



DEFENSE CONTRACT MANAGEMENT AGENCY

DCMA EVMSC Update on Business Systems Process

for

NDIA Integrated Program Management Division Meeting

Presented By:

Jean Christian Brutus P.E.

Acting Deputy Director, Earned Value Management Systems Center

13 April 2022



- DCMA Organization
 - Mission & Vision
- Earned Value Management Systems Center (EVMSC) Organization
 - Mission & Vision
 - Organizational Structure
- EVMSC Charter and authorization
 - Contract Administration Services
 - Weapons System Acquisition Reform Act (WSARA)
 - EVMS Career Development Program (ECDP)
 - DCMA Compliance Evaluation Metric (DECM) Approach
- EVMSC Working Groups
 - Department of Defense Federal Acquisition Regulation Supplement (DFARS)
 - Policy
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- NDIA IPMD Invite Special Topics
 - Common GL findings
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- Contacts and information



DCMA and EVMS Mission and Organization



- DCMA

- **Mission** | We are the independent eyes and ears of DoD and its partners, enhancing warfighter lethality by ensuring timely delivery of quality products, and providing relevant acquisition insight supporting affordability and readiness.
- **Vision** | A team of trusted professionals delivering value to our Warfighters throughout the acquisition lifecycle.

- EVMS Center

- **Mission** | The EVMS Center contributes to the DoD acquisition process through actionable assessments of contractor effectiveness at supplier facilities, which provides stakeholders with expectations of future performance and potential impacts on individual contractors and/or programs
- **Vision** | Serve as a dedicated partner for effective DoD acquisition decision making by ensuring integrated, reliable, and actionable Earned Value Management data

EVMSC – Area of Responsibility



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EVMS Center

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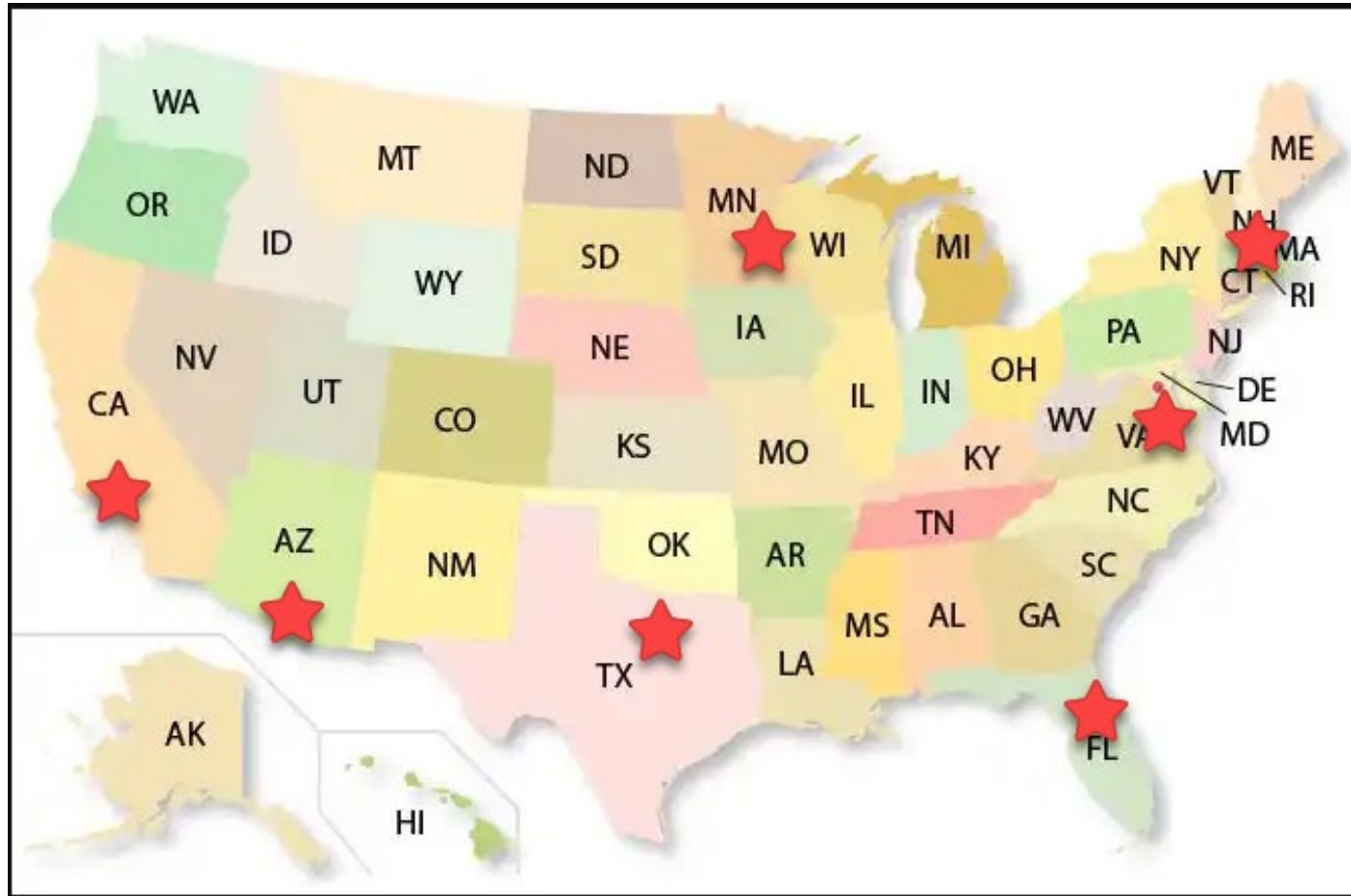
Raytheon Group
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 - Raytheon (Pratt/Collins) - Ball Aerospace -DRS
 - Vigor Works -Peraton
 - UArizona

General Group
 Jean Christian Brutus
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- GE Aviation
- Leidos
- Rolls Royce (RR) Corp.
- Progeny Systems Corp.
- Eastern Shipbuilding Group (ESG)
- Alsalam Aerospace Ind. (AAI)
- Charles Stark Draper Laboratory
- Dynetics
- RR plc.
- BAE Systems (Rochester, UK)
- VT Halter Marine
- M.C. Dean
- SRC, Inc.

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- BAE
- Battelle
- General Atomics
- Jacobs Technology
- Bell Flight
- Bechtel
- Coleman Aerospace
- Amentum
- Textron Systems (AAI, TSM&LS)
- GD
- Aerojet Rocketdyne
- Honeywell



NG Group – Carson, CA
Raytheon Group – Tucson, AZ
BAE/GD Group – Ft. Worth, TX
Boeing Group – Twin Cities, MN
LM/L3 Group – Orlando, FL
General Group – Hanscom, MA
EVMSC HQ – Ft. Lee, VA



If EVMS DFARS clause included, we are there



DCMA
Headquarters – Fort Lee, VA

DCMA Western Region

- Carson, CA
- Denver, CO
- Lockheed Martin Denver, CO
- Lockheed Martin Sunnyvale, CA
- Los Angeles, CA
- Palmdale, CA
- Phoenix, AZ
- Raytheon, Tucson, AZ
- Santa Ana, CA
- Stockton, CA
- NPO (NASA Product Operations), San Antonio, TX

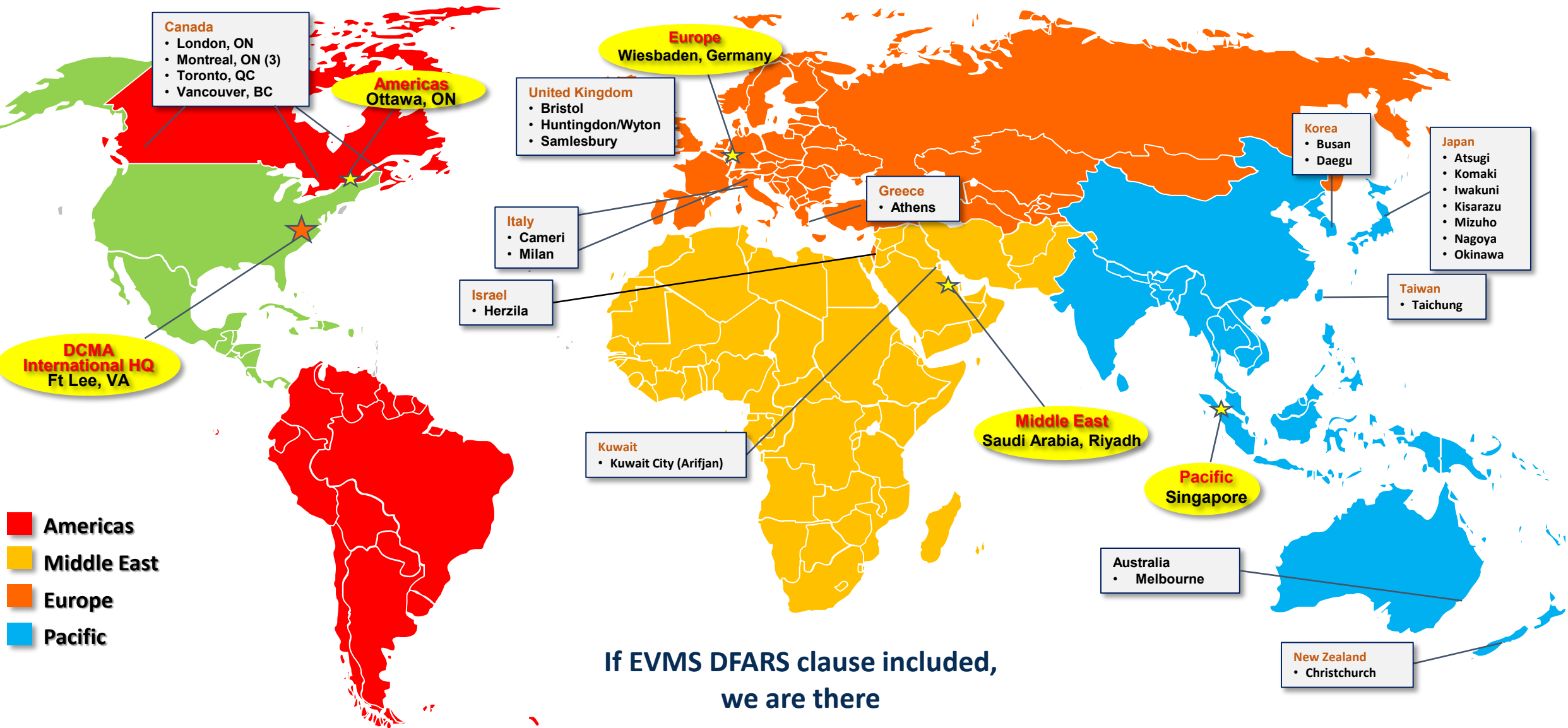
DCMA Central Region

- Bell Helicopter, Fort Worth, TX
- Boeing, St. Louis, MO
- Chicago, IL
- Dallas, TX
- Dayton, OH
- Detroit, MI
- Huntsville, AL
- Lockheed Martin, Fort Worth, TX
- Twin Cities, MN

DCMA Eastern Region

- Atlanta, GA
- Baltimore, MD
- Boeing, Philadelphia, PA
- Boston, MA
- Garden City, NY
- Hampton, VA
- Hartford, CT
- Lockheed Martin, Marietta, GA
- Lockheed Martin, Moorestown, NJ
- Lockheed Martin, Orlando, FL
- Manassas, VA
- Orlando, FL
- Philadelphia, PA
- Raytheon, Tewksbury, MA
- Sikorsky Aircraft, Stratford, CT
- Springfield, NJ
- APO (Aircraft Propulsion Operations), Hartford, CT
- NSEO (Naval Special Emphasis Operations), Philadelphia, PA

*more locations possible



If EVMS DFARS clause included, we are there

*more locations possible

EVMS Center FY21 Results and FY22 Projections



Event Type	FY21	FY22
Initial Visit	3	8
System Description	7	14
Focus Review	0	0
Initial Compliance Review	16	12
Surveillance	129	120
Corrective Action Plan	22	33
Integrated Baseline Reviews	14	15
<u>TOTAL</u>	<u>191</u>	<u>202</u>

EVMS Center Planning Processes:

- Resource loaded 18 months out
- Event plans refined 12 months out, but adjusted as necessary in accordance with ongoing analysis
- Standard Surveillance Plans (SSP) are a bilateral agreement with customers to ensure commitment
- 3 year cycle for surveillance planning ensures all System Intent Guidelines are covered
- **Contractor and EVMS signature agreed intervals

DCMA EVMS Charter and authorization





DFARS 242.302 (S-71) – Contract Administration Functions

- (S-71) “DCMA has responsibility for reviewing Earned Value Management System (EVMS) plans and for verifying initial and continuing contractor compliance with DoD EVMS criteria.”
 - “The procuring contracting officer shall not retain this function.”

Translates into these functional DFARS clauses under EVMS Center responsibility:

- DFARS 252.242-7005: Contractor Business System clause
- DFARS 252.234-7001: solicitation clause, DCMA EVMS center reviews proposal submissions plans
- DFARS 252.234-7002: post-contract award clause with these two criteria
 - Verifying initial compliance: System Description Review, Initial Visit, Compliance Review, Corrective Action support
 - Verifying continuing compliance: EVM systems monitoring and surveillance to verify continuing contractor compliance to the standard over a three-year cycle



Weapons Systems Acquisition Reform Act (WSARA) of 2009

- Created to reform the way DoD contracts and purchases major weapons systems (Public Law No. 111-23)
- Section 302 EVM related: “(8) A discussion of the manner in which the Department ensures that **personnel responsible** for administering and overseeing earned value management systems have the **training and qualifications** needed to perform that responsibility.”

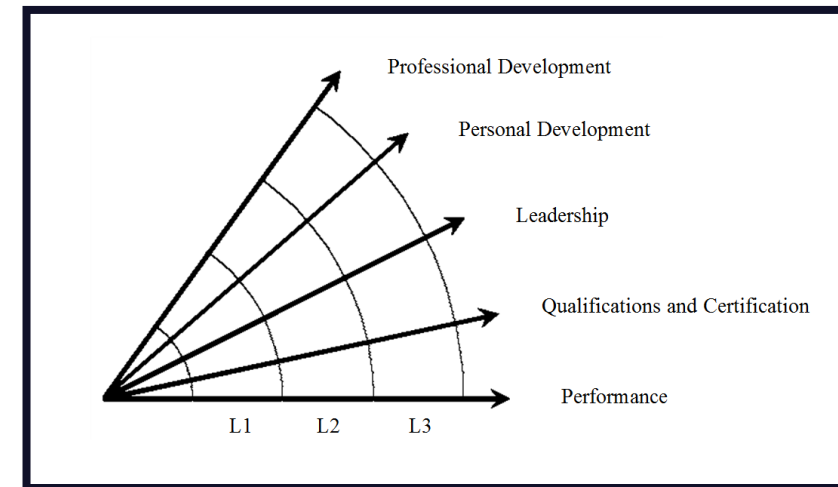
Response: DCMA created EVMS Career Development Program (ECDP) [previously ESCP 2009-2013]

- Created in 2009
- implemented from 2010 forward ensuring standardized competencies across skills, capabilities, and experience from Entry, Journey, and Expert levels
- Section 302 EVM related: “(9) A discussion of **mechanisms to ensure** that contractors establish and use approved earned value management systems, including mechanisms such as the consideration of the **quality of contractor earned value management performance** in past performance evaluations.”

Response: Initially (2009-2012), a small number of metrics were created for cursory review and high level metrics

- Lacked comprehensive configuration control
- DCMA Compliance Evaluation Metrics (DECM) [previously EVAS] were developed, implemented, and executed from 2013 forward
- Currently under configuration control, with input from all Department, Contractor, and Industry Stakeholders.
- CCBs now occur annually

- 2009 – 2013: EVMS Specialist Certification Program (ESCP)
- Evolving reorganization, Agency and Department revised training directions
- 2017 – current: ECDP initiated
- The ECDP develops the EVMS specialist into a fully qualified and skilled professional through a Five Vector model
- Think of the Five Vector Model as a career roadmap – that identifies the career milestones and learning opportunities that EVMS analysts need to progress to:
 - Level 1 (Entry)
 - Level 2 (Journey)
 - Level 3 (Expert)





DCMA EVMS Compliance Metrics (DECM)

- Standardized compliance approach process to assess the implementation risk of contractor processes and their EVMS
- Currently 142 DECMs (59 automated, 83 manual)
- Executed using contractor EVMS data such as IPMDARs, WADs, VARs, etc.
- DECM evaluation directly contributes to EVMS compliance assessment process & provides objective assessment of contractor EVMS health
- Annual Configuration Control Board to evaluate change requests from all stakeholders internal and external
 - Most recent CCB October 2021
 - Next CCB planned for Oct 2022
 - Voting board members, Intelligence Community, NAVSEA, and DCMA
- Current DECMs available on DCMA public page at: <https://www.dcma.mil/HQ/EVMS/>



DCMA EVMS Compliance Metrics (DECM)

- Analyzing DECM data for insights
 - Currently have ~12,500 data points
- Refine DECM trip thresholds
- Establish DECM prioritization
 - Linking DECM data with Corrective Action Request (CAR) data to establish which DECMs correlate to deficiencies
- DECM data analysis done in collaboration with NDIA at monthly working groups

EVMS Working Groups





- Mission
 - Promulgate executable policies which enable the EVMS Center to accomplish our DFARS mission in accordance with applicable laws, regulations, overarching polices, and collateral guidance.
- EVMSC Business Practices
 - Provide consistent, detailed processes and procedures which prescribe how the EVMSC will execute our DFARS mission.
- Working Group Participation
 - Participate in internal & external working groups to ensure consistency in EVMS interpretation & execution
 - Maintain lines of communication across the EVMS stakeholder enterprise
- Intake adjudication
 - Receive internal & external requests WRT EVMS information to provide answers/clarification/interpretation/actionable information for requestors



- DCMA Internal

- DCMA PDREP Configuration Management Board (CMB) (PMBI)
- DCMA MAN 2303 & 2303-01 Updates
- DECM Result Collection/Trending/Reporting
- Workforce Assessment Working Group

- DCMA External

- Department of Energy (DOE) EVMS Maturity Model
- DFARS Working Group
- Acquisition Data & Analytics (ADA) Third Party Assessment Study
- National Defense Industrial Association (NDIA) EIA 748 Working Group
- NDIA DECM Working Group
- NDIA IPMD Planning & Scheduling Committee
- NDIA Planning & Scheduling Excellence Guide (PASEG)

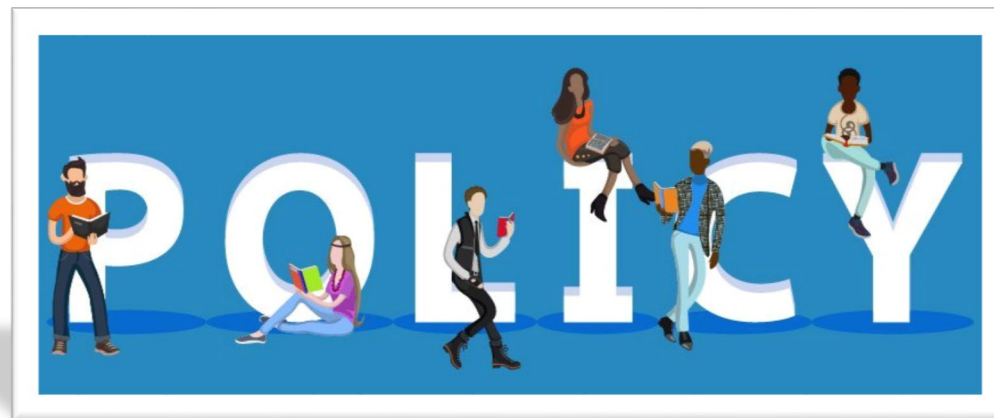


DFARS Working Group Update

- Three open related DFARS Cases
 - 2015-D038: Earned Value Management Applicability
 - Addresses applicability of Earned Value Management (EVM) on DoD contracts. The rule will address thresholds, roles and responsibilities, and approval authorities for the application of EVMS.
 - STATUS: resolving issues with proposed final draft
 - 2017-D021: Contractor Business Systems
 - Implements sections 893 of the NDAA for FY 2017 (Pub. L. 114-328) to revise the requirements for review of contractor business systems.
 - Working group inputs complete
 - STATUS: Report due date extended to 3/30/22 (as of mid March)
 - 2021-D006: Definition of material weakness
 - Implements section 806 of the NDAA for FY 2021 (Pub. L. 116-283), which provides a definition of material weakness for contractor business systems.
 - STATUS: DARS Regulatory Control Officer reviewing



- EVMS Center polices prescribed in Business Practices (BPs)
 - BP0: Earned Value Management Systems
 - BP1: EVMS Pre-Award Support
 - BP2: EVM System Description Review
 - BP3: EVMS General Support
 - BP4: EVMS Surveillance
 - BP5: EVMS Review for Cause
 - BP6: EVMS Compliance Review
 - BP7: EVMS Metrics Configuration Control
 - BP8: EVMS Career Development Training
- Available on DCMA public site at: <https://www.dcma.mil/HQ/EVMS/>
- Evaluated annually for updates





Integrated Baseline Review:

- DCMA EVMSC personnel support program-led events adding subject matter expertise
- Assist PMOs insight into business system execution at the program level

Initial Visit or System Description Review:

- Gain familiarity with a contractor business system and documentation
- SD Review to verify a contractor's business system and process definitions compliance to meet the intent of the EVMS guidelines

Initial Compliance Reviews or Corrective Action Plan (CAP):

- Comprehensive review to assess business system compliance, or CAP review to determine successful completion of corrective actions for a non-compliant system
- Highest resource usage
- Most individuals needed across multi-agency team
- Highest scope of workload per event

Surveillance:

- Standardized event targeting one or more business areas
- Focused, Smaller total work hours effort
- Greatest number of events
- Multiple occurrences over a 3 year period
- 3-year cycle to evaluate all 32 System Intent Guidelines for on-going business system maintenance, per policy guidance
- Staffed/evaluated by risk

Review for Cause or Focus review:

- Typically driven by specific buying command/customer concerns about potential business system non-compliance
- Drop-in nature may render these disruptive, with high workload and rapid turn-around
- Typically must adjust other EVM Center workload/priorities to insert in plan
- Example: Nunn McCurdy review



ECDP training & mentorship IPT

- Purpose:
 - provide continuity from previous training program (ESCP)
 - standardize training and qualifications for personnel overseeing EVMS for DoD
 - Defines competency: three proficiency levels Entry, Journey and Expert
- Formalizes mentorship, protégé agreement, protocols, and process
- Uses “Bloom’s Taxonomy” and a “Five Vector” development model
- Entry and Journey level courses rolled out CY21 with Expert level in CY22
- Developing Expert course in partnership with DAU to address CRs and Surveillance
 - Includes Asynchronous learning with hands-on work shops that mock CR processes
 - Beta testing planned late FY22 for virtual learning platform

ECDP outcome: Highly qualified, capable and credible DCMA EVMS professionals possessing the ability to effectively perform all DCMA EVMS Center business practices

- Bloom's Taxonomy is a hierarchical ordering of cognitive skills that can help teachers teach and students learn

- **Entry level focus:**

- Knowledge

- recalling facts and basic concepts
- Typical verbs include Define, Recall and Identify

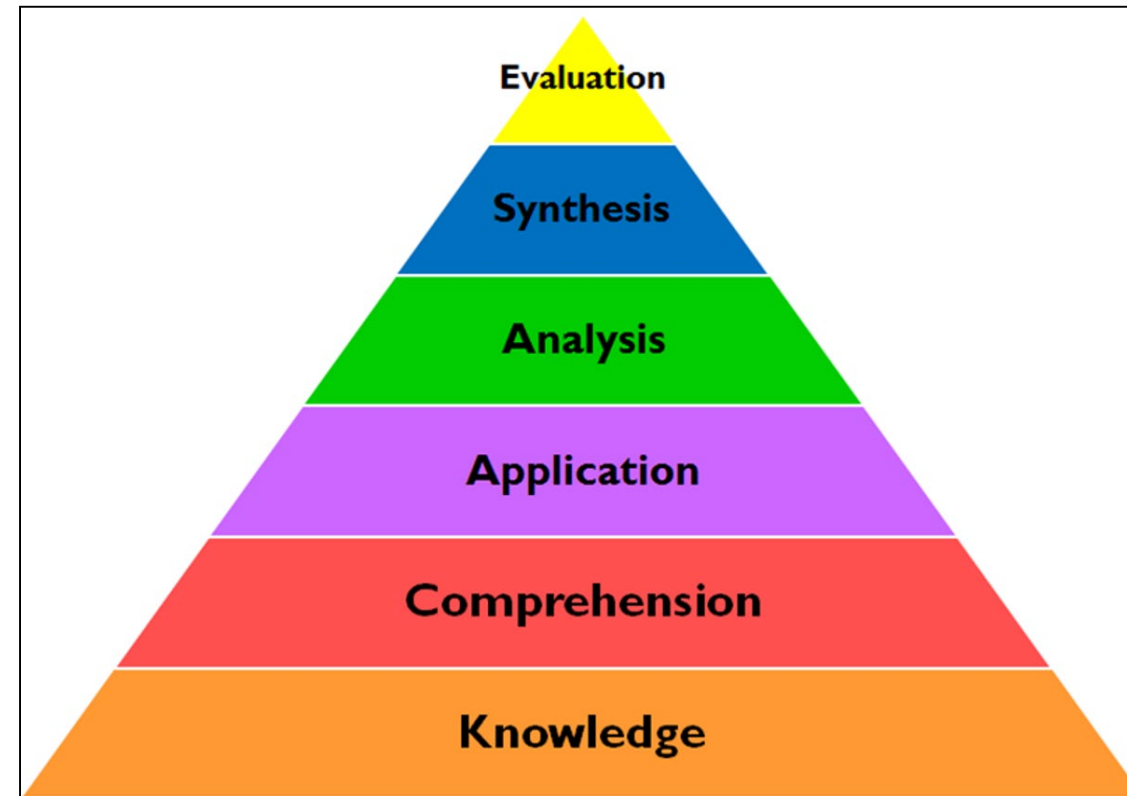
- Comprehension

- explaining ideas or concepts
- Typical verbs include Understand, Explain, and Differentiate

Expert

Journey

Entry





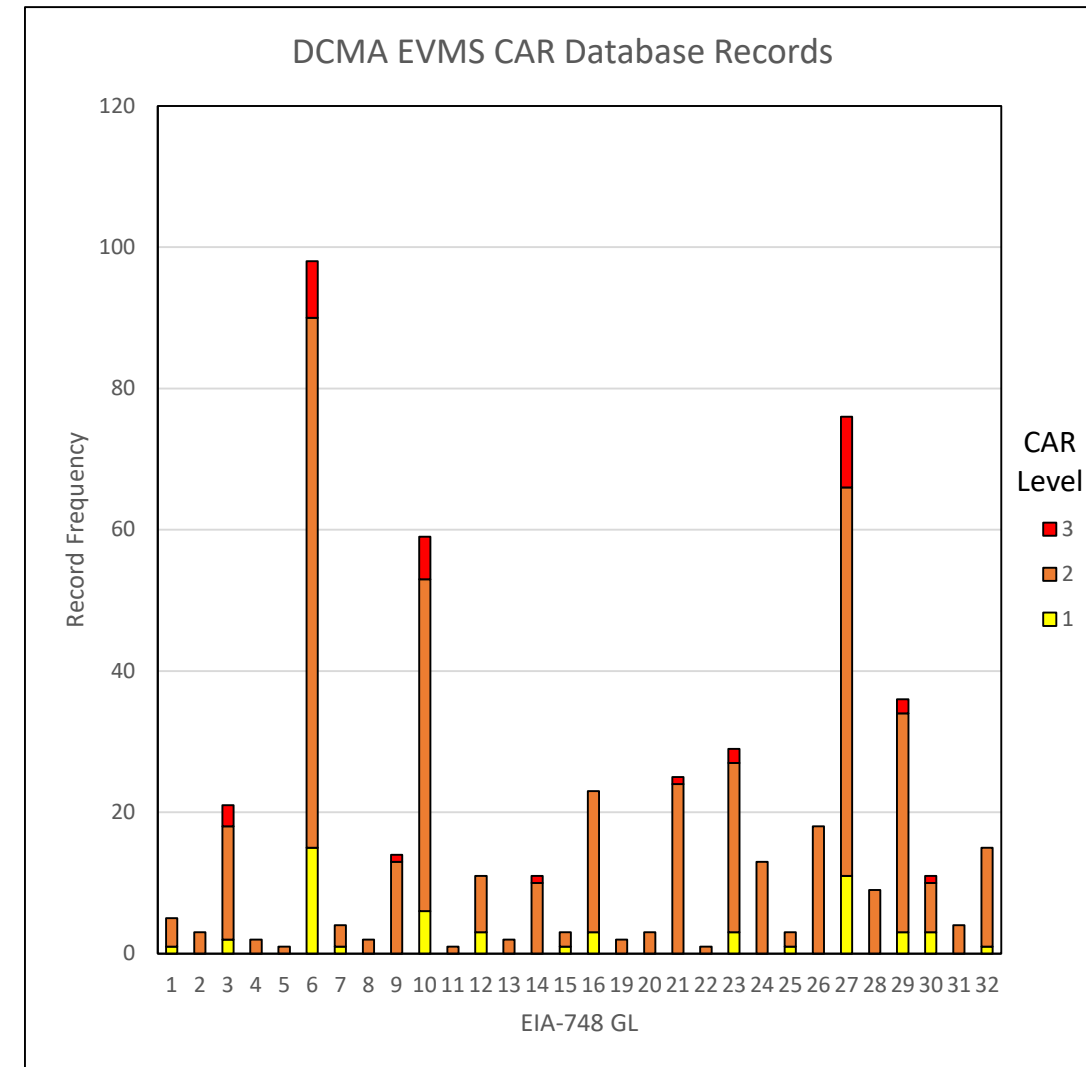
- Mission
 - DCMA EVMS Center Tools Subject Matter Experts (SMEs): responsible for gathering, understanding, and processing EVMS-specific tools used in all facets of performing the EVMS functional duties in support of carrying out all aspects of DCMA EVMS Surveillance Business Processes (BPs) as necessary.
- Leveraging software tools provides capability to automate significant number of EVMS compliance metrics
 - Requires expertise with EVM software tools utilized in Industry
 - Artificial datasets developed/updated for use in compliance metric testing
- Modernization efforts underway to develop Agency and Enterprise level repositories for data storage and analysis of EVMS-related data
 - Includes development of cloud-based repository for storage and analysis of surveillance event DECM results
- Compliance metric spec sheets, artificial datasets, & compliance procedures available for download at: <https://www.dcma.mil/HQ/EVMS/>



- Specific identification of roles and responsibilities
- Fully delivered, required contractor data and documentation
- Early engagement improves collaboration efforts
- Early involvement with contractor yields better results
 - Include all participants at the Initial Visit
 - Contractor wall-walk or story board essential
 - Contractor self-disclosure of potential pitfalls provides for better informed team
- Protected, proper sharing of previous results
- Consistent due dates, due-times during review
- Maintaining fluid, honest communications, daily briefs



- Common GL findings observed over the last few years
 - DCMA CAR database (PDREP) - 505 EVMS records (54 Level I, 416 Level II, and 35 Level III)
 - **GLs 6, 10, and 27** represent **46%** of all records
- Words of Wisdom on a specific GL with reoccurring issues
 - Focus on **WP/PP level scope of work** definition and how the specific/unique scope is **integrated** across subsidiary management processes.
- DECMs - How DCMA EVMSC uses them and how industry could benefit
 - 44 out of 142 Metrics focus on GLs 6, 10, and 27
 - At least 30 out of 44 are fully/partially automatable
 - Use of automated software facilitates quick health check, risk assessment, more focused sampling for follow up investigations, and recurrence verification.
- Schedule Analysis techniques used by DCMA and recommendation to industry
 - EVMSC Analysts focus on system compliance. Latest published DECMs provide focus areas where Artifact 11 (IMS) is required
 - Contract Management Offices (CMO) EVM Program Analysts focus on Schedule analysis (includes 1) CDRL Analysis and 2) Critical Path Analysis)
 - Recommendation: Work in coordination with both EVMSC and CMOs





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DCMA Hot Topics: *****HOT TOPICS*****

- February 2021: EVMS Business Practices & Attachments updated
- December 2021: EVMS Compliance Metrics (v5.0), Metric Tracker, and Artificial data set updated

DCMA EVMS Center: **DCMA Earned Value Management Systems Center**

Mission: The EVMS Center contributes to the DOD acquisition process through actionable assessments of contractor effectiveness at supplier facilities, which provides stakeholders with expectations of future performance and potential impacts on individual contractors and/or programs.

Organization: The EVMS Center is organized functionally into six execution Groups along with our Headquarters staff. The six Groups align with the Cost & Pricing Center structure. The six Groups are detailed below. Additional contractors not listed below are assigned to a Group either through their alignment with the Cost & Pricing Center or by geographic location.

- Lockheed Martin Group (Lead, Carlos Fagundo)
- Boeing Group (Lead, Erik Berg)
- BAE & General Dynamics Group (Lead, Patricia Gonzalez)
- Raytheon Group (Lead, Danielle Bemis)
- Northrop Grumman Group (Lead, Jim Dimmette)
- General Group (Lead, Jean Christian Brutus)

Business Practices: The EVMS Center defines execution of its EVMS DFARS mission via nine Business Practices (BP). All EVMS Center Business Practices require an annual re-assessment to ensure continued compliance with regulatory requirements, DCMA policy &/or DOD guidance issuances.

BP0 – Earned Value Management Systems

<https://www.dcma.mil/HQ/EVMS/>



- **ACWP: Actual Cost of Work Performed**
- **BAC: Budget At Completion**
- **BCWP: Budgeted Cost of Work Performed**
- **BCWS: Budgeted Cost of Work Scheduled**
- **CAP: Corrective Action Plan**
- **CAR: Corrective Action Request**
- **CCB: Configuration Control Board**
- **CR: Compliance Review**
- **DAU: Defense Acquisition University**
- **DECM: DCMA EVMS Compliance Metrics**
- **DFARS: Defense Federal Acquisition Regulation Supplement**
- **EAC: Estimate At Completion**
- **ESCP: EVMS Specialist Certification Program**
- **ECDP: EVMS Career Development Program**
- **EAC: Estimate At Completion**
- **ESCP: EVMS Specialist Certification Program**
- **EVAS: Earned Value Analytic System**
- **EVMS: Earned Value Management Systems**
- **GL: Guidelines**
- **IBR: Integrated Baseline Review**
- **IV: Initial Visit**
- **SD: System Description**
- **WSARA: Weapons Systems Acquisition Reform Act**