National Defense Industrial Association / Integrated Program Management Division Meeting

6-7 February 2019

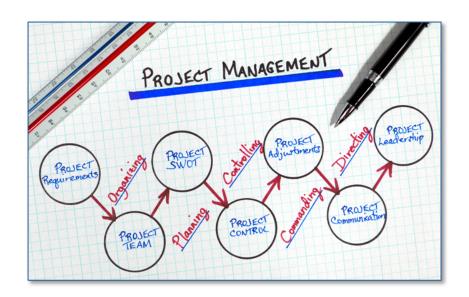
Ivan Bembers
NRO Earned Value Management Center of Excellence





Agenda

- Reforming the Guidelines
- Over Target Baseline / Schedule
- Agile and Program Management
- Re-focused Integrated Baseline Review (IBR)





Reforming the Guidelines – What's Driving the Need to Update

- Continuing industry consolidation acquisition of businesses without an EVMS asserted to be compliant with the Guidelines
- Evolving business and responsibilities of program control professionals
- Challenges associated with the integration of EVM and Agile philosophies/practices
- ISO 21508 "Earned value management in project and programme management" (2018-04)
- Effects of data driven surveillance on government/ industry engagement
- Ownership = Responsibility

White paper available

Does EVM continue to be an enabler of success?

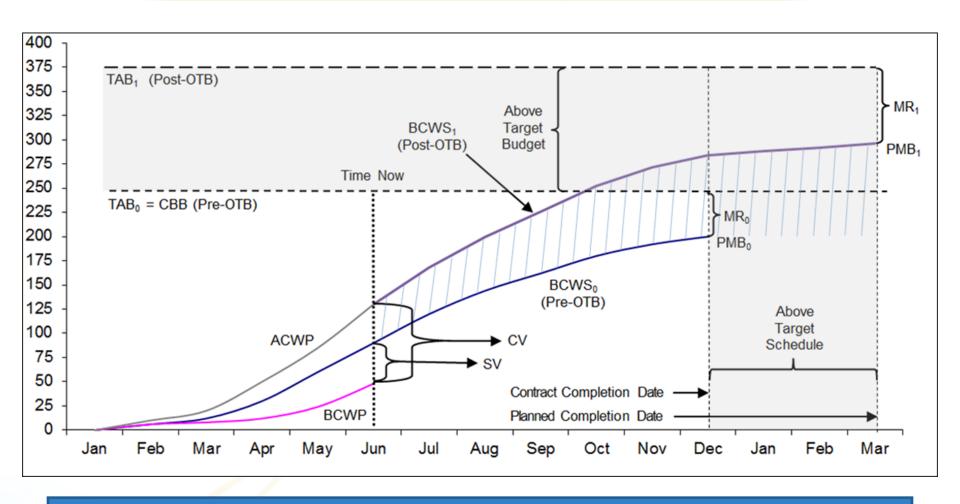


Over Target Baseline / Schedule

- NRO's Earned Value Management Center of Excellence (ECE) has established best practices
 - After contract award, the Contracting Officer, COTR, and the NRO EVM Focal Point communicate to ensure the contractor implements an effective and affordable EVMS that complies with the Guidelines and other EVMS contract requirements
 - The contractor notifies the Contracting Officer of any significant changes to the Performance Measurement Baseline prior to implementing the change
 - Prior to implementing an Over Target Baseline (OTB) and/or Over Target Schedule (OTS), the
 contractor submits to the Contracting Officer ground rules, assumptions, scope, impact, plans to
 adjust variances, potential reporting changes, documentation recommendations, and planned
 dates for implementation
 - The Contracting Officer approves the OTB/OTS prior to implementation
- Clarifying the Risk
 - Above Target Budget (ATB). The difference between the Total Allocated Budget (TAB) and the CBB caused by the implementation of an OTB.
 - Above Target Schedule (ATS). The difference between the new baseline dates established for performance measurement and the contractual dates caused by the implementation of an OTS.



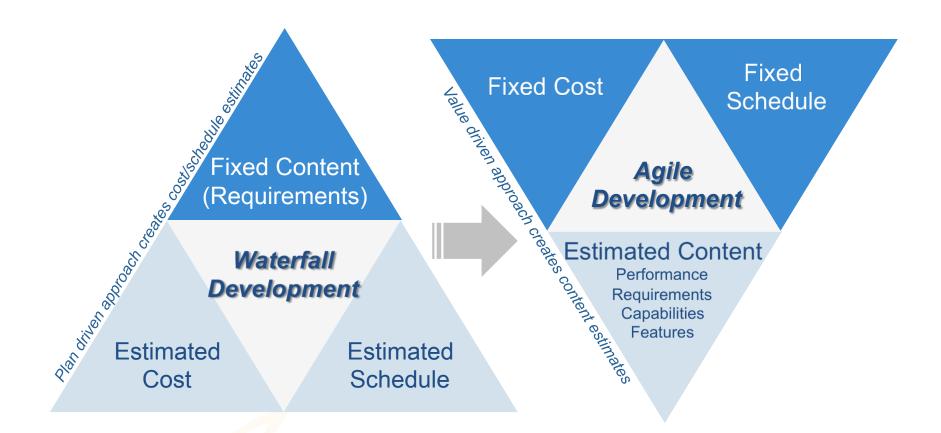
Above Target Budget/Above Target Schedule



Clarifying the Risk



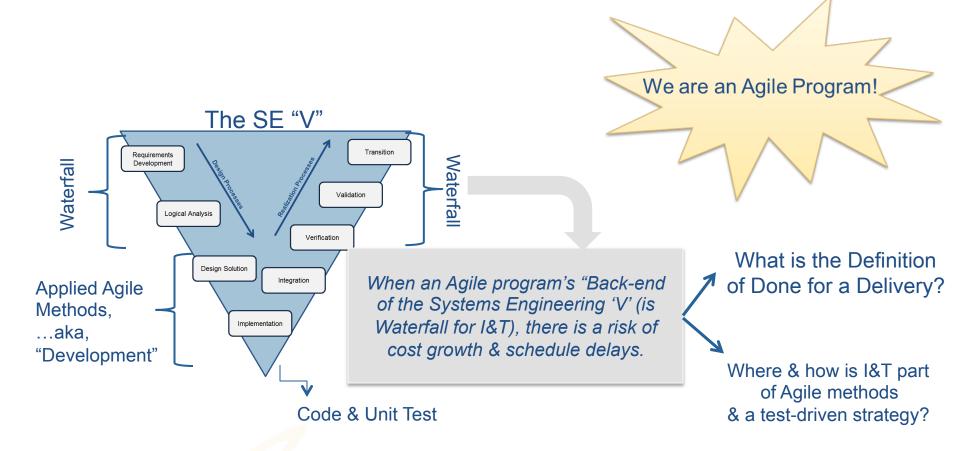
Agile and Program Management – The Iron Triangle



This is a typical description of the "Iron Triangle" that compares and contrasts Waterfall with Agile

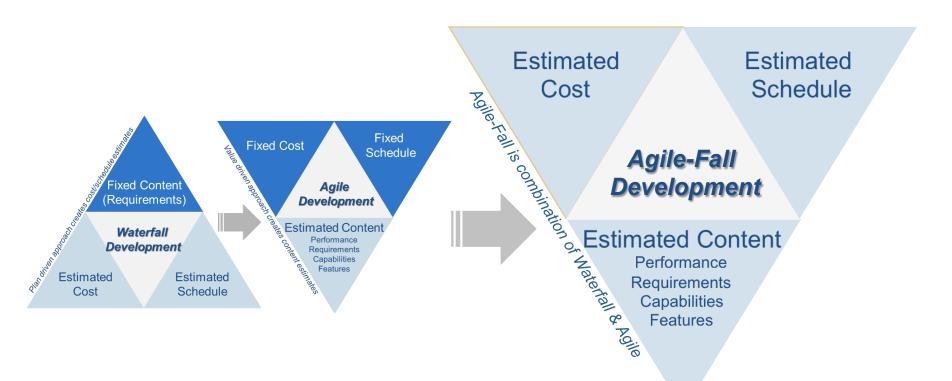


The "Agile-Fall" Challenge





The "Agile-Fall" Triangle



In a way, while a program may claim to be applying agile methods, Agile-Fall is a blend of both Waterfall and Agile. If not properly understood, it can actually be a blend of exactly opposite of what is intended or needed.



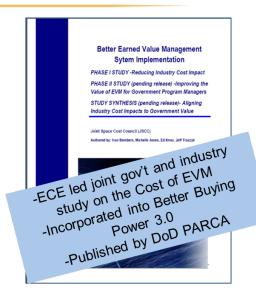
Refocused Integrated Baseline Review (IBR) Impetus for Change

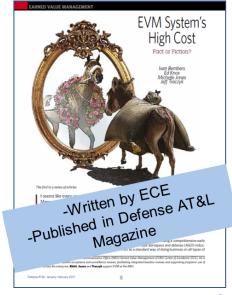
JSCC Better EVM Implementation Study:

- The Joint Space Cost Council Better EVM Implementation Study recommendations prompted the CAAG/ECE to refocus the IBR Process across the NRO
- After preliminary reviews, the CAAG/ECE came
 to the same conclusion of the JSCC study that
 recent IBRs were <u>process reviews</u> and <u>data</u>
 <u>integrity checks</u> rather than technically
 focused reviews to assess baseline
 achievability of cost, schedule and performance
 contract objectives

NRO Refocused IBR Pilots:

- The JSCC study and IBR pilot feedback revealed that NRO program managers already highly value the IBR
- The IBR pilot success proved to be an enterprise opportunity to improve advance warning of future program execution risk







NRO's Refocused IBR Process

- An <u>enabling</u> activity supporting the Director's "Executable Contracts Initiative"
- Responds to NRO's <u>industry-partner</u> feedback about the way NRO conducted IBRs
- Refocuses the IBR as a <u>technical</u> review of a contractor's plan to accomplish the authorized work
- Leverages <u>industry-accepted project</u> <u>management practices</u>

UNCLASSIFIED

NATIONAL RECONNAISSANCE OFFICE

14675 Lee Road Chantilly, VA 20151-1715

Office of the Director Announcement

Number 2017-11

22 February 2017 EXECUTABLE CONTRACTS INITIATIVES

To improve acquisition outcomes, we must ensure we are awarding executable contracts - contracts with attainable acquisition schedules and realistic prices. Achieving this requires the Office of Contracts and our entire Acquisition workforce to partner together and incorporate effective acquisition strategies from the beginning of every acquisition. Specifically, we need to:

 a. Invest in early acquisition planning to create tighter Statements of Work and to clearly define requirements that are fully consistent with available budget and schedule.

 b. Develop incentives that clearly reflect National Reconnaissance Office priorities.

c. Use all of the contracting tools available.

d. Conduct thorough market research to ensure industry has both the capacity and capability to perform.

e. Emphasize cost realism, not proposed cost.

 Conduct overall risk assessments that evaluate past performance, capabilities, cost, and schedule.

This represents a start toward executable contracts, but we will continue to look for ways to improve our processes and strategies. I look forward to discussing this further at the 6 March 2017 Program Manager's Conference, as well as in future Acquisition Strategy Councils, and Quarterly Program Reviews.





NRO's Refocused IBR Approach

The Review



The Outcome

- A Government program manager led activity assessing the contractor's plan to verify the <u>authorized work</u> with:
 - Adequately defined work scope
 - ☐ Relationship to technical baseline
 - Schedule realism
 - ☐ Sufficient budgets & resources
 - ☐ Quality built into Definition(s) of Done
 - Procurement integrated into plan
 - ☐ Test-driven results (Rework, DRWO, Acceptance Criteria)
 - Effective Earned Value Techniques
 - ☐ Risk-reduced and adjusted baseline plan

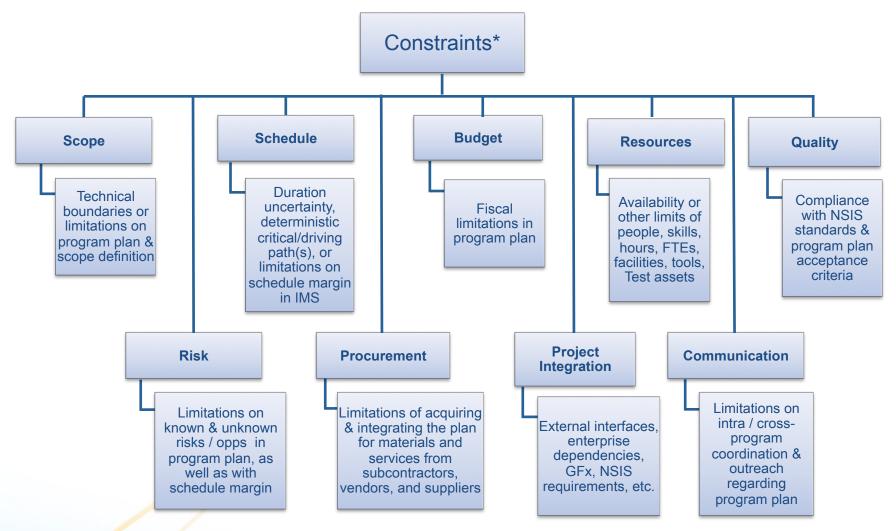
- A declaration...
 - ☐ The baseline is achievable
 - ☐ The baseline is not achievable
 - Baseline achievability cannot be determined

DNRO, "I don't know why any program would not apply the refocused IBR approach."

^{*} Caveats & rationale supplement the declaration



Industry-Accepted Project Management Constraints

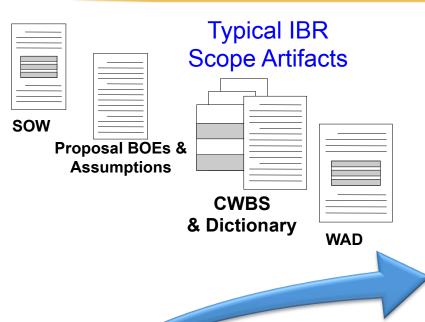


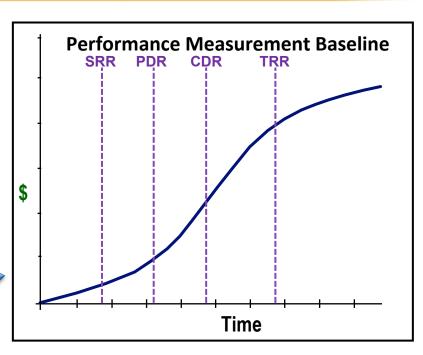
* <u>Constraints</u>: Limitations and restrictions on the baseline plan and future performance that may require or drive Government/contractor planning assumptions and execution challenges





Relationship of the Technical Baseline and the Performance Measurement Baseline





SYSTEM SPECIFICATION

CONCEPT OF OPERATIONS

Technical Baseline Artifacts

PRODUCT ROADMAP

BILL OF MATERIALS

VERIFICATION AND TEST PLAN

TERFACE CONTROL DOCUMENTS

The Technical Baseline is key to the IBR

NATIONAL RECONNAISSANCE OFFICE

SUPRA ET ULTRA





Back Up



Avoiding IBR Pitfalls

An IBR is not:

- Pass/fail review
- Process implementation review
- EVMS Surveillance review
- Monthly reviews (PMR, BMR)
- Design review
- Proposal evaluation and fact finding
- Approval of the PMB and MR

Focus is not on:

- Identifying findings
- Performing data traces
- *Interviewing* personnel
- Process demonstration
- Deriving a color-coded risk assessment
- Asking fact finding questions
- Identifying liens
- Taking ownership of the PMB, MR and data quality away from the contractor

We value the achievability assessment over focusing on management processes during the review.



IBR Benefits and Key Activities

Benefits

- Focus on early assessment
- Create PM/COTR ownership and accountability
- Ensure early warning
- Accelerate course corrections
- Address concerns about cost growth, schedule delays and unmet Mission Partner & Oversight expectations

Four Phases



Today's IBR is not a "check the box" review. The focus shifted from "Did the contractor finish planning?" to "Is the plan achievable?"



Refocused IBR Approach

Close

- Document Activities, Actions, and Results in MFR
- Issue follow-up actions and resolve

Conduct In-Plant Activities

- In-brief
- Discussions
- Declaration of Baseline Achievability
- Out-brief



CAAG/ECE* is a Key Resource throughout the Process

Plan

- Conduct CAAG/COTR meeting
- Establish the Government Team
- Develop IBR schedule

Prepare

- Prioritize Constraints/Hold Risk Perspectives Discussion
- Conduct IBR Training (Overview, Roles & Responsibilities, Mock CAM Discussions)
- Engage in Data Analytics
- Develop Discussion Questions

^{*} Earned Value Management Center of Excellence



Exemplar Constraint Description - Scope

· ·	** 31.6				
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	ontributes to a Declaration	Characteristics of an	7.1.		
	of Baseline Achievability	Achievable Baseline	Risks	Artifacts	To Prepare for the Review, Consider
of scenable plan assection authorized constant structure of we delivite the constant in relation relation relations.	e Review Team's evaluation scope for this constraint ables insight into baseline in artifacts. The team esses that scope is fully and impletely described for the horized work. This instraint provides the IBR in with the opportunity to ess the scope definition and decomposition of the intract work breakdown acture (CWBS), statement work (SOW), contract iverables (CDRLs), such as CWBS Dictionary, and ated contract requirements relation to the technical seline and the contractor's rk authorization documents.	 Completeness and Consistency of contract-level scope definitions with internal contractor baseline plan documents for the authorized work. This includes evaluating the relationship of the technical baseline with the contract requirements and baseline plan artifacts, such as the work authorization document(s) with the contract SOW, CWBS, CWBS Dictionary. Clarity and understanding of direction provided in scope statements prepared by the contractor PM and received by the CAM Contractor planning ground rules and assumptions are understood and addressed in the baseline plan scope definition. Awareness and explanations of how BOEs/TDs evolved into current authorized work scope statements. 	 Inadequately bounded work scope definitions in CWBS Dictionary and/ or work authorization documents Authorized scope has not been allocated to a WBS element Omission of authorized work scope in the CWBS Dictionary, control accounts, summary level planning packages Unauthorized scope has been planned, Scope Change is adequately modified and reflected as a result of authorized changes to the contract (for contract actions) and control accounts (for in-scope changes to the contract that are out of scope to the control account) 	 Conformed contract (latest modification) Contract SOW Contract WBS & Index Contract WBS Dictionary Work authorization document(s) Technical baseline and associated artifacts PM, IPT Lead, and CAM planning assumptions Proposal basis of estimates and task descriptions CDRLs 	 The CWBS and CWBS Dictionary consistent with the SOW The Contract Work Breakdown Structure (CWBS) and CWBS Dictionary are consistent with the SOW The CWBS is product-oriented and is related to the NRO's Standard WBS (SWBS) The CWBS and dictionary represent all of the authorized work to be accomplished The CWBS and any contractor extensions fully reflect the authorized work. The technical baseline is related to the authorized work scope in the Performance Measurement Baseline The control account work authorization document(s) fully and adequately describe the authorized work The control account work authorization(s) scope statement(s) embody a bounded definition of done. The baseline plan adequately contains authorized work scope and is measureable, testable, traceable, complete, and acceptable to stakeholders



Three Key Parameters for evaluating the Baseline Plan

Contractor baseline plan assumptions

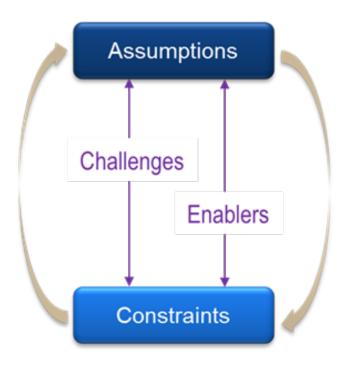
 A factor in the planning process that is considered to be true, real, or certain, without proof or demonstration

2. Project management constraints

 A limiting factor that affects the execution of a project, program, portfolio, or process

3. Challenges and enablers

- Challenges
 - Factors, conditions or scenarios that may reduce the likelihood of achievability
- Enablers
 - Ideas, investments, initiatives that may increase the likelihood of achievability



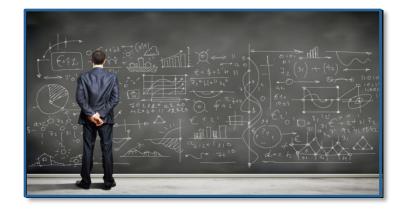


Making It Happen...ECE¹ IBR Leadership & Engagement

- Policy and guidance
- Tools
- Analysis
- Training and workshops
 - Formal
 - One-on-one



- Outreach and planning
- Leadership and engagement
- Improved collaboration with IBR stakeholders



Enabling Success



Scope Worksheet

- Initiates IBR planning
- Enables the
 Government team to
 think through IBR
 objectives, focus areas
 and review priorities
- Used to gain consensus and communicate agreed-to focus areas

- Contract Data
- □ Trigger Event
- ☐ CLINs
- □ Contract Value Subject to Review
- SOW Focus Areas

- Known Risks/Opportunities
- Project Management Constraints
- Points-of-Contact
- □ Training
- □ Additional Information/Notes/ Comments

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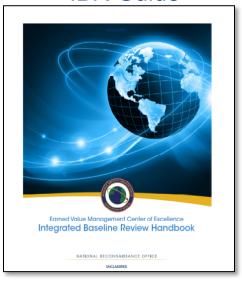
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It's a Project Charter for the IBR



IBR Tools

IBR Guide



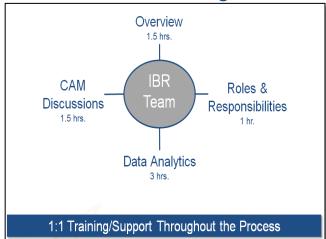
WBS/SOW/CDRL Worksheet

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1.1.3	SS Program Management	0				0				
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WBS/Activity Worksheet

				,	
				10618	10619
				MS	MS
MS Count	Name	Information	Tab	Factory System Integration Start	Factory Test Dry Runs Start
	Program X		TAB 1		
0	1.1.1	17 TOTAL EVENTS	TAB 2	0	0
0	1.1.4	8 TOTAL EVENTS	TAB 3	0	0
0	1.1.9	3 TOTAL EVENTS	TAB 4	0	0
32	8.2.2	20 TOTAL EVENTS	TAB 5	1	4
0	8.5.4	19 TOTAL EVENTS	TAB 6	0	0
	Unique ID	Name	Type	BL Fin	Finish
0	10618	Factory System Integration Start	MS	10/2/2018	10/2/2018
3	<u>10619</u>	Factory Test Dry Runs Start	MS	1/2/2019	1/2/2019
2	<u>10621</u>	Factory Acceptance Test (FAT) Start	MS	3/28/2019	3/28/2019
2	<u>11239</u>	PSR Meeting - Conducted	MS	6/28/2019	6/28/2019
0	14193	HW PSR	MS	3/11/2019	3/11/2019

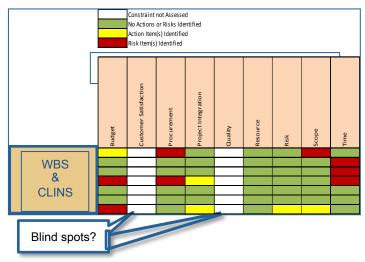
IBR Training



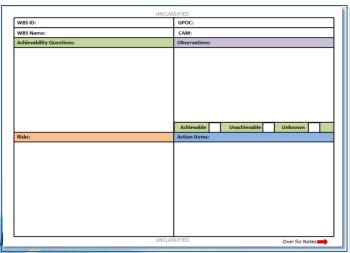


IBR Tools, Cont'd

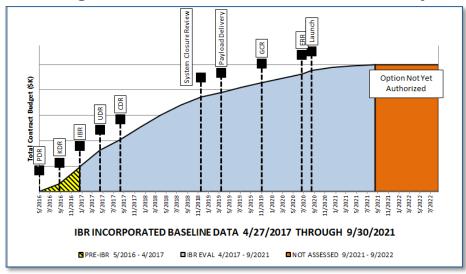
Constraint Matrix



CAM Discussion Quad



Budget Profile with Milestone Overlay



Question Worksheet

		Artifact (IMS,	Constraint								
		WBS	(Scope,						Status		
		Dictionary,	Time,		GPOC	Contractor	Government Comment /		(Open/	Closure	
ID#	CA/WBS	CAP, etc)	Budget, etc.)	Author	Approved	POC	Question	Contractor Response	Closed)	Date	Closure Comments
001	1.02.03.03.08	RAM, CAP, WAD	Budget	Jones	Yes - Smith	White	Hours/Dollars do not match between	Thank you for identifying this	Closed	1/2/2018	Received updated RAM and
ı							RAM and CAP/WAD for 1.2. Which is	problem. The CAP/WAD are correct.			verified hours/dollars now
ı							correct?	We are in the process of correcting			match between all 3
								the RAM.			documents.
l											
Г											
Г											
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Next Steps

- Continue enabling NRO use of refocused IBR approach
- Inform/educate our industry partners
- Balance "technical focus" with PM/COTR concerns about Contractors' EVMS health and CAM competencies
- Ensure currency of our IBR policies and products
- Scale and right-size IBR readiness and preparations with effective outcomes
- Continue to conduct IBR Retrospectives
- Leverage the power of Next generation IPM analysis tools, such as Empower™

Continuous Process Improvement