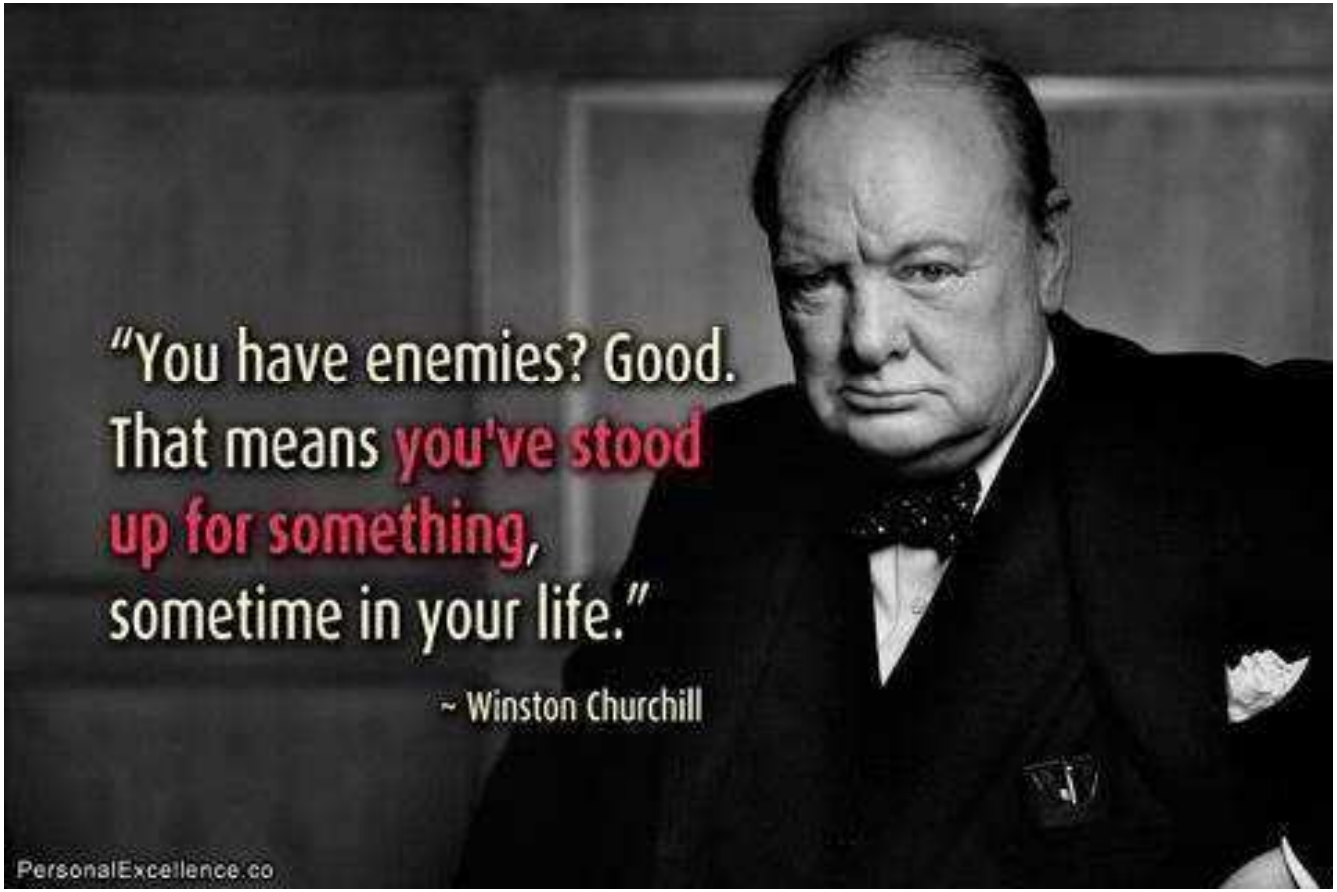
The Increased Importance of Project Governance and Controls in Lean Times

Kym Henderson

7th May 2014

An Opening Thought …



More Food for Thought

- **Project success can be an elusive concept**

- Was the Sydney Opera House a successful project?
  - Inadvertently created a national icon
  - **Cost over run in the order of 1,500%**
- Project success
  - Definitely more than achieving the triple constraints of cost, schedule and technical performance characteristics
- Attempting to emulate the Sydney Opera House "success" in lean times ….. **NOT RECOMMENDED**

What is Project Governance and Controls ?

- **Project controls** are the data gathering, management and analytical processes used to predict, understand and constructively influence the time and cost [and technical performance] outcomes of a project or program; through the communication of information in formats that assist effective management and decision making.

  Source: Mosaic Project Services White Paper

  http://www.mosaicprojects.com.au/PM-Knowledge_Index.html

- **PPP Governance** is the creation and implementation of the framework and principles by which the organization's PPP activities are directed, supported, monitored and controlled.

  PPP = Projects, Programs, Portfolios

So Why is Project Governance and Controls Important ?

Abbott Government set to cut thousands of Defence jobs

This story was published: 2 DAYS AGO | FEBRUARY 25, 2014 12:41PM

Sergeant Troy Charters from the 8/12 Regiment in Darwin at the Tarin Kowt Memorial in Afghanistan. *Source:* News Limited

The Abbott Government is set to cut thousands of jobs from the nation's weapons purchaser as it grapples with billions of dollars worth of cuts in the May federal budget.

http://www.news.com.au/national/abbott-government-set-to-cut-thousands-of-defence-jobs/story-fncynjr2-1226836405811

Defence = DMO
DMO = Defence
Materiel
Organisation
Materiel ~ Acquisition

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- DMO is the largest **project management** (and engineering services) organisation in Australia
  - 2013 -14 budget ~ $9.7 Billion
  - Over 180 major projects
  - Over 70 minor projects (up to $20M)

The Australian Bushmaster Protected Mobility Vehicle (PMV) “somewhere in Afghanistan”

Source: http://en.wikipedia.org/wiki/Bushmaster_Protected_Mobility_Vehicle

Australian Bushmaster PMV vs USA HUMVEE post IED strikes

Source: http://en.wikipedia.org/wiki/Bushmaster_Protected_Mobility_Vehicle

Source: http://artvoice.com/issues/v5n10/brave_hart

- So was the Bushmaster PMV acquisition project considered to be "**HIGHLY SUCCESSFUL**" ?
  - Has saved significant numbers of lives on operations
  - Export orders to Netherlands and United Kingdom

Bushmaster PMV Acquisition Program

- **Initial deliveries occurred in the late 1990s**
  - First deployed on operations in East Timor
- **Significant issues during development and production**
  - “it is worth noting that the design, development, and roll-out of the vehicle to the standard required was a costly and difficult process which resulted in time, budgetary, and project overruns”
    - Source: JG Papalitsas - 2010 www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA537081
- **Cancellation was even recommended**
  - “**From a position of near project cancellation**, the Bushmaster PMV is currently the most deployed armored vehicle within the Army’s inventory and stands as the Army’s largest armored vehicle fleet. This is a remarkable turn-around in perception and employment for the capability in the space of just five years.”

What Informs my Perspective or Views?

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"In war there is no substitute for vict
"In projects there is no substitute for

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"In war there is no substitute for victory" - General Douglas MacArthur
"In projects there is no substitute for delivery" - Kym Henderson

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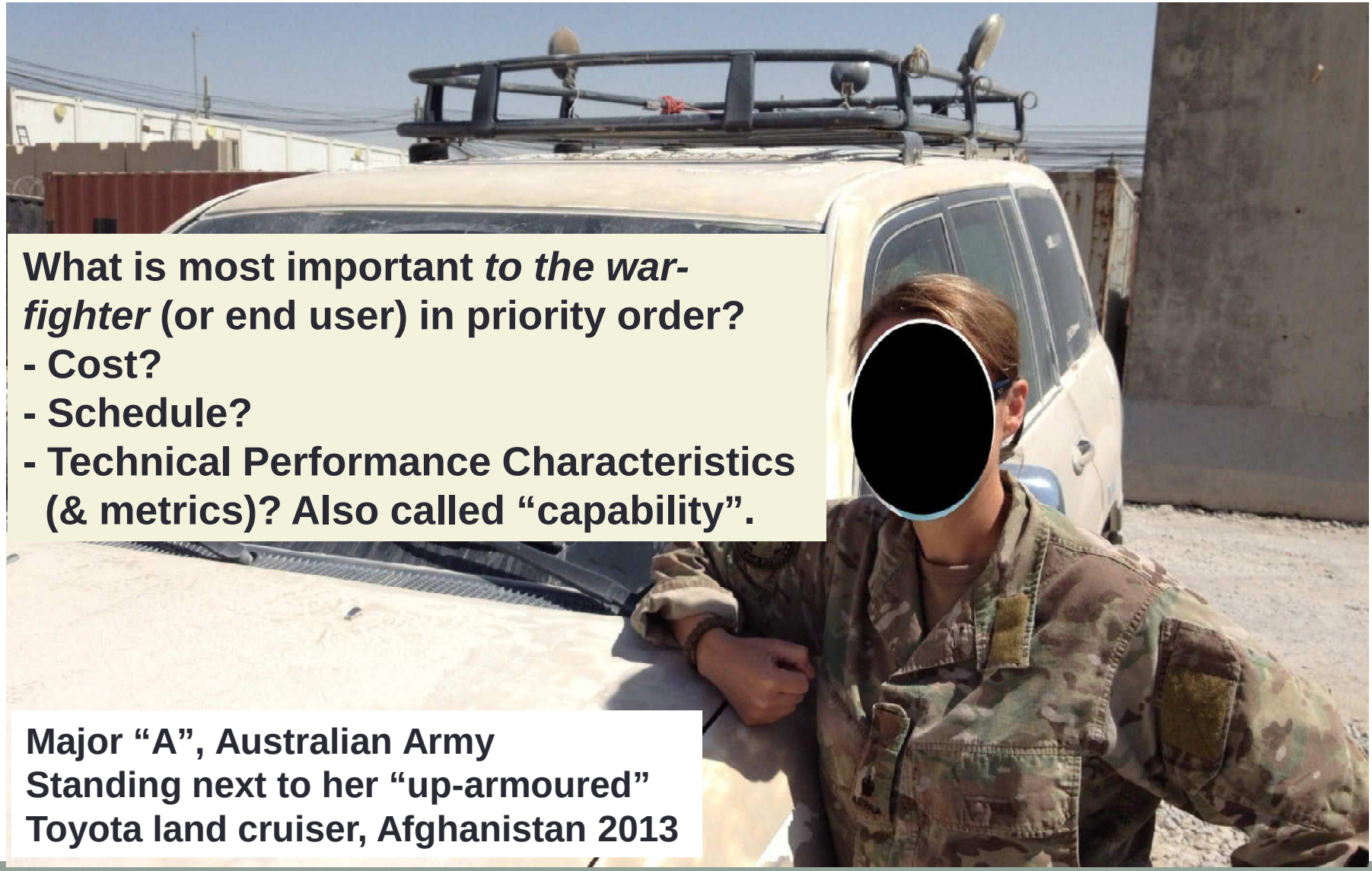
What's Most Important?



What is most important *to the war-fighter* (or end user) in priority order?
- Cost?
- Schedule?
- Technical Performance Characteristics (& metrics)? Also called "capability".

Major "A", Australian Army
Standing next to her "up-armoured"
Toyota land cruiser, Afghanistan 2013

What's Most Important?

**Major "A", Australian Army
Standing next to her "up-armoured"
Toyota land cruiser, Afghanistan 2013**

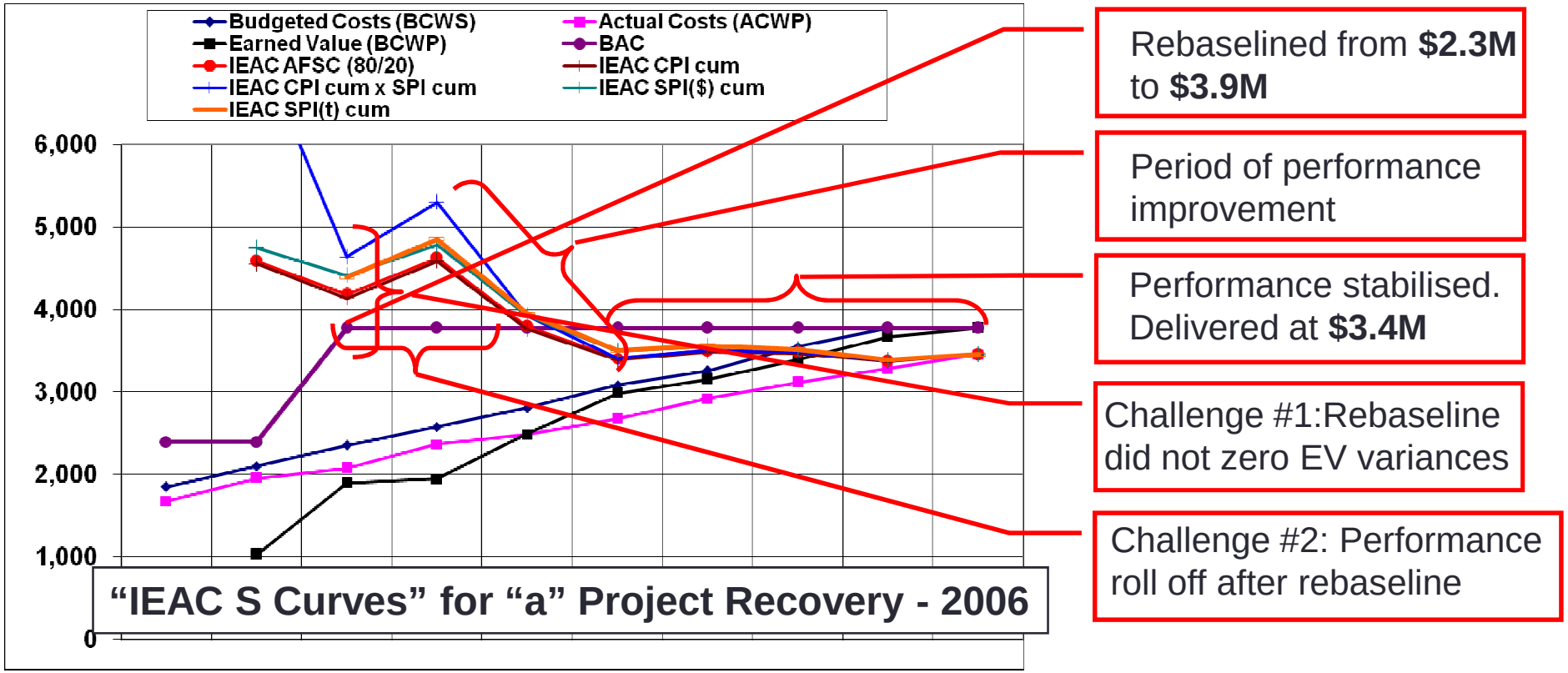
What's Most Important?

1. **Technical Performance Characteristics (capability)** (and metrics)
   - Ballistic glass windscreen withstood the impact of rounds fired
2. **Schedule**
   - Vehicle had been delivered to the end user and being used
3. **Cost?**
   - …… !

Highlights a significant disconnect between the usual project management and end user "drivers"

EVM = Project Control Best Practice

- … **data gathering**, management and **analytical processes** used to **predict**, **understand** and **constructively influence** the **time** and **cost** [and technical performance] **outcomes** of a project or program



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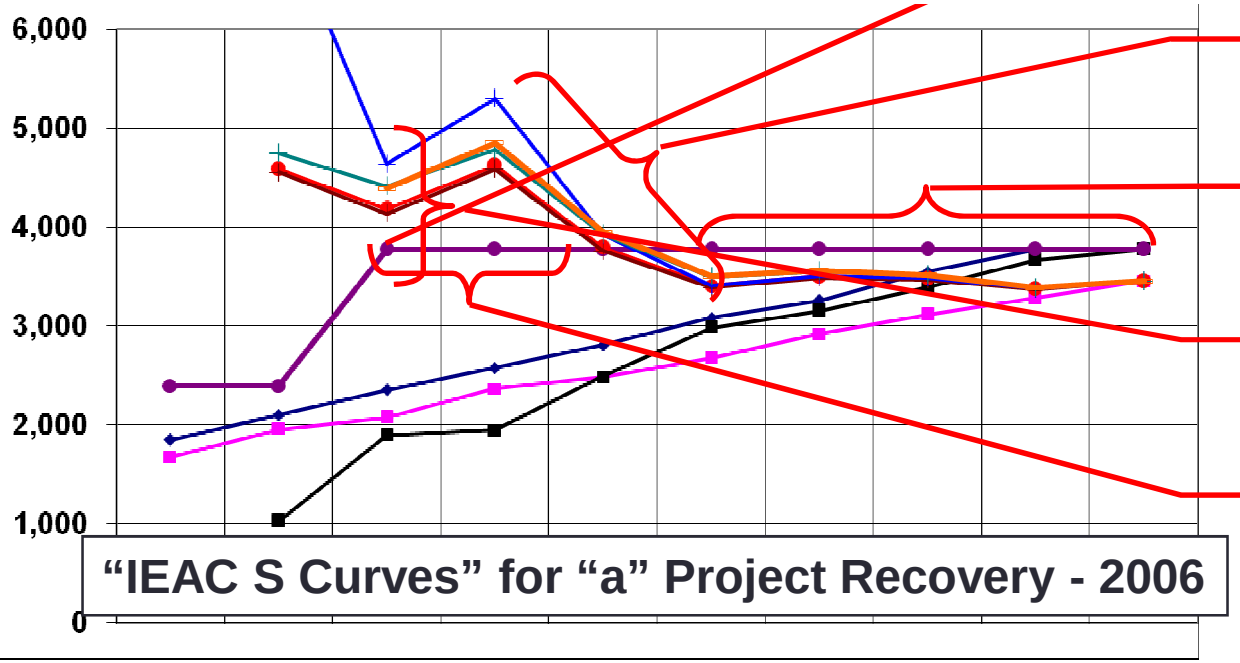
- … **data gathering**, management and **analytical processes** used to **predict**, **understand** and **constructively influence** the **time** and **cost** [and technical performance] **outcomes** of a project or program

Excellent discussion on project cost performance Kym. What about schedule performance?



"IEAC S Curves" for "a" Project Recovery - 2006

Period of performance improvement

Performance stabilised. Delivered at **$3.4M**

Challenge #1:Rebaseline did not zero EV variances

Challenge #2: Performance roll off after rebaseline

Importance of Schedule

"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*."

- Dr. Steve Gumley, [then] CEO
  Defence Materiel Organization (Australia)

Quote taken from DMO Bulletin, July 2006, Issue 61, page 3

Schedule delay is a significant cause of cost overrun

Earned Schedule: A story of global collaboration since 2003

- **Invention of**
  1. Earned Schedule (ES) by Lipke in 2003 - ***USA***
  2. Earned Duration (ED) by Jacob also in 2003 - ***USA***
- **A global collaborative research effort**
  3. Initial validation (ES) ***Australia*** (practitioner)
  - Follow-on validation – ***Belgium***
    4. Practitioner initially
    5. Then academic at University of Ghent
  6. Leadership in adoption on large scale programs (ES)
     - ***United Kingdom***
  7. More validation and ES tools development (ES)
     - ***Canada***
  8. Higher end tools development (ES) – ***Belgium***
  9. Earned Schedule Guide ➔ Drafted in ***UK*** in 2009
  10. **Global interest and uptake continues to accelerate**
  11. Including ***USA***

EVM Europe Association

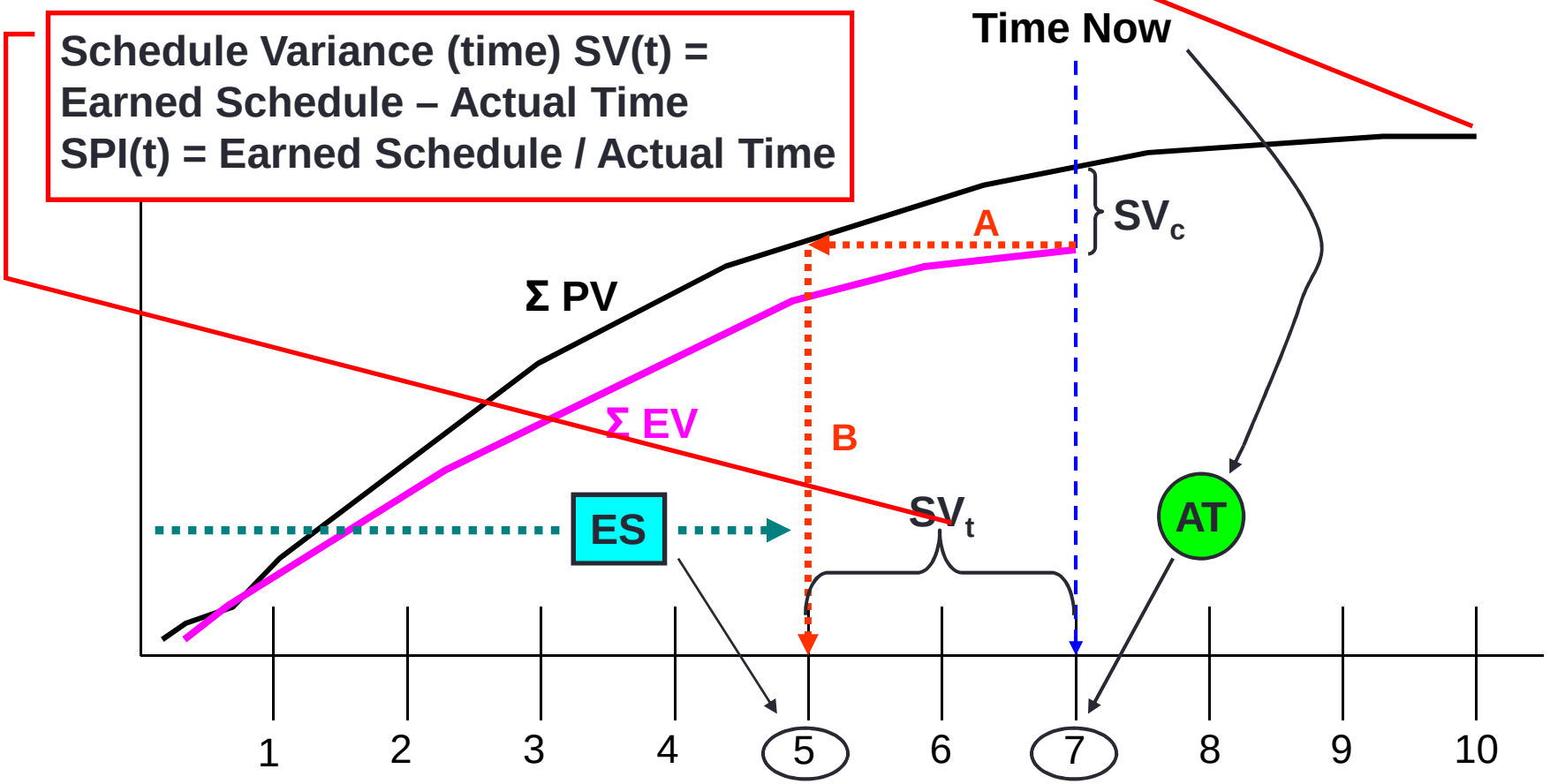
http://www.evm-europe.eu/

- Europeans interested in Walt Lipke's work started attending an EVA Conference in London (2006 and 2007)
  - Resulted in formation of EVM Europe Association in 2008
  - My suggestion to hold a meeting in London to consider this idea
- **EVM Europe Conferences**
  - Inaugural Conference at CERN, Geneva, Switzerland in November 2009
  - EVM Europe 5 Conference held at Ghent University, Belgium
    - EVM Europe 6 at same location 2-3 Dec 2015
- Established Project Controls/EVM Research Centre of Excellence
  - **Establishing commercial sector EVM project data research repository**
- **€1.2 million, 6 year Project Controls/EVM research project**
  - Headed by Prof. Dr. Mario Vanhoucke, Ghent University
  - Collaborative effort involving: Ghent University, The European Organization for Nuclear Research (CERN) - Geneva, Switzerland, University College of London (UK), George Washington University (USA) and the EVM Europe Association.

Earned Schedule Concept

Statistically Predicted Project Duration = PD / SPI(t)

Schedule Variance (time) SV(t) = Earned Schedule – Actual Time
SPI(t) = Earned Schedule / Actual Time

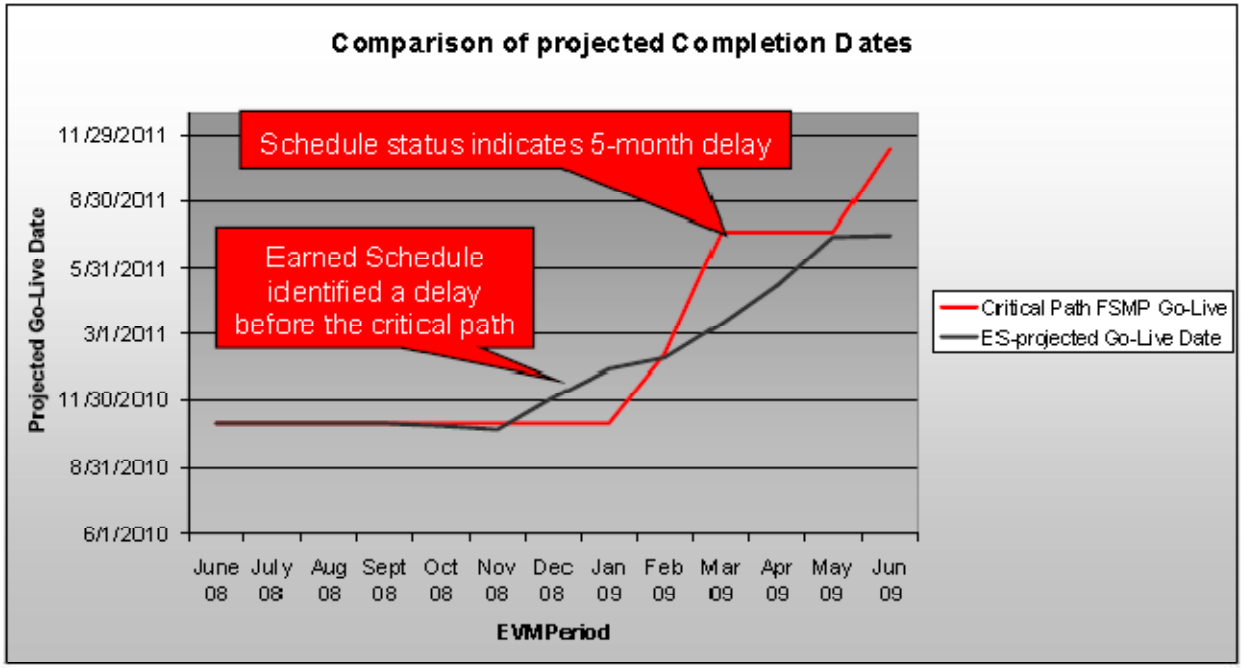


For the above example, ES = 5 months …that is the time associated with the PMB at which PV equals the EV accrued at month 7.

Booz Allen Hamilton Experience – USA
Un-named US Federal Govt Agency Program Data

Ready for what's next.

Looking Back: Earned Schedule view of The Project (project)



USA IPMC Conference 2009: Michelle Jones et. al.
http://www.evmlibrary.org/library/PS%2023%281%29.pdf

Booz | Allen | Hamilton

Booz Allen Hamilton Experience – USA National Reconnaissance Office Program Data

Summary of Program Case Studies

Program Case Studies	Insightful	Consistent	Misleading	
Program W – year 6	x			Quantitative measure, supporting controversial ICE
Program W – year 10		x		Consistent with other program metrics
Program X	x			Early warning of schedule problems
Program Y			x	Indicated slip, but extent of slip diluted by LOE in EVM baseline
Program Z	x			Early warning sign of major schedule delay
Additional Earned Schedule Data				
Program M		x		Earned schedule forecasts on-time performance for a program being managed to schedule
Program N		x		Earned schedule consistent with other metrics
Civil IT Project	x			Early warning of a schedule slip
Civil Shipbuilding Program	x			Accurate projection of a 6-month delay in delivery

- **Insightful**: Earned schedule metrics and forecast are a leading indicator of schedule performance or highlight something missed by other analytical techniques
- **Consistent**: Earned schedule metrics and forecast are consistent with the other program data
- **Misleading**: Earned schedule metrics and forecast are inconsistent with other program status indicators

USA IPMC Conference 2010: Lisa Wolf, Michelle Jones
http://www.evmlibrary.org/library/PS%2008v2.pdf

What's Most Important?

More work needed

1. **Technical Performance Characteristics** (and metrics)

   - Ballistic glass windscreen withstood the impact of rounds fired

With Earned Schedule

2. **Schedule**
   - Vehicle had been delivered and was in use

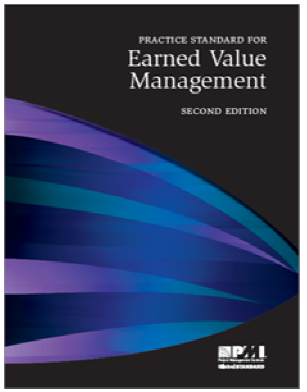
Strength of EVM

3. **Cost?**
   - …… !

Much has been done in the EVM World to achieve the core claim of an integrated Cost, Schedule and Technical Performance Project Control methodology

Much more remains to be done to achieve EVM's full potential

Takeaways: Resources



- **PMI Practice Standard for Earned Value Management 2nd edition**

http://marketplace.pmi.org/Pages/ProductDetail.aspx?GMProduct=00101262001

- **Earned Schedule website:** http://www.earnedschedule.com/
  - Papers: http://www.earnedschedule.com/Papers.shtml
  - Calculators: http://www.earnedschedule.com/Calculator.shtml

- **CPM website:** http:/www.mycpm.org
  - EVM Library: http://www.mycpm.org/resources/evm-library/
  - Measurable News: http://www.mycpm.org/news-events/measurable-news/

- **Mosaic Project Services:** http://www.mosaicprojects.com.au/
  - White Papers: http://www.mosaicprojects.com.au/PM-Knowledge_Index.

- **Kym Henderson:** kym.henderson@gmail.com

Take-aways: Conclusion

- Project Governance **MATTERS**
- Project Controls **MATTER**
- Project Management **MAKES A DIFFERENCE**
  - **Positive or Negative**
- **Project failures have consequences**
  - Often affecting people not associated with the failure
- Project Governance and Control is **ALWAYS IMPORTANT**
  - **Its more important in lean times because the capacity to absorb over-runs is much more limited**
  - Ether your or someone else's project may get cancelled as a result