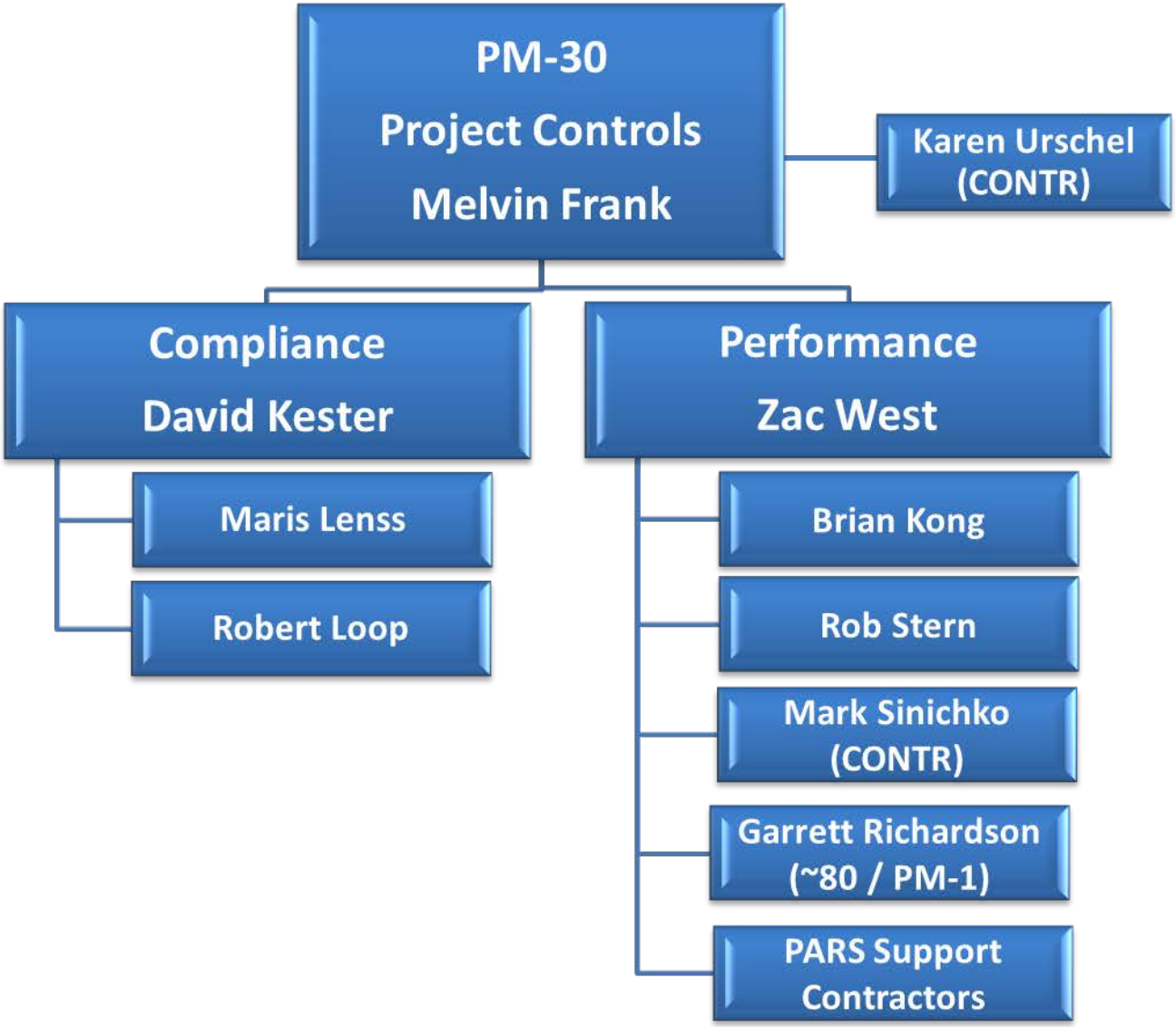
Achieving Consistency Isn't for the Weak of Heart

Melvin Frank
Director, Project Controls (PM-30)
Office of Project Management (PM)
May 2018

PM-30 Organization



Invoking Change – Lessons Learned

"*All great changes are preceded by chaos*." —Deepak Chopra

- Just because most stakeholders agree we need consistency, it isn't easy to achieve. There will be outliers.
- Consistency requires commitment and fear of commitment impedes the process.
- Approach and communication is everything.
  - –Who and How matters
- Nothing is possible without authority and management buy-in…interested in solutions, willing to commit.
- **The Goal: Cost effective/efficient use of EVMS**

EVM Implementation – General Thoughts

- Projects are 2.5 times more successful and waste 13 times less money when proven project management practices are used.

  – PMI Pulse of the Profession 2016

- Earned Value Management (EVM) has proven itself to be one of the most effective performance measurement and feedback tools for managing projects.

  – PMI 2005

EVM Implementation – General Thoughts

- **The need remains for a discussion on how the EVMS project controls process integrates with the project delivery process**
  - Per DOE O 413.3B Project Delivery requires the implementation of an integrated management system
  - For projects >$100M the certified management system (EVMS) must integrate the key project components of scope, schedule, budget, resources, and risk
  - Contractors have the flexibility to develop and implement effective management systems tailored to meet their respective needs
  - Any differences in approach for EVMS implementation during the project's life-cycle should be addressed as part of the EVMS Description

EVM Implementation – General Thoughts

- **Degree of Acceptance**
  - The EVM concept is perceived to be useful across industries
  - When implemented properly, the benefits outweigh the costs
  - There is room for improvement
  - People using EVMS need to better understand its purpose, capabilities, and limitations
  - The expertise of those responsible for implementing EVMS vary considerably

EVM Implementation – General Thoughts

"We are reminded by the work of Dr. W. E. Deming, the father of modern quality management, in which he demonstrated that the vast majority of quality problems are rooted in processes—ignored, flawed, or misunderstood by the worker, not in the workers themselves. Clear process definition, documentation, and accompanying roles and responsibilities are vital to assuring that EVMS works as intended and compliant with ANSI Standard 748."

– Brodkorb, R. (2011). The truth about preparedness for any EVMS assessment by others. Paper presented at PMI® Global Congress 2011—North America, Dallas, TX.

Next Steps

- **Decision: Align with a Proven Model**
  - Contractor ownership / Customer input
    - NDIA IPMD Guides are a respected source in the EVM Community
- **Energy Facility Contractors Group (EFCOG) and DOE**
  - Move to a more consistent alignment with the referenced NDIA documents (Intent Guide, PASEG primarily)
  - Provide EFCOG and DOE comments to those updates
    - Reflect unique approach or consideration relevant to DOE business
      - Construction of complex facilities, remediation (de-construction), life extension projects
      - Not to reinvent but should there be only one comprehensive guide or expand to complementary guides

Energy Facility Contractors Group (EFCOG)

Project Delivery/Project Controls EVMS Subgroup

efcog.org/project-delivery/project-controls-subgroup/earned-value-management-task-team/

Bookmarks | Citrix Access Gateway | PARSIIe Login | Earned Value Manage | Yahoo! | Google Translate | Outlook Web App | A Gift From Us | Meaningful Jewelry a

EFCOG

HOME | ORGANIZATION | WORKING GROUPS | BEST PRACTICES | JOIN EFCOG | UPCOMING EVENTS | LIBRARY

Events

House Nuclear Cleanup Caucus Event
04/11/2018
Washington DC

QA & ISM Working Group Meeting
04/23/2018 - 04/26/2018

Material Control & Accountability Subgroup Meeting
04/24/2018 - 04/26/2018

Engineering Practices Subgroup Meeting
05/01/2018 - 05/02/2018
Washington, D.C.

Project Delivery Working Group Meeting
05/01/2018 - 05/03/2018
North Las Vegas

Earned Value Management Task Team

Leadership

Amy D. Basche

Rick M Millikin

Craig T Hewitt

EVM SME POC List

Upcoming Events

No Events

Earned Value Management 'Fire Suppression' System

Why Send A Fire Engine To Do A Smoke Alarm's Job?… It Costs A Whole Lot Less To Have A Smoke Alarm At Every House Than Having A Fire Engine... Smoke Alarms ***Prevent*** Fires, Fire Engines ***Respond*** To Fires... Use of EVMS Tests Saves Projects Through Early Detection.

There is GENIUS in EVMS

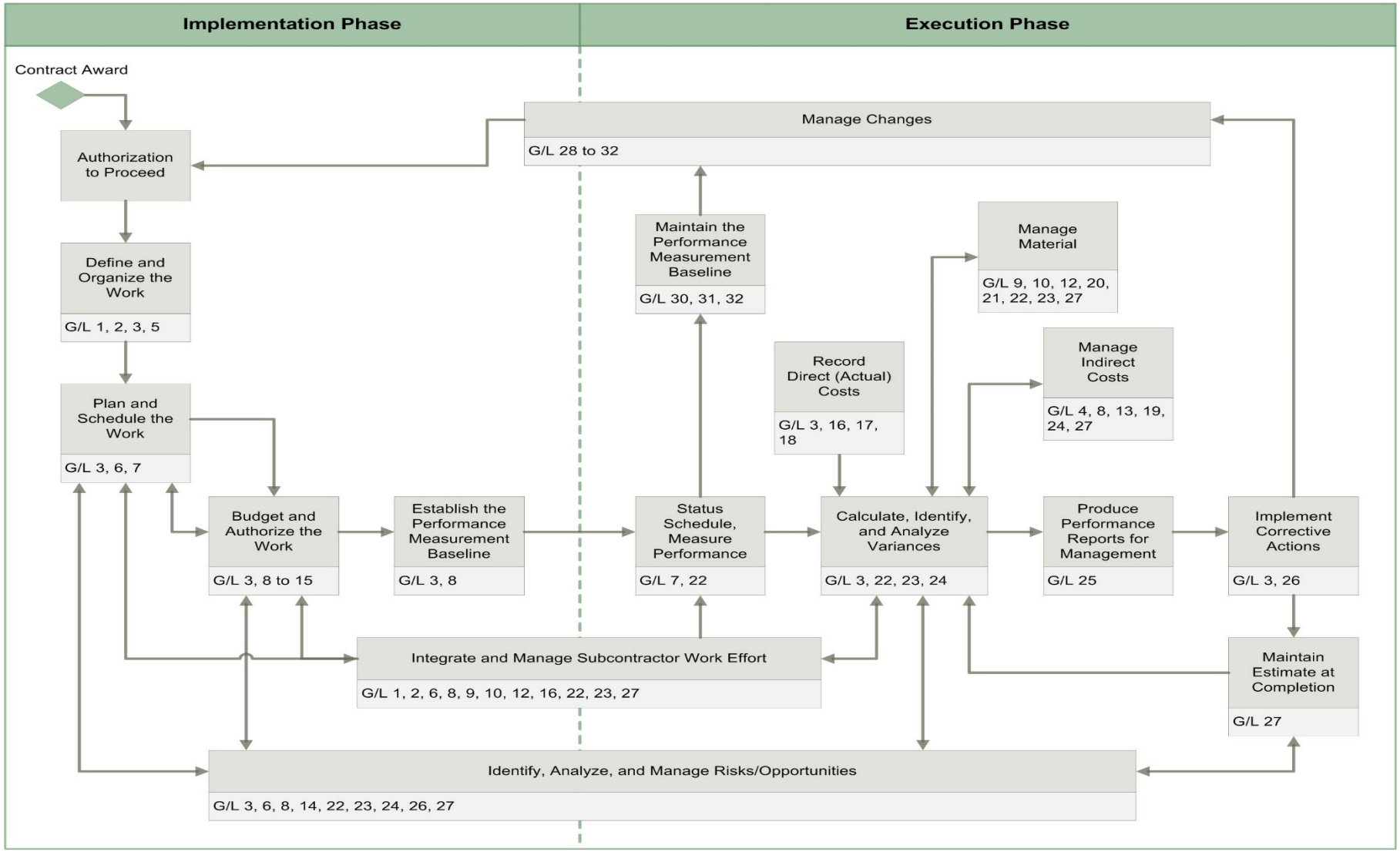
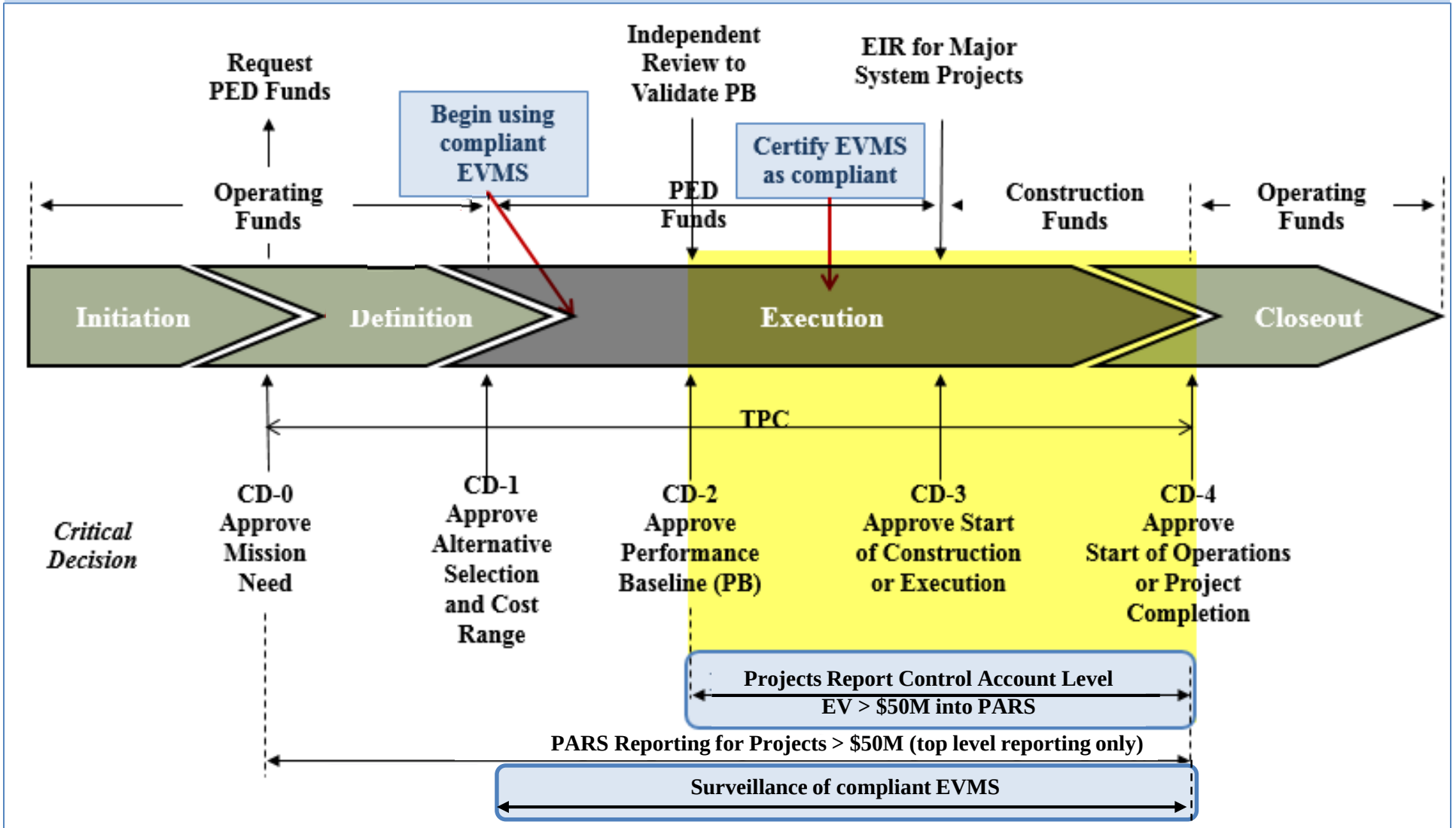


Figure 2 image from the NDIA IPMD EVMS Guideline Scalability Guide, Revision 1, November 2016

Integrated EVM / PM Acquisition Lifecycle

EVM is Integral to DOE's PM Philosophy from CD-0 to CD-4



Typical DOE Acquisition Management System for Line Item Capital Asset Projects

EVM Implementation – Cross Reference Checklist

- **EVMS compliance preparedness includes development of a cross-reference matrix mapping the sections of the EVMS Description to the 32 EIA-748 Guidelines**
  - Greatly assists the compliance process and serves to assure that all relevant EIA-748 requirements are addressed through documented processes and artifacts

EVM Implementation – Cross Reference Checklist

NDIA

National Defense Industrial Association
Integrated Program Management Division

Earned Value Management Systems
EIA-748-C Intent Guide Appendix
Compliance Map Template

April 29 2014*

National Defense Industrial Association (NDIA)
2111 Wilson Blvd., Suite 400
Arlington, VA 22201
(703) 522-1820
Fax (703) 522-1885
www.ndia.org

* See the Intent Guide Change History Log for minor updates made on January 30, 2015

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NDIA Intent Characteristics and Attributes

DIA EVMS CROSS REFERENCE CHECKLIST

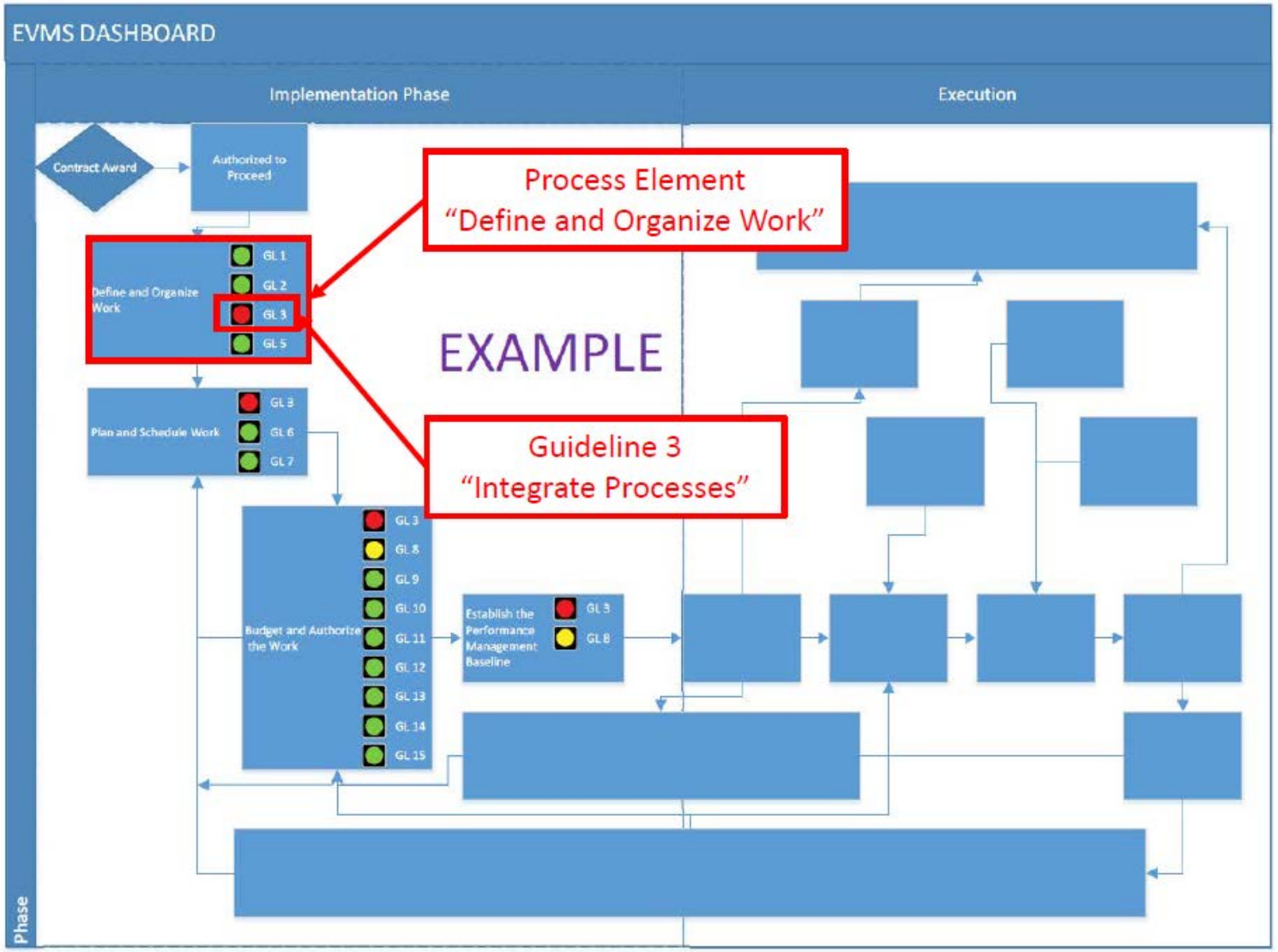
GUIDELINE and QUESTIONS	INTENT YES	INTENT NO	SD REFERENCES
ORGANIZATION			
Define the authorized work elements for program. A work breakdown structure (WBS), tailored for effective inter mmonly used in this process.			
Is a single product-oriented WBS used for a given oject extended to the control account level as a inimum?	X		Sect. 2.2.2 WBS Development: 1st Para deliverable-oriented division of project wo each CNS project, making each project-s Para 2 last sent. "For authorized scope, t PP level, as WPs must be distinguishable
Does the WBS include all authorized project work d any revisions resulting from authorized changes d modifications?	X		Sect. 2.2.2 WBS Development: 2nd Para **all the project scope**, including all subc defined at the current CD phase." 6th Par WBS Dictionary (WBSD) shall be kept u control with clearly identifiable revision nu
Are the following items included in the WBS:			
) All WBS elements specified for external reporting?		X	While section 5.5.2 states, "The IPMR is performance information on projects req must reflect the output of the contractor's
) WBS elements to be subcontracted, with ntification of subcontractors?		X	While section 2.2.2, WBS Development: WBS shall contain all the project scope, of size), as defined at the current CD pha Guide requirement that when effort is sub
Identify the program organizational structure including the major subcontractors responsible for accomplishing ganizational elements in which work will be planned and controlled.			
Are all authorized tasks assigned to organizational ements?	X		Sect. 2.4.2 OBS Development: 1st Para reflects the way the project is functionally the assignment of responsibility, account **tasks to be performed**." ..."**Each projec**
Are major subcontractor and/or inter-organizational			While section 2.4.2 OBS Development: 1

PARS Development Efforts

- **Extractor Update**
  - –Technology Update : From Access 2003 to currently supported software
  - –Intuitive Navigation : Drop downs to simplify process
  - –Agile Development
  - –User can configure to extract and report …
    - Cost data to control account level consistent with current extractor, or
    - Detailed cost data to support project control analytics Project Controls Analytics
- **Provides additional analytics for project performance and EVMS compliance**

Project Controls –Top Level Dashboard (Early Conceptual)

- Top level dashboard aligned with NDIA EVMS EIA-748-C Intent Guide
- 32 guidelines organized into process elements aligned with implementation and execution phases of a project



UPDATE: CNS Certification Pilot

- Completing the Certification Process for CNS
- Focused approach using a data driven, automated analysis approach
- Entering in to a Self-Governance model

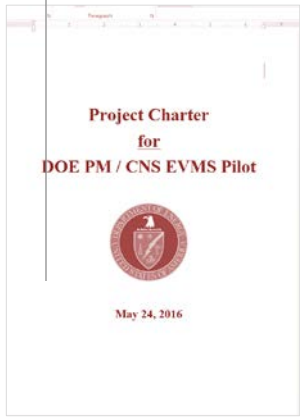
CNS EVMS CERTIFICATION TIMELINE

12 OF 32 EIA-748 GUIDELINES NON-COMPLIANT

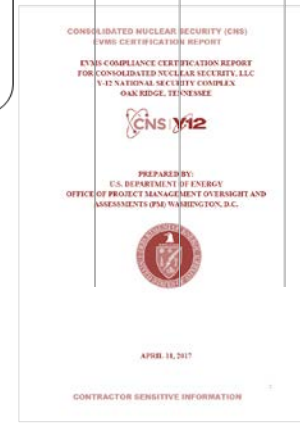
8 OF 32 EIA-748 GUIDELINES NON-COMPLIANT

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MAY 2016	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN 2017	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV

- CNS EVMS PILOT CHARTER SIGNED
- PM-30 EVMS CERT REVIEW CONDUCTED
- PM-30 EVMS CERT REVIEW REPORT RELEASED
- PM-30 EVMS CERT REVIEW FOLLOW-UP CONDUCTED
- PM-30 EVMS CERT REVIEW FOLLOW-UP REPORT RELEASED
- CNS AND PM-30 COLLABORATION TO JOINTLY DEVELOP EIA-748 EVMS DATA REQUIREMENTS AND TESTING PROTOCOLS COMPLETED
- CNS ROOT CAUSE & CORRECTIVE ACTION PLAN FINALIZED
- MEB EXTERNAL INDEPENDENT REVIEW (EIR) CONDUCTED TO CONSIDER EVMS
- CNS EVMS AUTOMATED TESTING PROTOCOLS DEMO @ NDIA WORKSHOP
- UPF EXTERNAL INDEPENDENT REVIEW (EIR) CONDUCTED TO CONSIDER EVMS


Project Charter
for
DOE PM / CNS EVMS Pilot

May 24, 2016


CONSOLIDATED NUCLEAR SECURITY (CNS)
EVMS CERTIFICATION REPORT

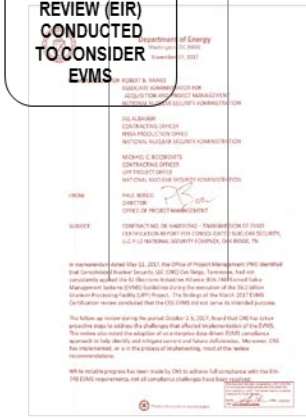
EVMS COMPLIANCE CERTIFICATION REPORT
FOR CONSOLIDATED NUCLEAR SECURITY, LLC
Y-12 NATIONAL SECURITY COMPLEX
OAK RIDGE, TENNESSEE

CNS Y-12

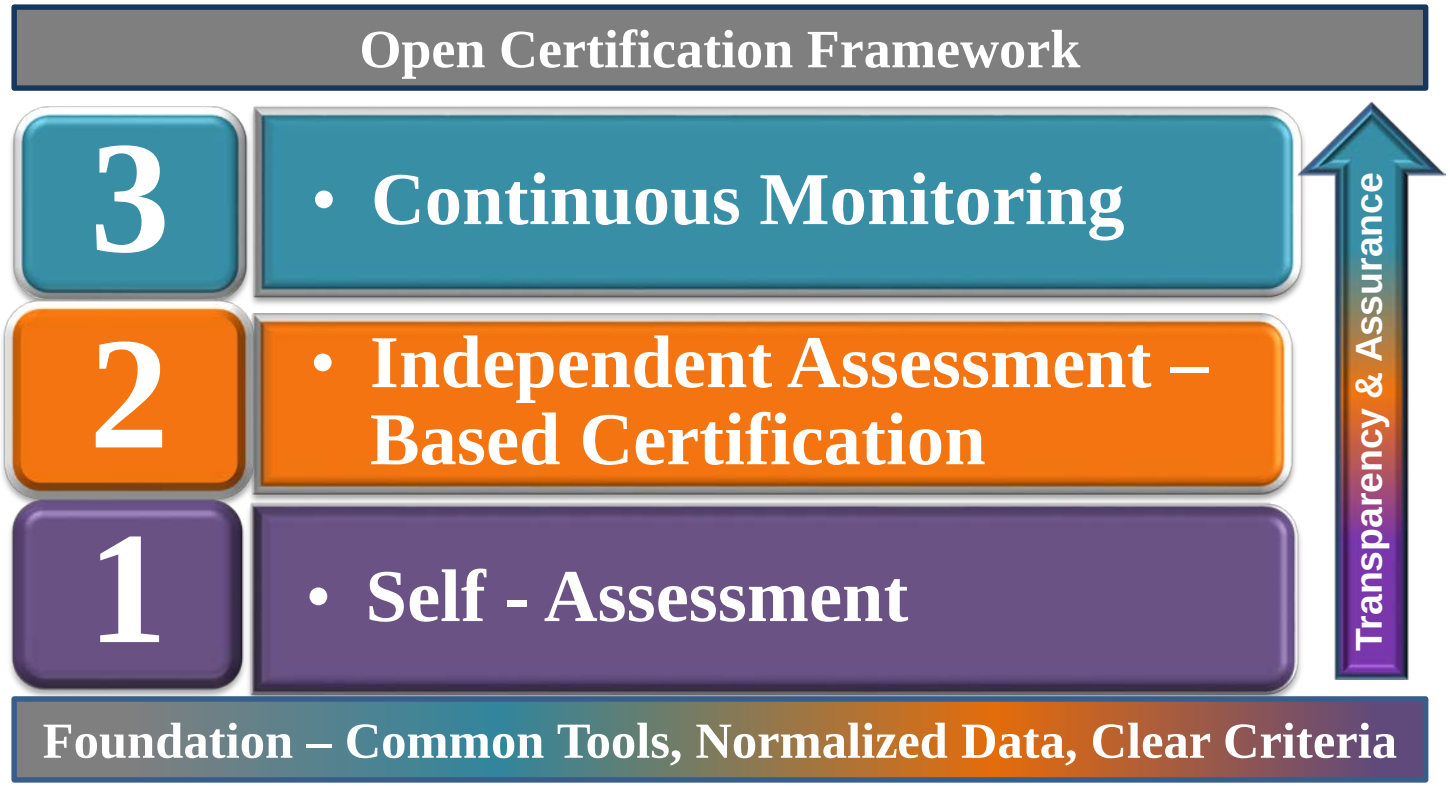
PREPARED BY:
U.S. DEPARTMENT OF ENERGY
OFFICE OF PROJECT MANAGEMENT OVERSIGHT AND ASSESSMENTS (PMI) WASHINGTON, D.C.

APRIL 18, 2017

CONTRACTOR SENSITIVE INFORMATION


Department of Energy

Open Certification Framework



- **Level One (Self-Assessment)**: Requires the release and publication of due diligent self-assessment, against EVMS guidelines.
- **Level Two (Attestation):** Requires the release data and publication of available results of an assessment carried out by an independent third party based on EVMS guidelines.
- **Level Three (Ongoing Monitoring Certification)**: Requires the release and publication of results related to EVMS guidelines.
- **The increase in Transparency and Assurance is based from the foundation of having common tools, evaluating normalized data, against a clear criteria.**

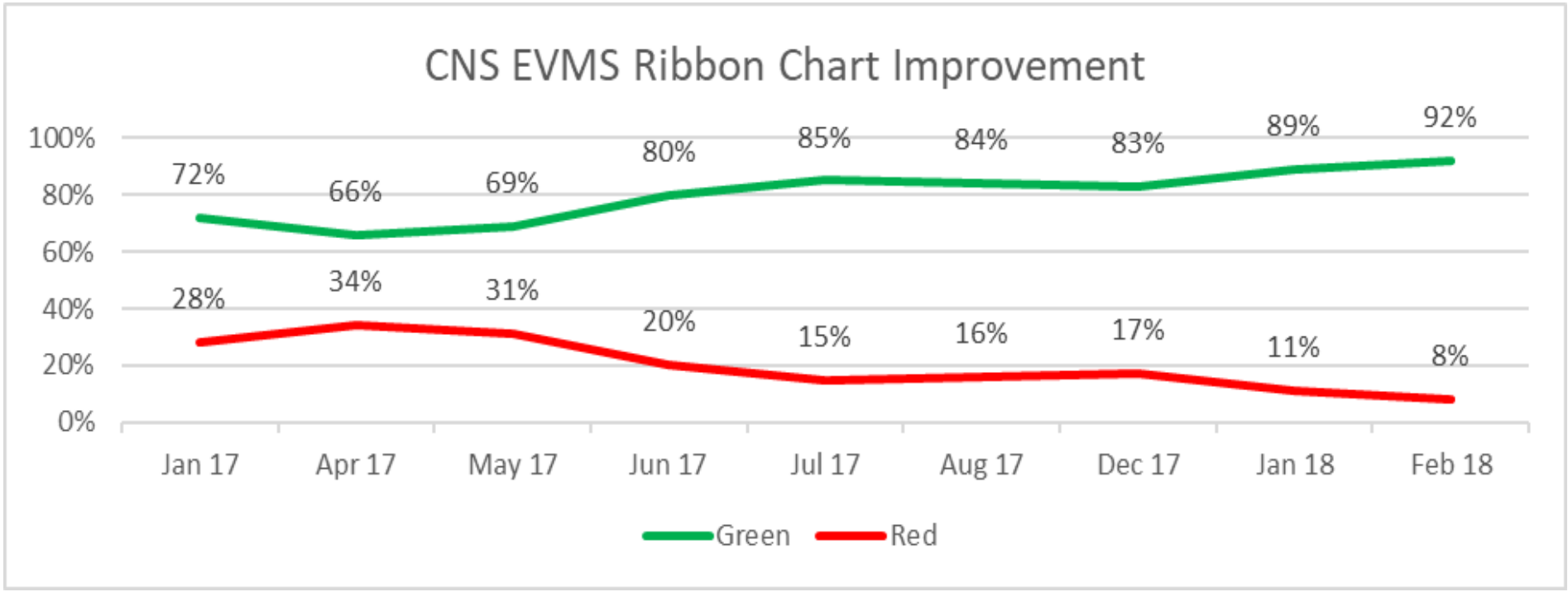
Self-Governance Key Characteristics and Features

- **EVMS Self-Governance**
  - Between Contractor and DOE
- **Contractor Commitment:**
  - Leadership engagement which via routine and transparent oversight, progress assessment, and open dialogue, ***demands continuous improvement, and defines and enforces project management excellence***
  - A chartered authority structure (e.g., Governance Board) with cross-organizational engagement (e.g., financial office, procurement, quality assurance, etc.) to ***establish effective processes which are repeatable and enduring, implement corrective and improvement actions***, and report to and interact with institutional leadership

Self-Governance Key Characteristics and Features – Contractor Commitment

- **A methodology to:**
  - Routinely ***monitor, assess and report system health and corrective actions*** via dashboards and metrics
  - Clearly defined and ***independently positioned Program Surveillance Officer*** that has a clear line to senior management
- **A learning organization capable of:**
  - Maintaining and ***improving workforce skill*** via proven techniques such as peer-to-peer mentoring
  - Prioritizing and executing ***process improvements***
  - ***Report improvement progress*** to Governance Board
- **Above all and incorporated throughout should be *transparency and an abject openness to critical feedback*.**

Effective Self Governance Results



Data shows performance improvements over time as a result of a formal Self-Governance program.

Path Forward

- Future EIA-748e EVMS Standard Update
- NDIA Intent Guide Rewrite
  - Opportunity to influence the application of EIA-748 EVMS compliance towards the uniqueness of design and construction efforts
- PM-1 EVMS Certification is contractor and site specific for capital asset projects equal or greater than $100M
  - All capital asset projects greater than $50M require EVMS Reporting
- PM-1 Certified EVMS Description Revision Approvals
- Next Round of RSAV Anticipated in Summer 2018
- Development of the Planning and Scheduling Amplification Guide
- Work towards automating the EVMS Compliance process continues for those that want to participate
  - What's the carrot? Self-governance – reduced oversight

Questions? Comments?

Office of Project Management