



progress with confidence

# **EVM – History, Perceptions, Benefits AS 4817-2019 Implications**

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**SCOPE WORKS**  
ACHIEVING PROJECT GOALS



## Agenda

- » What is EVM?
- » History and objectives of EVM (AUS centric)
  - Ten Benefits of EVMS
- » Perceptions of EVM
  - The biggest barrier to EVM?
- » AS4817-2019 Overview
- » Close including Q&A
- » Backup
  - Online location AS4817-2019

# What is EVM (Poorly Understood)

## » 1. Project Management Methodology

- Pre-dates PMI (1969)
- Cost Schedule Control System Criteria (1967)

## » AS4817-2003, 2006 and 2019 process model of EVPM depicted

- Adopted by ISO EVM Standard 21508:2018

## » The language of “Control Accounts and Work Packages”

- Is the language of EVPM
- EVPM embedded into the CASG business model



### 5.1 General

The earned value management process steps are shown in Figure 1.

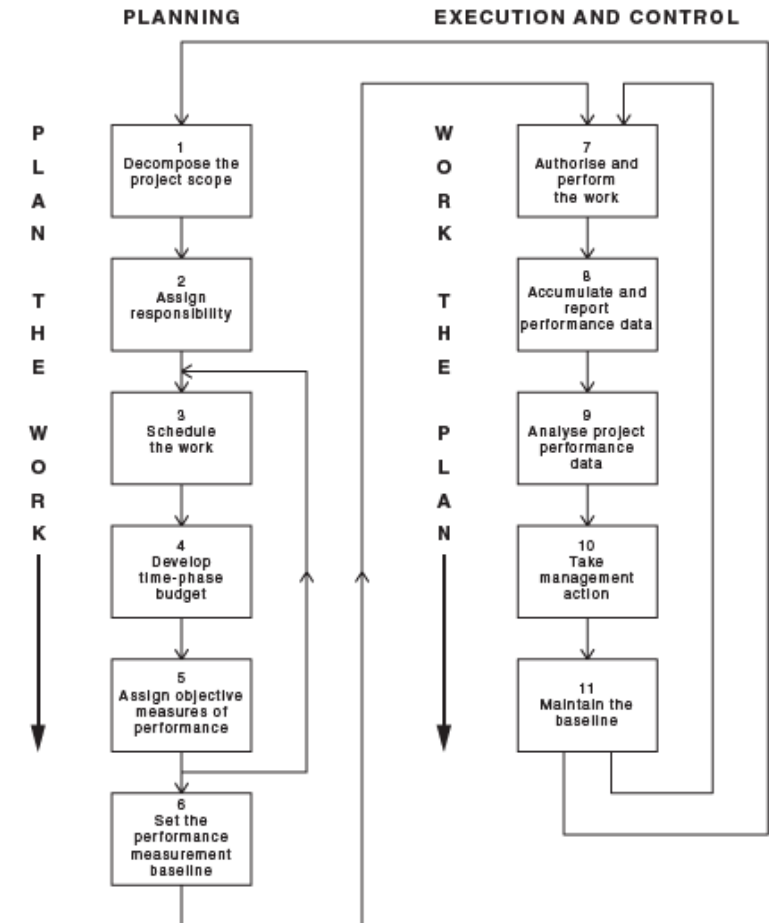
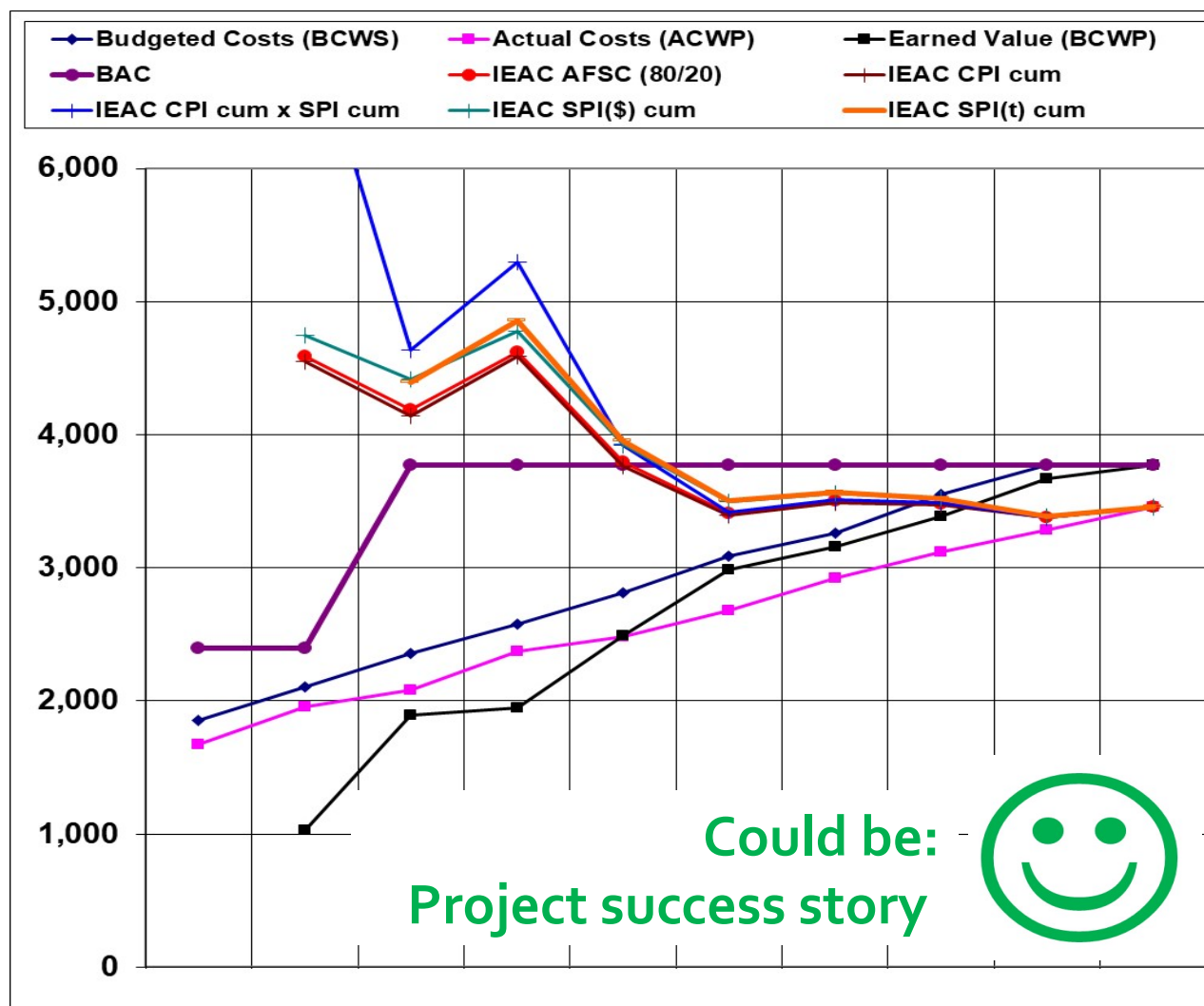


Figure 1 — Earned value management process steps

The earned value management process steps shall consist of the steps described in Clause 5.2 to Clause 5.12.

## What is EVM (Poorly Understood)



# (AUS centric Brief) History and Objectives of EVM

**1967:** USAF published Cost/Schedule Control System Criteria, US DoD Instruction 7000.2

**1989:** Adoption by Australian DoD C/SCSC and CSSR ("EVM lite")

**1998:** ANSI EIA Standard 748-A (USA) (32) "criteria based" EVM

**2003:** AS4817-2003 (AUS)

**2005:** PMI Practice Standard for EVM 1<sup>st</sup> edition

**2006:** AS4817-2006 (AUS)  
11 step "process model" of EVM  
Developed in response to perceived overheads of USA "criteria" based EVM

**2012:** PMI Practice Standard for EVM 2<sup>nd</sup> edition  
Complete rewrite from 1<sup>st</sup> edition  
**Included Earned Schedule (Lipke: 2003)**

**2018:** ISO EVM Standard (21508:2018)  
Global EVM standard (informative)  
**Adopted AUS 11 step process model of EVM**  
Included Earned Schedule (Lipke: 2003)

**2019:** AS4817-2019 Modified adoption of 21508:2018  
Approved, published August 2019 2019  
**Reinstated AS4817-2006 normative req'ts**

**2019:** ISO EVM Implementation Guide project  
Global EVM Implementation Guide  
Kick-off teleconference 28 Aug 19

**2019:** Earned Value gaining popularity across range Industries, Countries by providing "objective progress" rather than costs over budget or time planned

**2020+:** Earned Value integrated and used with Agile and Waterfall Project Management Methodologies



# Ten Benefits of Earned Value and Earned Value Management Systems t | b | h

1. Single management control system that provides critical and reliable data using one Baseline
2. Integrates work, schedule, and cost using a work breakdown structure & other project views
3. EVM and Scheduling metrics proven to provide early warning signs of program problems – weekly EVM
4. EVM and Scheduling metrics often validate Technical Performance Measures (TPM) & Agile accuracy
5. Schedule performance index provides an early warning signal in first 15% of Program
6. To Complete Performance Index (TCPI) and Cumulative CPI strong predictors of the accuracy of Project EAC's and Project completion Cost – critical for Governance nowadays
7. EVM useful for comparative analysis, risk management, lessons learned at similar phases of programs
8. Management by exception principle using tolerance stoplight charts can reduce information overload
9. Many Companies, Projects already running main “principles” of an EVMS – exploit that advantage with modern software and reporting, know how to scale the EVMS
10. Earned Value has developed a large body of public domain knowledge and Government case studies

The S. Earned Value, Ph.D. Acquisition Quarterly Fall 1998

## Competing Perceptions of EVM



- A valuable methodology
- Modest cost and effort
- Provides useful project performance metrics
- Improves PM decision making



- Time consuming and costly
- A reporting overhead
- Doesn't provide useful information for managing a project



- The greatest methodology and toolset "since sliced bread"
- Does everything for you on a project except make the morning coffee
- "The EVM Religion"

The biggest barrier to EVM?

Or maybe?



A Few Good Men, Movie (1992)



## How might AS4817-2019 affect the practice of EVM [in AUS]?

- » The standard EVM answer: “it all depends”
- » **One possibility: NO CHANGE**
  - ISO adopted the AUS 11 step process model of EVM
  - The normative requirements in AS4817-2006 reinstated unchanged into AS 4817-2019
    - Important for obtaining Defence agreement for modified adoption of ISO EVM Standard
- » It might (possibly, maybe, hopefully ...) make EVM a more attractive option for adoption
  - Discussion on benefits of EVM
- » Another possibility: **Opportunity(s) in the guidance for advances to practice**
  - ISO EVM Standard guidance reflects the global consensus on EVM best practice
  - **Treats Earned Schedule**

## The importance of schedule

### » Dr. Steve Gumley, [then] CEO of [then] DMO

"We need to maintain our attention on schedule delivery. Data tells us that since July 2003, real cost increase in projects accounted for less than 3 percent of the total cost growth. ...Therefore, our problem is not cost, it is SCHEDULE."

*DMO Bulletin, July 2006, Issue 61, page 3*

### » LTGEN Hans "Whitey" Driessnack USAF

"Engineering problems will first manifest themselves in a schedule slip someplace. Generally, as I have learned since then, if you have a technical problem someplace, or some kind of a problem, it will manifest itself first as a schedule slip. Then, it will eventually become a cost problem. If you wait to see the cost problem, something has already happened over which you have long since lost control. I always believed in the old adage, 'Time is money'; but if you could control the schedule, you could in fact control the cost ultimately in what was going on."

*GAO Expert Meeting Minutes, September 29, 2015, page 9*

### » ISO 21508:2018, AS4817-2019 plus in development ISO EVM Implementation Guide

- Offer opportunities for [much needed] advances to practice
- The Paradigm shift would be massive due to the “cost-centric” legacy of EVM
  - *Earned Schedule value proposition: the primary focus of EVM over time*

### » EVM is here to stay

- The ten benefits of EVMS as true today as when Christensen’s paper published (1998)
- Earned Value and Scheduling run as a best practice in many successful PM companies
- Earned Value focus on “earned” work/validate with Agile and Waterfall methodologies
- TCPI and CPI strong predictors of the accuracy of Project EAC’s and profitability - Governance
- Many Companies and Projects already running main “principles” of an EVMS – exploit that advantage with modern software and automated reporting, know how to scale the EVMS
- Conduct an independent Earned Value and Scheduling best practice review on your projects


### » Questions


## Backup

» Online location of AS4817:2019

[https://infostore.saiglobal.com/en-au/Standards/AS-4817-2019-121505\\_SAIG\\_AS\\_AS\\_2761048/](https://infostore.saiglobal.com/en-au/Standards/AS-4817-2019-121505_SAIG_AS_AS_2761048/)



 **AS 4817:2019**  
Earned value management in project and programme management (ISO 21508:2018, MOD)  
**Standards Australia**  
[Preview](#)

  
Current