

Federal Contract Management and Vendors' Readiness

Part Two: Dealing With the Federal Government

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Dealing with the Federal Government

Neophytes will find dealing with the Federal Government perplexing, since the customer in case will act very differently than its commercial counterparts. Also, the additional regulatory requirements impact how eligible contractors are selected, monitored, and paid, and may require the aspiring contracting company to revise internal procedures or enhance its back-office or ERP system. In other words, the chosen provider must constantly prove to the federal customer that it did not cheat on the project, which mandates the use of the accurate cost and schedule data.

Federal contracts can often be fraught with legal snares for the unseasoned providers. Thus, many project-oriented organizations do provide products and services under government contracts, but project accounting for these organizations often requires the use of sophisticated methodologies for allocating and computing project costs and revenues. There are many different types of contracts the government is using and within each of those there are dozens or more variations, whereby each variation will drive its own type of billings, revenue recognition, and requirements for reporting back to the government customer.

The government requires its contractors to collect and allocate cost in certain ways; for example, according to the **Defense Contract Audit Agency (DCAA)** rules, labor costs must be recorded daily. Also, a contractor is required to keep track of several contracts simultaneously, meeting the rules for different types of contracts and being consistent in accounting for a number of indirect costs. To this end, government contractors have long been using *earned value measurement* (EVM), as it satisfies the government's requirement that contractors hold onto a stringent cheat-proof system that can be validated and audited, and because the method produces accurate cost and schedule information.

The primary difference between EVM and traditional 'budget versus actual' cost tracking systems is that the first one can quantify schedule and cost variances separately (e.g., cost variances can be compared directly against the planned cost of the work without distortions in cost variance data that production delays can cause). Also, the cost of an increment of work is identified when it is accomplished in terms of both cost and time schedule. Therefore, EVM's royal capability is early detection and identification of trends and variances to the plan, which enables analysis and decision making while there is time to take corrective actions (or at least to be aware of the situations if time does not permit corrections). As another benefit, instead of merely reporting actual costs, the EVM system predicts them.

Consequently, the defense and other federal markets are particularly complex, as requirements like EVM reporting provide high barriers to entry, and the first step before attempting doing business with the government should be a sensible self-assessment for any contracting provider. The government requires that all eligible contractors are technically and fiscally capable of completing the entrusted job. Thus, before any contract is awarded, the government will have to be convinced that the contractor has the technical expertise to produce the goods and services for which it is bidding to provide, that it has a back-office ERP or accounting system able to segregate costs by contract, and that it is financially viable.

Work Breakdown Structure

Another crucial evaluation factor is the ability of the ERP software in use to identify and accumulate costs by contract and *work breakdown structure* (WBS), which is a product-oriented division of tasks that accumulates cost and schedule data, while in APICS' words, "WBS is a hierarchical description of a project in which each lower level is more detailed". An example would be the company that engineers, prototypes, and runs production of a special product well in advance of finally shipping the commercial product, and that would like to receive prepayments on the milestones reached. Using WBS, it would have to establish budgets – by period and cost element – for subgroups such as software design, mechanical engineering, electrical prototyping, fabrication, final assembly, and so on, whereby a project cost account manager would be responsible for each.

To further exemplify, when any special project starts, project milestones are set up, whereby a percentage of the budget is allocated for each milestone. As a milestone is reached, the project manager wants the project team to prove to him or her that they have met their goal in a specific amount of time and at a specific cost that is, hopefully, within the budget. The project team, on their hand, will also have to prove that they have "earned" the estimated cost of this portion of the project. In other

words, the typical questions like “Are we hitting our project targets?”, “Are we within project budget to date?”, “What is our estimate to completion in terms of both money and time?”, “How do earned value and actual value compare?”, “Do we have acceptable data to obtain prepayments from our customers based on reaching our milestones?” and so on, which are asked on a daily basis, have to be answerable in near real-time.

Thus, any government contracting project-oriented manufacturer has to keep track of almost each and every item and part, when it was purchased or manufactured and for which compartment or task, and when it is due to be sent onto the next station or shipped, in addition to knowing how much it costs and to which budget compartment it must be allocated.

For manufacturers with long production cycles, WBS increases the functionality of project control by enabling more accurate cost tracking at the project level, since the program defines the posting level accounts and the summarization program that allows for multiple-level cost collection and reporting by rolling up costs from the lowest level to the higher levels. The solution thereby lets each department in the organization look at the numbers in the way it wants and needs, as to be able to monitor the actual procurement and production that goes into a project against an estimate both in dollars and hours. These departments should now be able to sum up material, labor, overhead, subcontract, and other direct charges for each individual project and compare those costs against the total estimate for the project, whereby multiple budgets could be provided—original, revised, and current. As costs are collected in WBS accounts, earned value calculations indicate whether each activity and rollup level is running ahead or behind schedule and over or under budget through any given period.

Obtaining the data to provide these calculations should not be difficult in principle, as a project cost accounting system simply needs to capture and record costs through the end of each period, as well as the budgets for each cost element, and the *budgeted cost of work performed* (BCWP) for each period. However, to do so, each cost charge needs to be “stamped” with a time period, and there must be a budgeted amount for each cost element for each time period.

Example of Real-time Project Management Support

Contrary to most generalist ERP products, the product offered by the niche vendor **Relevant Business Systems**, for example, exhibits the following architectural capabilities to support real-time project management and variance measurement:

- Time-stamped inventories, costs, shop orders, purchase orders, requisitions, receipts, sales orders, etc. can be maintained by item number, by project, and by WBS account;
- Costed transactions, including all material movement and labor transactions, are not only the basis for accounting's "business-as-usual" GL journal entries, but they also, in real time, update the project or WBS cost components of material, labor, overhead, subcontract, and other direct costs and selling, general, and administrative costs—which are used in all *actual cost of work performed* (ACWP) and BCWP calculations, even at the WBS level;
- A cross-reference is maintained between the ACWP costed transaction and the GL journal entry; and
- ACWP and BCWP costed transactions are as up-to-the-minute for the project management department as the GL journal entries emanating from the regular back-office departments are for the general accounting department.

Consequently, while Relevant's WBS capabilities easily satisfy government requirements for EVM, the above product architecture results with truly flexible project reporting, without encumbering the GL with an overly complex chart of accounts. It thereby avoids the major drawbacks of trying to force-fit general purpose ERP products to a project-oriented environment such as the already repeatedly mentioned heavy customization, having to go "to and fro" the GL to extract WBS data for EVM (and then not having real-time data), and the inability to look at costs to date on a specific project versus budget to date on that project. For those that are less project accounting astute, BCWP, ACWP, and *budgeted cost of work scheduled* (BCWS) are only some of the major project cost metrics. Still, with them, one can measure any project's performance. For example, comparing BCWS to BCWP provides *schedule variance*, while the relationship of BCWP to ACWP provides *cost variance*.

This is Part Two of a three-part tutorial.

Part One defined the entry of small vendors into federal contracts.

Part Three will discuss the challenges and make user recommendations.