

Earned Value-Based Project Management¹

Project Controls Personnel: Finding the “Right Stuff”

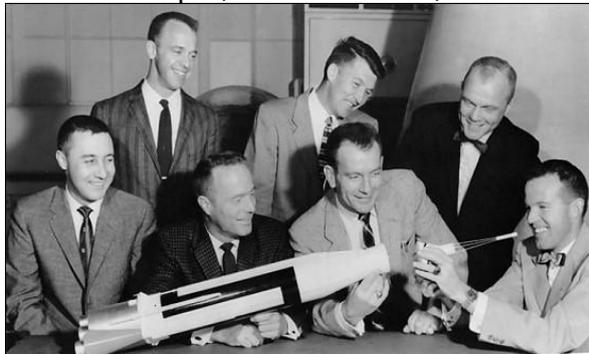
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ABSTRACT

So you want (or need) to implement Earned Value Management (EVM) in your organization? In order to do so, you need to recruit and hire the right people with the right skill set. That skill set can be formulated and expressed in many different terms including (but not limited to) personality, technical knowledge, and analytical capabilities. You post the job, receive a ton of resumes, and then you realize that you are uncertain how to discern between those who claim they know what they’re doing and those who actually can do what you need them to do. How do you pick the right people with the right skill set? This paper discusses one person’s view of the various roles in the world of EVM and how to recruit and retain the right talent.

INTRODUCTION

What is “The Right Stuff?” First of all, it is a movie based on the story of the original “Mercury Seven” astronauts (Alan Shepard, John Glenn, Scott Carpenter, Wally Schirra, Gordon Cooper, Gus Grissom, and Deke Slayton) and their macho, seat-of-the-pants



Alan Shepard Wally Schirra John Glenn
Gus Grissom Scott Carpenter Deke Slayton Gordon Cooper
THE MERCURY SEVEN

Figure 1: Photo: NASA Langley Research Center, April 30, 1959, Public Domain.

approach to the space program. Originally a book by Tom Wolfe (no relation, unfortunately), it covers an exciting time in the United States space program from the breaking of the sound barrier by Chuck Yeager to the establishment of Project Mercury at the National Aeronautics and Space Administration (NASA). Most importantly to us, it showed that no one had a clue how to run a space program or how to select people to be in it (NASA was only six months old when the Project Mercury astronauts were chosen²).

Often, particularly if new to the contracting world of development, modernization, upgrade or enhancement work valued at \$20 million or more requiring Earned Value Management, we can find ourselves in exactly the same figurative boat. From a slow start

¹This article was provided by the College of Performance Management (CPM), a non-profit professional association devoted to earned value-based project and program performance management. The article was previously published in CPM’s quarterly newsletter *The Measureable News*. It is republished here with approval of the author and CPM. For information about CPM, visit their website at <https://www.mycpm.org/>

² <http://www.nasa.gov/audience/forstudents/k-4/stories/what-was-project-mercury-k4.html>

with humiliating mistakes, Project Mercury eventually became popular worldwide and the six successful manned flights were followed by millions of people on radio and TV not only in the United States, but around the world. So, too, can be the experience of establishing your Earned Value Management System and attendant team... well, perhaps not as grand as being on radio or TV (unless you REALLY mess up – not the kind of attention you really want), but certainly success can be found and maintained by finding people with the “right stuff.” – and you can expect to make mistakes along the way.

Alan Shepard: *Sounds dangerous*
Recruiter: *It is! Extremely dangerous!*
Alan Shepard: *Count me in!*

INITIAL RECRUITING: WHAT JOB TITLE IS REALLY NEEDED?

What, exactly, is the difference between an EVM Analyst, a Planner/Scheduler, and a Project Controls Professional (not to be confused with a Project Controller (financial analyst) or a Project Controls Engineer (technical liaison))? It really depends upon your organization and its needs, as well as what definitions your organization has developed and what your system description states about roles and responsibilities. The following provides definitions of these roles based upon observations and discussions with people from various companies:

EVM Analyst: An EVM Analyst understands how to use the EVM Cost, Reporting, and Integration tools, such as Deltek Cobra, MPM & wInsight, EVM ForProject, EcoSys EPC, Primavera Cost Manager, ARES PRISM, DecisionEdge, Safran, Unanet, Dekker Trakker (and any others I am just not thinking of for this publication who will likely get upset they were not mentioned – and to whom I immediately and deeply apologize)³. They are capable of creating and pulling together the requisite artifacts into Control Account Manager (CAM) notebooks to help prepare for an Integrated Baseline Review (IBR). They help determine the charge number schema and relate it back to the Work Breakdown Structure (WBS), as well as create and maintain a ‘dollarized’ Responsibility Assignment Matrix (RAM). They provide advice and guidance to the CAMs regarding what Earned Value Techniques (EVTs) to use. They understand the Defense Acquisition University (DAU) Gold Card and know all of the formulas (probably by heart), and can maintain the various and sundry logs needed to perform EVM (Contract Budget Baseline, Management Reserve, Undistributed Budget, Change Control, etc.). EVM Analysts can produce the related artifacts like Work Authorization Documents (WADs) and Control Account Plans (CAPs) and can perform reconciliations among and between the various documents as required. A solid EVM Analyst pulls reports from the tools in a timely manner (receiving schedule status and actuals data from other sources), determines where the variances are, which ones exceed the pre-agreed-to thresholds, and communicates the need for variance analysis to be performed by the CAMs. They create the Integrated Program Management Reports (IPMRs) from the tools and estimate actuals where needed. They run various Estimate-at-Completion (EAC) scenarios on a monthly basis, and test the CAM-provided EACs against tests of

³ For a rather comprehensive list of project management software tools, go to <http://www.capterra.com/project-management-software>.

reasonableness such as the To-complete Performance Index (TCPI). They can create, produce, understand, and communicate the impacts of requests for changes to the Performance Measurement Baseline (PMB) so that management may make informed decisions. The best EVM Analysts are also capable of helping the CAM understand, at an ‘in the weeds level’, the impacts of variances and can determine whether the variance analyses, (including root cause, impact, and corrective action plan), provide sufficient explanation for reporting and posterity. They also follow up in future months of execution to ensure the corrective actions were indeed followed, as well as determine whether they were effective and had the desired outcome. As well, they may possess a basic understanding of risk and opportunity analysis.

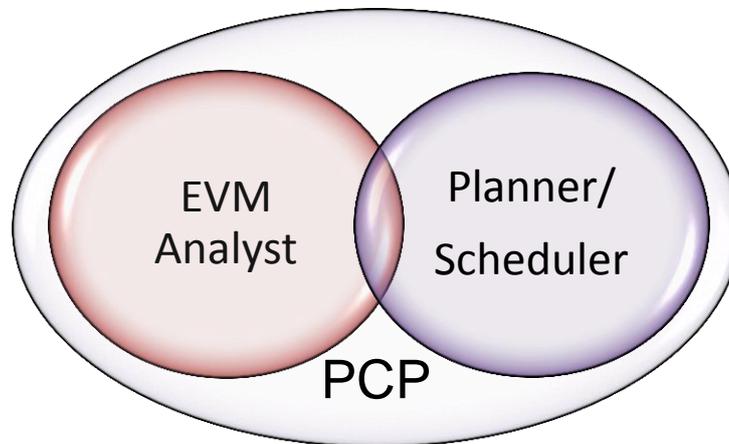
Planner/Scheduler: A planner/scheduler is an expert at creating and maintaining the heart of the PMB establishment process, the Integrated Master Schedule (IMS) (and the Integrated Master Plan (IMP), where applicable). He/she has a logical, process-oriented mind and is comfortable speaking to the product/project lifecycle and how it relates to identifying and baselining both discrete and support/Level of Effort (LOE) type work. They load the duration estimates (and sometimes cost estimates, when a resource-loaded schedule is required, desired, or needed) provided by the CAMs into the Scheduling Engine (such as Microsoft Project/Project Server, Primavera P6, Deltek Open Plan and Acumen, Safran, Artemis, et. al.), determine the critical path and perform resource leveling. They may also use further tools such as Steelray, Polaris™, Argo™, Schedule Wizard, and Risk+ to perform schedule health checks, Monte Carlo analysis and other aspects of Schedule Risk Assessments (SRAs). The planner/scheduler is able to keep the CAMs on target to identify their legs of the WBS, create tasks lists, put the tasks in order and establish relationships between those tasks with proper, meaningful logic (as opposed to, “Hey, what’s the relationship we can use here to make it look like we’ll finish on time? – Oh, I know, let’s just use that Start-to-Finish thing.”). They are able to clearly communicate the probability of successfully completing the scope of work on time, and can assess and develop ‘what if’ scenarios based upon the optimistic, pessimistic, and most likely data points that are provided. The planner/scheduler, during project execution, gathers the status of the schedule and can clearly and concisely communicate to the CAMs and PM (as well as the rest of the project team and stakeholders) the impacts of not adhering to the schedule. They ensure horizontal and vertical traceability of all project-related schedules (upper/lower schedules and/or with external subcontractor schedules). The best planners/schedulers use further techniques such as Earned Schedule and Schedule Adherence to communicate the status of the project and provide further insight (and perspectives) into the probability of on-time project completion, and predictions of actual project completion. They do not necessarily have EVM knowledge and experience, but solid project planning/scheduling skills are indeed required within an EVM environment.

Project Controls Professional: This person is either of the above skillsets, or a hybrid of both. A Project Controls Professional, or PCP, can bring home the bacon *and* fry it up in the pan. A true womb-to-tomb expert, he/she does not only do all of the above (both EVM Analyst and Planner/Schedule descriptions), but is also involved in the establishment of

the WBS itself, the WBS Dictionary and ensures full mapping of these artifacts to the SOW. They provide extensive support in the development of the IMS and ensure all of the CAMs and PMs have been properly trained, often providing the training themselves in many organizations.

They support the PM and CAMs in conducting lessons learned exercises by coordinating data calls, soliciting and

analyzing feedback, preparing reports, and identifying improvement areas. A PCP understands not only the letter of the ANSI⁴ criteria, but the spirit and intent as well. They can develop creative solutions for meeting the criteria, usually while customizing approaches and solutions that are relevant to the specific contract, work, and environment in which the work is being performed. These are the folks that really know how to improvise: Did you know that, in order to create the space uniforms for the Mercury astronauts in *The Right Stuff*, the costume designers used silver fabrics and other materials left over from costumes for singer/actress Cher⁵? Now THAT is improvising! The best PCPs review IPMRs prior to submittal and may be involved in Risk Management Boards. They have an understanding of Contractual strategy and may wind up being the CAMs and PM’s ‘go-to’ person for understanding what is really going on with the project and often takes a prominent role in Project Management Reviews (PMRs) and other customer-facing communications regarding the health of the project.



The above descriptions are by no means intended to imply that, if your organization is doing it another way, it is “wrong.” They are provided as a means to have a baseline of common understanding for discussion of finding the “Right Stuff.” For purposes of this article, when mentioning a “Project Controls Professional” herein, I am speaking of any (or all) of these three categories as inclusive, unless otherwise clarified.

EXPERT PRACTITIONERS VS. EXPERT TOOL USERS

If one thing jumped out at you when reading the above descriptions, I hope that it was that tool knowledge is only part of the job for each of these roles. But how do you know which skillset is more important? Well, first we need to have a baseline understanding of what is meant by the term ‘practitioner.’ One can reasonably argue that a ‘practitioner’ is one who understands the spirit and intent of the ANSI criteria, and has a solid understanding of the best practices of project management. If you consider certification of high value, I would even go so far as to say that one should not ‘only’ be certified in EVM by a reputable and

⁴ ANSI/EIA-748 (latest version)

⁵ http://www.imdb.com/title/tt0086197/trivia?ref_=tt_trv_trv

recognized organization⁶, but they should also pursue the Project Management Institute® (PMI®) Project Management Professional (PMP) certification. I know that when I obtained the PMP certification, I did so for the sole purpose of being able to tell PMPs who felt they knew “all about EVM” because they could regurgitate a few formulas for a test that I had a clear understanding of exactly the level of knowledge needed for the PMP exam. Ultimately, however, the greater (and less ego-driven) benefit is that having both certifications may help ensure that the practitioner can relate the EVM tools, procedures, policies, and techniques directly to the language of their number one most important customer: the project manager. After all, isn’t the purpose of EVM, ultimately, to enable the PM and CAMs to make solid, information-based decisions regarding their projects? I am not advocating that the PCP be beholden to the PM in any way (in fact, I would encourage they do not report, functionally, to the PM), but understanding how EVM relates to each of the five (5) process groups and ten (10) knowledge areas⁷ can lend to the PCPs credibility, which encourages the necessary communication and respect for the data, analysis, and information being provided. This is setting aside the possibility, of course, that an applicant may simply be a good test-taker and that obtaining these certifications may have no real bearing on their ability to perform the job. There is the old joke: “What do you call someone who graduated at the bottom of their class in medical school? Doctor.” Just because the certifications are in place, it may not mean they are good practitioners. However, it could at least show a commitment to the craft and at least some theoretical knowledge which could be utilized.

Let us also discuss what is meant by a “tool user.” They can produce every possible view and permutation of any report that you could possibly ever think to ask for. These are the tool jockeys; the drivers of making the data look really cool and interesting. They usually know how to load data automatically between the tools, and how to link every electronic feed together seamlessly. Often, they seem to be able to take an eight-hour task and get it done in 30 minutes. Manually load status? Pshawwww... who needs to type when you can have the computer load everything in for you?

This leads to the following question: Do solid PM and EVM practitioners really need to be experts at the tools? Conversely, if someone is excellent at using the tools, do they really need to be good practitioners of PM/EVM? I would say that the answer is (as it so often is in project management), “It depends.”

Gordon Cooper: *You boys know what makes this bird go up?*

FUNDING makes this bird go up.

Gus Grissom: *He's right. No bucks, no Buck Rogers.*

What are the real EVM requirements you need to meet? How much money do you have available to invest in the tools? Hopefully, if you bid on an ANSI-Compliant requirement, you bid the price of the tools into your proposal! How much money do you have to hire the personnel? Did you (or, in many unfortunate cases, your management or proposal team) think you could perform ANSI-Compliant EVM on a \$600M contract with .75 of an FTE?

From my personal experience, I would likely place my money on a practitioner nearly every time, over someone who is a tool expert yet has no knowledge of the processes, reasons, and logic for why the tools even exist. A solid project controls practitioner could do EVM with

⁶ Such as the Association for Advancement of Cost Engineering International (AACEI) Earned Value Professional (EVP) certification or the College of Performance Management (CPM)’s Professional Education Program (PEP) Graduate Certificate.

⁷ Project Management Institute, A Guide to the Project Management Body of Knowledge, (PMBOK® Guide)—Fifth Edition, Project Management Institute, Inc., 2013, Table 3-1, Page 61.

a stack of Post-it® notes, paper, pen, calculator, and a good-sized wall. They can improvise; they can understand the meaning and find problems and develop and execute solutions. I made a huge hiring mistake early in my ‘managerial’ career by assessing only the software skills of an applicant. I was impressed by his resume and he certainly was an MS Project expert; I was impressed that he had been training people on the tool since shortly after its inception! However, once I hired him, we soon realized he was incapable of applying his tool knowledge in a practical and valuable manner to the project. He lasted less than thirty days.

Dwight D. Eisenhower: *The first American into space is not going to be a chimpanzee. I want test pilots!*

Deke Slayton: *None of us wants to think that they're gonna send a monkey up to do a man's work... what they're trying to do to us is send a man up to do a monkey's work. Us, a bunch of college-trained chimpanzees!*

When the space program was first being developed, it was argued that a chimpanzee could be trained to use the controls and fly the craft (In pre-flight training, a chimp was taught to push a lever within five seconds of seeing a flashing blue light; failure to do so resulted in punishment in the form of a mild electric shock to the soles of the feet, while a correct response earned a banana pellet). Dwight Eisenhower argued that such an important task must be done by someone with a specific set of skills, knowledge, and application of logic. The same could be said of Project Controls Professionals. One can be trained on a tool by any number of vendors or in-house programs. But if the tools fail or there was a data input problem (it is always garbage in-garbage out), could a tool user spot that in time to avoid embarrassment? It is often harder to help someone make the transition from ‘data and chart producer’ to an ‘analyst.’ This is a mindset and skill that usually only comes with experience. This is not to say nor even imply that expert tool users are incapable of having knowledge, skills, logic and experience. To the contrary; it is often the best tool users who become the greatest practitioners. It is, however, to state that as the one who may be looking for the biggest ‘bang for the buck’ in hiring their staff and making an assessment of fit, seeking evidence of those less tangible skills is likely more important than a demonstration of tool capability. Do not make the mistake of being dazzled by the software genius.

PERSONALITY TYPES

What personality type is needed in order to be an impactful Project Controls Professional? There are several factors to consider, many of which are inter-related and can be dependent upon the environment in which they will be working.

Assertive or Aggressive? Or just Confident? Let’s face it; one of the most difficult parts of the job is dealing with CAMs and PMs who view EVM as a non-essential administrative burden on a project rather than a tool to help manage the work. The common cry is “I have to do my job” – while not realizing that this is actually *part* of their job and could actually help them. They can be non-responsive to requests for project schedule status and variance analysis feedback. They may unreasonably expect the analyst to be able to analyze and make a recommendation on a change request two hours before the next change control board meeting. In some cases, they can be flat-out aggressively anti-EVM and everything the analyst appears to stand for and refuse to attend training and status meetings. The role of a Project Controls Professional is not for the faint of heart. I have seen excellently skilled and knowledgeable personnel crack and break in this type of environment; eventually leaving for greener (and calmer) pastures. In an environment such as we are discussing herewith; where EVM is starting up from, presumably, a bit of ‘scratch’, the analyst can face a lot of

resistance to their very existence. After all, he/she is telling the CAM and the PM that they have to announce and explain what they plan to do, explain why they plan to do it and, during execution, explain why they are *not* doing it, and then tell us how they’re going to fix it. We are forcing accountability and shining a flashlight, likely, on their weaknesses. In this case, the role requires someone who can be assertive without being aggressive.

Chuck Yeager: *I'm a fearless man, but I'm scared to death of you.*

Glennis Yeager: *Oh no you're not. But you oughta be.*

The aggressive applicant may come across as an immovable and unreasonable EVM zealot to a project team. I have seen more damage done to the psyche and morale of a project team by a highly experienced hard core EVM zealot than by any neophyte. Stuck in the mindset of ‘my way or the highway’, the aggressive candidate may have a problem customizing approaches that satisfy the spirit and intent of the requirement while accommodating the needs, knowledge, skills, and willingness/resistance of the CAM and other members of the PM Team. This leads to the team being turned completely against the practice of EVM, making it even harder to ensure compliance in the future.

What is also needed is confidence; confidence in their own skillset and confidence that the team can grow to the point of meeting the need and creating a cooperative environment.

Gordon Cooper: *Who was the best pilot I ever saw?
Well, uh, you're lookin' at 'im.*

Uh, perhaps the above statement is not quite the level of confidence that your best candidate should have. However, a clear and realistic understanding of what they are and are not capable of doing is important. I recall, many years ago, an applicant who, after only one year of practical real-world experience post-college, claimed he knew how to do every single task that I asked him about... and I got into some pretty advanced topics. When I stated, “Oh, this is great, then we will not need to provide training for you on any of these things...” the backpedaling quickly began. Sniff out the difference between confidence and smoke & mirrors.

Conflict Management Skills: Skills beyond the potentially pre-conceived realm of EVM expert, planner/scheduler, and all-around good Project Controls Professional are needed for success. A well-rounded candidate who understands other key project and people management skills, such as conflict management, can be most valuable and can save much valuable time during the start-up phases of an EVM System. Note that this is neither conflict *avoidance* nor conflict *resolution*; it is conflict *management*. Seek an applicant who has had leadership training that includes conflict management skills training and understands the actual value of conflict in the workplace and how it can be used to effectively establish relationships, processes, and open the lines of communication among all needed parties. Ask questions that will help you discern whether they have an understanding of their own default conflict management style and whether they are aware of others. Test the waters to see if they know how to apply that knowledge, including how to best approach those differing styles. Have a discussion regarding emotional intelligence and attempt to discern their skills in this area.

Consultative/Engagement/Teaching/Adaptive Style: The very best project controls personnel are constantly teaching and engaging the CAMs in nearly every interaction. They take the time to sit with the CAMs to ensure they understand the data and what it is telling them. The worst ones have the attitude of, “Well, I explained this before, and I posted it to the shared

drive, what more am I supposed to do? Wipe their nose?” This is, again, the difference between providing merely data versus providing information that can serve as the basis for making decisions. An analyst can provide 50 different views of the data, but if the CAM cannot understand what it means or where it came from, it is of little to no value. Look for the skills in a candidate that indicates they enjoy the topic, are enthusiastic about it, and can explain it in a way that is easy to understand and is relatable. They should also be able to adapt their approach given the audience and their needs, knowledge level, and applicability.

Naturally Inquisitive: The ideal member of the project control staff is not afraid to ask the hard questions. They actually enjoy digging into the data to get to the root of issues, and not only know to ask the questions, but ask them in a way that stirs conversation, thought, and collaboration. Sometimes their inquisitive nature, in an ideal environment, can be contagious.

Personal Accountability: This is probably one of the most important attributes of any employee, let alone a project controls person in whose hands you have entrusted analysis of project information. The unwillingness to own up to, admit, and manage mistakes can have tremendous repercussions to a project and, in cases where the company is going to be subject to Defense Contract Management Agency (DCMA) surveillance, to an entire organization. It can also lead to irrevocable damage of the reputation of the data/information and its value to a PM and CAMs.

Alan Shepard: *Dear Lord, please don't let me [mess] up.*
Gordon Cooper: *I didn't quite copy that. Say again, please.*
Alan Shepard: *I said everything's A-OK.*

One should never be afraid to admit their mistakes or ask for help when they need it (or realize when they need it). My personal mantra, over the years, has become, “Ask the question, have the conversation, be open to the possibility I am wrong.” Early in my career, back when I was a financial analyst at a major defense contractor, I was attempting to reconcile the cumulative actuals reported in a CSSR (yep, the way-old IPMR) to the actuals that were coming from the accounting system. I could not, for the life of me, locate \$650K on this program that I inherited at about three years in. I was pulling my hair out for three days, going back through several years of data to try to find it, working 15-hour days. Nearly in tears, I sent a memo to my manager telling him about the issue and explaining that, for the life of me, I just could not find it and I needed help. His response? “Lisa, it is only \$650K. So far, we have spent \$700M on this program, what percent is that?” When I realized this was less than 0.1% (yes, one-tenth of one percent!) of the actuals, I had egg on my face at my failure to recognize the lack of materiality of the issue. I can only imagine what would have happened if I had tried to hide the problem and kept trying to find it for the remaining three years of the program! Think of the hours wasted! Mind you, this was back before the current DCMA surveillance practices, so I suspect I could not get away with that (letting it ride) now. The best practice would have been for my predecessor to have ensured reconciliation on a monthly basis so that effort was not wasted down the line attempting to find the proverbial needle in the haystack. I have seen analysts take over projects and need to spend thousands of dollars of their time just to locate a small amount for reconciliation.

FORMULATING THE JOB REQUIREMENTS

Make a list of what you really need in order to fill the role in your particular organization, given your particular project and staff skillsets. How much does the number of years of experience really matter? The answer to that can likely be found, once again, to be, “It depends.” Are the personnel needed for full ANSI-Compliance subject to DCMA oversight,

JSRs, IBRs, etc.? Or is a ‘best practices’ implementation requirement in place? Or has the company simply decided they have an internal desire to establish the practice because they believe in it as a solid project management tool? Is the team they are going to be working with experienced in EVM or are they all neophytes?

If you buy in to the theory that EVM is really a forcing function for solid project management practices, as I do, much of this depends on the existing skill sets, personnel, and policies surrounding the organization’s existing project management teams. In all of these examples, it is possible that the person would need as little as two years to as many as fifteen years of prior experience just to get things started. The key is assessing your own organization’s baseline so that one can determine how much it is going to take to get the project team where they need to be in order for ‘good’ EVM to even be possible.

Another thing to consider is that years of experience do not necessarily translate to practitioner excellence or even skillsets that are valuable. One should consider the theory of “conscious competence⁸” in being able to apply a discipline set and teach it to others:

- Unconscious incompetence – this is the level of consciousness a person is at when they do not even know what they do not know. They may even deny that they do not know something, and are ignorant of their own level of incompetence.
- Conscious incompetence – this person recognizes they have a deficit in their skillset and, as such, is generally willing to learn. This person is the ideal new CAM and PM.
- Conscious competence – this is the level of experience wherein one now has attained competence, but still requires concentration to perform the task and demonstrate the skill in their work and to others.

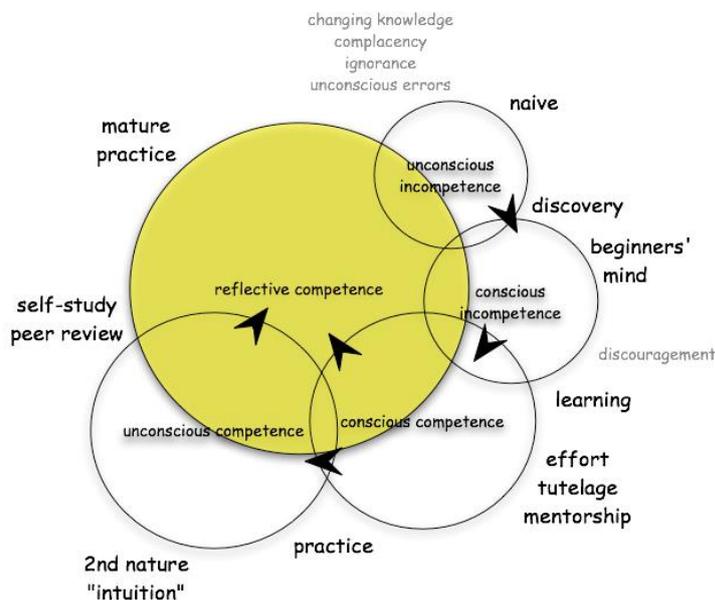


Figure 3: Courtesy of Will Taylor, Chair, Department of Homeopathic Medicine, National College of Natural Medicine, Portland, Oregon, USA, March 2007

- Unconscious competence – this individual has become so adept at the skillset that they can do it without concentrating. At this point, it has become natural to them and ‘second nature.’

The best practitioners of EVM, and most valuable in establishing an EVMS, in my experience, have reached the level of *unconscious competence*; however, they are able to translate their experience *back* to the level of *conscious competence* so that they can best explain the skills and demonstrate them to another. This actually requires a very specific skillset of being able to explain concepts without speaking ‘over the

heads’ of and intimidating those who are either still in *unconscious incompetence* or in *conscious incompetence* levels.

⁸ For more on this theory, go to <http://www.businessballs.com/consciouscompetencelearningmodel.htm>.

As well, the ability of those who have reached *unconscious competence* to relate themselves back to *conscious competence* enables them to be in learning mode at all times – willing to see new methods for performing EVM and PM and being open to new ideas. My favorite expression is, “Be open to the possibility you are wrong.” The complacent *unconscious competent* person may feel they have reached the status of “expert” and have ceased being open to new ideas, feel the need to flaunt their expertise instead of share it, and try to elevate the practice of EVM to something akin to voodoo and unreachable. This person soon ceases to be relevant and valuable to an organization that needs someone to help them (CAMs, PMs, executive, etc.) gain the skills and knowledge needed to be successful.

Last, experience in multiple environments can be a key thing to look for. The applicant with twenty years of experience, all on the same program in the same company, may not have the breadth of knowledge needed to translate that knowledge to your project needs. Twenty years of experience split among four different companies, at five years each (or some permutation thereof) – with varying levels of requirements, internal and external clients, etc. may be the key to being able to make that translation.

GROWING FROM WITHIN

What other job skills typically translate well to becoming a Project Controls Professional? Industrial engineers (and other engineers) often become some of the best planners/schedulers, as their minds tend to think of things as processes, involving planning and laying out the best way to make pieces fit together. In many companies, financial analysts wind up becoming EVM analysts which can often be a very good thing. Good financial analysts (I am not speaking of accounting staff, but finance staff) view not just the data in front of them, but how information fits into the ‘big picture’ - with an understanding of cause and effect. They often have a knack for knowing the right questions to ask of CAMs to stimulate good analysis of root cause and impacts of variances. Accounting personnel are often good at the numbers piece; reconciling logs and other artifacts comes naturally to them. Project coordinators are a natural, obvious fit as well.

If you are reading this and are thinking of heading down the path of becoming a Project Controls Professional but think it is not nearly glamorous enough, remember this: Rick Springfield turned down a ‘lesser’ astronaut role in *The Right Stuff* (1983) so that he could be the ‘star’ in *Hard to Hold* (1984) instead. Springfield has stated that he greatly regrets this decision. I do not blame him. *The Right Stuff* became a critically acclaimed success and went on to be nominated for 11 Oscars, winning four of them. *Hard to Hold* was a box office and critical flop. One of the best project controls analysts I have ever worked with had a Master’s degree in Systems Engineering. She could have been doing that SE work on projects, but she had a knack for EVM and an interest. She took a ‘lesser’ project controls role and successfully and smartly parlayed that joint knowledge into leadership positions, whereas; had she remained a cog in the wheel instead of branching out her knowledge, her career may have gone very differently.

RETAINING THE TALENT

You’ve roped them in, you grew them, you shaped and molded them and invested time and money into their personal and professional growth. You held their hand through the blood, sweat, and tears involved in the battleground that is the establishment of an EVMS. Now how do you keep them? This is the eternal conundrum for any manager, not just for those of Project Controls Professionals.

Do not ignore the traditional motivational theories such as James’ Instinct Theory⁹, Maslow’s Hierarchy of Needs¹⁰, McGregor’s Theory X and Theory Y¹¹, Herzberg’s Two-Factor Theory¹², among others. Nearly every motivational theory ascribes to the concept that many people are looking for something better, some way to grow – or however they may define ‘better’. However, in the world of the EVM Analyst, Planner/Scheduler, and Project Controls Professional, the avenues for growth appear limited and finite. How do you fix that?

Executive Advocacy: Be certain that, at the highest level of the organization, the skillsets of these personnel are understood, acknowledged, and appreciated. Particularly in a *Sarbanes-Oxley* world, the accuracy and integrity of the lower-level project data and information generators can make or break the quality of the rolled up financial outlooks and reporting for shareholders.

Career Path: Providing a career path that allows for personal and professional growth of these employees is a key feature. Do not pigeon hole them into ‘just’ doing EVM. There are many skills these employees have that are translatable to other areas of knowledge. Doing so also creates a better-rounded employee that can prove invaluable down the line. For example, they could move into Pricing, Acquisitions, Surveillance, Internal Governance/Internal Auditing, Project Management, Consultative Services, Contracts, Subcontract Administration, just to name a few. Provide the freedom and opportunity for these personnel to not feel stunted and ignored. Even better, provide a clear path for them to reach for.

Internal Communities of Practice: Having an internal community of practice provides an outlet for these employees to share their knowledge, concerns, complaints and observations among like-minded peers. Not only that, it can be incredibly valuable for an organization in that it may allow a forum in which common issues can be discovered across a large organization. Finding these items, escalating, resolving, and remediating them before they become insurmountable (or – gasp! – discovered during a Joint Surveillance Review!) can be invaluable.

Ongoing Education: Hands down, the most valuable course I ever took was one regarding how to influence people over whom I had no authority. Understand that PCP folks have a very hard job; they need to get people higher up on the food chain to listen and talk to them, all while attempting to influence their behaviors. Ensure that the personnel have the funds and time available to take courses that are valuable to them that go beyond the technical aspects of the job. Hit on the all-important soft skills areas that can make them well-rounded and capable of handling the changes in their career as they go through the path of higher levels of responsibility.

HOW DO YOU KNOW? – THE RESUME

What should you be looking for on the resume before even bringing a person in for an interview? First, look for a resume that has been structured in a manner that shows results-

⁹ <http://psychclassics.asu.edu/James/Principles/prin24.htm>

¹⁰ <http://www.simplypsychology.org/maslow.html>

¹¹ <http://www.businessballs.com/mcgregor.htm>

¹² http://www.mindtools.com/pages/article/newTMM_74.htm

oriented instead of task-oriented work. The traditional words like “tasks performed include...” are far less impactful and meaningful than “recent accomplishments include...” Look for evidence that the applicant understands that the roles involved in EVM have more to do with having a positive impact on the project/program and its team than just crunching numbers.

Second, and this one really stands out to me when reviewing resumes, be sure the applicant does not mix up the terms EV, EVM, and EVMS. An applicant who utilizes these terms interchangeably may not understand or appreciate the differences between them and, as such, may indicate a more rudimentary knowledge of their application.

Third, if the resume is primarily task-focused instead of results and accomplishments-focused, this does not mean you need to throw it out. But be sure they have mentioned the many key artifacts that are related to project management and earned value management. I have read a lot of resumes by those stating they are EVM-experts who do not mention a single EVM-related artifact. They never mention ANSI criteria; they never mention the PMB, etc. If you are looking to establish an EVMS, but cannot afford the applicant who has actually already established one and led a team that has actually obtained a validation of a system (they are few and far between), be certain the applicant has been a participant in things like Integrated Baseline Reviews (IBRs), Joint Surveillance Reviews (JSRs), training development and delivery, etc. Even if someone hasn't ever actually led a team obtaining a validation, if they have been on a team that has helped *maintain* a validation, they likely have a lot to offer. At a minimum, they can help the team prepare and understand what is expected of them.

Last, do not be afraid, at some point (likely after the interview) to actually check on the references and speak with former employers (where possible, with respect to privacy). Most people will not mince words when they really like a former employee. But, of key importance, is asking about the real EVM environment to which the employee has been exposed. Ask whether their work was subject to internal governance and/or DCMA surveillance. If they only performed EVM because of an internal drive on, perhaps, commercial contracts, find out from what resources they designed their system description, or whether that is even known.

HOW DO YOU KNOW? – THE INTERVIEW

Beware the consultant! I say that because, in the past, I have had to deal with consultants who were just that – great at explaining concepts, had a nice, clean-cut and polished image – but were absolutely useless during real execution. They knew all the work that had to be done but could not actually perform the actual work itself. You really want the person who knows how to (and is willing to) roll up their sleeves and get it done. Be certain that, when you do decide to bring someone in for an interview, that you are not fooled by the ability to ‘talk the talk’.

Where possible, perform a pre-screening interview to attempt to discern whether they are a good fit for your organization. The aspects of “fit” are up to you, of course. But in the prescreen, you can determine whether their salary requirements are in alignment with your idea for the job role, as well as try to determine whether the candidate's style and personality will mesh well with the team. This is not to say that hiring a clone is a good idea – in fact, I would argue that it is not. But ensure they are not too abrasive – or too weak – to be effective. If you are consistently finding that the qualified candidates' salaries are consistently much higher than the range you considered, you may need to reconsider your requirements or increase the salary range.

In the in-person interview, be certain to look for the candidate who can share anecdotal evidence of execution successes and failures. This will help ensure that they have had the real-world experience instead of just a conceptual idea of what goes on. Some questions I like to ask:

1. Tell me about a time when you had a resistant CAM and how you dealt with it... Here, you are hoping to not receive responses like, “I have never had a resistant CAM,” “What is a CAM?” or, heaven forbid, “I escalated it to management and got the jerk fired.” This gives the candidate an opportunity to demonstrate the depth of their emotional intelligence and conflict management skills.
2. What is your funniest story of what has happened at an IBR? You do not want to hear something like, “What is an IBR?” Or a story that may reveal they lack a training skill, such as “It was hilarious when I had a CAM tell the DCMA interviewer that ‘everything’ was on his critical path because it was all important stuff.” Oh, wait, this has actually happened to me. Never mind. Not a red flag... they may have just had a CAM who refused to attend training! Ultimately, this question gives an opportunity to discover a little bit of the candidate’s personality and how they handle pressure.
3. What would you do if you found a significant variance and the CAM does not have any idea why it exists? Here, you would hope the candidate discusses things like performing traceability analysis with the CAM, discussing the different artifacts and showing the CAM how they inter-relate, showing them the charging reports, etc. This would give the applicant an opportunity to demonstrate their internal consultative and training skills as well as practitioner knowledge.
4. Is a CPI of 1.2 a good thing or a bad thing? Why? Or Is an SPI of 1.2 a good thing or a bad thing? Why? What you are looking for here is the answer, “It depends.” A quality PCP understands that the indices are merely indicators; they do not tell the whole story.
5. You have 45 seconds in an elevator to convince a PM that EVM is the right way to manage a project. Go! Here, you are looking for the ‘conscious competence’ example – would the elevator speech they provide make sense to the neophyte or is it so wrapped up in technical jargon as to be unintelligible to the layperson?

PARTING THOUGHTS (SUMMARY)

In today’s economy, hiring the right people on the first try is more important than ever. No company can really afford to lose time, money, and progress from a poor hiring choice that results in lost time in proper establishment of an EVMS, no matter at what level. And we all know how expensive it is to recruit and onboard new employees only to have it not work out.

Liaison Man: *You mean for this “space race,” you don’t want our best pilots?*

Recruiter: *I didn’t say that. We want the best pilots that we can get.*

Sometimes, unfortunately, you need to hire the best you can get, given your time and budget constraints. Take the time to set out the key criteria for what will work with your organization, meet your needs, and get you what you are really looking for. If you need to get things rolling quickly, looking for the candidate who is merely a “fast learner” is not the smartest choice; rather, you need the one with the skills to hit the ground running and can be the leader and teacher as opposed to the learner. Focus on the key criteria you have set forth for identifying the “Right Stuff,” and remember, if you are looking for a jazz pianist, don’t hire (and pay the highest dollar for), the Oscar-winning actor.

About the Author



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Lisa Wolf is the Earned Value Management (EVM) and Procurement Systems Focal Point for Booz Allen Hamilton, your essential partner for predictive intelligence, emerging technology, and advanced engineering. In her role, Lisa is responsible for ensuring the proper assessment, compliance and training of the Earned Value Management and Procurement Business Systems through proposal support, Integrated Baseline Reviews (IBRs), Internal Surveillance Reviews (ISRs), Joint Surveillance Reviews (JSRs), Pre-Award reviews, Peer Reviews, and Subcontract Administrator process surveillance. Lisa’s wide range of diverse EVM experience as a practitioner has been in RDT&E, Production, Deployment, Software Development, and IT and support services projects of varying contract sizes and types with myriad clients.

Lisa presently also serves as Co-Dean for the College of Performance Management (CPM) 600-G (Government EVM) Education and Certification tracks and Deputy PM for CPMs Integrated Project Management certification program. She is also co-Lead of the National Defense Industrial Association (NDIA) Integrated Program Management Division (IPMD) Contracts working group, and the Vice President of Communication for the College of Performance Management (CPM). She is a frequent speaker and trainer of Earned Value and Project Management topics in the United States at EVM World, IPM conferences and other PMI events, as well as worldwide, including presentations and trainings in Alexandria, Egypt, Yokosuka, Japan, the Cayman Islands, and Melbourne and Sydney, Australia. She has served as a guest lecturer for graduate students at Bowie State University in Maryland, as well as a course developer and leader for the American Management Association.

Lisa earned her MBA from The Johns Hopkins Carey Business School and has been certified by the Association for the Advancement of Cost Engineering International (AACEI) as an Earned Value Professional (EVP) and by the PMI as a Project Management Professional (PMP).

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