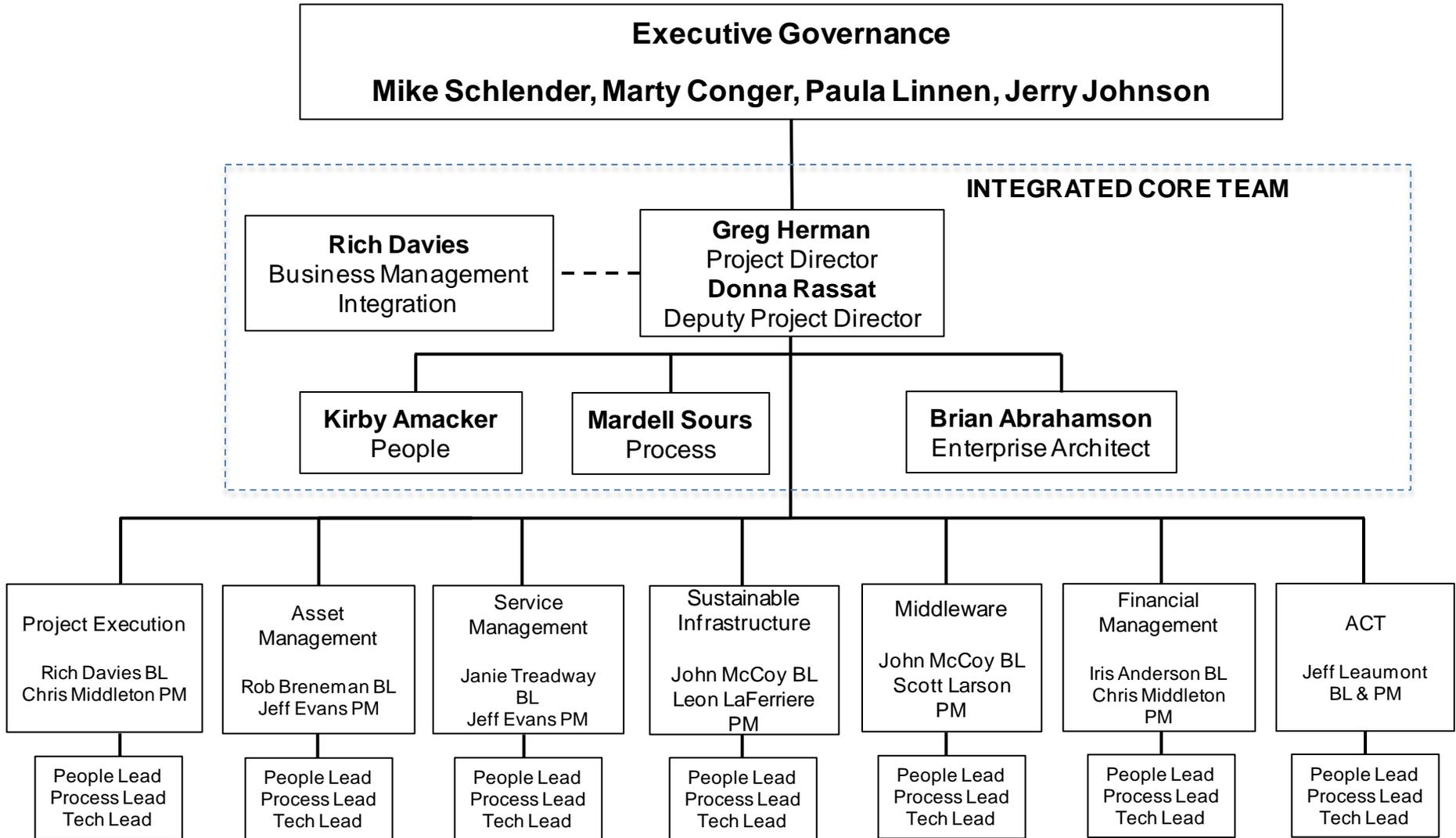
- A change in one impacts the other two
- All three elements must be addressed to deliver sustainable improvement
- Business Processes must first be defined to effectively deliver changes in People or Business Systems

Consistent and unambiguous definition of approach to executing work - both efficiently and effectively



IMS Improvement Project Structure

Focuses on Leadership



IMS Improvement Process Provides Standardization

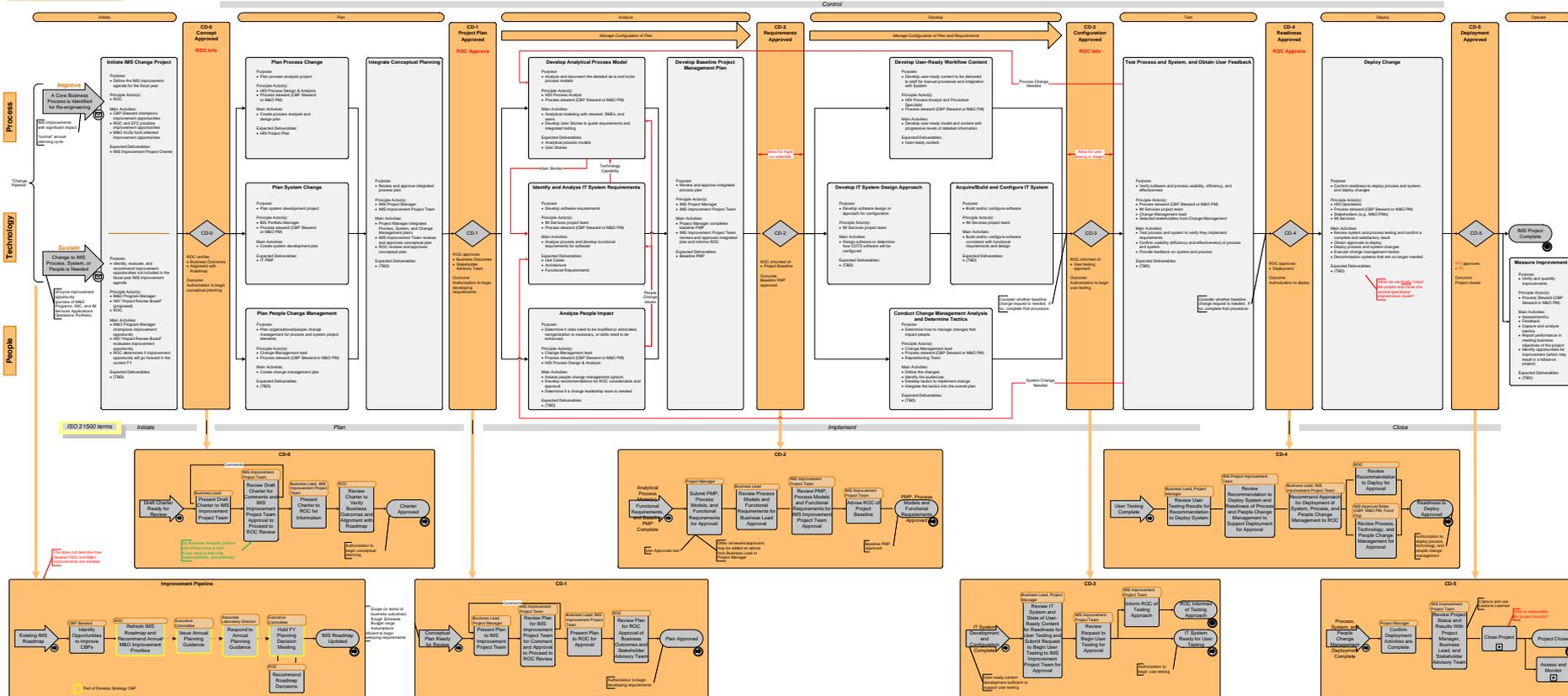


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- ▶ Stage gates are critical aspects to managing and controlling project development
- ▶ Definition and expectations (inputs/outputs) at each gate
- ▶ Identify deliverables and approval at each gate

IMS Improvement Project Lifecycle



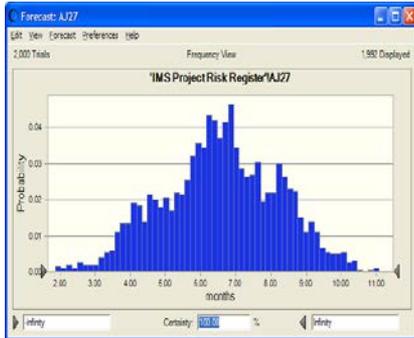
- ▶ We are leveraging best practices to ensure success
 - Portfolio Risk Registry and Mitigation
 - Formal Risk Assessment
 - Earned Value Management (EVM)
 - Decision Assessment Framework
 - Functional Scope Metrics
 - Produce Defect Metrics
 - Systems Integration (SI) Assessment Framework
 - Strategic Vendor Engagement
 - Dedicated resources to address People Change Management and key business staff

We are Actively Identifying Project Risks and Mitigations

- ▶ **Risk:** PNNL is first public sector customer to leverage Fusion Applications with Middleware, BI, WebCenter, UCM, UPK
 - **Mitigation:** Form partnership with Oracle technical points of contact and executives.
- ▶ **Risk:** Product performs against expectations
 - **Mitigation:** Incorporate multiple decision assessment checkpoints throughout year.
- ▶ **Risk:** User experience is not as anticipated
 - **Mitigation:** Incorporate user interface-based communication and training early and often.
- ▶ **Risk:** Culture change with deployment of new system
 - **Mitigation:** Need active engagement of management teams
 - **Mitigation:** Provide detailed rollout of system and communications plan that focus on people change.
- ▶ **Risk:** Ability to retain/reskill key staff
 - **Mitigation:** Continue to integrate staff in new knowledge areas.
- ▶ **Risk:** Business continues to evolve
 - **Mitigation:** Conduct early assessments as business changes are identified; manage through change control.

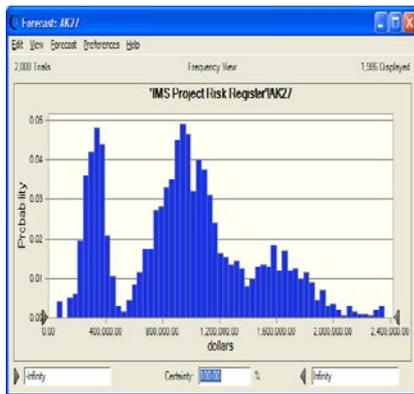
We are Utilizing Advanced Risk Assessment and Management Tools

Schedule Delay Distribution



- ▶ Project Risk Management Plan & risk registry
- ▶ Project risk analyst developed risk models & simulations on highest risks
- ▶ Highest risks well understood & being managed

Cost Distribution

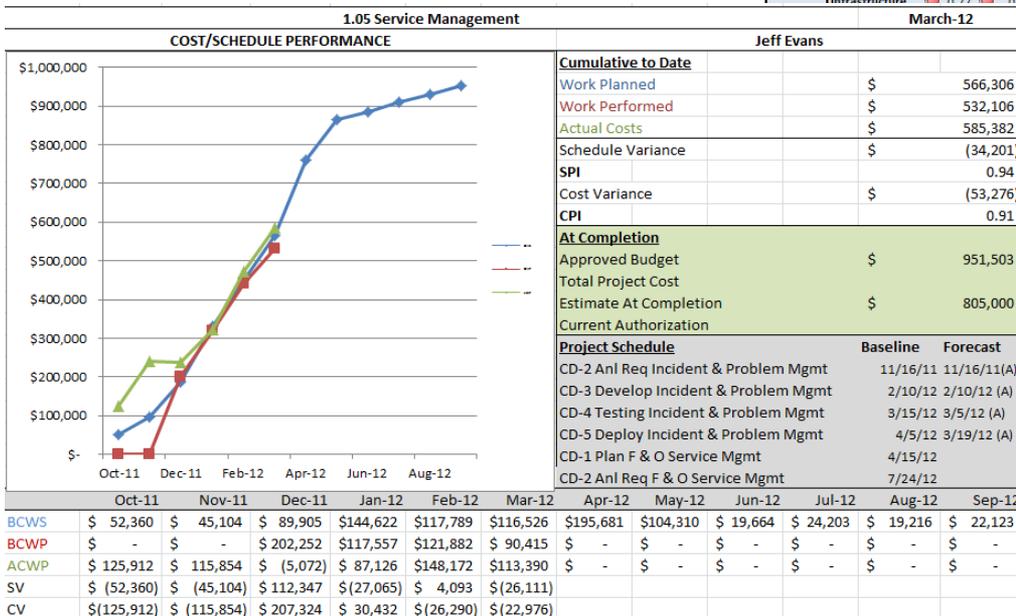


		Schedule Impact							
		N	VL	L	ML	M	MH	H	VH
Likelihood Scale	VH	N	L	M	H	H	VH	VH	VH
	H	N	L	M	H	H	H	VH	VH
	MH	N	L	M	H	H	H	VH	VH
	M	N	L	M	M	H	H	H	H
	ML	N	L	L	M	M	H	H	H
	L	N	L	L	M	M	M	H	H
	VL	N	L	L	L	L	L	M	M
	VVL	N	L	L	L	L	L	L	L
	N	N	N	N	N	N	N	N	N

Earned Value Management (EVM) Is Applied to Monitor Project Performance

- ▶ Maturity of Project Managers and Business Leads growing
- ▶ Seasoned Project Director
- ▶ Strengthening business outcomes key performance indicators

WBS	Title	Cost	Schedule	Accomplishments	Issues
1.01	Deployment	0.95	0.76		
	Program Management	1.06	0.96	Modeled PEL risks with quantitative impacts; performed month carlo simulation to inform decision makings. Updated software quality plan. Building collaboration with WSU MIS Grad students. Identified metrics to support PEL decision making for the PEL.	
1.02	Project Execution (PEL)	1.03	0.63	Latest version of Fusion Apps configured (PPM, WebCenter, Business Intelligence) for validation of unexplored user stories; product stabilized (Business Intelligence, Dashboard, Reporting, Workflows, Web Center, document/content management). Fusion Apps functionality/integration introduced to key stakeholders.	Oracle delivery - 3rd party commitments, HCM interface (delays with Oracle product development); showstoppers aggressively monitored; Assessed product to support requirements.
1.03	Core Financials	1.77	1.00	Assessed impacts relative to use permit/act	BCR - defer project scope outside minimal GL assessment required for
1.04	Asset Management	0.59	0.99	Locations and space management deployed. Governance team formed. As-Is and To-be process and fit-gap for property management in progress. F&O services requests (high priorities) user story development. New PM assigned and executing on-target.	Locations cost over-run \$150K
1.05	Service Management	0.91	0.94	Service Catalog complete. Comprehensive review/value assessment of Lab Services. IT Incident & Problem Mgmt. preparing for operations; Corrective actions applied in PM have significantly lowered risk.	Change Management in IM Services culture
1.06	Sustainable Infrastructure	0.77	0.55	RUP1 installed in 3 environments, misc. patches installed, upgraded UPK, Business Intelligence Analytics Installed.	Installation of RUP1 more complex than anticipated. Fusion App performance scalability assessment



Only one of many ways to manage and assess project performance and business outcomes

Decision Assessment Framework is Guiding Major Decisions

Three Checkpoints

- Early March, 2012:
Before user pilots
- May, 2012:
After user pilots
- Late July, 2012:
Prior to roll-out

Three Criteria

- Does it work?**
Will the software component of the solution perform as intended – enabling the functionality required by the user stories?
- Will it drive the outcomes?**
Will the combination of new processes, roles and tools be readily adopted by end users to achieve the business outcomes?
- Can we afford it?**
Can the solution be implemented for a cost and schedule that is acceptable relative to the business outcomes we expect to achieve?

Three Ratings



One of Three Outcomes...

Blend of Yellow & Green
Push forward, “don’t overanalyze”

Mostly Yellow, Some Red
Informed management discussion necessary. Be prepared to compromise scope, schedule or cost

Mostly Red, some Green/Yellow
Not on a trajectory for success. “Don’t fool ourselves” – likely need to re-plot our direction



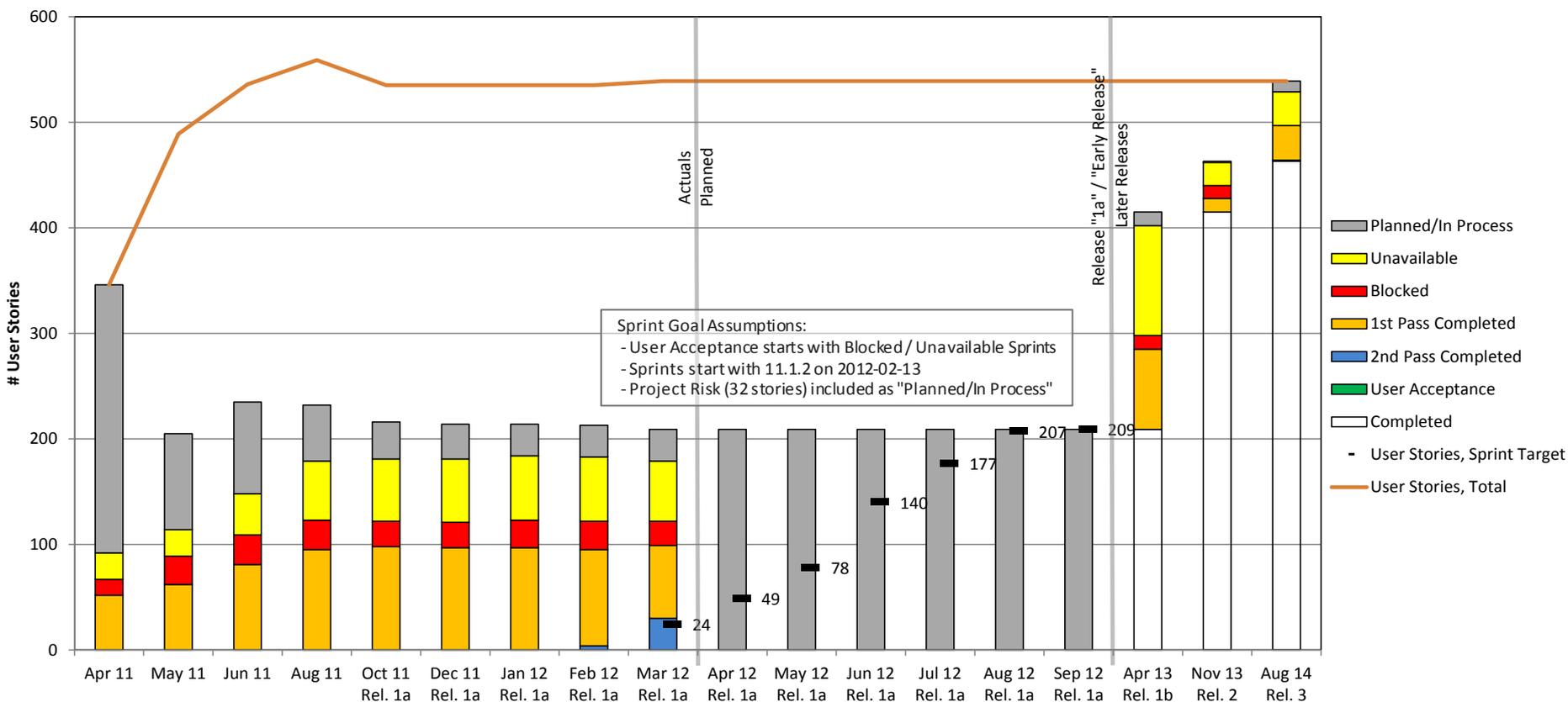
Example: Assessment and Criteria Evolution

Project Execution “Early Release”: Assessment Criteria

#	High Level Criteria	Sub-Criteria	Target Metrics	Assessment Date	Status 3/5/12	Owner	Comments	
1	Does it work?	1.1	Target-state user stories are well defined	PEL/Risk Management user stories defined (G) PEL <u>or</u> Risk Mgmt user stories are not well defined (Y) PEL <u>and</u> Risk Mgmt user stories are not well defined (R)		G <input type="checkbox"/>	PW	User stories based on the process are well defined
		1.2	User stories can be mapped to application functionality	90% + of user stories mapped to app functionality (G) 75-90% of user stories mapped to app functionality (Y) <75% of user stories mapped to app functionality (R)		G <input type="checkbox"/>	CM	
		1.3	“Must Have” Enhancements provided by Oracle	Oracle expected to deliver must-haves per baseline (G) Oracle likely to deliver must-haves delayed 1-2 mos. (Y) Oracle likely to delay 60+ days from baseline (R)		Y <input type="checkbox"/>	CM	
		1.4	Bugs/Defects fixed within acceptable timeframe	>85% show stopper/critical/high fixed within 5 days (G) 70-85% show stopper/critical/high fixed within 5 days (Y) <70% show stopper/critical/high fixed in 5 days = Red (R)		Y	CM	
2	Will it drive the outcomes?	2.1	Expected outcomes are well defined	Detailed outcomes & metrics documented (G) High level outcomes documented, no detailed metrics (Y) Outcomes only discussed in concept with no analysis (R)		Y	RD	
		2.2	User Experience is intuitive	End users can navigate solution with minimal training (G) End-user experience will be complex, but trainable (Y) End-user frustration likely to occur, even with training (R)		Y <input type="checkbox"/>	Kirby A	
		2.3	Stakeholder Advisory Team concurrence	“Unanimous -1” thumbs-up on day-in-life review (G) Mixed acceptance of day-in-life review (Y) Majority of SAT does not accept day-in-life review (R)			Rich D	
3	Can we afford it?	3.1	Expected financial benefits stay within acceptable threshold	Hard financial benefits within 10% of business case (G) 10-50% loss in hard financial benefit (current phase) (Y) >50% loss in financial benefits from current phase (R)			Rich D	Benefits refresh in progress; have not changed projections
		3.2	Expected costs stay within acceptable threshold	EAC for current phase (not FY) +/- 10% baseline (G) EAC expecting 10-40% negative variance (Y) EAC likely to exceed 140% of original baseline (R)		G <input type="checkbox"/>	Donna R	

We actively track Functional Metrics

User Stories – PEL Scope

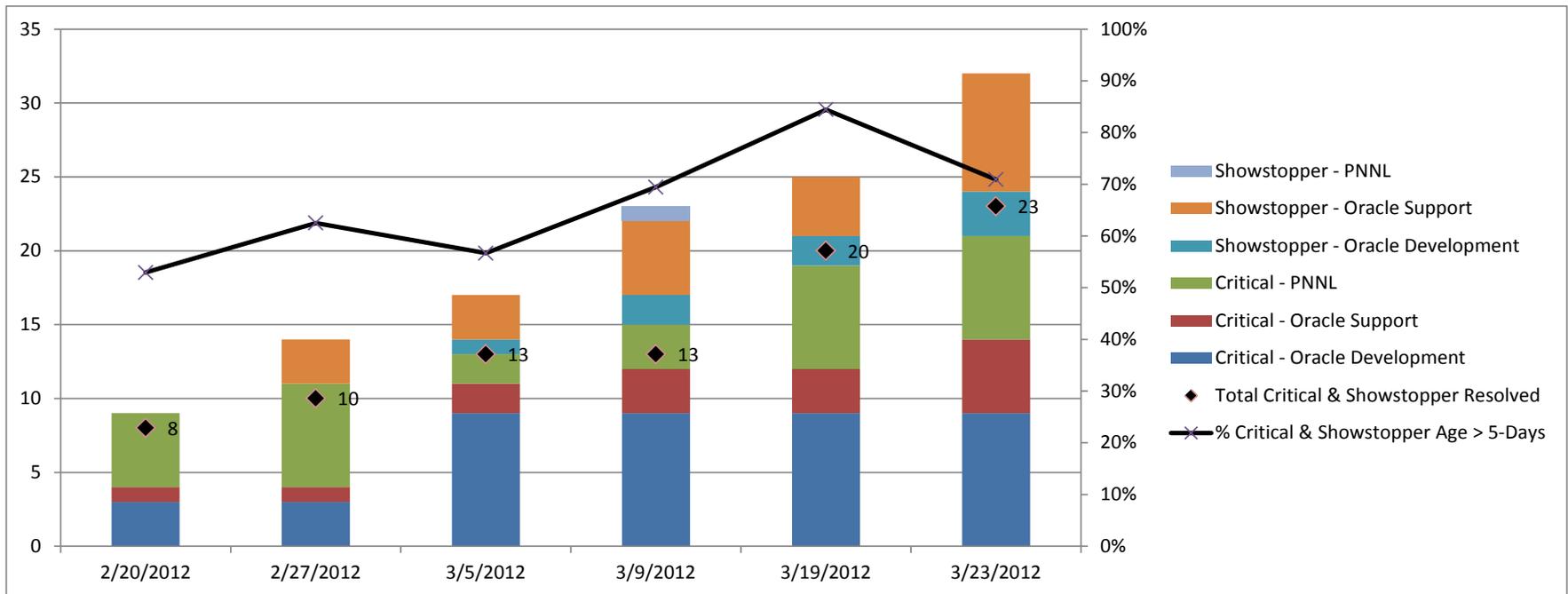


We actively track product Bug and Enhancement Metrics

Total Open SR Counts (since project start; 105 SRs as of 3/28/12):

PLA Line	# of Open SRs			# of Open SRs
	Customer	Development	Support	
Oracle Fusion Applications	26	30	29	85
More Applications		4	2	6
Middleware	2	3	6	11
Unspecified		1	1	2
Database Technology	1			1
Total	29	38	38	105

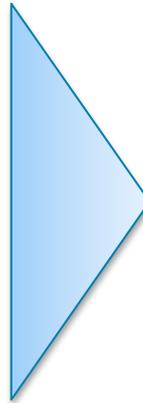
RUP1 Open Showstopper & Critical SRs (since 1/1/12; 32 SRs as of 3/23/12):



Assess Value of Systems Integrator (SI)

Challenges

- Maturity of vendor
- Engaged independent trusted advisor
- Access to:
 - skilled ERP Project Management resources
 - technical skills
 - product configuration skills
- Delivery methodology
- Financial risk sharing
- Access to broader community



Assessment Framework

- Classification of challenges
- SI ability to mitigate (Good, Fair, Poor)
- Other mitigation Options (Good, Fair, Poor)
- Total value rating

CHALLENGE <i>High, Medium, Low</i>	CHALLENGE DESCRIPTION	SI ABILITY TO MITIGATE <i>Good, Fair, Poor</i>	OTHER MITIGATION OPTIONS <i>Good, Fair, Poor</i>	SI VALUE
HIGH Maturity of vendor software	<ul style="list-style-type: none"> Product maturity issues from Oracle have a high likelihood of impacting the PNNL delivery schedule 	POOR <ul style="list-style-type: none"> SI's will have limited ability to influence product delivery beyond what PNNL is currently capable of. 	FAIR <ul style="list-style-type: none"> Continued intense focus on PNNL/Oracle relationship across multiple levels, and positioning of PNNL, to mitigate product delivery issues. Aggressively leverage 'stretch goals' 	
HIGH Full time engagement with an independent, trusted advisory	<ul style="list-style-type: none"> PNNL not currently leveraging a trusted, 3rd party advisor that is "on the ground" with the team on a regular basis. Current advisory functions either internal or high level in their engagement. 	GOOD <ul style="list-style-type: none"> Seasoned resources from an SI, on the ground with the team, can help identify creative opportunities to optimize critical path, and objectively manage both expectations and required contributions of stakeholders 	FAIR <ul style="list-style-type: none"> PNNL can continue to leverage limited internal expertise, engage in deeper-dive 'spot reviews' with 3rd party experts, and leverage advice and counsel of current partners 	
HIGH Access to skilled ERP project management resources	<ul style="list-style-type: none"> PNNL has limited internal resources capable of managing complex, dynamic critical path and complex interdependencies for large-scale ERP. Minimum of 1 add'l experienced PM required. 	GOOD <ul style="list-style-type: none"> Core SI strengths are typically in large-scale ERP project management capability – can be leveraged to replace, augment or train internal PM capability. 	GOOD <ul style="list-style-type: none"> PNNL has the opportunity to make an effective strategic hire from industry for large-scale ERP and build the capability internally. 	
HIGH Access to technical skills (architecture, middleware, data integration, etc.)	<ul style="list-style-type: none"> New technology platforms represent a significant technical shift for internal IT talent; significant learning curve in developing necessary skills. 	GOOD <ul style="list-style-type: none"> Technical platforms have been on market multiple years with good base of SI skills; some are newer. Generally SI can bring skills that can ramp rapidly, even on new platforms. 	FAIR <ul style="list-style-type: none"> Accelerate, increase and formalize training program for internal resources. Ensure all key talent has formally identified backup. 	

Strategic Vendor Engagement

- ▶ Engage at all levels with clear roles, expectations and communication points
- ▶ Communicate early and often, engaging at multiple levels easily
- ▶ Plan with partners
- ▶ Influence product direction (strategic and tactical)
- ▶ Ensure common understanding of escalation process
- ▶ Maximize value to the vendor ecosystem
- ▶ Articulate business needs and apply resources to build vendor value in the marketplace for mutual success
- ▶ Leverage capabilities in other lab and private sector relationships

Planned Scope for Oracle Fusion

- ▶ Project Execution [Fusion Project Portfolio Management (PPM), Financials]
 - Early release (September 2012)
 - Phased adoption (through FY13)
 - Full implementation (start of FY14).
- ▶ Business Capture and Proposal Development (FY13)
- ▶ Core Financials (FY12 – 14)
- ▶ Budgeting and Planning (FY14 – 15)
- ▶ Acquisitions (FY14 - 15)
- ▶ Human Capital Management (FY14 – 15)

PPM Project Details

Projects

Project: JTB 2012.02.16.001 (200118)

Tasks

- Manage Project Budget
- Manage Project Expenditure Items
- Manage Project Forecast
- Manage Project Plan
- Track Project Progress

Edit Project Definition
Done

Basic Information Edit

Name	JTB 2012.02.16.001	Project Start Date	10/01/2011	<input checked="" type="checkbox"/> Planning project	
Number	200118	Project Finish Date	09/30/2015	Service Type	
Business Unit	PNNL Business Unit	Project Status	Draft Direct Project	Work Type	Project
Project Unit	Pacific Northwest National Laboratory	Priority	Medium	Project Space	Project_Space_Template_for_Oracle_Fusion_Projects_Template
Organization	P0000 - PNNL	Project Type	DOE Direct	Project Space	JTB_2012_02_16_001_Space
Legal Entity	Pacific Northwest National Laboratory	Outline Display Level	1		
Description	Testing re-org.				

Project Definition List

- Project
 - Basic Information
 - Project Plan
 - Team Members
 - Project Customers
 - Partner Organizations
 - Supplier Organizations
 - Project Classifications
 - Project Plan Type
 - Resource Breakdown Structure

Project Search

Saved Search

Project Name

No data to display.

Project Plan Edit

Outline Number	Task Number	Task Name	Planned Start Date	Planned Finish Date	Billable	Chargeable	Task Manager
0	200118	JTB 2012.02.16.001	10/01/2011	09/30/2015		No	
1	1	1	10/01/2011	09/30/2012	Yes	Yes	
2	2	2	10/01/2012	09/30/2013	Yes	Yes	
3	3	3	10/01/2013	09/30/2014	Yes	Yes	
4	4	4	10/01/2014	09/30/2015	Yes	Yes	
5	5	5	10/01/2011	09/30/2015	Yes	No	
5.1	5.1	5.1	10/01/2011	09/30/2015	Yes	Yes	
5.2	5.2	5.2	10/01/2011	09/30/2015	Yes	No	
5.2.1	5.2.1	5.2.1	10/01/2011	09/30/2015	Yes	No	
5.2.1.1	5.2.1.1	5.2.1.1	10/01/2011	09/30/2015	Yes	Yes	
5.2.1.2	5.2.1.2	5.2.1.2	10/01/2011	09/30/2015	Yes	Yes	

Rolled-up Task Dates

	Planned	Estimated	Actual	Baseline
Start Date	10/1/2011			
Finish Date	9/30/2015			

PPM Generated Simple Project Gantt

Projects

Project: JTB 2012.02.16.001 (200118)

Manage Project Plan

Tasks Progress **Gantt**

Done

View ▾

Task Name	Task Number	Planned Start Date	Planned Finish Date	2013											
				Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	
▽ JTB 2012.02.16.001	200118	10/01/2011	09/30/2015												
1	1	10/01/2011	09/30/2012	Fitzsimons, Brian P, Gadd, Amy A, Materials -											
2	2	10/01/2012	09/30/2013												
3	3	10/01/2013	09/30/2014												
4	4	10/01/2014	09/30/2015												
▽ 5	5	10/01/2011	09/30/2015												
5.1	5.1	10/01/2011	09/30/2015												
▽ 5.2	5.2	10/01/2011	09/30/2015												
▽ 5.2.1	5.2.1	10/01/2011	09/30/2015												
▽ 5.2.1.1	5.2.1.1	10/01/2011	09/30/2015												
▽ 5.2.1.2	5.2.1.2	10/01/2011	09/30/2015												

<No Tasks Selected>

- Baseline
- NormalProgress
- Actual Critical Task
- Summary Progress
- Critical Task
- Baseline Milestone
- Summary
- Critical Progress
- Critical Milestone
- Milestone
- Baseline Critical Milestone
- Critical Milestone
- Actual Critical Progress
- Normal
- Critical S
- Actual

PPM Project Spaces

Project Space Demo

→ Abraham Mason | [Logout](#)

Home

Activity Stream - Quick View

No activities to display.

Action Items

No.	Title	Description	Priority	Due Date	% Complete
1	Create webcenter spaces documentation	Document all features and functionality	2		60%
3	Configure Content Server for document workflows	Create ad hoc team document review workflow	3	4/3/12	100%
2	Create webcenter spaces template	Work with Chris Yardley to create draft project space template	1	4/3/12	100%

Links

- [Electronic Prep & Risk FNVA](#)
- [Proposal Pricing](#)
- [Work Authorization Lifecycle](#)
- [Advanced Travel Request Approvals System](#)
- [Badge Request](#)
- [CMS](#)
- [Delegations System](#)
- [eContract File](#)
- [Information Release](#)
- [Library Research Tools](#)
- [MyIP](#)
- [RAFT](#)
- [RMTS](#)
- [ETR Reports](#)
- [Acquisition Web Reports](#)
- [Project Analysis](#)
- [Project Management](#)
- [Proposal & Contract Information](#)

Events

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3 9:00 PM PEL Demo	4	5 5:30 PM PEL Stakel	6 Courtenay Vacation -- AZ	7
8	9	10	11	12	13	14
6:00 AM Kevin - Vacation -- Disney World						

Announcements

Test Announcement
 Welcome to your project space

Planned Scope for Maximo

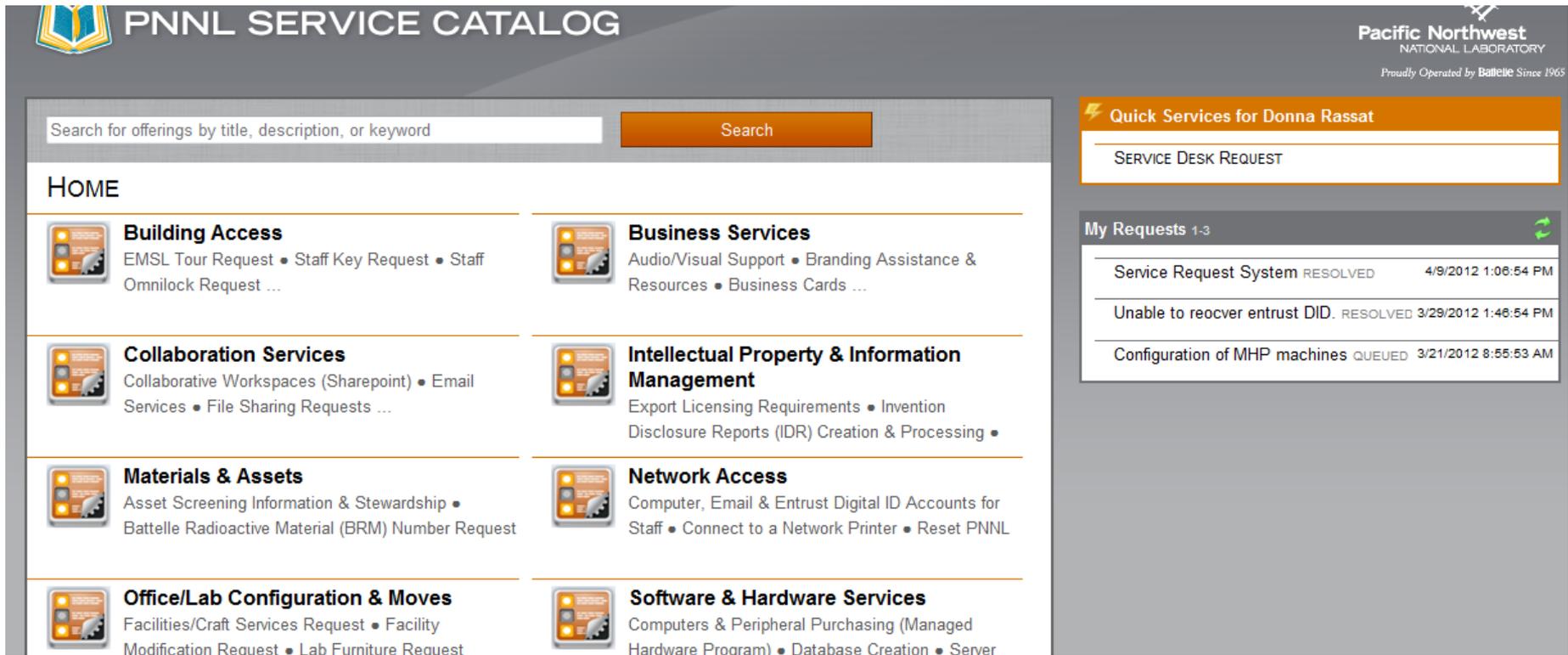
▶ Service Management

- ✓ Consolidated PNNL Service Catalog
- ✓ IT Incident and Problem Management
- ✓ Generic IT Service Request
- Facilities and Operations Service Management (now)
- Continued automation of service management within an Enterprise Service Management framework (FY13).

▶ Asset Management

- ✓ Locations
- Property (now)
- Chemicals (FY14)
- Rad Protection and Material (FY14)
- Waste Management (FY15).

Service Catalog Consolidates All Services Into One Stop For Users



The screenshot displays the PNNL Service Catalog homepage. At the top left is the PNNL logo, and at the top right is the Pacific Northwest National Laboratory logo with the text "Proudly Operated by Battelle Since 1965". Below the logo is a search bar with the placeholder text "Search for offerings by title, description, or keyword" and an orange "Search" button. The main content area is titled "HOME" and features a grid of service categories, each with an icon and a list of services:

- Building Access**: EMSL Tour Request • Staff Key Request • Staff Omnilock Request ...
- Business Services**: Audio/Visual Support • Branding Assistance & Resources • Business Cards ...
- Collaboration Services**: Collaborative Workspaces (Sharepoint) • Email Services • File Sharing Requests ...
- Intellectual Property & Information Management**: Export Licensing Requirements • Invention Disclosure Reports (IDR) Creation & Processing •
- Materials & Assets**: Asset Screening Information & Stewardship • Battelle Radioactive Material (BRM) Number Request
- Network Access**: Computer, Email & Entrust Digital ID Accounts for Staff • Connect to a Network Printer • Reset PNNL
- Office/Lab Configuration & Moves**: Facilities/Craft Services Request • Facility Modification Request • Lab Furniture Request
- Software & Hardware Services**: Computers & Peripheral Purchasing (Managed Hardware Program) • Database Creation • Server

On the right side of the interface, there is a "Quick Services for Donna Rassat" section with a "SERVICE DESK REQUEST" button. Below that is a "My Requests 1-3" section with a refresh icon and a list of request items:

Request Item	Status	Timestamp
Service Request System	RESOLVED	4/9/2012 1:08:54 PM
Unable to recover entrust DID.	RESOLVED	3/29/2012 1:48:54 PM
Configuration of MHP machines	QUEUED	3/21/2012 8:55:53 AM

- ▶ All ERPs are challenging - even mature products
- ▶ Risk assessment rigor for critical project areas
- ▶ Strong governance engagement; External Advisory Board is advocate for executives
- ▶ We also experience challenges
 - Business leadership and project management of a diverse Lab portfolio
 - Maintaining commitment for critical business resources with multiple business pressures
 - In-kind resources – increasing management awareness of effort
- ▶ Project execution
 - Enable a well-rounded set of project metrics to also inform governance; not only on technology aspects
 - Do not underestimate the amount of integration (lack of vendor understanding in third-party integration)
 - Develop disciplines around people change (e.g., action learning teams, demo protocol, standard approach)



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Environmental Sciences Division

Questions?