



**PARCA
EVM**

PARCA Update

**NDIA IPMD MEETING
September 17, 2014**

**Mr. Gordon Kranz
PARCA Deputy Director for EVM**



PARCA EVM

PARCA EVM AGENDA

▶ PARCA

▶ Results

- Increase the quality and utility of EVM data
- Increase the use of EVM across the acquisition chain
- Improve acquisition professionals' ability to utilize EVM
- Reduce Contractor's administrative burden of inefficient use of EVM
- Ensure constructive 2-way communication between DoD and Industry



**PARCA
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PARCA Organization

Director, Performance Assessments and Root Cause Analyses (PARCA)

Mr. Gary R. Bliss

**Deputy Director for
Earned Value
Management**

Mr. Gordon M. Kranz

**Deputy Director for
Root Cause Analysis**

Dr. D. Mark Husband

**Deputy Director for
Performance
Assessments**

Mr. David S. Cadman

**Deputy Director for
Acquisition Policy
Analysis Center**

Dr. Philip S. Anton

**OSD EVM Policy
Holder**

**Nunn McCurdy
Breach Analysis**

**Program
Assessments and
DAES Selection**

Analysis Team

PARCA was brought into existence via the reforms called for by the Weapon Systems Acquisition Reform Act (WSARA) of 2009

As the central office for major defense authorization performance assessment, root cause analysis, and earned value management (EVM), PARCA advises AT&L on program execution status; and issues policies, procedures, and guidance to the Military Departments and the Defense Agencies to improve program management practices



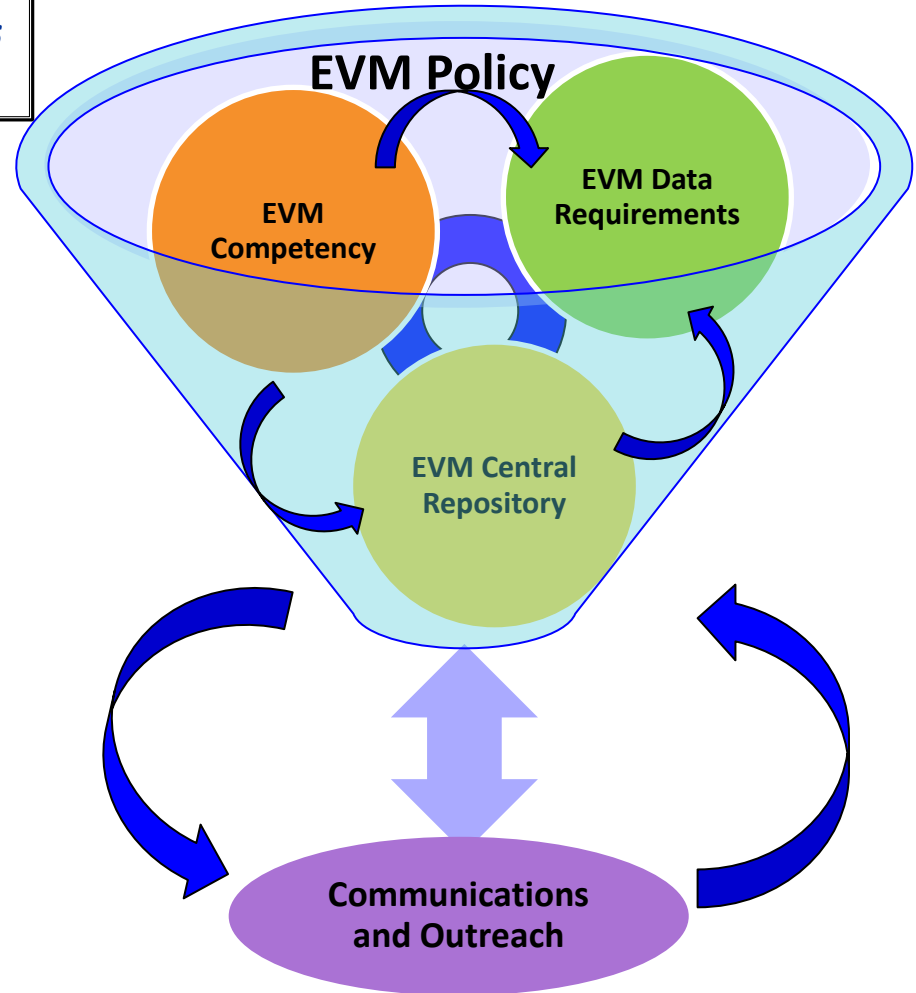
PARCA EVM

PARCA EVM Organization

PARCA is responsible and accountable for EVM performance, oversight, and governance across the Department

▶ **Guiding Principles**

- Increase the quality and utility of EVM data
- Increase the use of EVM across the acquisition chain
- Improve acquisition professionals' ability to utilize EVM
- Reduce Contractor's administrative burden of inefficient use of EVM
- Ensure constructive 2-way communication between DoD and Industry
- EVMS is perceived by all stakeholders to be cost effective





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INCREASE THE QUALITY AND UTILITY OF EVM DATA

- **EVM-CR Direction**
- **EVM Data Utilization**
- **EVM-CR Reporting Compliance**
- **IPMR Transition**
- **EVM Data Quality**



EVM Central Repository Direction

- ▶ Focus has been reporting compliance
 - Requirements tracked to CDRLs
 - Assess and communicate reporting compliance metrics to stakeholders

- ▶ Transitioning to focus on data quality
 - IPMR DID defines open data standard for cost and schedule data
 - Real-time assessment of data quality; communicated to stakeholders

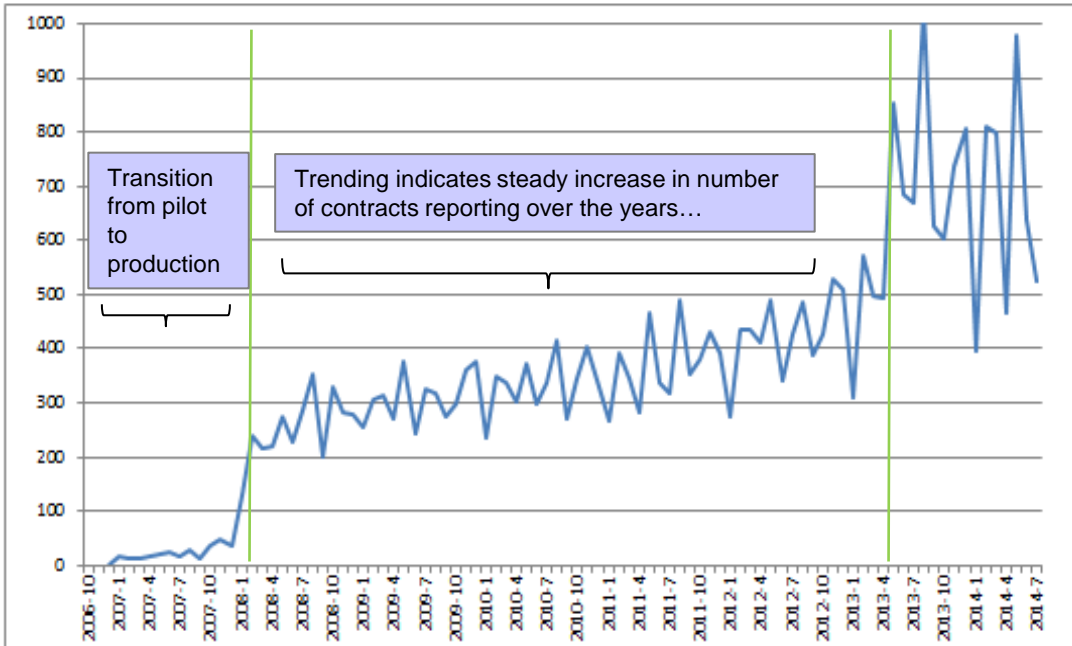
EV DATA USED BY LEADERSHIP AND DECISION MAKERS



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Central Repository - EVM Data Utilization

More Data Submissions

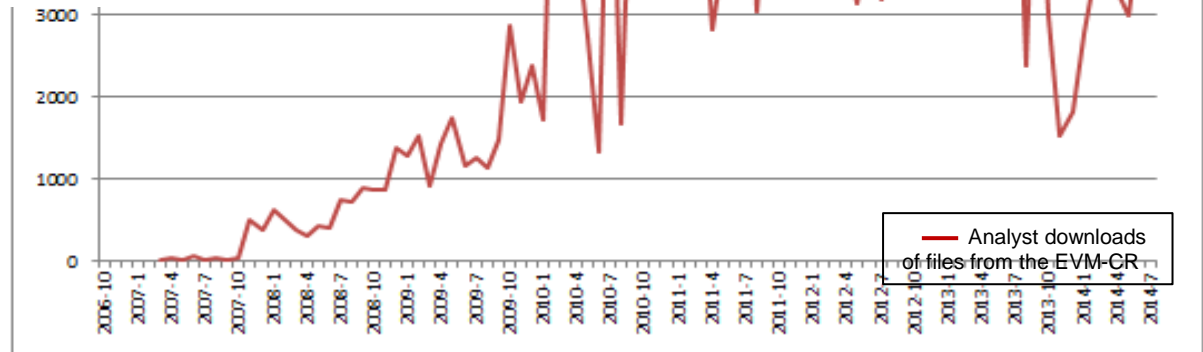


Watching / measuring process leads to change!

PROCESS IMPROVEMENT

April 2013 major EVM CR software update improved the tracking of submissions, better organization and made the data more useable.

More Data Usage



"The best way to improve compliance is to have data be used and to be visible to higher authority." - Bliss

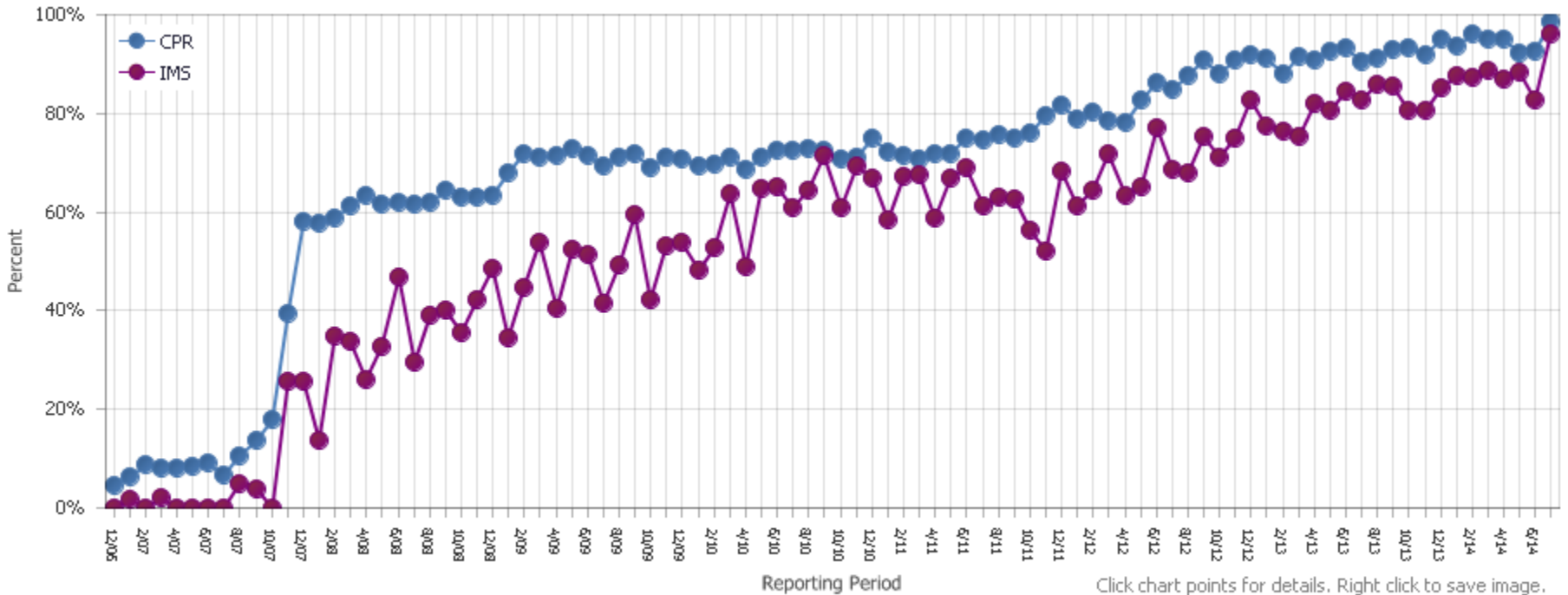
HIGHER VISIBILITY

- PARCA assumed leadership and authority of the EVM CR
- DAES process re-engaged.
- Increased interest from OSD, CAPE, DAMIR, DCMA



EVM-CR Reporting Compliance

November 2006 : July 2014



Percent on time = Total reports delivered on time divided by total reports required for month.

Continued Improvement On Reporting Compliance!



Continued Transition to IPMR

	Cost			Schedule	Total With IPMR (identified per CDRL)
	Readable UN/CEFACT (passes schema validation)	Unreadable Un/CEFACT (fails schema validation)	Other Readable (legacy XML/EDI)	Readable UN/CEFACT (passes schema validation)	
3/30/2014					
Programs	3	1	13	4	17
Contracts	3	1	15	4	23
Tasks	3	2	16	5	25

	Cost			Schedule	Total With IPMR (identified per CDRL)
	Readable UN/CEFACT (passes schema validation)	Unreadable Un/CEFACT (fails schema validation)	Other Readable (legacy XML/EDI)	Readable UN/CEFACT (passes schema validation)	
8/30/2014					
With IPMR Requirement					
Programs	4	0	14	4	17
Contracts	6	0	17	5	22
Tasks	7	0	17	6	24
Including with IPMR But Not Required					
Programs	8	0	14	6	21
Contracts	11	0	17	7	27
Tasks	13	0	17	9	30

▶ **Good news**

- Continued adoption of IPMR including utilization for programs that do not have required
- Addressed issues with preparing IPMR formats correctly

▶ **Continued work needed to meet IPMR requirements on contracts**



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Focus Transitioning To Data Quality

➤ Data Quality Initiatives and Activities

- Real-time, automated data issue reporting to submitters and reviewer
- Bridge EVM data submission and headquarter DAES reporting (e.g. DAMIR)
- Active headquarter monitoring to identify systemic data quality issues

➤ Data Quality Check Categories

- Format: Is readable (passes XML schema) but fails detailed data exchange instructions (DEI)
- Internal Consistency: Month to month time period disconnects (broken WBS, major shifts in numeric values)
- CPR Header: Numeric and date data issues typically in the Format 1 header
- PMB: Numeric data checks in PMB line, e.g., missing or negative values
- Detailed WBS Level: Numeric checks at lower WBS levels in Format 1; typically incomplete specifications
- DAMIR: Business rule requirements to support DAES functions



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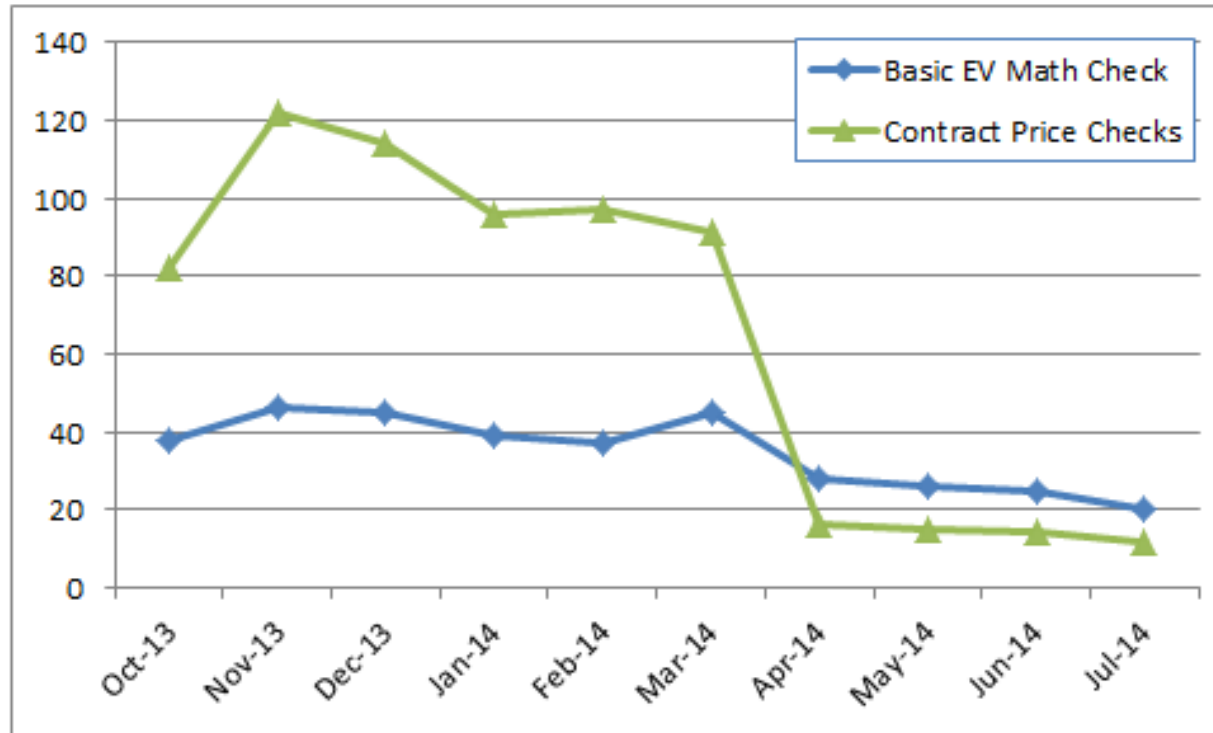
DAMIR EV Data Quality Status

Rule	Oct 2013 Error Count	Nov 2013 Error Count	Dec 2013 Error Count	Jan 2014 Error Count	Feb 2014 Error Count	Mar 2014 Error Count	Apr 2014 Error Count	May 2014 Error Count	Jun 2014 Error Count	Jul 2014 Error Count	
Management Reserve must equal TAB - PMB BAC	38	46	45	39	37	45	28	26	25	20	Basic EVM Math Checks
PMB BAC must be less than or equal to TAB	29	29	24	25	23	29	19	18	16	15	
PMB Cumulative BCWS must be less than or equal to TAB	25	27	24	22	20	27	16	14	15	14	
PMB Cumulative BCWS must be less than or equal to PMB BAC	2	3	3	0	0	1	0	0	1	0	
PMB Cumulative BCWP must be less than or equal to PMB BAC	1	1	1	0	0	0	0	0	0	0	
Best Case EAC must be less than or equal to Worst Case EAC	1	0	1	0	0	0	0	0	0	0	Forecast Correctness Checks
Best Case EAC must be less than or equal to Most Likely EAC	1	4	5	5	5	5	6	3	2	2	
Worst Case EAC must be greater than or equal to Most Likely EAC	4	3	2	4	4	3	0	1	1	0	
Target Price must be great than or equal to NCC	0	0	0	0	0	0	0	0	0	0	Contract Price Checks
Estimated Contract Ceiling must be greater than or equal to Estimated Price	82	122	114	96	97	91	16	15	14	12	
Contract Ceiling price must be greater than or equal to Target Price	74	105	100	85	87	80	8	7	8	9	
Authorized Unpriced Work must equal CBB - NCC	7	6	11	7	6	13	5	4	5	3	
Completion Date must be on or After Start Date	1	1	0	0	0	0	0	0	0	0	Date Checks
Planned (Budget) Completion Date must be on or after Start Date	0	1	0	0	0	0	0	0	0	0	
OTB Date must be on or before Report Period To (or report created date)	0	0	0	0	0	0	0	0	0	0	
Estimated Completion Date must be on or after Start Date	0	1	0	0	0	0	0	0	0	0	
Totals	265	349	330	283	279	294	98	88	87	75	



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DAMIR EV Data Quality Status



Continued Improvement On Data Quality



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INCREASE THE USE OF EVM ACROSS THE ACQUISITION CHAIN

- **EVM Policy and Better Buying Power 2.0**
- **IPMR DID/Guide**
- **DFARS EVM Language Update**
- **DOD IPM EVMS Implementation Instruction**



EVM Policy and Better Buying Power 2.0

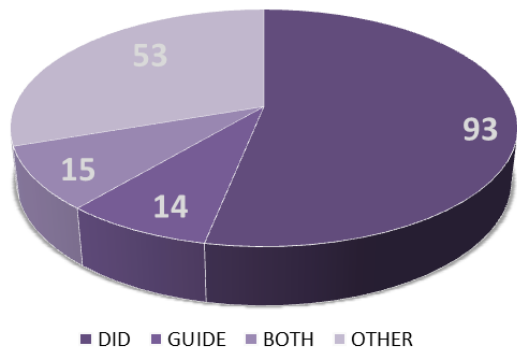
- ▶ EVM Policy Strategy supports BBP 2.0 Objectives
 - Achieve Affordable Programs
 - Clarify EVM policy to reduce administrative and economic burden of the implementation of EVM
 - Leverage tailored EVM reporting to gain insight into program performance in support of decision making
 - Control Costs Throughout the Product Lifecycle
 - Establish policy and provide guidance to ensure proper application of EVM based on program work scope, risk, size, and duration
 - Provide guidance to ensure consistent review and use of contractor data in Government oversight



IPMR DID/Guide Comments/Results

- ▶ Informal request sent to Industry and Government for feedback on IPMR DID and Guide
 - Identify where language in the IPMR DID or Guide is confusing
 - Identify where clarifications can be provided
 - Identify where there is perceived burden
 - Identify where the IPMR is providing benefit and success stories

NUMBER OF COMMENTS



Common Themes

- ❖ Subcontractor Reporting
- ❖ WBS Structure
- ❖ Variance Analysis
- ❖ IMS



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DFARS Update

- ▶ Consistent with Federal Regulations
 - For all MDAP/MAIS development contracts, and non-MDAP/MAIS development cost or incentive contracts and subcontracts,
- ▶ Consideration of work scope in application of EVM and EVMS practices
 - Contracting officers shall work with program managers and OSD EVM policy holder (for MDAP and MAIS) or Service/Agency EVM focal point (non-MDAP and MAIS) to obtain a recommendation of the applicability of Earned Value Management
- ▶ Consistent with 5000.02
 - If the Component Acquisition Executive (CAE) has approved a waiver of EVM reporting per DoDI 5000.02, Enclosure 2 (9)(a), the DFARS EVMS requirements are not applicable
- ▶ Update Thresholds
- ▶ Out for review by DoD EVM IPT



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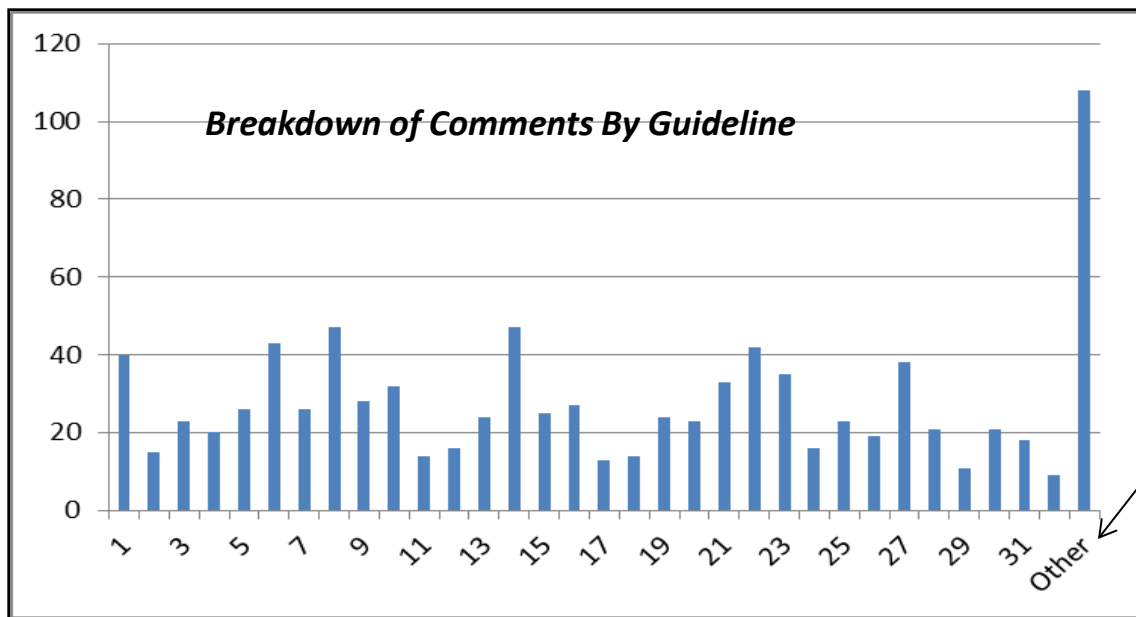
Purpose of DoD IPM EVMS Implementation Instruction (DoD IPM EVMS II)

- ▶ Provide a single, authoritative DoD interpretation of the 32 guidelines contained in the ANSI/EIA 748 EVMS Standard to facilitate consistency and a common understanding for determining EVMS compliance and validation within the DoD.
- ▶ Establish DoD's overarching, strategic requirements for implementation of the 32 ANSI/EIA 748 guidelines.
 - Provides the DoD strategic intent of each guideline as well as the specific attributes required in a compliant EVMS. Attributes are the specific EVMS characteristics that will be tested as part of determining compliance with the 32 guidelines in ANSI/EIA-748.
 - Use as starting point for how DoD components (DCMA, Intelligence Community (IC), NAVSEA SUPSHIPS, and DCAA) will develop/maintain test step processes to assess EVMS compliance.
 - Acknowledge differences, where appropriate, in EVMS guideline interpretation and application for development versus production type work.



Status of draft DoD IPM EVMS II

- ▶ Initial draft DoD IPM EVMS II distributed to the DoD Stakeholders responsible for conducting or participating in EVMS compliance/surveillance reviews (DCMA, Navy/SUPSHIPS, NRO, NGA, NSA and DCAA) for review and comment.
 - Version 1 released May 28, 2014 – DoD Strategic Intent, Glossary, and References
 - Version 2 released June 17, 2014 – Completed draft document with Foreword, Introduction, and Process Area Overviews
- ▶ Received 921 comments/recommendations addressing all areas of the document.



Other Includes:

- Foreword
- Introduction
- Process Area Overview
- Glossary
- Reference Documents



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DOD IPM EVMS II Adjudication Status

- ▶ Adjudication team consists of representatives from DCMA, Intelligence Community, Navy/SUPSHIPs, and DCAA.
 - Each DoD Component has two representatives that are responsible for conducting EVMS compliance and/or surveillance reviews
 - Other DoD Components (e.g. Army, Air Force, MDA etc.) will have opportunity to provide comments but will not be on the adjudication team

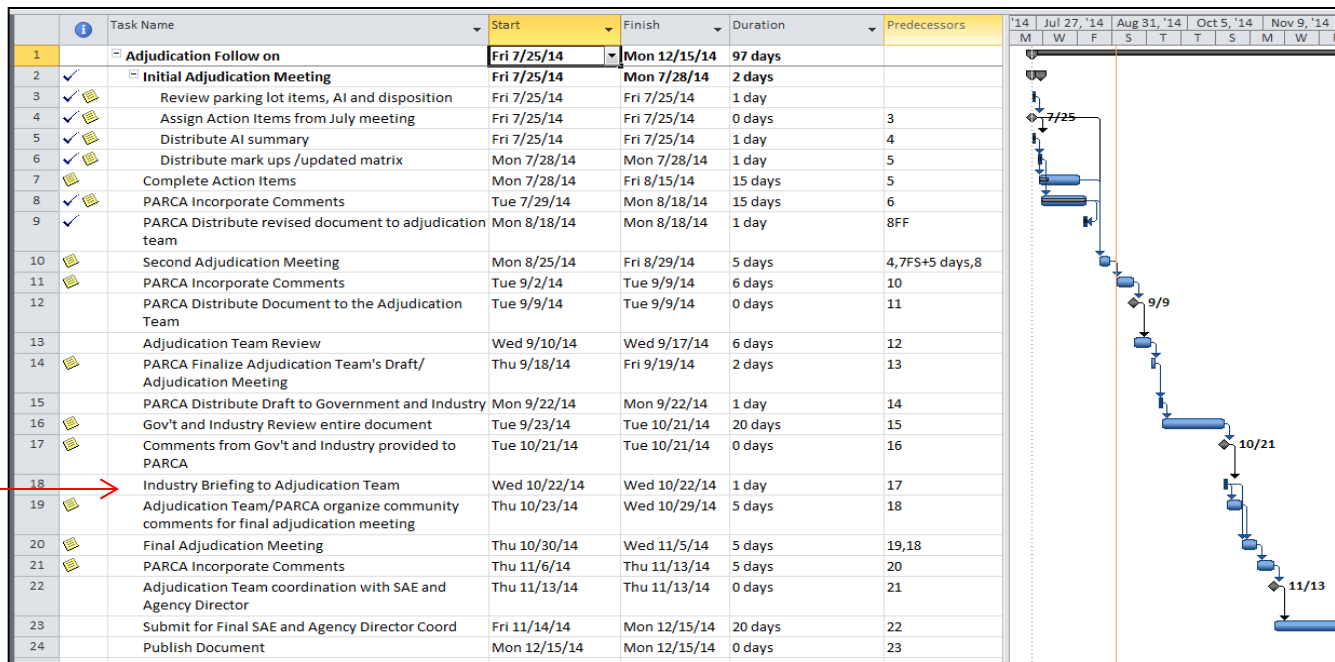
- ▶ Adjudication Team Meetings
 - Two meetings held in July and August 2014, reached consensus on adjudication of comments.
 - Third meeting scheduled for September 2014 to finalize draft DoD IPM EVMS II before released in a wider distribution for review/comment.

- ▶ Provided opportunity for NDIA Working Group on Production, Manufacturing and Naval Construction (PMNC) and NAVSEA SUPSHIP to brief Adjudication Team on EVMS guideline interpretation and application differences between production and development programs as they relate to EVMS compliance.



DOD IPM EVMS II Path Forward

- ▶ Draft DoD IPM EVMS II to be distributed to EVM Community in September 2014
 - Government: Adjudication Team, Civil and other DoD Agencies
 - Industry: NDIA to obtain and consolidate all industry comments and submit as one response. Industry to brief adjudication team on comments during October.
- ▶ Adjudication Team to adjudicate comments October 2014
- ▶ Target date for DoD IPM EVMS II publication: December 2014



Industry briefing to Adjudication Team October 22, 2014



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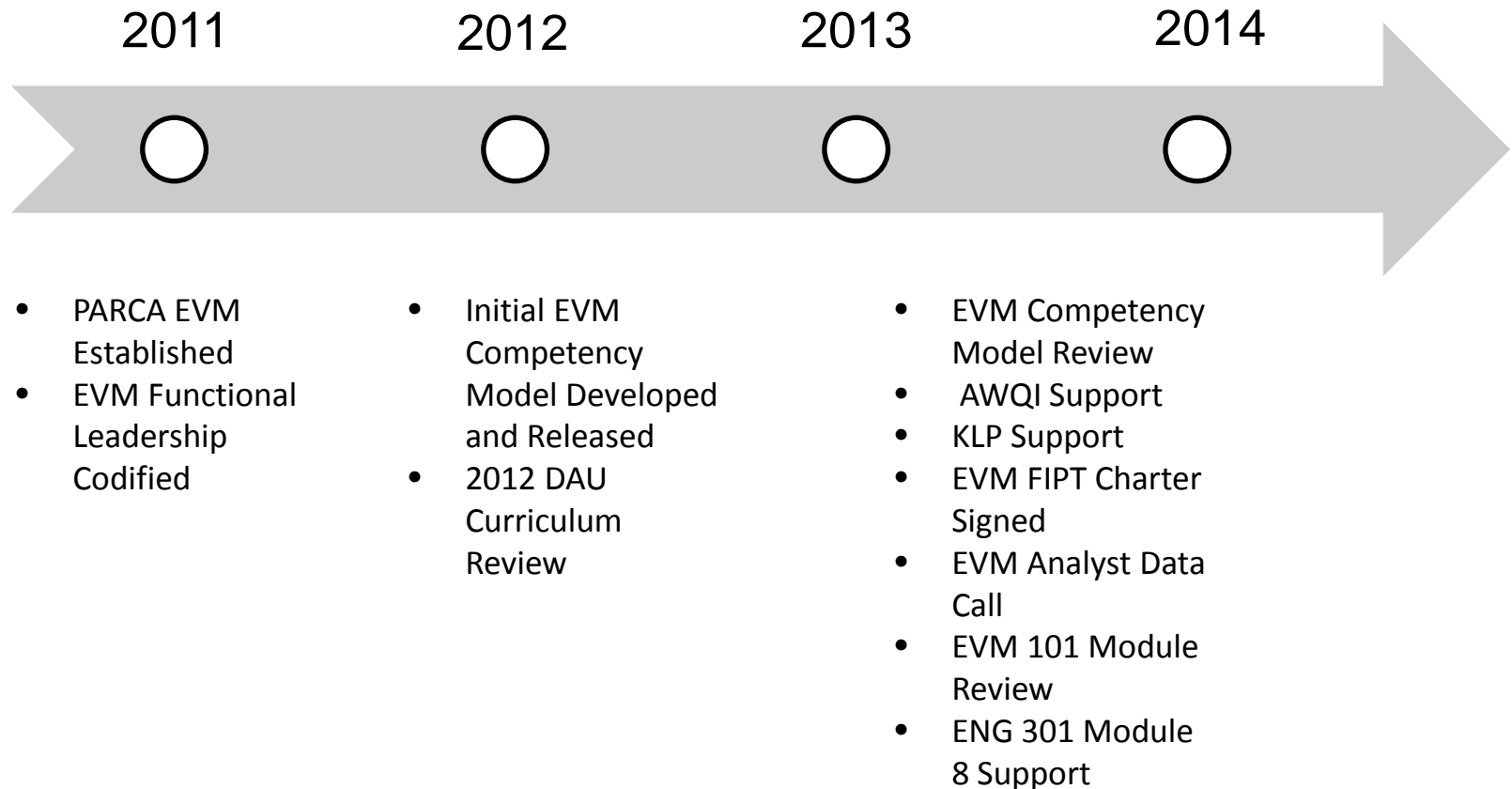
IMPROVE ACQUISITION PROFESSIONALS' ABILITY TO UTILIZE EVM

- **Functional Leadership**
- **EVM Competency Model Development and Update**
- **DAU Curriculum Review and Update**
- **Human Resource Initiatives**



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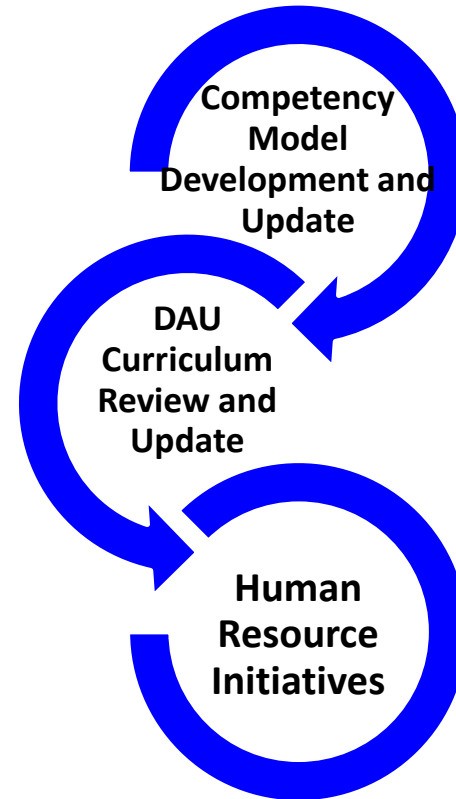
EVM Functional Leadership Timeline





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EVM Functional Leadership



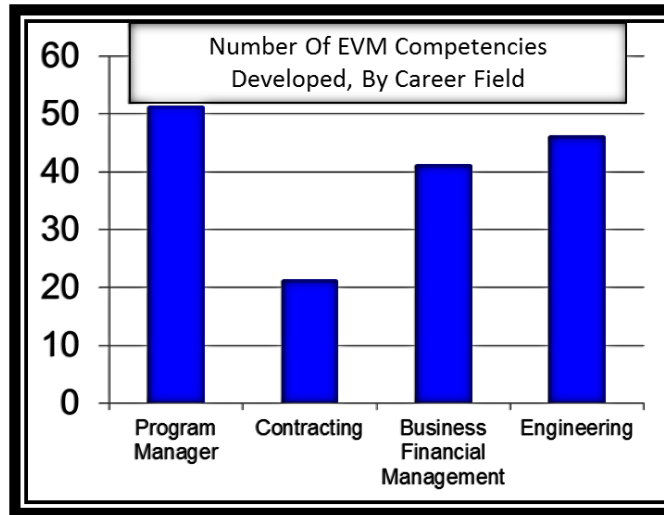
Baseline of EVM competencies provides a basis for development and training of EVM workforce and supports EVM policy implementation



EVM Functional Leadership Competency Model Development and Update

➤ Development of Competency Model

- Role-based cross-functional EVM Competency Model Developed and published
- Inclusion of EVM Competencies into other Functional Area Models
 - PM, CON, BFM, SE competencies developed and vetted
 - Future: IT, LOG, FE



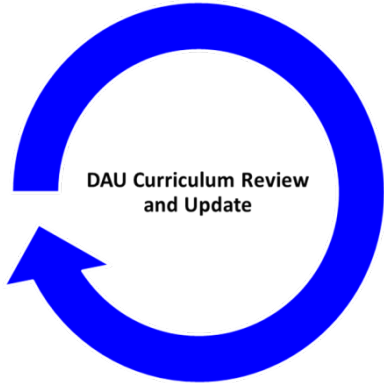
➤ Review and Update of EVM Competency Model

- Incorporate new policy
- Incorporate feedback from studies, HRI, DAU Courses



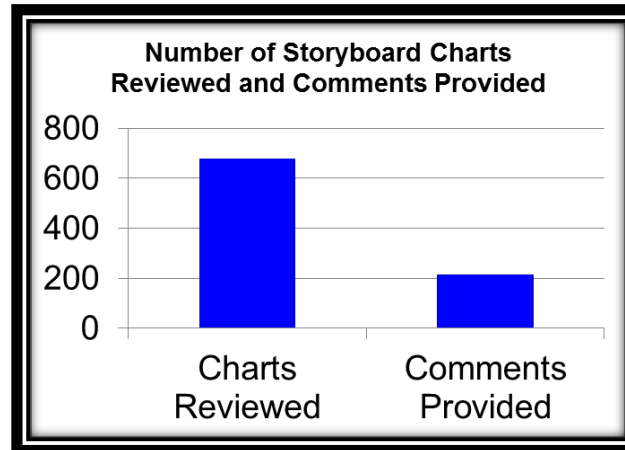
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EVM Functional Leadership DAU Curriculum Review and Update



➤ EVM Courses

- Annual Review of EVM Course Curriculum
 - 2012 review completed, comments accepted, and incorporated into courses (22 classes reviewed)
- Support of Development of EVM Course Content
 - EVM 101 Modules reviewed and feedback provided



➤ Support of Development of EVM Course Content in Other Functional Area Courses

- SYS 301 Technical Leadership in Systems Engineering, Technical Measurement and Managing Uncertainty



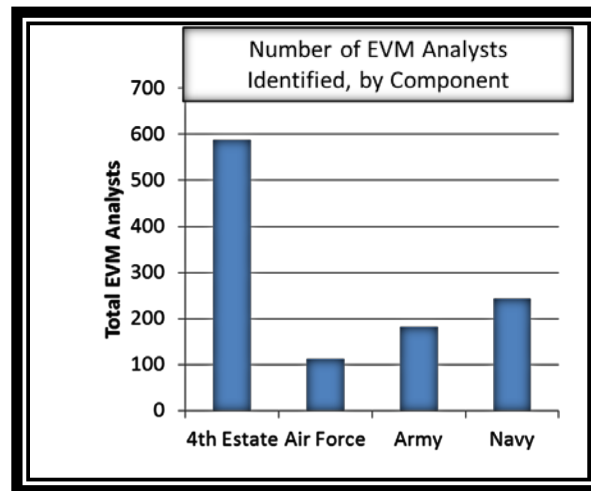
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EVM Functional Leadership Human Resource Initiatives



➤ EVM Analyst Call

- Worked with Service and 4th Estate DACMs and performed a survey which identified EVM Analysts within DoD to support strategic management of education and experience



➤ AT&L Acquisition Workforce Qualification Initiative

- Map EVM Competencies into work products and tasks

➤ AT&L Key Leadership Position Initiative

- Identify individuals as prepared to fill mandatory KLPs based on their training, education, and experience



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REDUCE CONTRACTOR'S ADMINISTRATIVE BURDEN OF INEFFICIENT USE OF EVM

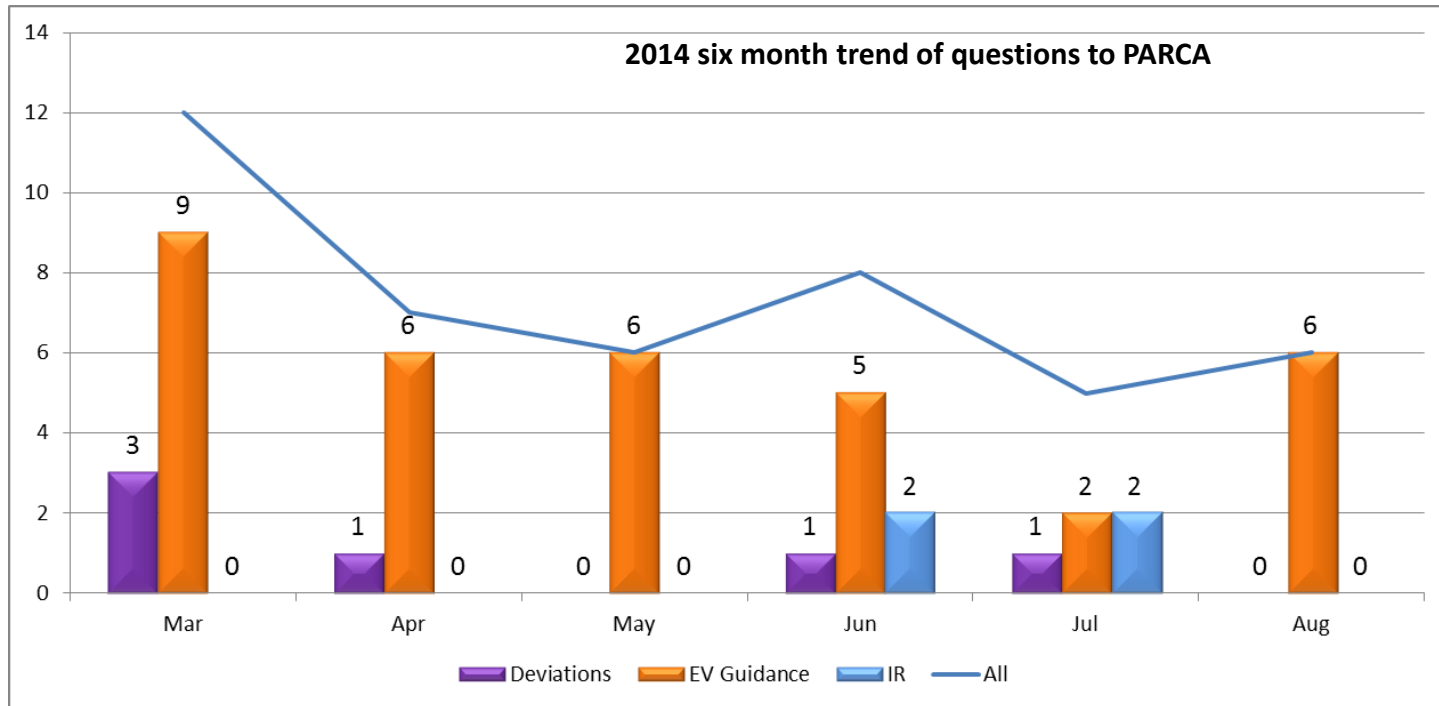
- **EVM Data Requirements**
- **EVM Waiver/Deviation**
- **EVM Guidance and Interpretation**



EVM Data Requirements

GOAL: Provide guidance and advice on EVM applicability and reporting requirements to more efficiently achieve program objectives

- PARCA categorizes information into three areas; Deviations, Guidance, and Issue Resolutions

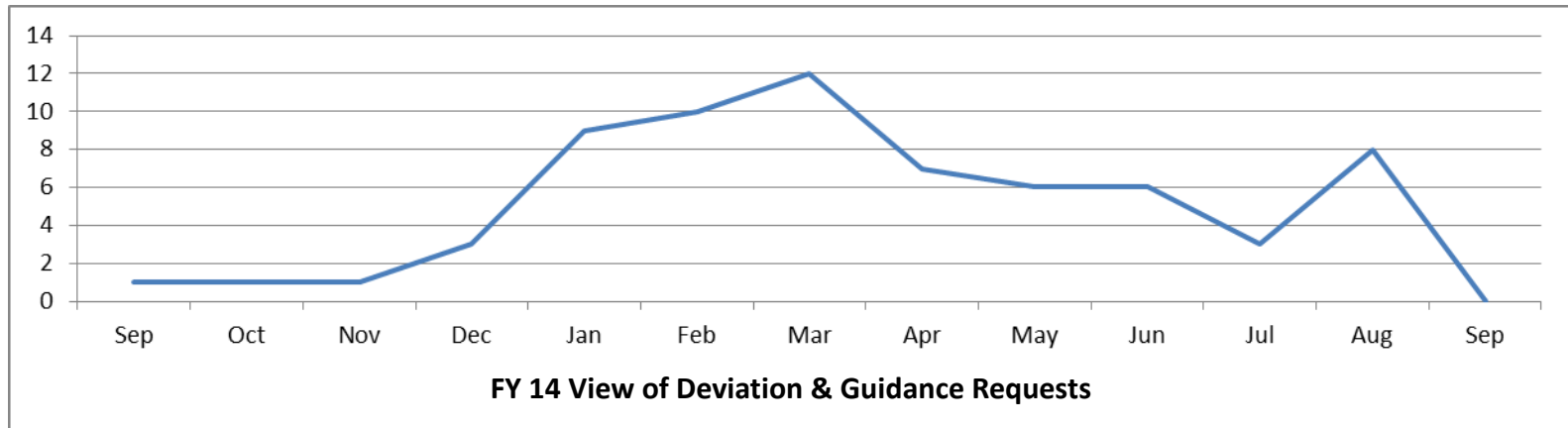




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EVM Waiver/Deviation Requests

GOAL: Tailor the EVM reporting requirements to more efficiently achieve program objectives



- **Deviation:** Review of requests for DFARS Applicability and potential EVM deviations or tailoring
 - Total Deviation Discussion Requests to date = 48
- **EVM Guidance:** Response to questions regarding implementation of EVM
- **Issue Resolution:** Formal request for PARCA to review an EVM issue/interpretation



PARCA EVM

Recent EVM Waiver/Deviations

- ▶ PARCA provides a review and position on EVM applicability; does not have contractual authority to change contracts
- ▶ Deviation Topics
 - Conversion of FFP to FPIF contracts = 8%
 - Service / Sustainment / Production Contracts EVM Application = 63%
 - Government to Government contracting = 6%
 - IDIQ / BOA / Task Order Based = 17%
 - Other = 6%
- ▶ Note, there are two requirements for EVM application
 1. Deviation per the DFARS
 2. Waiver by the CAE per the DoDI 5000.02



Recent EVM Waiver/Deviation Results

- ▶ Deviation Guidance Provided
 - *Conversion of FFP to FPIF contracts*
 - Contracts did not include EVM in original RFPs
 - Formal EVM/EVMS requirements and IPMR do not apply
 - Must include enough cost and IMS reporting to support incentive review
 - *Service / Sustainment Contracts EVM Application*
 - Service type work does not lend itself to use of EVM
 - EVM does apply for any included development or “planned maintenance” tasks
 - IMS would still apply
 - *Government to Government contracting*
 - Government should impose EVM reporting and EIA 748 standards
 - Full DFARS should not be imposed due to limitations of Government systems
 - *IDIQ / BOA / Task Order Based*
 - Work scope, by task order or group of task orders, determines EVM application
 - Apply DFARS to total IDIQ but only implement on EVM related TOs



EVM Guidance and Interpretation Topics

- ▶ Recent topics / questions
 - *IPMR / IPMR Guide*
 - EACs and FPIF contracts
 - DFARS & IPMR relationship
 - Handling of de-scopes
 - Subcontractor flowdown of the IPMR
 - CSDR vs IPMR WBS
 - *EVM Application*
 - Consideration of work scope when determining applicability of EVM
 - Applicability / utility of MIL STD 881C
 - IDIQ / Task Orders & EVM
 - *XML File Validation*
 - What is XML / How is it implemented
 - XML testing / XML Schema validations



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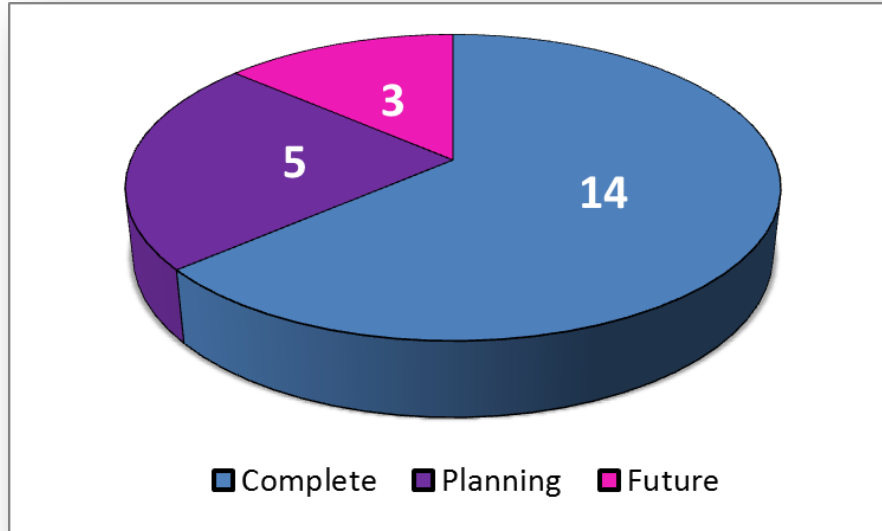
ENSURE CONSTRUCTIVE 2-WAY COMMUNICATION BETWEEN DOD AND INDUSTRY

- **PARCA EVM Outreach**
- **PARCA EVM Training**



PARCA EVM Outreach

PARCA EVM 2014 EVENTS



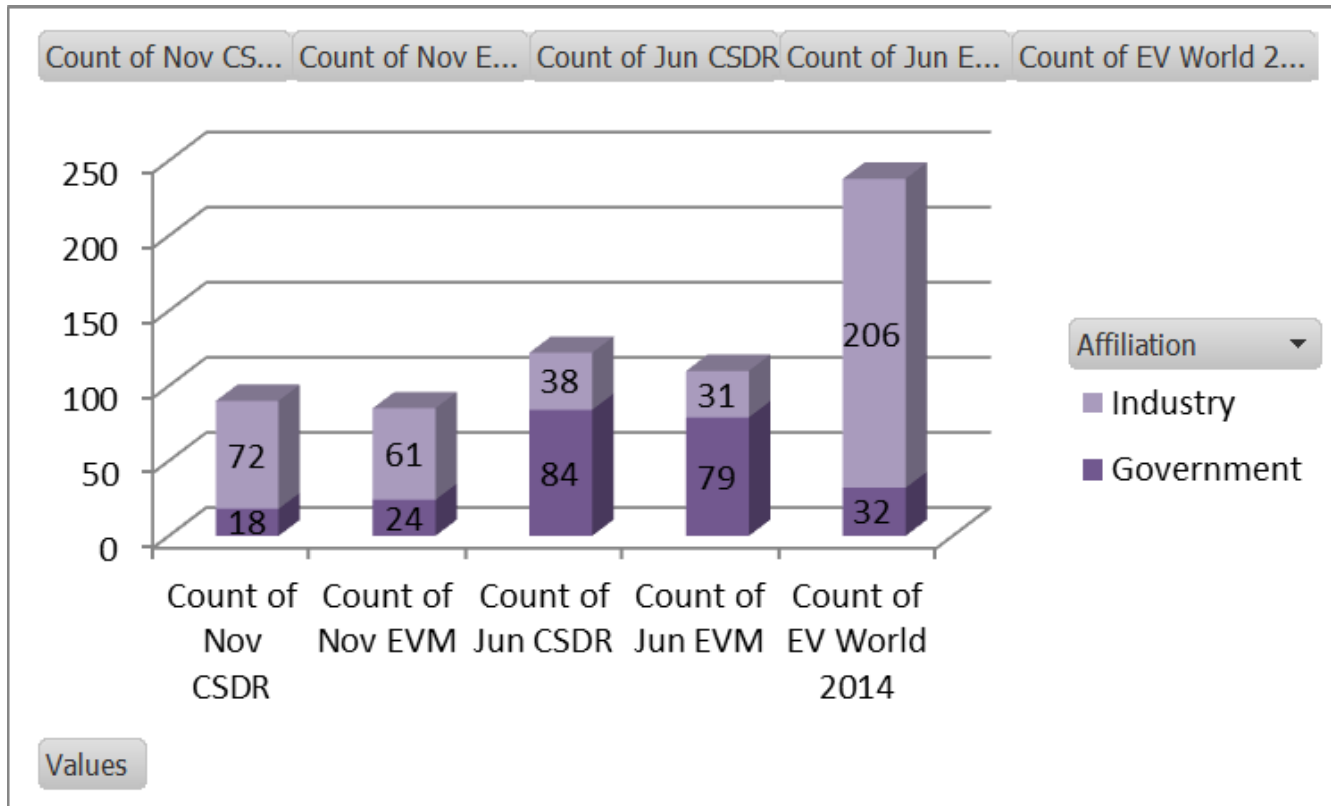
- ❖ NDIA IPMD Meetings
- ❖ DoD EVM IPT Meetings
- ❖ EVM World
- ❖ IPM Conference/Workshops
- ❖ EVM/CSDR Training
- ❖ Webinars

Recent Workshops Presented

- Tailored IPMR
- Role-Based IPM
- Right Sizing Earned Value Management for Your Project
- Exploring Ways to Inform Earned Value Using Technical Performance Measures (TPMs)
- Integrated Master Plan The Foundation for Program Success



PARCA Outreach Demographics



**Reaching Industry and Government audiences
Tracking participation in events to identify stakeholders being reached and gaps to plan for future events**



PARCA EVM

PARCA EVM Training

- ▶ EVM Training to Government PMO's - Quarterly
 - **Topics:** EVM Policy, Tailored IPMR Implementation, EVM-CR
 - **Next Training:** October 28-29, 2014 Hanscom AFB

- ▶ EVM/CSDR Training (Government and Industry)- Semi-Annual
 - **Topics:** IPMR Implementation, EVM-CR, CSDR Reporting
 - **Next Training:** November 18-20, 2014 Orlando, FL

Training targeted at users of EVM Reporting in both Government and Industry



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Contact Information

How to contact us:

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

PARCA EVM Email: osd.pentagon.ousd-atl.mbx.evm-interpretation@mail.mil

OR osd.pentagon.ousd-atl.mbx.parca-evm@mail.mil



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Agile Initiative



DoD Agile Initiative

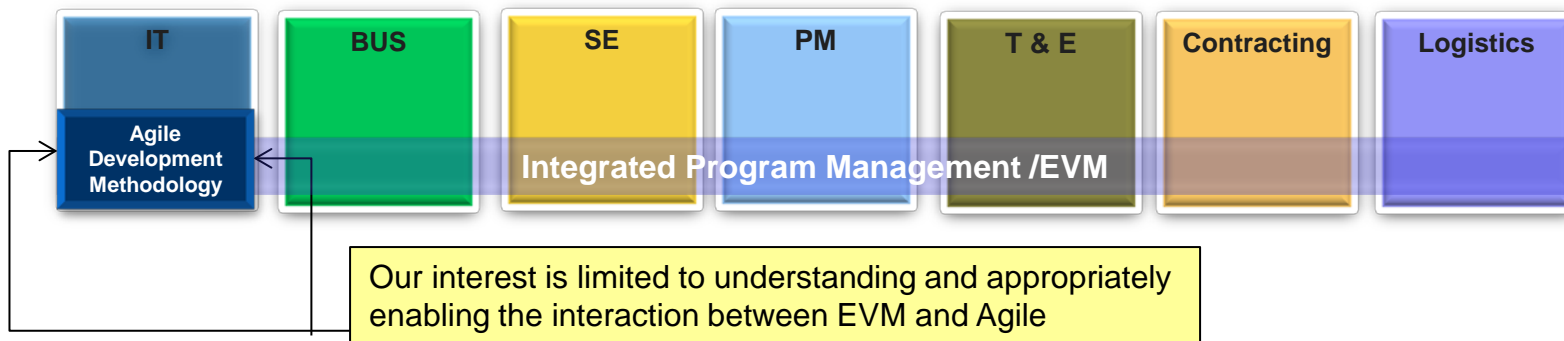
Background:

- ▶ Earned Value Management (EVM) is the preferred program management tool for cost or incentive Major Acquisition Information Systems (MAIS) and Major Development Acquisition Programs (MDAPS) >\$20M.
- ▶ Using Agile methodologies for managing programs with significant software development has been gaining wider acceptance within DoD.
- ▶ The Army and the Air Force have asked PARCA EVM for policy and/or guidance to better manage programs that required both EVM and Agile.

Problem Statement:

- ▶ Given differences in managerial approach and lifecycle development, how can the application of EVM and Agile be leveraged to increase the probability of the program’s cost, schedule and technical success?

Functional Area Competencies





DoD Agile Initiative Status

Our research has revealed:

- ▶ Examples of programs that have successfully managed through the correlation of the EVMS and Agile.
- ▶ Numerous studies and initiatives already in place or underway (SEI Carnegie Mellon, MITRE, GAO, DoD).

Next Steps:

- ▶ October visit to a major program that is currently using Agile and have EVMS as a contractual requirement.
- ▶ Decision to move forward with a dedicated subgroup to explore the issue further.

What we are asking from Industry:

- ▶ Examples of Agile/EVM integration successes or failures.
- ▶ Participation in our field visits.