

Transparency, Accountability Drive Government's Growing Earned Value Requirements

Today, TV audiences may enjoy a show called, “What You Get for the Money,” to see how much ‘house’ is available in different locations across the U.S., based on a pre-set purchase price.

In government contracting, disciplined criteria and cost management is required to ensure the federal government can somehow answer the fundamental question, “What did we get for the money?” Government contractors understand the project management and fiscal discipline required to comply with federal regulations are best achieved via the implementation of formal Earned Value Management Systems (EVMS). This is also why the Office of Management and Budget (OMB) and Department of Defense (DoD) now require EVM on all performance-based contracts in excess of \$20 million.

EVM promotes the integration of cost, schedule and technical processes with risk management, to improve the efficiency of program management. When done correctly, EVM serves as an early warning system that can tell when a project is falling off track from a time or cost perspective. “The measurement of earned value also helps temper optimistic forecasts on specific contracts,” said Bill Wencel, Senior Project Management Consultant at Management Concepts Inc., Vienna, Va. Government contractors must build a performance measurement baseline, with detailed cost and schedule information spanning the life of the project. Earned value is derived from measuring actual costs and time spent, against the contractor’s original baseline plan.

As the federal government strives to improve transparency and accountability, it’s not surprising that a growing number of government contractors are required to demonstrate EVM capabilities, tracking and reporting on their progress on all types of federal contracts, including those that are part of the American Recovery and Reinvestment Act of 2009.

Why EVM?

The EVM concept has been around since the 1960’s, used by the DoD as a central component of the Cost/Schedule Control Systems Criteria (C/SCSC). The Office of Management and Budget (OMB) and DoD now recognize the American National Standards Institute/Electronic Industry Association, ANSI/EIA 748 (32 guidelines) to ensure contractors:

- Have and use effective, integrated, internal management systems of their choosing;
- Make available valid, accurate and timely data from

that system for both contractor and government managers.

The DoD requires program managers and integrated product teams to use earned value management, “to better track progress and spending on defense contracts, and to ensure each organization gains real value from its investments,” said David Kester, Director of the EVM Center, within DCMA’s Engineering and Analysis Directorate. DCMA’s EVM Center ensures contractors field an ANSI-748 compliant EVMS. EVMS ensures the development of a Performance Measurement Baseline (PMB) using objective measures of technical achievement. “The best measure the DoD has for determining the relevance and reliability of cost, schedule and technical performance data is the status of the contractor’s EVMS compliance as determined by DCMA,” Kester explained.

The focus on earned value has intensified in recent years, primarily due to “a laxity, both within government and industry, in terms of properly tracking schedules and expenses on defense contracts in the past 10 years,” he added.

Federal oversight organizations, industry experts and contractors agree EVM provides an effective means to monitor contract cost and schedule performance. Since April 2008, when the DoD lowered its threshold to include performance-based contracts in excess of \$20 million, a wider audience of mid-sized government contractors has been forced to learn about the discipline instilled by EVM – generating challenges in managing and reporting on government contracts. And it’s not solely the mid-sized contractors who are struggling. “Some large federal contractors with billions of dollars in government business each year are finding it difficult to achieve EVM compliance on government audits. This in turn translates to slower payment and more arduous auditing,” said Nadine Massih, managing director, Government Contract Consulting, at RSM McGladrey, Inc., in Vienna, Va.

While the concepts involved in EVM appear simple, it takes rigor and a ‘disciplined management commitment to accountability’ to accurately track project hours, and costs to a level of detail that will comply with EVM regulations. “As we continue to grow our federal government business we’ve found in recent years, nearly every RFP asks to describe our EVMS, which makes a formal EVMS important for us,” said Elma Levy, co-founder, Dovèl Technologies, Inc., a veteran

An Earned Value Management Update

software development and systems integration firm in McLean, Va.

Dovèl uses Microsoft Dynamics® ERP Financial Management and Project Accounting Solution, along with Microsoft Project® and DecisionEdge¹ to accurately gauge earned value performance. Dovèl added EVM software from DecisionEdge a year ago, to integrate with Microsoft Project and more accurately track the earned value of two separate software development projects for the Food and Drug Administration (FDA). Dovèl COO Frank Wilkinson maintains the company has always used EVM primarily via earned value data outside of the Dynamics ERP system. This is because, “most financial and accounting systems weren’t built with EVM as a central component,” he said.

Additional training was needed to directly feed the EVMS. “For example, the structure of charge numbers must be consistent across our organization, and focused effort was required that simply couldn’t be accomplished on an ad hoc basis,” he explained.

As Dovèl executes on contracts, formal quarterly reviews are required under Dovèl’s Capability Maturity Model Integration (CMMI) Level 3 processes, during which the integrator reviews financial and other quality metrics. Adhering to CMMI standards ensures that Dovèl’s projects are implemented according to a repeatable, high quality process. “After incorporating EVMS into our CMMI project management processes, we’ve been able to readily identify areas of risk and highlight areas that require our immediate attention,” Wilkinson said.

EVM: What it Takes

Industry observers claim the rigor and management commitment required may unfortunately dissuade some companies from bidding on government contracts. EVM reporting requires training and resources to effectively track each step in a contract’s fulfillment, and manage cost accounting along the way. In defense contract requirements, contractors must implement effective management processes to meet all of the DoD’s 32 EVMS Criteria. Luigi D’Amato, a Partner at Tatum, LLC, a government contracting consultancy in Washington D.C., maintains that while full EVM compliance can be difficult to achieve, “a robust accounting system such as the solution provided by Microsoft, can help most government contractors achieve EVM compliance,” he said.

Once a contract is awarded, an Integrated Baseline Review (IBR), conducted by the government program manager and the contractor, verify the realism and accuracy of the baseline plan, assessing risk and ensuring complete coverage of the statement of work, logical scheduling of the work activities and adequate resourcing. As a precursor to the IBR process, the

program team performs a Schedule Risk Assessment to predict the level of confidence in meeting program milestones. The IBR, coupled with the risk analysis, assesses the achievability of the performance measurement baseline and provides managers with early-warning indicators of program risks and opportunities. Per DoD policy, the IBR process should be conducted not later than 180 calendar days after contract award. DCMA’s Kester asserts that EVM is a management function not unlike systems engineering in its importance for managing risk. Effective implementation and use of EVM requires analytical analysis to convert Contract Performance Report (CPR) and Integrated Master Schedule (IMS) data into actionable management information. Kester said, “Program managers must show a willingness to accept bad news in order to navigate the space between the cost, schedule and technical parameters of a program.”

For cost and incentive type contracts valued between \$20 million and \$50 million, contractors must field a system that adheres to the concepts and principles of EVM. For cost and incentive type contracts over \$50 million, DCMA’s EVM Center must certify the contractor’s EVMS as being compliant with the ANSI-748 guidelines, a process that DCMA’s Kester admits currently tends to drag on. Contractors with EVMS certification credentials from the DCMA don’t need to go through the EVMS certification process. Only contractors not previously certified, or found lacking in maintaining a viable EVMS, must go through the DCMA certification process.

Not Always a Perfect Fit

Despite its benefits in cost plus contracts, there are situations in which EVM isn’t a good fit. “In typical seat management contracts, in which a government institution is paying a contractor for employees to perform routine, ongoing tasks, it can be extremely difficult to report on earned value,” said Dovèl’s Wilkinson.

CALIBRE, Alexandria, Va., an employee-owned management and technology services company, primarily from contracting with the DoD, has 115 project managers working on as many as 300 projects a year. The company depends on Microsoft Dynamics ERP to accurately and reliably allocate its costs according to DoD regulations. The contractor is currently working to achieve CMMI certification at level II, using specialized software that incorporates EVM project management components, and provides compliance checking to ensure CALIBRE’s work achieves compliance with DoD regulations, said William Barkovic, Vice President and CTO of CALIBRE. So far, Barkovic explained, because CALIBRE’s expertise is focused primarily on providing technology services, the company hasn’t been awarded

many contracts featuring an EVM requirement.

When it comes to firm/fixed price contracts, EVM doesn't generally mesh well, because each contractor's cash flow must be stretched to fit the length of the contract. Although highly popular, on DoD contracts, DCMA's Kester explained current DoD policy allows for the removal of an EVM requirement if the application of EVM doesn't make sense. "A government program manager can ask for a waiver from the program decision authority as part of the program acquisition strategy," Kester explained. If the EVM requirement is waived, the government program manager must implement an alternative method of management control to provide advanced warning of potential

performance problems. "Waivers to the EVM policy should be the exception not the rule," Kester said.

Stan Soloway, President and CEO, Professional Services Council expressed concern that the federal government appears to be conducting acquisition project management by abdication. In other words, "layering requirements on program officers and contractors, from EVM to ISO 9003, to Lean Six Sigma, to certifications for CMMI, and more – all of which are perfectly legitimate, and, in some cases appear to be proxies for more granular, individual evaluations by the government," he explained.

While changes are inevitable in almost all contracts, the use of EVM on fixed price contracts, "will force

Tips and Best Practices

Here is some helpful advice to assist in the implementation of EVM systems.

TIP: Look for an EVM system flexible enough to provide for varying levels of discipline/rigor, since a \$2 million contract requires less control than a \$100 million program.

TIP: It's key to use a strong accounting system that provides information in as close to real-time as practical. The more connected accounting, project, materials and labor data is to the EVM system, the less re-entry work required to get accurate measurements. Dashboards and other analytic tools can reduce arguments over the validity/timing of data, versus what the results actually say.

TIP: Program managers must be trained in project management as well as financial management to adequately report on schedules/plans and estimates. These managers need more than an accounting background to come up with a basis for their estimates and justify planned expenses.

TIP: When forecasting across several years, your plan may not have the same level of granularity in year 3 or 4 as now, which makes it critical to budget accordingly.

TIP: Education is often needed for managers to understand what EVM provides, and that its not a silver bullet solution for project management.

TIP: Management support is key to establishing policies and rules for doing business on government contracts, which often require organizational changes that, in turn, require enforcement.

TIP: In the EVM planning phase, when estimating costs, the organization's resources that will work on each project must charge their time to each specific work package.

TIP: A prudent project manager must be able to perform tradeoff analysis and demonstrate the impact on a project's schedule, if budgeted costs are suddenly reduced by management. There are still situations in which managers demand sudden cost reductions. A program manager must be allowed to demonstrate how a budget reduction will force the use of less costly resources, for example, to fulfill a contract. The goal is to achieve better decisions using analysis, not intimidation.

TIP: Management must establish control tolerances for government contracts. For example, if costs or timing are accurate within 5 %, there is no need for further action. If the numbers vary by 10 % or more, all teams must meet to address variances.

Source: Bill Wencel, Senior Project Management Consultant in the Enterprise Learning Solutions Division of Management Concepts Inc., Vienna, Va. The company uses Microsoft Dynamics to address government contractor financial management needs.

contractors to build hefty scope management and change management practices to earn any profit from government contracts,” Wencel explained.

Kester explained that while OMB policy doesn’t exempt fixed price contracts from EVM requirements, “DoD doesn’t, as a matter of course, use fixed price contracts for development and integration efforts.” He added that within the DoD, use of fixed price contracts is typically limited to mature, low-risk production work, “which uses other means to manage contract performance,” he explained.

Higher risk development work is generally accomplished with cost plus contracts that require EVM, Kester added. “And low rate initial production, as well as early production contracts tend to be of the fixed price, plus incentive type, which also require EVM,” he said.

EVM Futures

Although EVM is complex and time-consuming, Mark Tillema, president and CEO, Integrated Management Concepts, Thousand Oaks, Ca., who has watched EVM’s evolution since the 1980s, sees a brighter future ahead. The advent of solutions such as Microsoft Project and Microsoft Dynamics ERP already help simplify some complexity, he explained. In the future, Tillema expects a much simpler to use, web-based EVM system that incorporates an organization’s workflow information and will make it easier to visualize a contract’s earned value. For government contractors new to formal EVMS systems, “easy-to-use, web-based systems will facilitate the transition to simpler, more understandable earned value reporting,” Tillema said.

And as earned value concepts take hold, the use of EVM will continue to expand. In the DoD, responsibility for contractor EVMS enforcement is centralized within the DCMA’s EVM Center. In other federal civilian agencies, it’s permissible to use self and third party EVMS certifications. Ultimately, government oversight organizations, agency program offices and industry contractors will likely be forced to hire program management expertise, especially professionals experienced in EVM. “My organization is currently setting up an EVMS certification program, and will expand both hiring and training for EVM professionals,” who will share some responsibility for EVMS compliance, Kester explained, adding that the EVMS review schedule

for 2010 will be released soon.

DCMA is working hard to turn around what has become an area that wasn’t previously well-maintained. DoD-wide, “there’s an ever-increasing appetite for more and better program management to ensure government can properly track schedules, risks and costs,” Kester explained.

For many reasons, government contractors are seeking broader, more integrated solutions, such as those offered by Microsoft. After studying DCAA audit requirements and seeing that government contractors were being underserved in terms of financial management, Microsoft stepped into the market in 2001. Although the software giant initially acquired companies to get started, Microsoft’s commitment today is evident from its investment of more than \$1 billion a year in ERP systems. Today, Microsoft delivers a suite of software products that allow contractors to manage both commercial and public sector businesses. Modern business solutions must be integrated, adaptable and work well with Microsoft Office applications to streamline operational and regulatory reporting processes across a government contractor’s entire business.

Powertek Corp., Rockville, Md., already uses Microsoft Dynamics ERP and is considering an EVM solution built on Microsoft Project, based on advice from partner Pleasant Valley Business Solutions, Reston, Va., which helps government contractors implement Microsoft solutions for federal regulatory compliance. As an 8A contractor that primarily provides IT services to both civilian and defense agencies, Steven Miller, Powertek vice president of finance and operational services hopes to expand the company’s federal business, although the dramatic rise in EVM requirements on government contracts may force not only new software but additional staff time and resources to achieve compliance.

Additional Resources:

For the latest on updates and implementation of EVM, visit the DoD’s web site at: <http://www.acq.osd.mil/pm/>

The Defense Contract Management Agency also offers guidance at: http://guidebook.dcma.mil/248/guidebook_tools.htm

