



Improving EVM and Project Management Integration in the Dept. of Energy

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Outline

- Project Management Improvements
- Improving EVM and Project Management Integration
- Current Endeavors
- Path Forward





From Secretary Ernest J. Moniz

- **12/01/2014: Improving Management of Projects**
 - DOE manages “some of the largest, most complex, and technically challenging projects in the public or private sector. Many are one-of-a-kind projects that involved the risks and challenges of nuclear operations.”
 - Accomplishments: GAO High-Risk List narrowed focus to NNSA and Environmental projects greater than \$750M
 - Reorganization to further improve management of projects:
 - Provide a clear line of functional responsibility from the Under Secretary to the project owner to the Federal Project Director
 - Establish a project assessment office with direct line of responsibility to the appropriate Under Secretary that does not have line management responsibility for project execution



Some New Terms and Definitions

- **New terms from S-1 memo of Dec. 1, 2014, *Improving the Department's Management of Projects***
- **Project Management Risk Committee (PMRC)**
 - Provides enterprise-wide project management risk assessment and expert advice to the Secretary, CE, PMEs, and ESAAB on cost, schedule, and technical issues for projects \$100M and greater
- **Project Management Executive (PME)**
 - Previously identified as the Acquisition Executive (AE)
- **Chief Executive for Project Management (CE)**
 - Previously identified as the Secretarial Acquisition Executive (SAE)

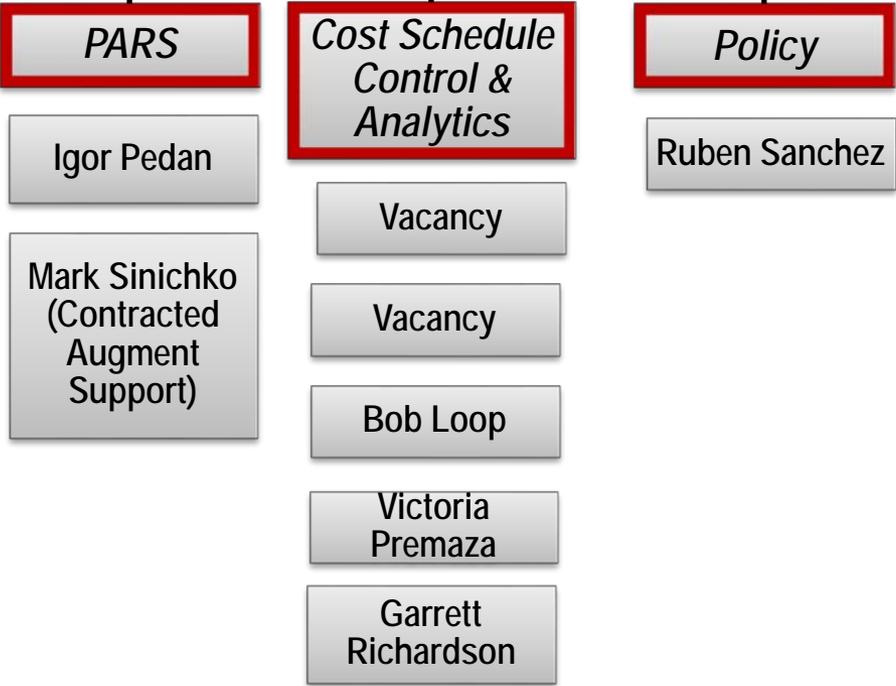


MA-63
Project Management
Michael Peek, Director

MA-631
Project Assessment
John White, Chief

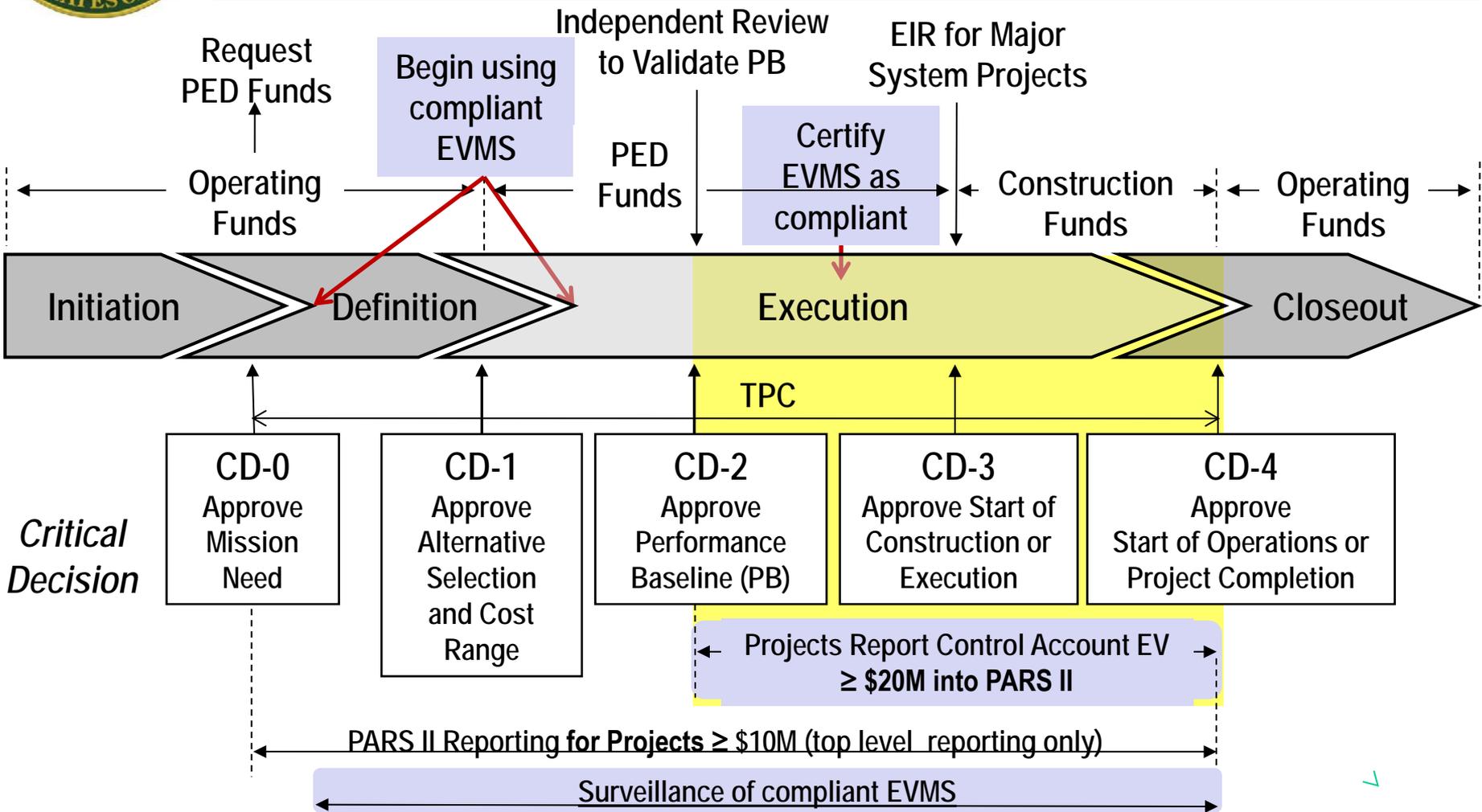
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(Contracted
Augment Support)





EVMS Requirements Tied to DOE's Acquisition Lifecycle

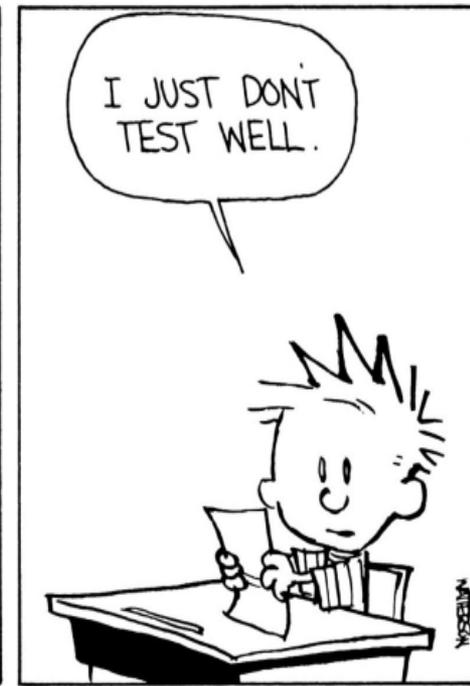
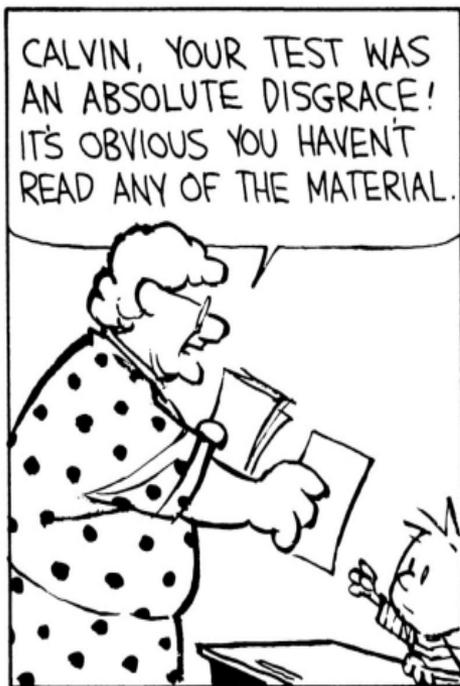


Typical DOE Acquisition Management System for Line Item Capital Asset Projects



Why More Compliance Issues Identified?

- Continuous Improvement
- Federally led reviews
- Enhanced knowledge
- Better tools
- More sophisticated analytic capabilities
- Individual vs grouped CARs





Common EVMS Issues

- Planning and Scheduling
- Element of Cost (EoC)
- Integration of Cost and Schedule
- Baseline Control
- ETC/EAC
- Variance Analysis
- CAMs
- MR and Contingency (Budget vs Funds)





Other EVMS Issues

- Surveillance
 - Contractor
 - Site/Program
- Root Cause Analysis
 - VARs ~ Performance Issues
 - CARs ~ System Issues
- EVM Cost and Schedule systems
 - Licenses not current - Not maintained up to date
 - Current versions properly implemented enable compliance





Improving EVM and Project Management Integration





Improving EVM and PM Integration

- **Purpose:**

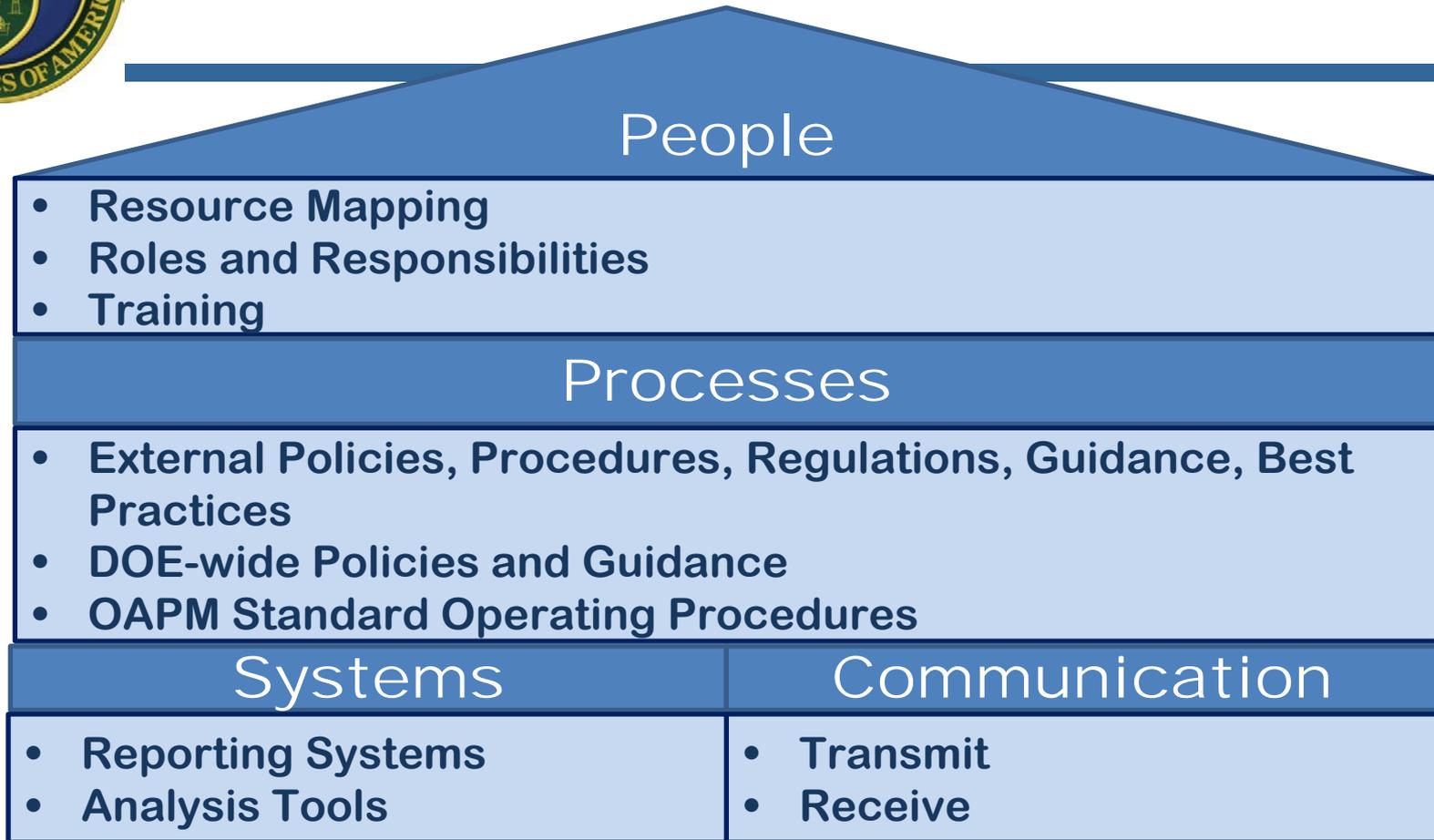
- Complete assessment of EVMS within DOE Capital Asset Projects
- Conducted by independent entity recognized and respected by government and industry as EVMS expert

- **Goal:**

- Provide an executable path forward to obtain EVM excellence in a structured, well-defined, and clear approach
- Achieve a fundamental paradigm shift across the DOE enterprise (Feds and Contractors) in Departmental buy-in, accountability, and executability



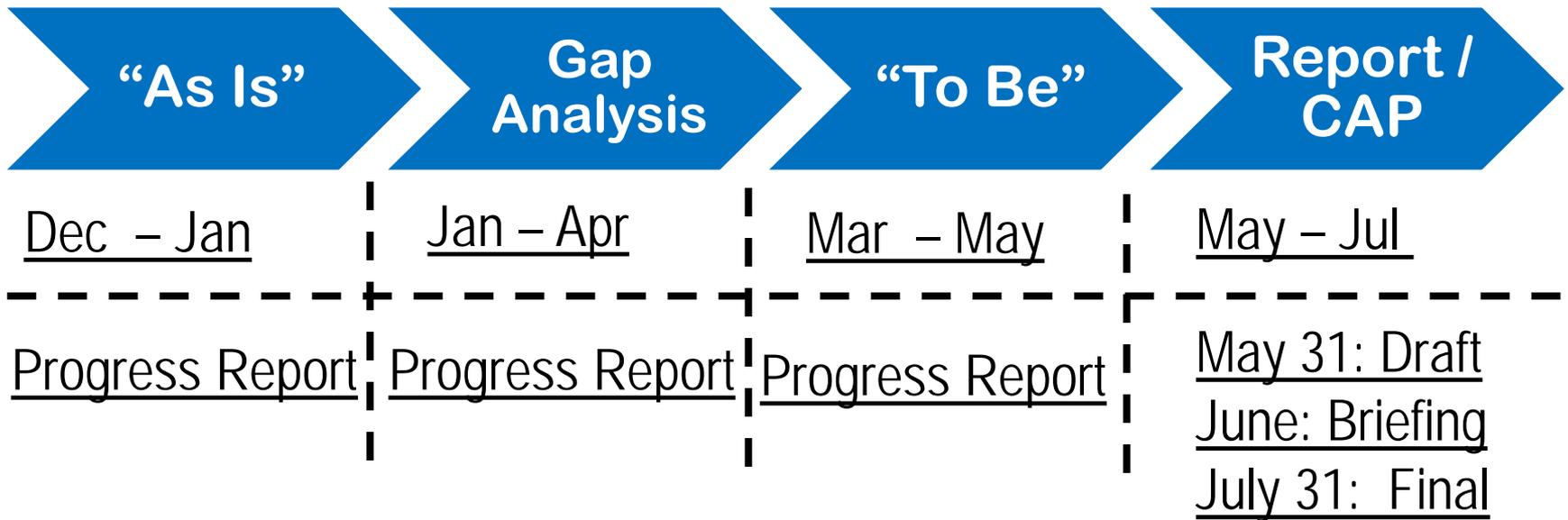
Improving EVM and PM Integration



- H&A collecting input for gap analysis to identify strengths, weaknesses, technical and cultural barriers, opportunities
- Create an executable corrective action plan - invest in the future



Initiative Timeline





Initiative Deliverables

- The final report is a document to convey recommendations of improvement and a reasonable path to follow
 - It does not include the execution of the plan
- The environment is not static, i.e. work continues in OAPM on process development
 - Interim recommendations may have already been incorporated by time of delivery of the final plan
 - Examples: Consistency Improvements (more on these coming up)
 - DOE EVMS Integration Handbook (EVMSIH)
 - Use of Webinar to communicate
 - EVMS Corrective Action SOP



Current Endeavors





Preliminary Survey Results

- **Surveys sent to DOE Federal Staff, Federal contract support staff, and DOE Capital Asset Contractors**
- **88 Survey responses to date:**
 - Feds = 44 / Contractors = 44
 - Coincidence that the responses are 50/50
- **The primary message is clear (and no coincidence):**

CONSISTENCY



DOE EVMS Integration Handbook (EVMSIH) Background

- **Survey and feedback results regarding EVMS**
 - Provide clarity
 - Add consistency in application
- **Historically EVMS reviews have used a mixture of sources including**
 - NDIA IPMD Intent Guide
 - Bowman Guide
 - DCMA Interpretive Guide (Draft)
 - EVMIG
 - PASEG
- **Contractor concerns that some of the sources were nondescript and difficult to access**



Genesis

- **2/18/2015: The Department of Defense published the Earned Value Management System Interpretation Guide**
 - Replaced the NDIA IPMD Intent Guide with a government document
 - High level focus
 - Did not include evaluation methods
- **OAPM Goal – Provide Clarity and Consistency**
 - Develop a DOE EVMS Interpretation Handbook
 - At the minimum compliance level
 - Integrating the compliance intent with the evaluation methods and narrative explanations
 - One stop handbook



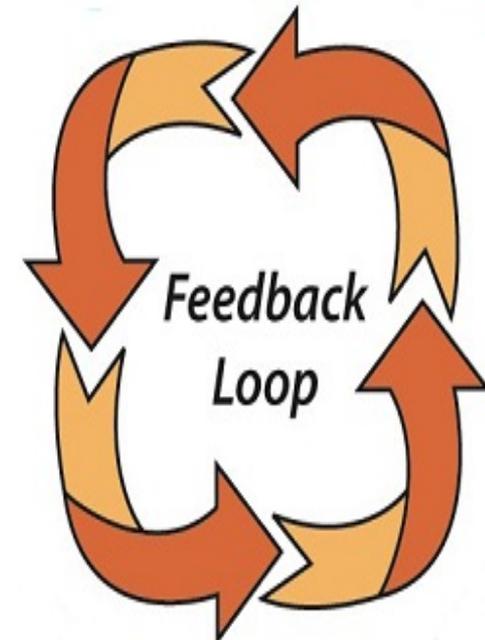
Construct of the DOE EVMSIH

- **Supports the EIA-748 EVMS Guidelines**
- **Qualifying Expectations Lines of Inquiry (QE LOIs)**
 - Minimum expectations of EVM compliance
 - CARs will reference the non-compliant QE LOIs
- **Narrative explanation of the QE LOI**
- **Impact of non-compliance**
- **Data Traces**
 - How OAPM verifies compliance with the QE LOI
- **Interview Questions**
 - Verification of QE LOIs that cannot be done with data traces alone



Development

- **Webinar held April 1st, 2015 for release of the initial draft of QE LOIs for Internal DOE and DOE Contractor Comment**
- **After adjudication of QE LOIs, the draft EVMSIH will be released for comment by sections**
 - Inclusive of narrative discussions and verification steps
 - 5/19/15: Release Organization; Planning, Scheduling and Budgeting
 - 6/16/15: Release Analysis and Managerial Reporting; Accounting Considerations
 - 7/14/15: Release Revisions and Data Maintenance; Indirect Considerations



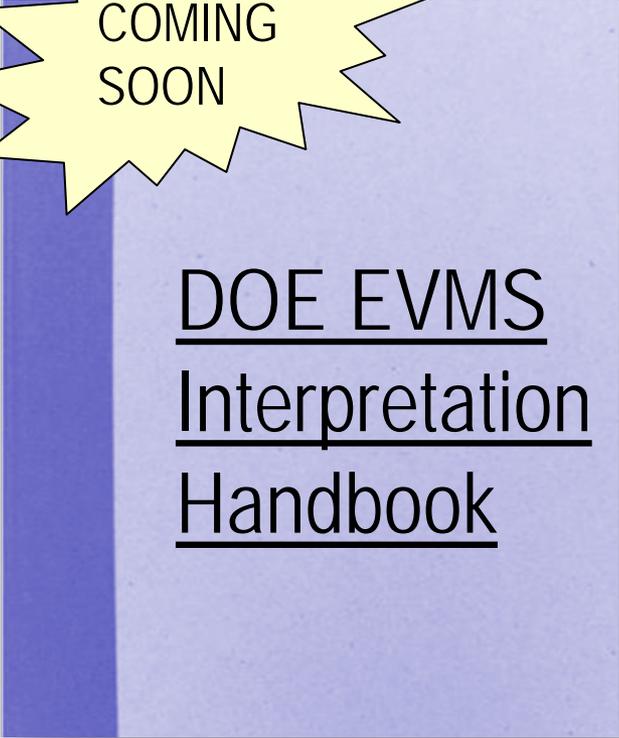


Release of EVMSIH

- **Release of EVMSIH *Draft***
 - Early September 2015
 - OAPM will pilot the EVMSIH on several compliance reviews
 - The EVMSIH *Draft* will be revised with lessons learned from pilots and another user comment period
- **Release EVMSIH (Final)**



COMING
SOON



DOE EVMS
Interpretation
Handbook



Enhanced Data Analytics

- Data-driven approach (consistent with DCMA)
- Recent data-driven review issues – datify compliance reviews and performance assessments
- Consistent PARS II and EVMS review data submissions
 - UN/CEFACT XML Schema
- Analyze data sets to detect patterns and uncover issues before they appear
- Targeted compliance and surveillance reviews
 - Increased efficiencies; reduce footprint and resource needs
 - Identify and localize issues; optimize surveillance and avoid disruptions





Project Assessment & Reporting System (PARS IIe)

- **Purpose**
 - Central Repository and official “System of Record” for capital asset project performance information
 - Same data as maintained in our contractors’ project management systems
 - Used by federal and contractor personnel across the nation to record and track the progress of capital asset projects
- **Goal**
 - Provide accurate, timely, complete, and verifiable project performance data
 - Provide greater transparency on the performance of specific projects
 - Facilitate the efforts of project analysts to analyze, track, and validate the data

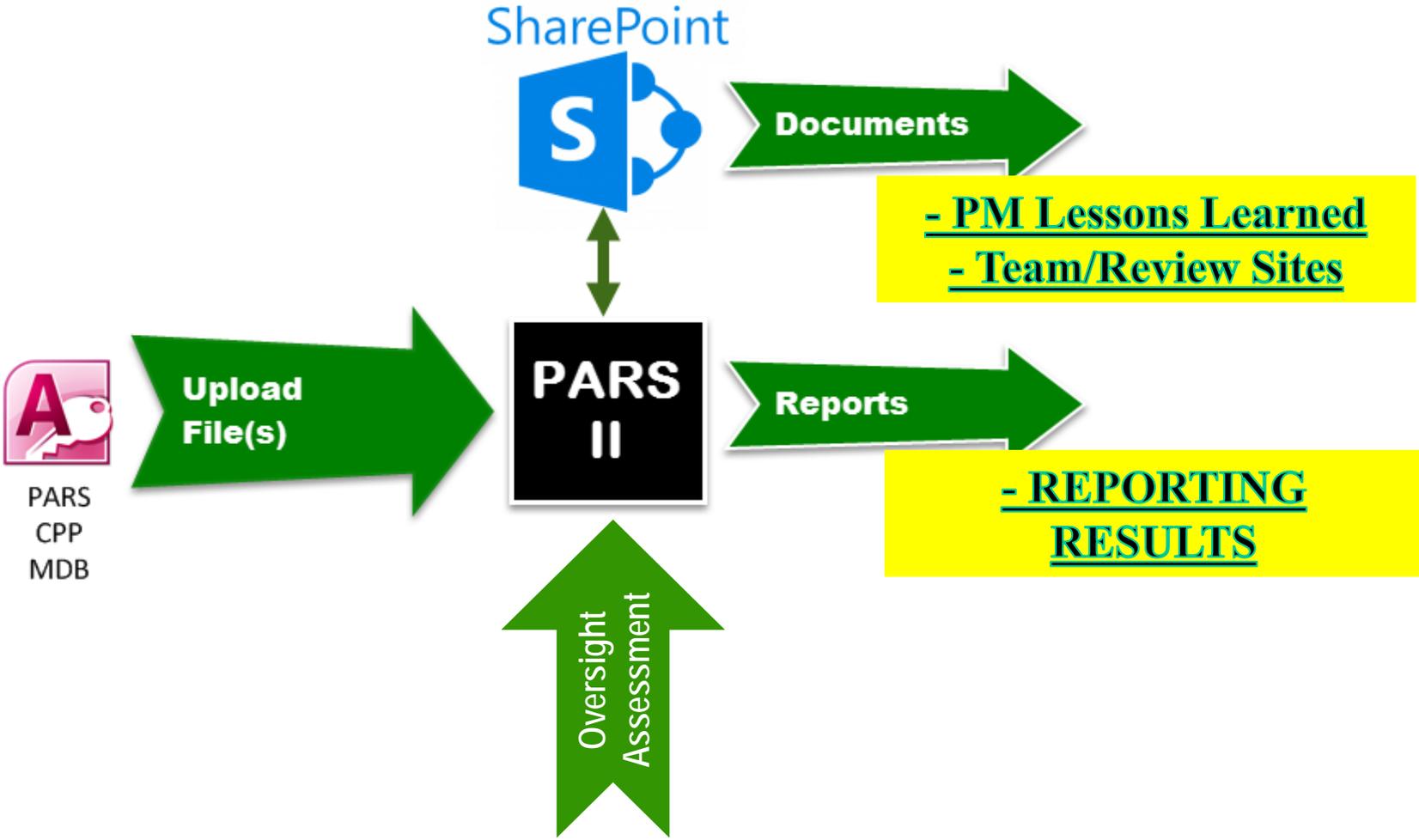


PARS System Evolution

- **PARS – pre October 2010**
 - Cumbersome, complex, insufficient level of detail, manual entry, limited automation, no reporting and analysis capabilities, etc.
- **PARS II – released October 2010**
 - Powered by COTS product
 - Increased analysis and reporting capabilities, increased visibility and transparency into contractor performance
- **PARS IIe – released July 2014**
 - Powered by SharePoint 2013 Development Platform
 - Advanced document management, information sharing, and collaboration capabilities
 - Scalability to meet current and future demands and strategic objectives



PARS II Current State





PARS II Current State

- PARS II Dekker Module Issues
 - IE Browser - Browser independency is a need, not a want
 - MS Office 2003 - Software no longer supported by Microsoft
 - Impacts uploading, viewing, reporting processes
- Resolution is to transition:
 - O&A Module to SharePoint 2013 platform
 - CPP process from custom extraction to UN/CEFACT XML
 - CPP dashboards and reports to Business Intelligence platform



Transition to UN/CEFACT XML

- Electronic Data Interchange (EDI) format for tool-agnostic data exchanges of project performance cost and schedule data
- Adopted by DoD as standard for project performance data reporting in 2012
- Incorporated as standard data output by many software vendors (Deltek, Oracle, Microsoft, ARES, and others)

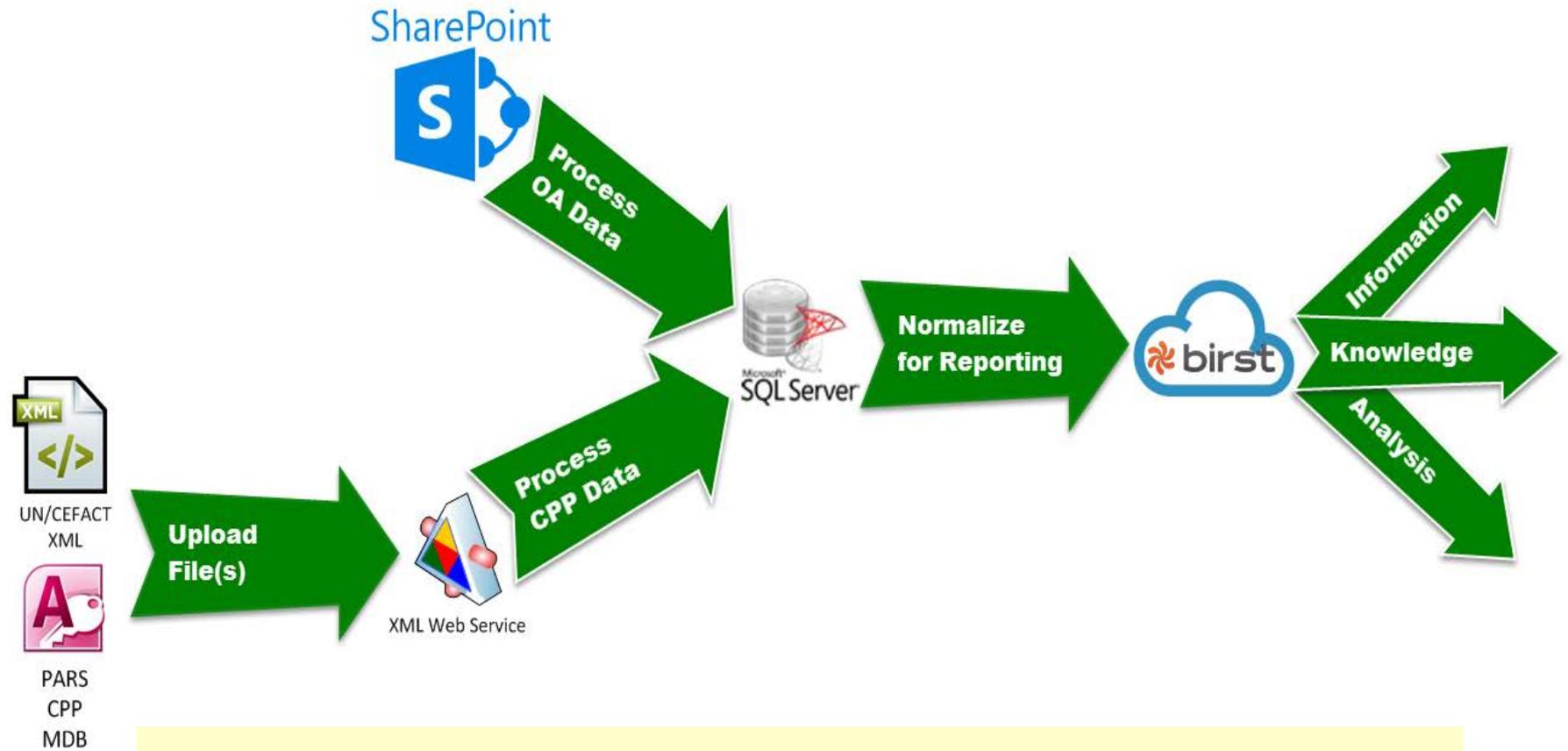


Controlled Unclassified Information (CUI)

- Will enable access to UCNI and OUO for authorized users
- System elevated to MODERATE impact level
- 60 day password expiration and 15 minute timeout limit
- Two-Factor Authentication (TFA) login (similar to online banking login process (e.g., Chase))



PARS IIe Enhancement in a Nutshell



GAINING KNOWLEDGE



New APM Handbooks

NEW

Lifecycle
Cost
Handbook

NEW

Statement of
Work and
Key
Performance
Handbook

NEW

APM
Glossary of
Terms
Handbook

PARS IIe Policy & Guidance Repository
DOE APM Website



Some Terms and Definitions

- Authorized Unpriced Work (AUW)
- Baseline Change Proposal (BCP)
- Budget Change Request (BCR)
 - > BCR-P
 - > BCR-M
 - > BCR-C
- Contingency
- Management Reserve (MR)
- Over Target Baseline (OTB)
- Over Target Schedule (OTS)
- Undistributed Budget (UB)





Improved Training & Common Understanding

- **Enhanced Federal EVMS training**
 - EVMS Basic on-line: 24/7
 - DOE OLC (search EVMS)
 - Added Advanced EV course
 - <https://powerpedia.energy.gov/wiki/PMCDP>
- **Encourage EV professionalism/certification**
 - Earned Value Professional (EVP)
 - Planning and Scheduling Professional (PSP)
- **EV training snippets for all, including contractors**



EV Training Snippets

- Answers to your EVMS questions – ready when you are
- 34 web-enabled snippets – a range of EV topics
- Accessible 24/7 - 10 to 20 minutes in length
- DOE's Powerpedia
https://powerpedia.energy.gov/wiki/Earned_Value_Management_System#Training_videos
- PARS II Policy & Guidance section in EVMS Training Snippets library
<https://pars2e.doe.gov/policy/Lists/EVMS%20Snippets/AllItems.aspx>
- EFCOG Website
http://www.efcog.org/wg/pm_evmssg/EVMS_snippets.htm



EV Training Snippet Library

1.0 DOE Reviews: (8 ea.)

- Order 413.3 EVM Reqts
- EVMS Review Approach
- EVMS Stage 1 Surveillance
- EVMS Stage 2 Surveillance
- EVMS Stage 3 Surveillance
- EVMS Review for Cause
- EVMS Certification
- Common EVMS Findings

2.0 EV Reporting: (4 ea.)

- CPR/IPMR Purpose and Use
- CPR/IPMR FPD Quick Check
- IPMR Data Item Description
- CFSR Overview & Reconciliation with IPMR/CPR

3.0 Schedules: (4 ea.)

- IMS Initial Baseline Review
- IMS Monthly Review
- Schedule Health Metrics
- Guidance & Resources



EV Training Snippet Library (Cont.)

4.0 Advance Topics: (9 ea.)

- OTB/OTS Implementation
- Integrated Baseline Reviews
- Budget vs. Funds / MR vs. Contingency
- Undistributed Budget
- Authorized Unpriced Work
- Baseline Control Methods
- FFP Subcontract and Prime EVM
- CAM Roles and Surveillance
- High Level EVM expectations

5.0 PARS II Analysis Reports: (7 ea.)

- Reports Overview
- Data Validity Reports
- Schedule Health Assessment Reports
- Variance Analysis Reports
- Trend Reports
- EAC Reasonableness and Independent EAC
- OAPM Monthly Report

6.0 Predictive Analysis: (2 ea.)

- Predictive Analysis Methods
- Applied Predictive Analysis



Path Forward





Conclusions and Goals

- Continue to improve
- Data-driven reviews are the norm
- Open and honest communication
- Mentor/coach/advisor – also test administrator
- Contractor systems – they are responsible
- Local surveillance (self-policing)
- EVMS expertise resides in field
- DOE (Feds and contract partners) recognized as best in government and industry





QUESTIONS?





Backup Slides



Document the “As Is” State

- Review and Document
 - Mission/Vision/CONOPS
 - External and internal EV-related policies, internal procedures, guidance, templates
 - Contractual language and special clauses
 - Tools for EV reporting and analysis



Document the "As Is" State

- **Review and Document (continued)**
 - Application of EVMS within the Department
 - Functional staffing (who, where, reporting structure)
 - EVMS Training
 - Communication
 - Compliance Issues, i.e. CARs
 - Dependent on CAR database



Conduct Gap Analysis

- Primary Gap Analysis methods to be used
 - Benchmarking
 - Research
 - Surveys
 - Interviews
 - SWOT
 - Root cause analysis



Recommend the "To Be"

- Recommend an improvement plan based on Steps 2 and 3:
 - Areas to be covered are the same as Step 2 ("As Is")
 - Plus any additional recommendations based on Step 3 Gap Analysis



Deliverables

- Deliver drafts of the Strategic Review Report and Strategic Improvement CAP
- Meeting to brief document findings and recommendations
- DOE provide comments
- Deliver final documents
 - Executive Summary
 - Analysis Methodology
 - Analysis and Results/Recommendations



Handbook Purpose

LCC Handbook - procedures, information, examples, and tools to develop consistent and defensible life-cycle cost estimates (LCCE) and perform appropriate life-cycle cost analyses (LCCA)

SOW & KPP Handbook - guidance and best practices for developing complete SOW and KPPs

APM Glossary of Terms Handbook - definitions of commonly used APM terms to ensure consistent use in documents and discussions