



PARCA

DoD EVM Policy Initiatives

Mr. John McGregor
PARCA Deputy Director for EVM



► Topics to be Discussed

- PARCA
- Recent Publications
- Ongoing Initiatives
- Questions



Director, Performance Assessments and Root Cause Analyses (PARCA)

Mr. Gary R. Bliss

**OSD EVM
Policy Holder**

**Nunn
McCurdy
Breach
Analysis**

**Program
Assessments
and DAES
Selection**

Analysis Team

Mr. John McGregor

**Deputy Director for
Earned Value
Management**

Mr. Dave Cadman

**Deputy Director for
Root Cause Analyses**

Dr. Peter Eggan

**Deputy Director for
Performance
Assessments**

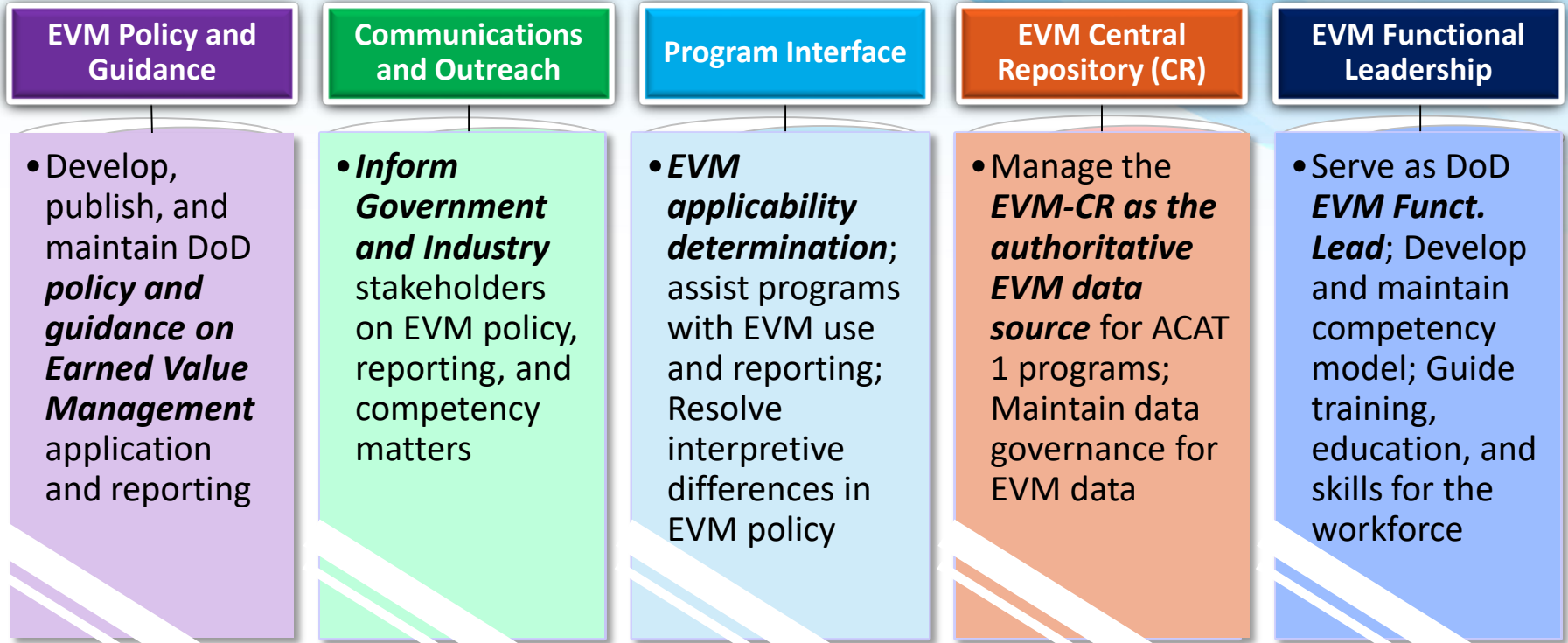
Dr. Danny Davis

**Deputy Director for
Acquisition Policy
Analysis Center**

***PARCA was brought into existence via the reforms in the
Weapon Systems Acquisition Reform Act (WSARA) of 2009***



EVM, as a management discipline for making decisions, depends on governing the entire EVM value stream from Contractor to Government analyst



“To be successful, EVM practices and competencies must be integrated into the program manager’s acquisition planning and execution processes”

- PARCA Authorities Memo, Aug 2011

► Strategic partnerships across the EVM Value Stream

PARCA works across DoD Services/Agencies, Federal Agencies, and Industry



Working to facilitate the effectiveness of EVM for joint situational awareness and program decision making



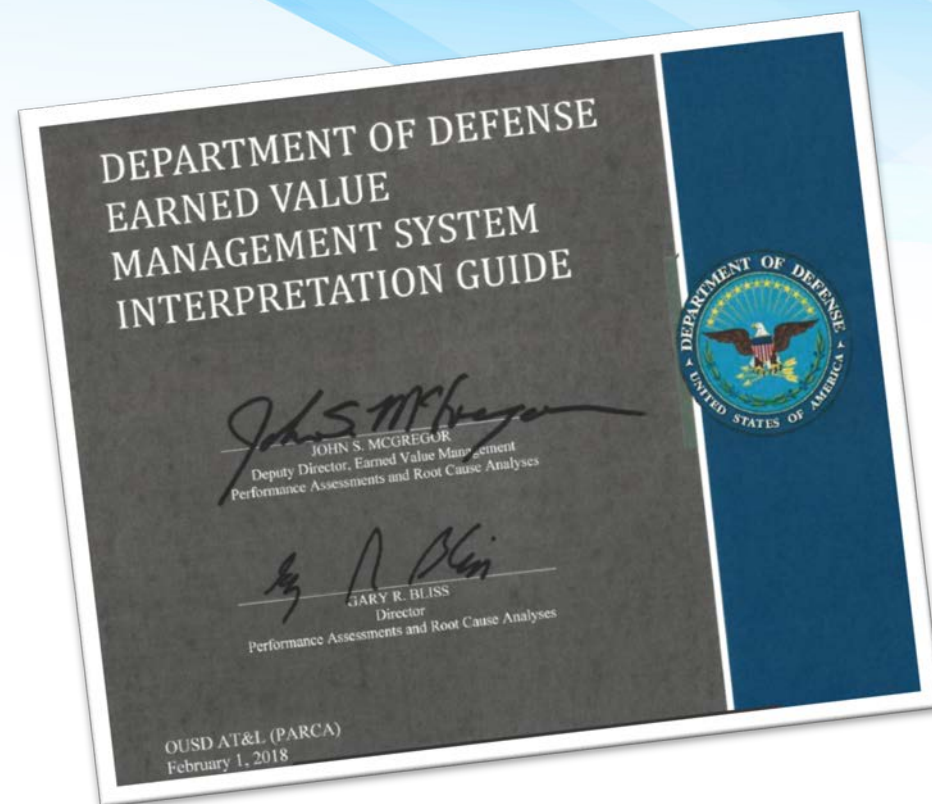


PARCA EVM Policy Initiatives

Recent Publications

▶ DoD EVMSIG is used as the basis for the DoD to assess compliance to the 32 EVMS Guidelines

- Involved Government and Industry stakeholders across EVM and compliance communities
- Published February 2018



<https://www.acq.osd.mil/evm/resources/PG-EVMS.shtml>



► MIL-STD-881 presents direction for effectively preparing, understanding, and presenting a Work Breakdown Structure

- Involved Government and Industry stakeholders across EVM and cost communities
- Published April 2018

Quick Search ASSIST

Data updated: 18 Apr 2018

Document ID: MIL-STD-881 Scroll down to access document images

Overview

Title: Work Breakdown Structures for Defense Materiel Items

Scope: This Standard presents direction for effectively preparing, understanding, and presenting a Work Breakdown Structure (WBS). It provides the framework for Department of Defense (DoD) Program Managers to define their program WBS and to defense contractors in their application and extension of the contract's WBS. Section 1 defines and describes the WBS. Section 2 provides instructions on how the WBS is applied as well as how to develop a program WBS in the pre-award timeframe. Section 3 provides direction for developing and implementing a Contract WBS and Section 4 examines the role of the WBS in the post-award timeframe. This Standard also provides WBS definitions for specific defense materiel commodity systems in Appendices A through J. Appendix K addresses WBS elements that are common to all systems, as well as those which use unique elements (e.g., Space Systems, Information Systems, Defense Business Systems, Launch Systems, and Strategic Missile Systems). Appendix L presents for the DoD Sustainment Cost Reporting Structure (CRS) and its associated definitions for informational purposes. The purpose of providing sustainment information is to present an explanation of transitioning from reporting using a WBS to reporting sustainment costs using the CRS, regardless of acquisition phase or type of funds used.

Status: Active **Document Date:** 09-APR-2018
Next Review Due: 08-APR-2023
FSC/Area: MSC **Doc Category:** Military Standard-Standard Practice

Responsibilities

Lead Standardization Activity: SO Executive Agent for the Defense Standardization Program
Preparing Activity: PARCA OSD Performance Assessments and Root Cause Analyses
Coordination: H4

Army Custodians: III Aviation & Missile Command
Navy Custodians: SH Naval Sea Systems Command (N7p Systems)
Air Force Custodians: 10 AFMC Command Standardization Office (ComSO)

Projects

Project Number: MSC-2017-013

Changes to military standards or handbooks issued after August 1, 2003 are incorporated in the modified document.

Revision History

Rev	Effective Date	Description	Doc. Date	Pages	Size
001	08-APR-2018	Revision D	08-APR-2018	223	2887.3 KB
002	03-OCT-2011	Revision C	03-OCT-2011	250	1883.0 KB
003	02-APR-1998	Revision B Notice 1 - Cancellation	02-APR-1998	1	434.0 KB
004	25-APR-1993	Revision B	25-APR-1993	137	911.3 KB
005	25-APR-1975	Revision A	25-APR-1975	123	8718.8 KB

DEPARTMENT OF DEFENSE STANDARD PRACTICE WORK BREAKDOWN STRUCTURES FOR DEFENSE MATERIEL ITEMS

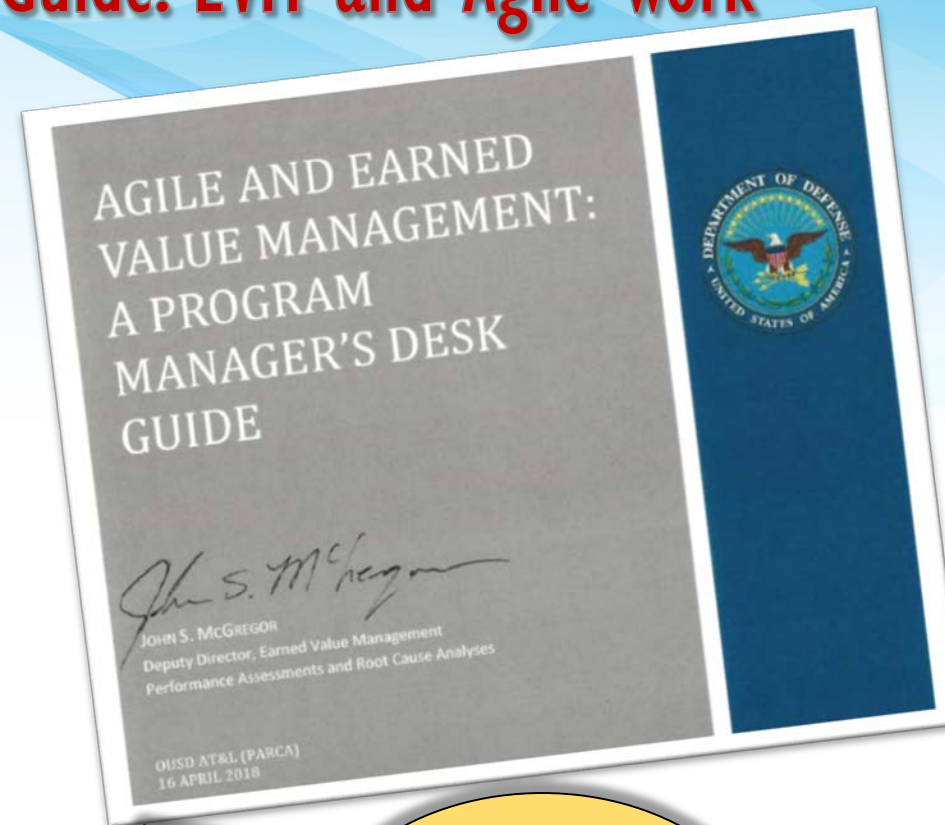
9 April 2018
SUPERSEDING
MIL-STD-881C
3 October 2011



http://quicksearch.dla.mil/qsDocDetails.aspx?ident_number=36026

▶ DoD Agile & EVM: PM Desk Guide: EVM and Agile work together

- Addition of two new chapters
 - IBR: Emphasis on incremental process
 - Agile Metrics: Agile metrics as they relate to EVM metrics and analysis
- Published April 2018



Next chapters
— contracting,
EAC's...??



► Website Reskin Complete

- Bootstrap framework has been applied to the site which has a new look and feel
- Site functionality and workflow has not changed

User Guide Updates in progress and will be posted to the public website once approved



► Industry Reviewer – available to all of Industry (currently 5 corporations participate)

- Real time access to Reporting Compliance Reports
- Access to submissions delivered by data managers from your organization
- Requires a signed authorization letter from corporate leadership

Feedback??

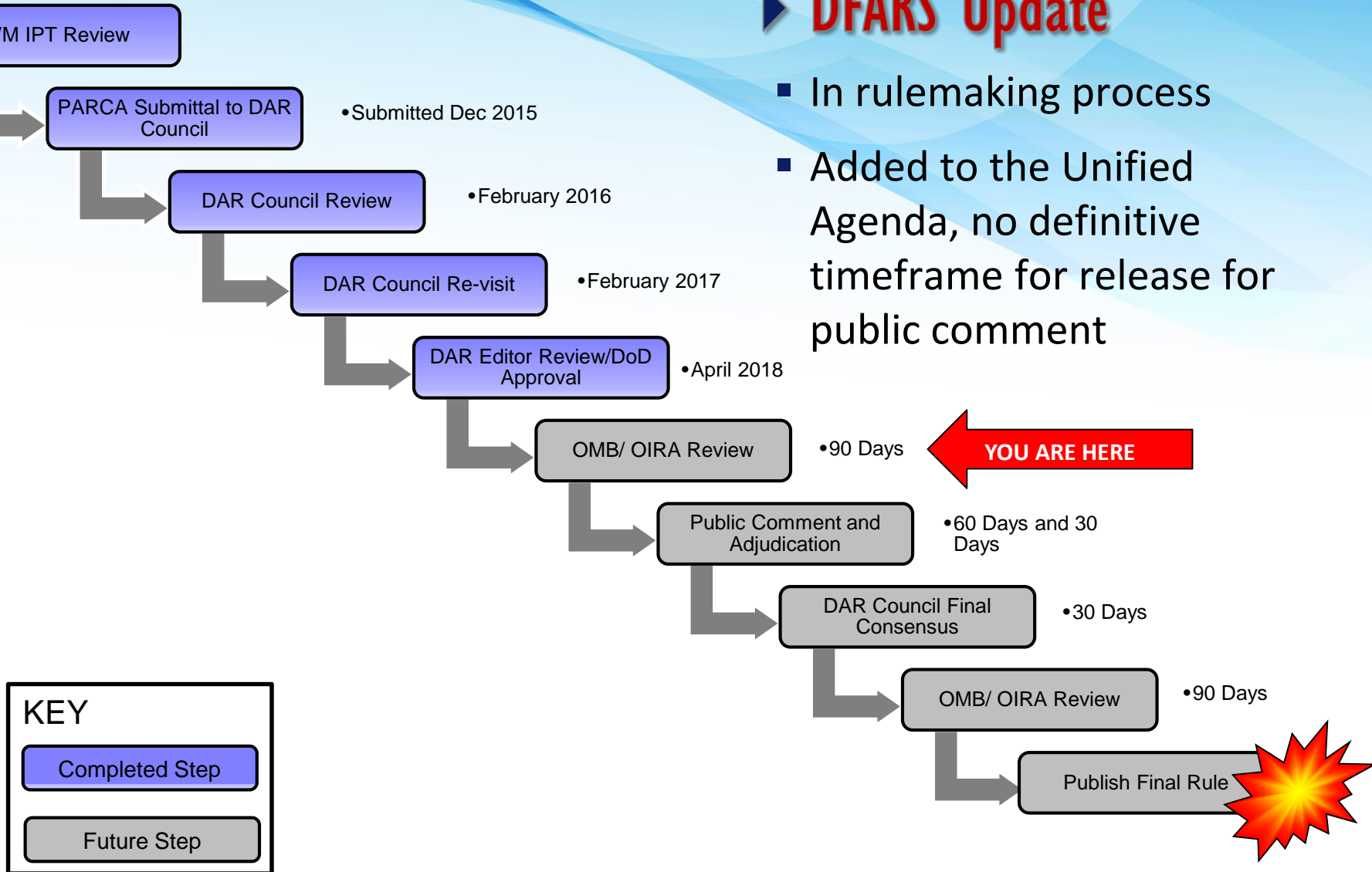


PARCA EVM Policy Initiatives

Status of Current Projects

▶ DFARS Update

- In rulemaking process
- Added to the Unified Agenda, no definitive timeframe for release for public comment



▶ 5000.02

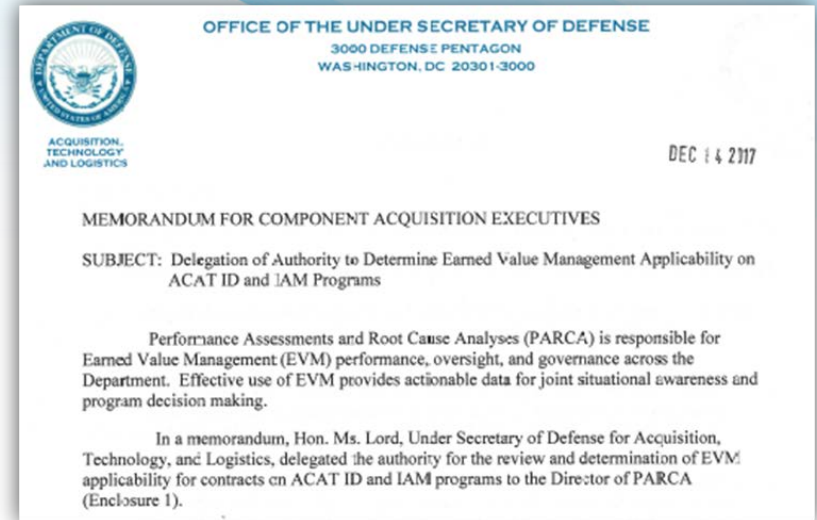
- PARCA delegation for EVM applicability reviews
- Change version 4 in process

▶ DoD PM Guide to the IBR

- Effort to modernize the document and reflect current policy
- Focus on purpose and process

▶ EVMIG Replacement

- Single document that contains disparate EVM policy application guidance
- Iterative process underway; publish summer 2018



▶ IPMR2

■ Data Delivery Requirements

- Submitted electronically in accordance with their applicable DoD-approved file format specifications and data exchange instructions (DEI) -- [Contract Performance Dataset and Schedule Dataset](#)
- Submitted in contractor's specified electronic file format -- [Performance Narrative Report](#)
- Submitted in contractor's native scheduling software electronic file format native format -- [Integrated Master Schedule \(IMS\)](#)

■ Delivery Timing

- Data-only Delivery -- no later than **5** contractor accounting calendar business days after the contractor's accounting calendar period end date
- Government Data Review -- **3** Government accounting calendar business days to review data and provide the contractor a list of elements for [variance reporting](#)
- Variance Narrative Delivery -- **5** contractor accounting calendar business days following the Government review

Goal is to reduce time to receive actionable data; Support DCMA compliance activities



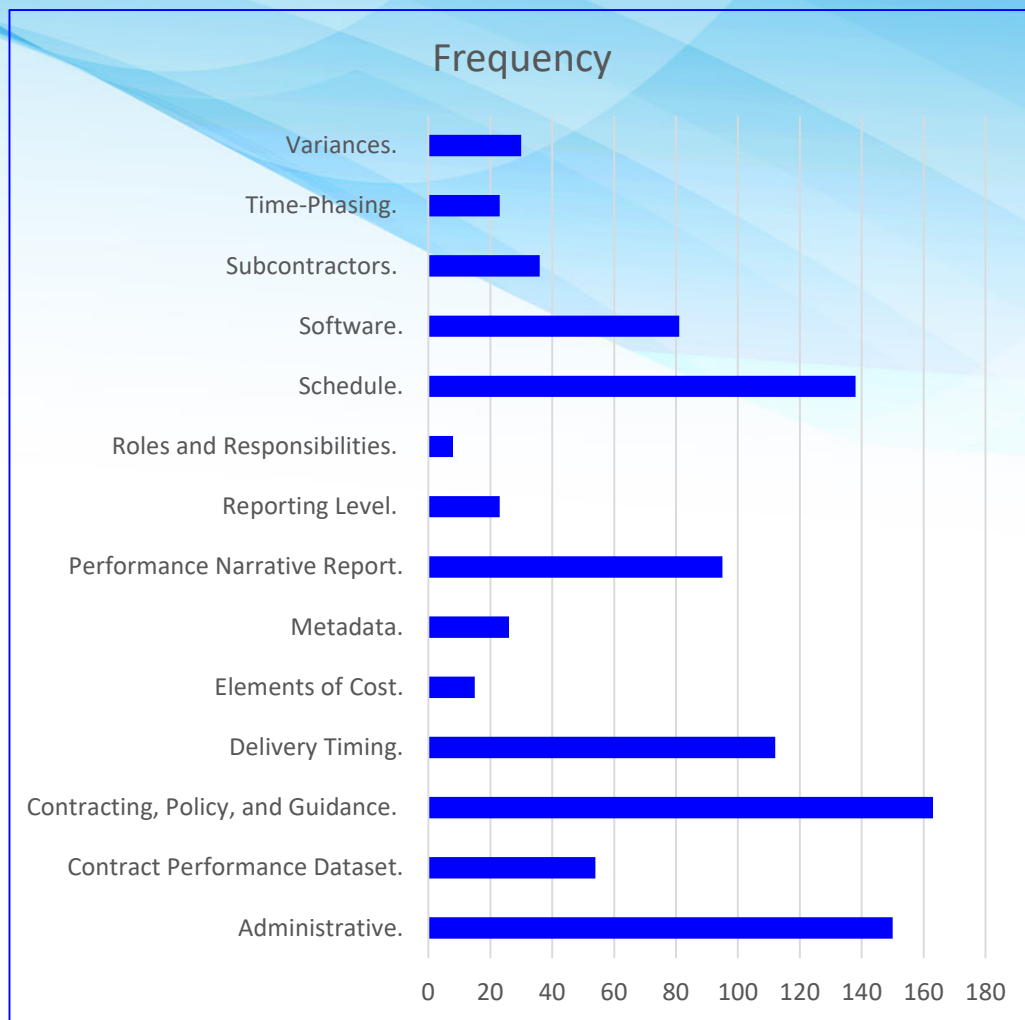
▶ Feedback for the IPMR was due on April 20th

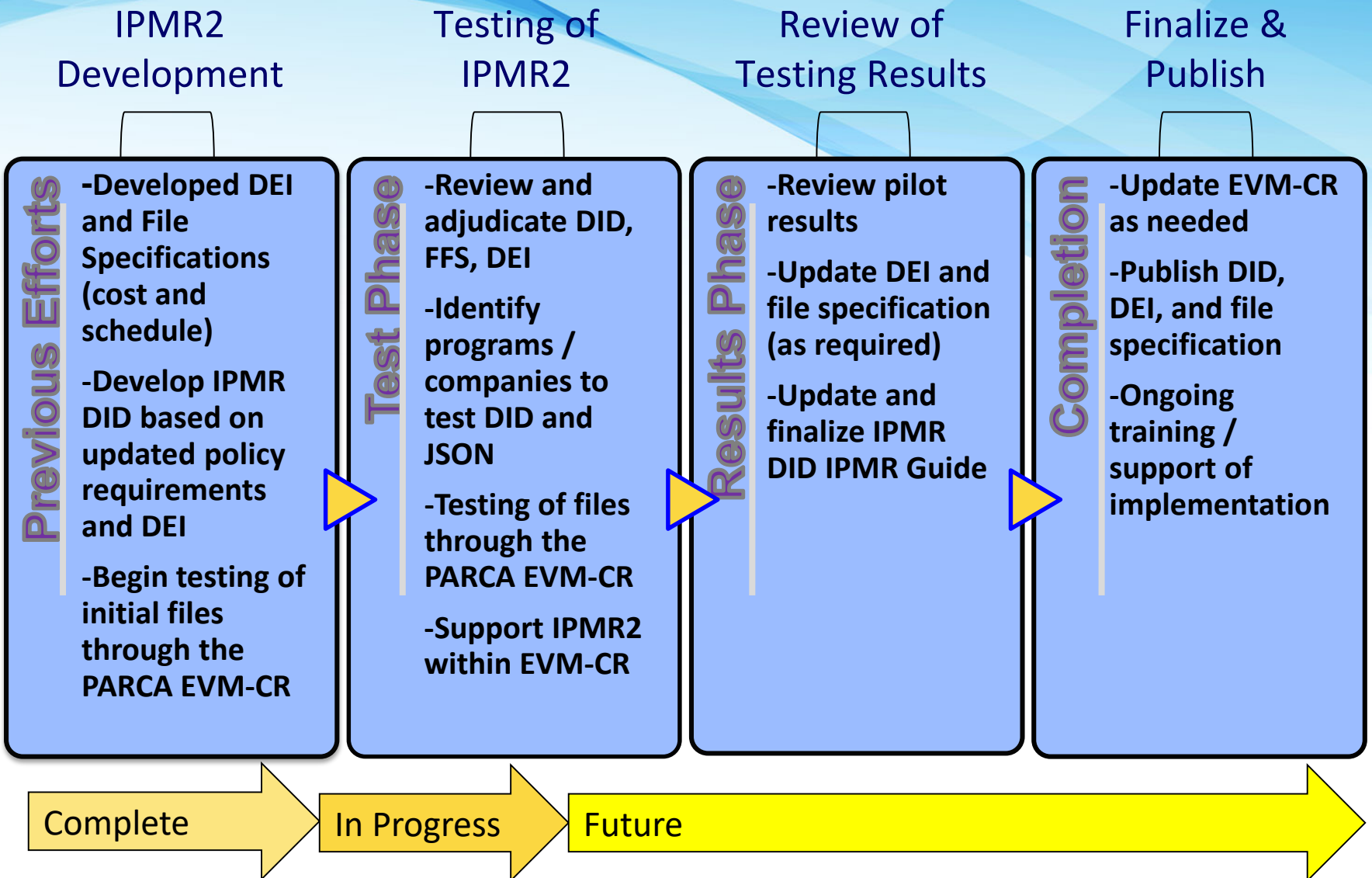
- 954 comments have been received

▶ Feedback topics include:

- Delivery timing requirements for variance reporting
- Variance analysis
- Level of reporting
- Software change from UN/CEFACT to JSON
- Restrictions on tailoring to remove requirements

▶ Will hold adjudication meeting for comment review





▶ **Outstanding item:** question on handling indirects in the Control Account

We can all learn from baseball....

*There are three outs in baseball --
out hustle, out think, and out perform*

BASEBALL | SM



Are there any other policy or guidance questions?



Questions Contact Us

PARCA EVM Website:
<http://www.acq.osd.mil/evm/>

PARCA EVM Email:
osd.dodevm@mail.mil

PARCA AEP Program

PARCA Acquisition Exchange Program (AEP) provides a unique career-development experience for high-caliber Government civilians or military personnel interested in acquisition and/or EVM.

<http://www.acq.osd.mil/evm/aep.program.html>





Back-up Just in Case

- ▶ **Terminology and Work Products genericized**
 - Contractor's processes, described in its **EVM System Description**, are the basis for the actual artifacts and documentation from the system
 - The work products referenced are **typical products** that may vary based upon how the contractor integrates their processes and **may differ** from contractor to contractor both **in name and content**
- ▶ **Material classification**
 - An **analysis of material items** is required to identify categories, high-value material, critical material, and material aggregation points
- ▶ **Retroactive changes clarified**
 - If **actuals have been incurred**, the work may be replanned **only in the future periods** to reflect when expected to be performed (LOE)
 - Retroactive adjustments to BCWS and BCWP **due to rate changes** are made **at the discretion of the contractor**
- ▶ **Utilization of rates**
 - **De-scoped work** is to be removed **using the rates that are baselined** with the affected scope

2 Step EVM Application Process

Step 1. Contract Criteria Review

- Contract is Cost Plus or Incentive
- Contract > \$20M (including known options)
- Contract has at least 18 months period of performance

If any No

EVM Not Applicable*

If all Yes

EVM placed on contract; option to have applicability determination based on nature of work (Step 2)

Step 2 (Optional). Work Attributes Review

- Does EVM apply based on review of SOW, PWS, WBS, & CDRLs (i.e., work discretely measurable & schedulable)
 - PARCA & Services - ACAT ID & IAM for DAE/MDA decision—delegated to PARCA
 - Services - other ACATs for SAE/CAE decision

No

*EVM does not apply** EVM not on contract; no deviation/waiver required

Yes

EVM does apply EVM is placed on contract; PMO has option to seek waiver/deviation

* The PM has the option to make a business case to apply EVM outside the thresholds and application decision

Back-up

MIL-STD-881D



- ▶ **Added Appendices**
 - Strategic Missile Systems
 - Sustainment Cost Reporting Structure
- ▶ **Combined Appendices**
 - Manned and Unmanned Aircraft Systems
 - Missile and Ordnance Systems
- ▶ **Additional Standard Breakout for Common Elements**
 - Cybersecurity below system test and evaluation, systems engineering, and program management
 - Data rights for data
 - ILS for systems engineering and program management
 - Equipment subassemblies for common support equipment and peculiar support equipment
- ▶ **Ability to tailor WBS to delete unnecessary WBS elements**

- ▶ Mil-STD 881C published in 2011
- ▶ Changes to Standard based on Government need and Industry concurrence and recommendation
- ▶ Evaluated Feb 2015 survey as to whether to incorporate:
 - Cybersecurity identification
 - Life Cycle approach
 - Improving Information Technology definitions
 - Improving Strategic Missile Definitions
- ▶ Kick-off meeting held Spring 2016
- ▶ Completed!

- ▶ Showing WBS numbering for each commodity:
 - Provides clarity regarding level of indenture and parent-child content
 - Maintaining the WBS numbering not essential requirement
- ▶ Extension of the WBS to lower levels may be necessary to get needed visibility
 - Only those elements that define the system will be used
 - Extensions for commodities can be found at <http://cade.osd.mil/policy/csdr-plan>
- ▶ Critical to understand cybersecurity cost of each system (i.e., hardware, software, systems engineering, and system test and evaluation), MIL-STD provides:
 - Structure to identify, collect and report many of these critical costs (recognizing that all this information is nearly impossible)
 - Where cybersecurity related costs can be easily accounted for, they should be called out

- ▶ “Release” in agile development terms has a different definition; not be misinterpreted within the MIL-STD
 - Release of one or more EPIC level CSCIs, is equivalent to a release in MIL-STD vs. multiple features
- ▶ Changed title of (now) Appendix J of Automated Information Systems to Information Systems / Defense Business Systems (reflect DoDI 5000.75: “Business Systems Requirements and Acquisition.”)
- ▶ Added Appendix L to discuss the relationship between the Operations and Support Cost Reporting Structure (CRS) and the WBS

- ▶ Appendix A - Aircraft Systems and Appendix H - Unmanned Aircraft Systems have been merged into a new Appendix A - Aircraft Systems, including unmanned and manned aircraft systems
- ▶ Appendix B – Changed title from Electronics Systems to Electronic Systems/Generic Systems
- ▶ Appendix C – Missile Systems and Appendix D – Ordnance Systems have been merged into a new Appendix C – Missile/Ordnance Systems focuses on tactical missiles and munitions due to their commonality in structure and intent
- ▶ Appendix D is now Strategic Missiles Systems which focuses on Intercontinental Ballistic Missiles (ICBM) and strategic missiles used by Air Force, Navy and Missile Defense Agency. Previously strategic missiles were part of Appendix C – Missiles Systems

- ▶ New and revised definitions have been incorporated into Appendix F – Space Systems to improve clarity and understanding of application and expansion of ground systems definitions
- ▶ Changed the title of Appendix G from Surface Vehicle Systems to Ground Vehicle Systems to reflect the common terminology by industry for land and amphibious systems
- ▶ Changed the WBS in Appendix G – Ground Vehicle Systems to reflect the approach to buying family of systems vehicles (i.e., variants)
- ▶ Changed the title of (now) Appendix J - Automated Information Systems to Information Systems / Defense Business Systems to reflect DoDI 5000.75: “Business Systems Requirements and Acquisition”

- ▶ Added a Sustainment Structure for Information Systems / Defense Business Systems (Appendix J) to recognize the overlap of acquisition and sustainment activities on acquisition contracts (For all IS/DBS, this structure should be used to appropriately reflect sustainment activities on IS/DBS programs)
- ▶ Added and redefined for the Common Elements Appendix (Appendix K) required reporting elements under Systems Engineering, Program Management, and System Test and Evaluation related to Integrated Logistics Support, Software Engineering, and Cybersecurity
- ▶ Required Rate Tooling to be separately identified within Integration, Assembly, Test and Checkout or with the WBS element it supports, at the appropriate level

- ▶ Further defined Peculiar Support Equipment and Common Support Equipment (Appendix K) to a lower level which identifies the subassembly the equipment supports, (e.g., Airframe/Hull/Vehicle, etc.)
- ▶ Added Contractor Logistics Support (CLS) (Appendix K) to reflect that contractor sustainment support may be moved to or completed at the depot, even during the acquisition phase
- ▶ Added Data Rights under Data (Appendix K) to reflect the government purchase of contractor data rights
- ▶ Included discussion on how to integrate the Cost Assessment Program Evaluation (CAPE) Sustainment Cost Reporting Structure (CRS) (Appendix L) with the WBS for Interim Contractor Support (ICS) and CLS reporting

Back-up

Agile and EVM Desk Guide



- ▶ **Emphasis on incremental process**
 - Traditional Rolling Wave planning
 - Agile Release or Program Increment Planning

- ▶ **Incremental Process is natural part of program execution**
 - IBR Preparation – Joint Training
 - Management Processes – Pulling Thread from WBS through Agile Product Backlog to establish common understanding of plan and risk
 - PMB Assessment – Every planning increment establish joint agreement on plan going forward

► Understanding of EVM & Agile Metrics

- Overview of typical Agile metrics and how they are used
- Agile metrics relationship to EVM metrics and analysis
 - BCWS, BCWP, ACWP, CV, SV, CPI, SPI, TCPI
- Using a sample scenario to show side by side examples of what the Agile and EVM metrics might look like over a series of four sprints
- Highlight the use of Agile metrics to track progress and to support forecasting



Next chapters —
contracting,
EAC's....??

- ▶ Overview of typical Agile reports, metrics, and analysis
 - Delivered functionality metrics such as velocity, product burn-down, release burn-up, and capability progress measures
 - Understanding work in progress using a cumulative flow diagram (i.e. lead time, response time, cycle time)

- ▶ Agile metrics and their relationship to EVM metrics (i.e. BCWS, BCWP, ACWP)

- ▶ Comparison of Agile and EVM status charts using an example data trace from the product backlog, through a Sprint status sheet, to the IMS

- ▶ Resources for additional information on Agile metrics

- ▶ Overview of emphasis on incremental process
 - Traditional Rolling Wave planning
 - Agile Release or Program Increment Planning

- ▶ Incremental Process is natural part of program execution
 - IBR Preparation and training – Will include Agile development familiarization training to ensure all parties have a mutual understanding of the Agile processes being used on the program
 - IBR Execution – Should be consistent with the nature of the Agile planning processes
 - The Performance Management Baseline assessment – Will review additional artifacts and linkages between the Agile technical execution process and the EVM performance management system
 - Management Processes – The evaluation of the management processes will need to include a review of the Agile development processes and metrics that will support program decision making

- ▶ Scenario describes one method of how Agile can underpin EVM progress in support of tracking program cost and schedule status and metrics.
 - The scenario is a generic SW program implementing an Agile development process.
 - The scenario has defined a single product Release which is tracked using Earned Value.
 - Shows alignment of EVM WBS elements to the Agile products hierarchy.

Back-up IPMR



▶ Variance Analysis -- Two Options

■ Option 1: Government Selected

- Within three business days of receiving performance data, the Government will provide the contractor a list of elements for variance reporting
- If the Government does not provide a list of variances to be reported, then no variance reporting is required
- The other sections of the Performance Narrative Report are required regardless if the Government does or does not choose to select variances to be reported

■ Option 2: Static Monthly Variance Reporting (i.e., no Government monthly selection)

- The elements that comprise the top five contract performance cost variances, the top five schedule variances, and the top five estimate at complete impacts are required to be reported, as applicable, according to the threshold

■ Variances

- Need to provide thresholds and minimum/maximum requirements
- Request for narratives by control account instead of by WBS/OBS is “very concerning”
- Unclear if variance reporting should be current or cumulative
- Unclear if static requirements mean additional variances cannot be requested

■ Time-Phasing

- Unclear how to report costs by month when a rebaseline affects this input
- Estimate at Completion may be incorrect since Estimate to Complete is not always updated each period

■ Delivery Timing

- The shift to submitting performance data five days after accounting calendar period end date does not fit into organizations’ business cycles
 - Does not allow time for subcontractor or IWO data to be integrated
 - Budget, performance, and EAC changes are still being finalized
 - Unclear if data due five days after accounting calendar period end date is flash data or final data
- Unclear if new timeline (5 days for performance data + 3 days for government review + 5 days for performance narrative report) can be tailored to allow for additional time
- If static variance reporting is required, unclear what timeline is required (i.e., are three days still allowed for government review?)
- Allowing only five days for the performance narrative report increases the likelihood that the variance analysis will be done by the financial analyst, and not the control account manager

- **Subcontractors**
 - When and how separate submissions of subcontractor data are required are unclear.
 - “Major supplier” and “major subcontractor” need to be defined
- **Contracting, Policy, and Guidance**
 - Need to implement on existing contracts or only on new contracts
 - Request for training on new requirements and implementation document
 - Need for guidance on signatures
 - Unclear how schedule and contract performance dataset need to be reconcilable
 - Ability to require the entire IPMR 2 for non-ACAT I programs
 - Contradictory language states tailoring to increase content, intent, and scope is prohibited, but other language states additional data formats or fields may be required
- **Administrative**
 - Confusion surrounding use and requirements to submit data which is defined as “may also be provided,” “this value is not reported as part of dataset,” “not required,” and “as specified in CDRL”
- **Software**
 - Elements of Cost include overhead but not other indirect costs, such as Cost of Money and G&A
 - Conflations of burdens as elements of cost creates difficulties in establishing total costs by traditional elements of cost (MAT, LAB, ODC) if there are multiple types of resource on the same work package, or if costs are only reported to the control account level
 - Calendar workshifts within the schedule format are not complete enough to run a CPM or SRA, as the hours of work (e.g. 8am to 4pm) for activities are not available

■ Contract Performance Dataset

- Definitions are needed for what is expected for “Custom Elements” and “Reserved Fields”
- Reporting SLPPs with Control Accounts is merging two different planning methodologies together
- Need direction on when prime and subcontractor/IWO reporting periods/calendars differ
- Clarification is needed on the difference between the Summary Data requirements and PMB Subtotal requirements in terms of COM, G&A, and UB

■ Schedule

- DID should provide a recommended annual cadence for when a SRA should be performed
- Guidance is needed on how historical performance data is maintained
- EV System Architectures do not provide both the calculated and physical percent completes
- Different requirements for the IMS and Schedule Dataset are unclear
- Unclear if all tasks/activities or only those on the driving paths require three point estimates

■ Performance Narrative Report

- Watch list needs to be defined
- Unclear what needs to be provided if no variances are identified
- Define what is “significant”

■ Metadata

- Clarification needed over definitions for “completion date” and “negotiated cost”