



Australian Government
Department of Defence
Associate Secretary

An update on the significant developments in integrated project controls, EVM and project reporting within and external to CASG

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Defending Australia and its National Interests
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The Intent of EVM Application

“The key reasons CASG applies EVM to applicable contracts is that it:

- promotes better project management practice in industry and
- ensures contract performance data is shared between contractor and Commonwealth staff so that emerging problems can be identified and acted upon as early as possible.”

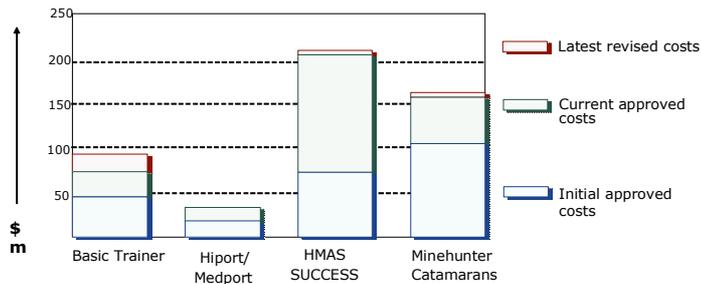
Quote from CASG Policy (PM) 003 EVM Application to CASG Contracts.

- In order to achieve these outcomes, the Commonwealth must undertake a series of reviews and then use the outputs of the EVMS in concert with other Project Controls information.



Origin of EVM in Aust DoD

- Report to the Australian Parliament - JPAC Report 243
 - Review of 16 projects originating between 1979-83
 - 11 of 16 projects exhibited cost, schedule or technical shortfalls
 - Four of the projects exhibited significant shortfalls:



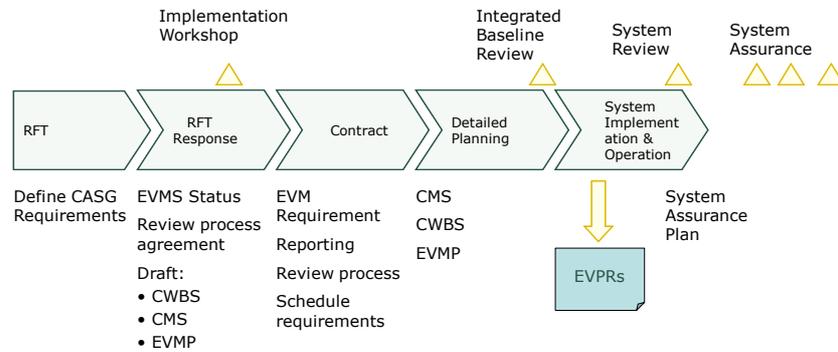
- Reaffirmed by First Principles Review of Defence in 2015

The Earned Value principle

- Earned Value is defined as the value of completed work expressed in terms of the budget assigned to the work
- At its most basic it is simply the generation of a single additional piece of data for analysis against time-phased budget and actual costs
- However, generation of valid data requires an underpinning system – Earned Value Management System



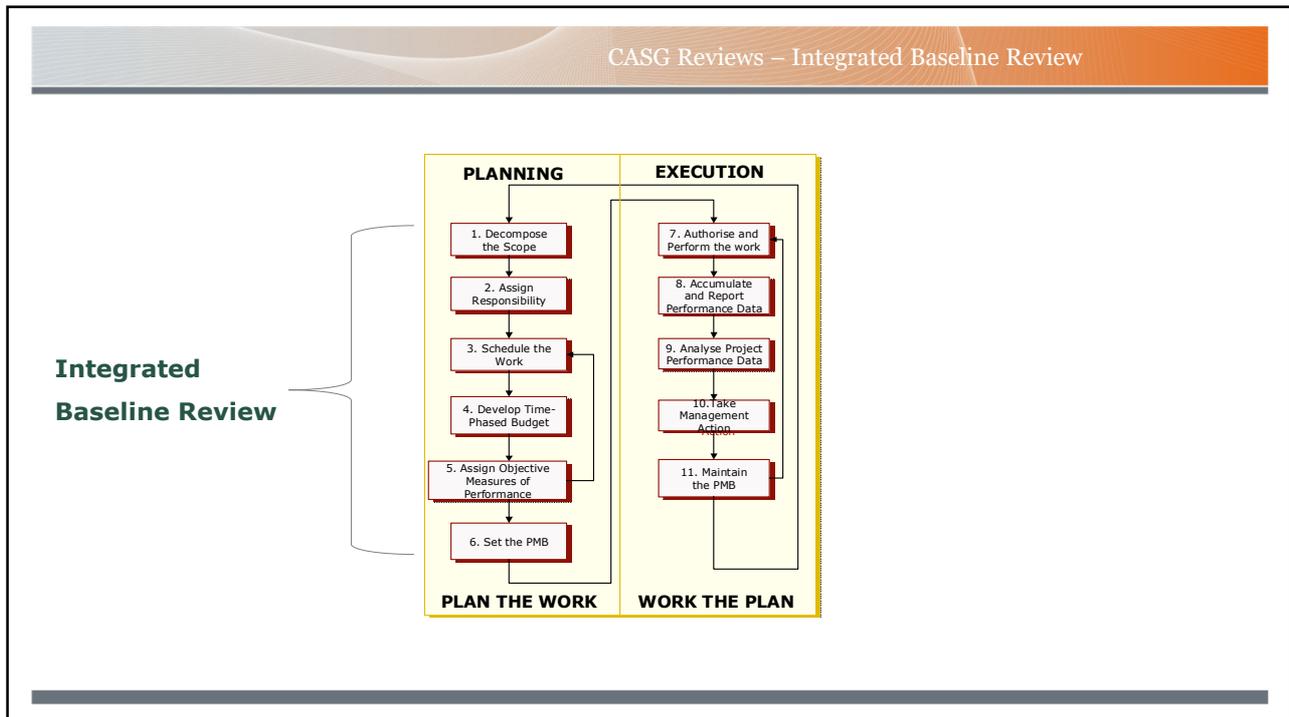
EVM Implementation Overview



EVM Standards

- CASG applies the Australian EVM Standard
 - AS4817:2019
 - It is a modified adoption of ISO 21508:2018, which itself uses the AS4817 process model
 - Differs via SHALL vs SHOULD statements
- Defence Supplement brings Aust DoD broadly in line with US DoD EVM requirements, which many of our global suppliers are familiar with (EIA 748C)

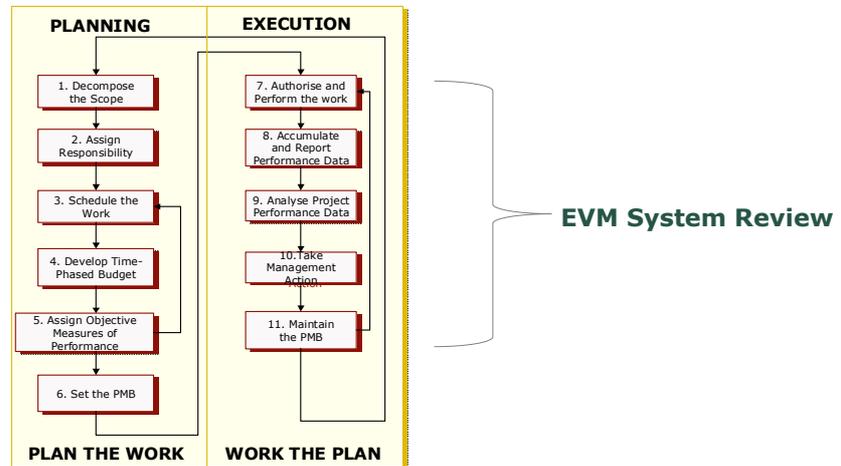




Integrated Baseline Review

- IBR objective is to enable an assessment of and subsequent approval of the Performance Measurement Baseline.
- Integral part of an EVM implementation on a contract. Provides for the review of the contractor's execution plans.
- Focus on the assignment, definition, scheduling and resourcing of work, thus establishing early visibility into the acceptability of the contractor's planning for the contract.
- Also reviews the methods and metrics used to measure contract performance or progress.
- The focus is upon reviewing the technical merits and resourcing of the plan and to assess the **risk associated with the baseline**.
- Data focused review.

CASG Reviews - EVM System Review



EVM System Review

- EVMS Review assesses compliance with the requirements of AS4817, the Defence Supplement and ASDEFCON clauses.
- Assessment of the contractor's practical implementation of EVMS for compliance with the contractual requirements and that its EVMS is capable of generating accurate and reliable data.
- Review can be tailored based on:
 - contract characteristics,
 - contractor's prior EVM experience
 - past performance of the contractor in applying EVM to other Defence contracts or other contracts where the equivalent EVM requirements have been applied.
- EVMS Reviews focus on process and process adherence.



IBR and EVM System Review Handbook

- Previously, IBR and EVMS Review guidance was contained in separate documents:
 - DMH (PROJ) 11-0-002 IBR Handbook
 - DMH (PROJ) 11-0-005 EVMS Review Handbook
- CASG Handbook (PM) 010 IBR and EVMS Review Handbook released May 2021.
 - Removed duplication across both reviews
 - Reduced burden on CASG Project Office and Industry staff



Earned Value Performance Reports (EVPR)

- EVPRs are the formal communication mechanism for EV data
- CDRL Item MGT-320
- Content requirements are outlined in Data Item Description (DID-PM-MGT-EVPR)
- There are five formats to the EVPR:
 - Format 1 – WBS;
 - Format 2 – Functional;
 - Format 3 – Baseline;
 - Format 4 – Manpower; and
 - Format 5 – Problem Analysis.



EVPR Format 1

Cost Performance Report - Work Breakdown Structure														Project Name/No.		Report Period			
ABC SYSTEMS Australia														Contract Type/No.		25/03/2009		26/04/2009	
DSD Adelaide														C439933		ASTIS MCE AWD/LH			
Quantity		Negotiated Cost		Est. Cost Authorized Unpriced Work		Tgt. Profit/ Fee %		Tgt. Price		Est. Price		Share Ratio		Contract Ceiling		Estimated Contract Ceiling			
1		47,008,313		0		9,801,411		20.85		56,809,724		0		0		0			
Current Period														Cumulative to Date				At Completion	
Cost Account		Budgeted Cost		Actual Cost		Variance		Budgeted Cost		Actual Cost		Variance		Latest Revised Estimate		Variance			
Item		Work Scheduled		Work Performed		Schedule		Cost		Work Scheduled		Work Performed		Schedule		Cost			
(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)			
		(10)		(11)		(12)		(13)		(14)		(15)		(16)		(17)			
13	2.01.01 ABC JOINT A A Terminal Installation Design Data	1,937	2,639	294	702	2,345	0	6,182	2,639	294	-5,543	2,345	345,742	345,742	0				
14	2.01.02.01 ABC JOINT A C ASTRIUM Prime Equipment	0	0	0	0	0	0	6,516,835	6,516,835	6,516,830	0	5	33,491,890	33,491,895	5				
15	2.01.02.02 ABC JOINT A C EMS Prime Equipment	0	0	0	0	0	0	95,000	95,000	95,000	0	0	741,340	741,340	0				
16	2.01.03.02 ABC JOINT A A Terminal Prime Mission Equipment	9,962	0	0	-9,962	0	9,962	0	0	-9,962	0	1,221,399	1,221,399	0					
17	2.01.03.03 ABC JOINT A A Terminal Testing	0	0	0	0	0	0	0	0	0	0	0	85,738	85,738	0				
18	2.02.01 ABC JOINT A B Systems Engineering Management	19,588	19,588	46,897	0	-27,309	87,617	87,617	88,803	0	-1,186	709,666	710,142	-476					
19	2.02.02 ABC JOINT A B System Req's Analysis & Design	4,304	0	0	-4,304	0	21,092	1,195	13,880	-19,896	-12,686	203,841	204,291	-450					
20	2.02.03 ABC JOINT A B Hardware Engineering	57,431	2,490	-1,242	-54,941	3,732	64,373	7,228	4,502	-57,145	2,727	2,747,646	2,747,674	-28					
21	2.02.04 ABC JOINT A B Verification & Validation	0	0	0	0	0	5,732	5,732	5,970	0	-237	22,009	22,246	-237					
22	2.03.01 ABC JOINT A D ILS Management	13,412	15,741	14,131	2,329	1,610	66,375	65,483	43,975	-992	21,508	350,614	350,614	0					
23	2.03.02 ABC JOINT A D Logistics Support Analysis	0	2,708	2,530	2,708	178	0	2,708	2,708	178	92,552	91,915	637						
24	2.03.03 ABC JOINT A D Logistics Engineering	0	0	0	0	0	0	0	0	0	83,766	83,766	0						
25	2.03.04 ABC JOINT A D Training	5,007	9,514	4,444	4,507	5,070	24,382	18,706	5,037	-5,676	13,669	27,232	11,161	16,071					
26	2.03.05 ABC JOINT A D Data	0	0	0	0	0	0	0	0	0	0	318,751	318,751	0					
27	2.03.06 ABC JOINT A D Configuration Management	4,015	4,015	1,486	0	2,529	20,127	20,127	11,222	0	8,905	134,030	134,054	-25					
28	2.04.01 ABC JOINT A E Project Management	68,137	66,467	32,093	-1,670	34,374	267,450	289,080	220,189	629	67,891	4,066,102	4,064,732	1,370					
29	2.04.02 ABC JOINT A E Monitoring & Control	0	0	-3,526	0	3,526	10,896	10,896	9,252	0	1,634	128,590	128,236	355					
30	2.04.05 ABC JOINT A C Sub-Contract Management	15,431	0	24,613	-15,431	-24,613	201,556	75,233	47,892	-126,323	27,341	708,821	708,821	0					
31	2 FINANCE ABC JOINT A E Finance	0	0	0	0	0	0	0	0	0	0	0	0	0					
32	Gen. and Admin.	0	0	0	0	0	0	0	0	0	0	0	0	0					
33	Undist. Budget												0	0					
34	Sub Total	199,224	123,162	121,721	-76,062	1,441	7,419,569	7,197,469	7,065,376	-222,100	132,093	45,479,728	45,462,556	17,223					
35	Management Resrv.											1,528,695	1,545,808	-17,223					
36	Total	199,224	123,162	121,721	-76,062	1,441	7,419,569	7,197,469	7,065,376	-222,100	132,093	47,008,313	47,008,313	0					

Project Performance Reviews

- A Project Performance Review is a formalised conversation between Project Teams and their PMs, SPO-Directors and Branch Heads.
- Aims to ensure a shared understanding of project status, early notice of issues, paths forward, actions, key decisions required/made and any assistance required from outside the project.
- Enables leaders to make sound business decisions and maximise the likelihood of project success.
- Process of reviewing performance against baselines. **Conversations driven by risk** and its mitigation.
- CASG EVM policy states that **EVPR information is an input to the project risk management process.**



Project Performance Review Information Platform

- Project Performance Review Information Platform (PPRIP) is a web-based platform, which drives Project Performance Review conversations around risks and issues, to support the decision making process and improve transparency of performance.
- Combination of automatic feeds of standardised data from existing corporate systems and manual entry.
- Supports the standardisation of project management and control data to improve project performance.

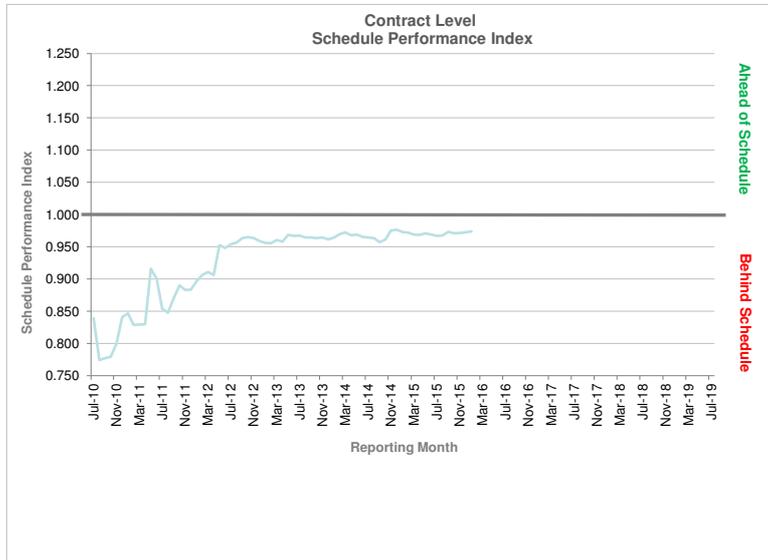


PPRIP Project Perspectives

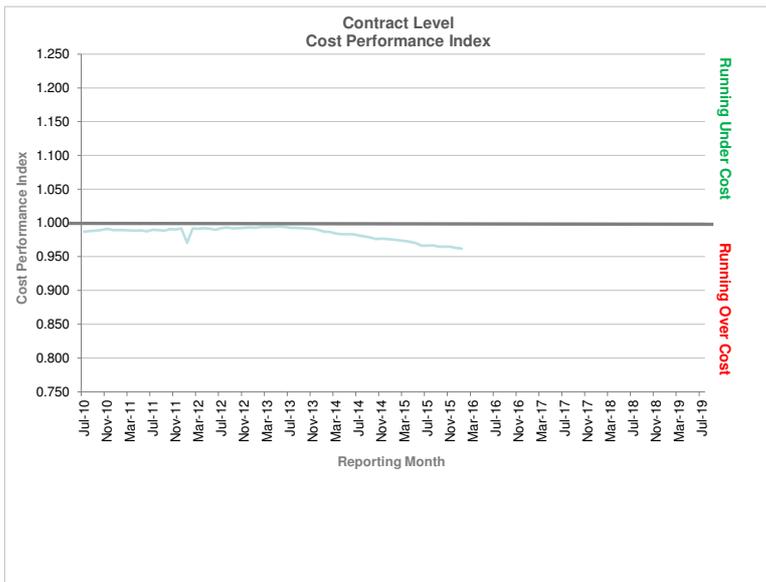
- Project Summary
- Project Attributes
- Risk
- Schedule Milestone Performance
- Contractor EVM Data (formerly Performance Curves)
- Cost
- Fundamental Inputs to Capability
- Interdependencies
- Scope
- Workforce Plan
- Commercial
- Other Areas of Concern



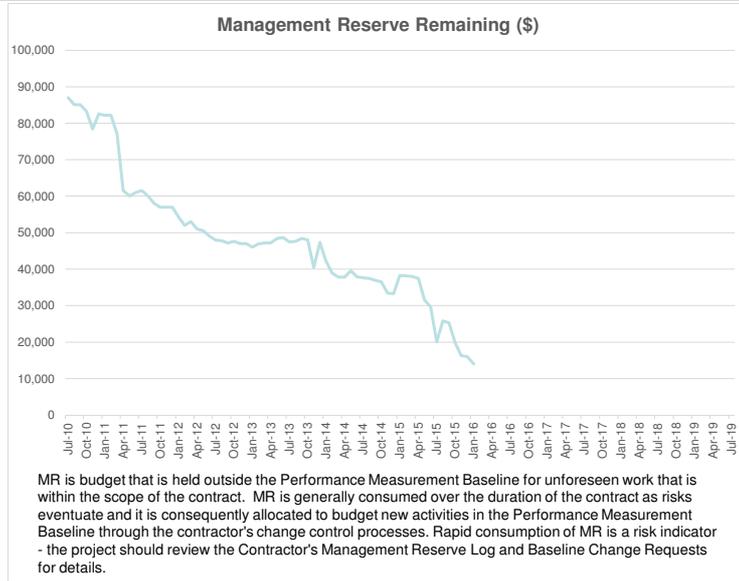
PPRIP EVM Charts - SPI



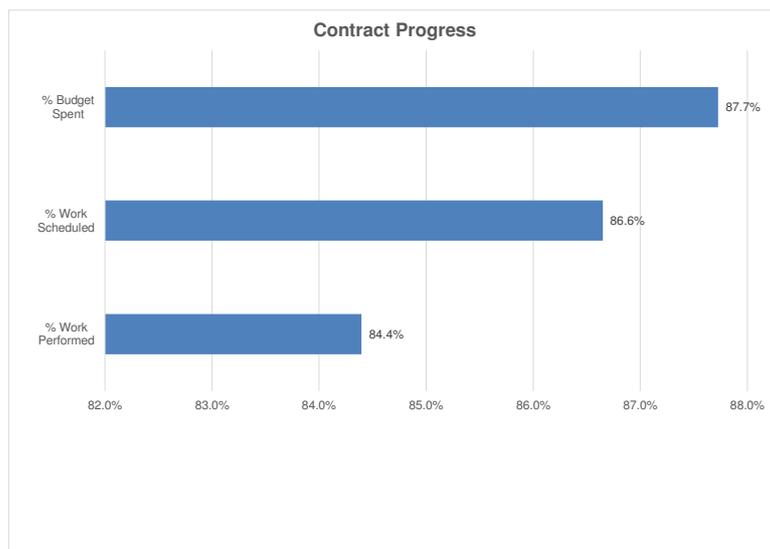
PPRIP EVM Charts - CPI



PPRS EVM Charts – Management Reserve



PPRIP EVM Charts – Contract Progress



← PPRES90103 PPRIP Training Project

Project Record DD-MM-YYYY View Current

Project Summary

Project Details

PROJECT STAGE	Post-Gate 2	CURRENT APPROVED BUDGET LESS CONTINGENCY	\$471,629,110
COMPLEXITY RATING	ACAT III	PROJECT MANAGER	Clements, Ronald MR
PROJECT CLASSIFICATION	DSE		

Project Review Sign Off

Review Status

PM PD SPO-D BH

Status

R

Current

Project Narrative View more

Capability, Schedule & Cost
 Capability will deliver the enhanced weapon system. Schedule: Project is on track to deliver the capability including improvements by final operating ... Edit

Reporting Period Narrative
 During the Month: Planning was conducted for rework in Northern Queensland. Planning is being conducted to move the roll out to October 2020 ... Edit

Help Needed
 Although assistance has commenced, continued support is needed to see this through to completion. Edit

Action Items Edit

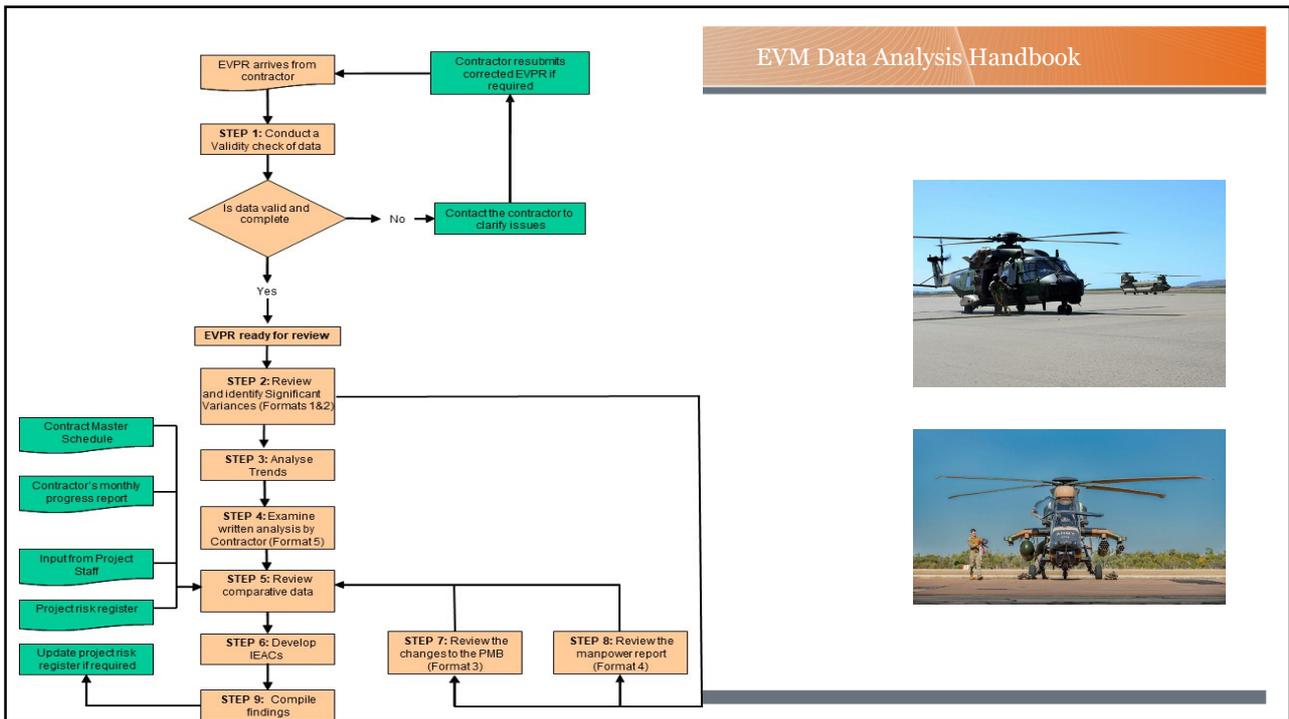
Action Owner	Due	Title	Last Updated
Jemison, Ronald MR	05-Dec-20	Black-Out Drive	05-Nov-2019
Jemison, Ronald MR	05-Dec-20	Optical site specif	30-Jul-2020

Project Perspectives	Current Status 11-Mar-2020	Previous Status 15-Sep-2019	PM Commentary
Risk			
Extreme High Current	2	R	The Project office conducted a review of Risks/Issues in Sept 19. The risks with a residual score of high or greater are included in Read More (+)
Extreme High Residual	2		
Schedule Milestone Performance			The Project is on schedule to deliver FOC by the milestone date including the elements of enhancement. Defence is working on the pr- Read More (+)
MAA MS Fast Late	3 ↑	R	
Max MAA MS Days Late	614 ↑		
Progress Performance Curves			Project cost variance from the current baseline represents significant project savings that will be reinvested in the program over t- Read More (+)
Baseline Plan	87.73%	A	
Cost			The Project status of Red is primarily due to a 10% reduction in actual costs. The project will complete considerably below the appr- Read More (+)
CF - CB	-\$15,892,280	A	
YTD Var	\$3,407,802	R	
YE Var	-\$10,355,425		
Fundamental Inputs to Capability (FIC)			It has come to my attention that 10 AFS will not be available when required. The probability is one (1). We will need at a minimum o- Read More (+)
Number FIC Concerns	5	A	

EVM Data Analysis Handbook



- CASG Handbook (PM) 007 EVM Data Analysis Handbook released May 2021.
 - Comprehensive update of EV Data Analysis Guide
 - Guidance on Management Oversight of Projects Using EVM
 - EVM use in Project Performance Reviews
 - Earned Schedule
 - Case Studies
 - EVM Snapshot Calculator



International EVM Standard




- ISO EVM Standard 21508:2018 provides a global standard for EVM
- ISO EVM Implementation Guide is intended to:
 - Promote global adoption of EVM
 - Promote global use of ISO EVM Standard
- ISO EVM Standard
 - Represents the global consensus on current EVM best practice (**what to do**)
 - Which will flow into the Implementation Guide (**how to do it**)

- **ISO EVM Implementation Guide**

- Currently under development
- Ongoing COVID-19 impact (completion Sep 2022 → May 2023)
- CASG Represented in Core Team that is developing content
- Contains sections on **IBRs, EVMS Reviews and Data Analysis**
- Opportunities for advances to practice
 - ISO documents are developed by groups of experts from all over the world, that are part of technical committees.
 - Experts negotiate all aspects of the standard, including its scope, key definitions and content



Questions?

