

Integrating Systems Engineering and Project Management. The Match Made in Heaven Which Increases the Probability of Project Success

Mr Glen Alleman, MSSM

Thursday 22nd August 2019, 9:00am – 5:00pm

The Canberra Rex Hotel, Canberra

Biography:



Glen Alleman has 30 years' experience as a Program Performance Management leader in aerospace, defence, electric utilities, oil and gas, pulp and paper, and enterprise IT. His current focus includes integrated program performance management for complex system of systems using risk informed Earned Value Management.

Glen's formal training is in particle physics, where he wrote software digital filters to process the data stream from an accelerator. That turned into digital filters for radar, sonar, and guidance systems. Then into managing those types of programs. With a stint in the commercial side, he returned to Aerospace & Defence. Between doing engineering and managing engineers, he was sent back to school to get a Masters in Systems Management – a blend of Systems Engineering and Finance.

As a program manager at Rocky Flats Environmental Technology Site (a former nuclear weapons production facility), Earned Value Management became Glen's passion. His project managers kept the work on track, with a fixed closure date, for fixed price – budgeted at \$7B over 9 years. Using Earned Value Management, agile development practices, and measures of physical percent complete, they provided daily measurement of progress to plan to keep the program on schedule for a promised closure date.

After closure, Glen worked several proposals for space vehicles, developing the Integrated Master Plan, with resource loaded, risk adjusted schedule, with Technical Performance Measures used to provide Physical Percent Complete to Plan.

From this work, Glen moved to the government contracting side, providing program controls leadership to aircraft and spacecraft avionics systems, embedded control system, government business system, and biopharma product development. He joined the Institute for Defence Analyses in their support of the office of Performance Assessments and Root Cause Analyses where he provided policy advice to the owner of Earned Value Management for improving the effectiveness of EVM processes and tools.

At the same time Glen joined the College of Performance Management, where he taught course, gave presentations, and developed training materials around EVM, Risk Management, Agile development, Integrated Master Planning and Scheduling. In parallel to this work, Glen wrote the book – Performance-Based Project Management.

Glen's current includes working with the Joint Space Cost Council in developing of guidance for applying continuous risk management to Space Systems to successful manage cost and schedule growth in the presence of the uncertainty of complex system of systems.

Overview:

All projects – no matter the domain – are fraught with Technical, Cost and Schedule uncertainties, that create risk and reduce the probability of project success.

The contributing factors leading to project failure have been long identified and include unrealistic cost and schedule estimates, inadequate risk assessment, unrealistic technical performance expectations, unrealistic (un)anticipation of technical issues, and poorly performed and ineffective risk management. [1]

Workshop Objectives:

This workshop will teach participants:

- (1) The 5 immutable principles that must be addressed to achieve project success
- (2) That project success requires a collaborative engagement between systems engineering and project management, supported by project controls
- (3) The Seven principles of Systems Engineering needed to lead, manage and direct the processes and practices essential for project success [2], [3]
- (4) The Measures of Effectiveness (MoE), Measures of Performance (MoP), their Technical Performance Measures (TPM) and Key Performance Parameters (KPP) all of which are needed to know what “Done” look like in units of measure meaningful to decision makers

The workshop will teach students the practical application of the immutable principles of project success, the seven systems engineering Principles, Processes, and Practices and the supporting project management and controls processes essential for achieving project success using an Unmanned Aerial Vehicle (UAV) case study project.

The workshop will develop the Integrated Master Plan (IMP) and the Integrated Master Schedule (IMS) and associated Risk Management processes.

Attendees will leave the workshop with immediately actionable systems engineering and project management processes that when implemented in the workplace will increase the Probability of Project Success.

Venue:	The Canberra Rex Hotel, Canberra 150 Northbourne Ave, Braddon ACT 2612
Room	TBA
Timeframe:	Thursday 22nd August 2019, 9:00am – 5:00pm
Cost:	\$1,250.00

1 “The Seven Deadly Risks of Defense Projects,” F. N. Bennett, Security Challenges Vol. 6, No. 3, Spring 2010, pp. 97–111. Bennett was Chief of Capital Procurement, Australian Department of Defence, 1984–1988.

2 Systems Engineering Principles and Practice, 2nd Edition, Alexander Kossiakoff, John Wiley & Sons, 2011.

3 “Unifying Systems Engineering: Seven Principles for Systems Engineered Solutions, 20th International Symposium of the INCOSE, Denver, 2011