Published in PM World Today - May 2007 (Vol. IX, Issue V)

FEATURED PAPER

Activity Based Costing (ABC) - The Other Side of the Earned Value Coin?

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Forget CMMI®, http://www.sei.cmu.edu/cmmi/ OPM3® www.pmi.org and other "Capability Maturity Models". Want to save yourself and your organization time and money? Then apply this very simple test to see how mature your organization is in using project management "Best Practices". Do you use Earned Value Management and does your accounting system support Activity Based Costing and are you using it?

If you aren't using Earned Value Management and its alter ego, Activity Based Costing, then you are probably not getting the full benefits project management methodologies offer as effectively as you can or should. Worst case, failure to apply Activity Based Costing may well be causing you to outsource work which in reality is a "core competency" (Those activities you do better than others and make money at) and keep in-house work which you are actually losing money on.

So let's start out with a quick primer on both Earned Value and Activity Based Management.

For those new to Earned Value Management, (EVM) it is based on the principle of "Quantum Meruit" or the "value deserved". To select a simple example for illustration, let's use purchasing bananas at the green grocer as the analogy.

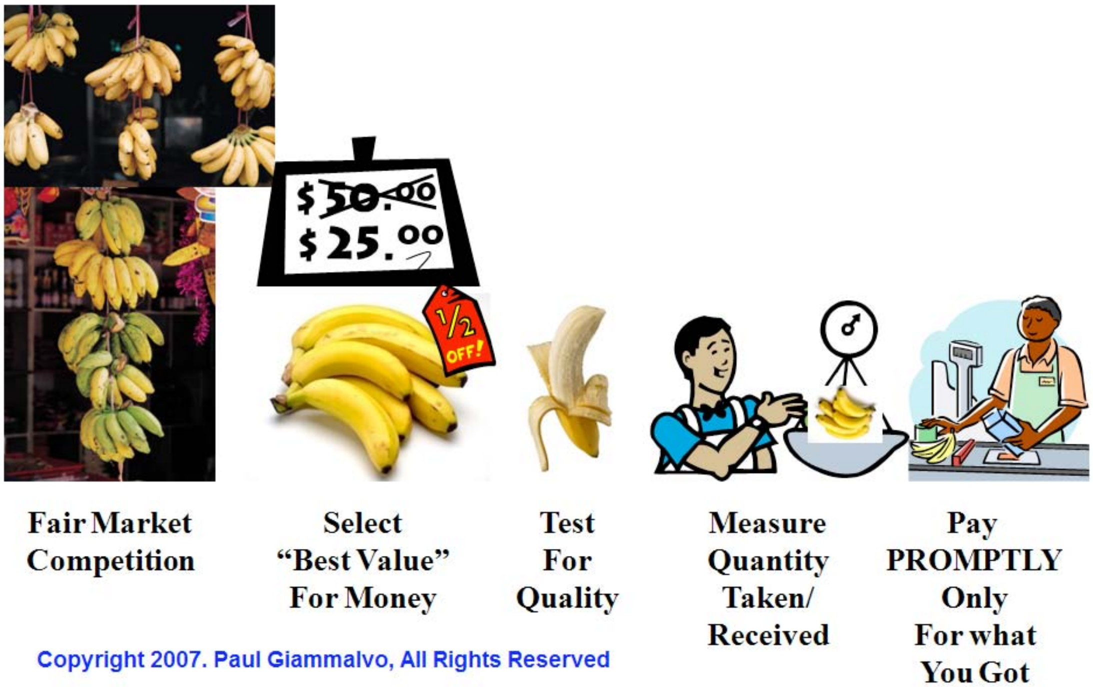

Illustration 1- Earned Value Explained

We walk into the green grocer to purchase bananas. In selecting our green grocer, there must first be a free and open market competition from which we can choose those with a reputation for honesty, good products and service. Before we purchase, we are able to evaluate the observed quality and the unit price, to the point of going out to competing green grocers to compare prices if we deem that appropriate. Once we've selected the bunch of bananas which we feel represents the best value for our money, we are free to test for the quality by eating one. Having made our final selection, the fruit is weighed, and we pay immediately for what we took. No more, no less.

OK, so let's see how our analogy works in project management. Firstly, Earned Value works for either traditional "low bidder takes all" or negotiated contracting approaches. Upon signing of a contract, one of the first requirements is for the CONTRACTOR to provide the OWNER with a "Schedule of Values". (usually using either a "Unit Price" or "Milestone Value" cost breakdown) (Reference EJCDC Document 1910-23 "Notice To Proceed" and AACE's Skills and Knowledge of Cost Engineering, 5th Edition, pages 14-2 through 14-5).

In order for a contractor to get paid, 3 criteria must be met-

1) The work must have been PHYSICALLY COMPLETED. This is evidenced by site visits or inspections. (MBWA- Management By Walking Around)
   In our analogy, this is the act of the consumer selecting the bunch of bananas and walking to the weighing station.
2) The work must be in "SUBSTANTIAL CONFORMANCE" to the specifications. This puts the burden on the contractor to prove that the work he is billing for is in "substantial" conformance to the specifications. In our example, the green grocer offers to allow our consumer to taste one of the bananas.
3) The contractor must have met or fulfilled the "SHALL CLAUSES" in the contract. In our analogy, this is illustrated by the green grocer and the customer weighing the bananas together.

IF all three criteria have been met, then the OWNER (Buyer) MUST pay promptly for the work which has been completed or face "late payment penalties" of about 1.5% per month. In our analogy, this is shown by the customer proceeding to the check-out counter.

So where does Activity Based Costing fit into the picture? To explain beforehand, we need to be clear on the terminology. The "Selling Price" is what the CONTRACTOR or SELLER charges the OWNER or BUYER. The contractor's "Selling Price" includes the direct costs, the indirect costs, overhead, contingency and profits. The selling price from the CONTRACTOR becomes the OWNERS or BUYERS COST. To reiterate, the CONTRACTORS SELLING PRICE is exactly equal to the OWNERS COST for that product or service.

To explore the importance of Activity Based Costing, let's return back to our green grocer. When he is calculating the "selling price" of the various fruits and vegetables, do all products he carries have the same shelf life? Do all require the same handling? Do all have to be refrigerated? Sprayed? I think most would agree that as these variables are not the same for each product that it would be "unfair" to consumers (buyers) if the Green Grocer were to allocate these kinds of costs on a pro-rata basis on all the products he sells? Can we also agree that in doing so, it would unreasonably burden products (like Apples?) with an unfair share of the overhead? Explained another way, as the bananas have a much shorter shelf life than apples, should the high spoilage rate for bananas be reflected in the pricing of apples? Or should the fact that lettuce requires almost constant spraying and refrigeration mean the bananas and apples shoulder those costs as well?

I think it obvious that the answer is no to all these questions. Yet in many companies today, this is exactly what we are doing when we allocate overheads on a pro-rata or uniform distribution basis. By allocating overheads on this basis, we are expecting our clients (customers or buyers) of certain products or services to assume an unfair burden. In the highly competitive global market, this may well be enough to price our products or services out of the market. Worst yet, it may very well bankrupt our green grocer, especially if the demand increases for those products he is offering which are being subsidized by other products he offers?

Another important point in implementing Earned Value: As contractors "live and die" by their cash flow, proper and appropriate use of Earned Value helps to ensure that contractors, sub-contractors and vendors stay financially healthy, ensuring future competitive bids to owners, and does this in a manner which is nearly risk free to the owner, as the owner paid only for what she got, no more, no less.

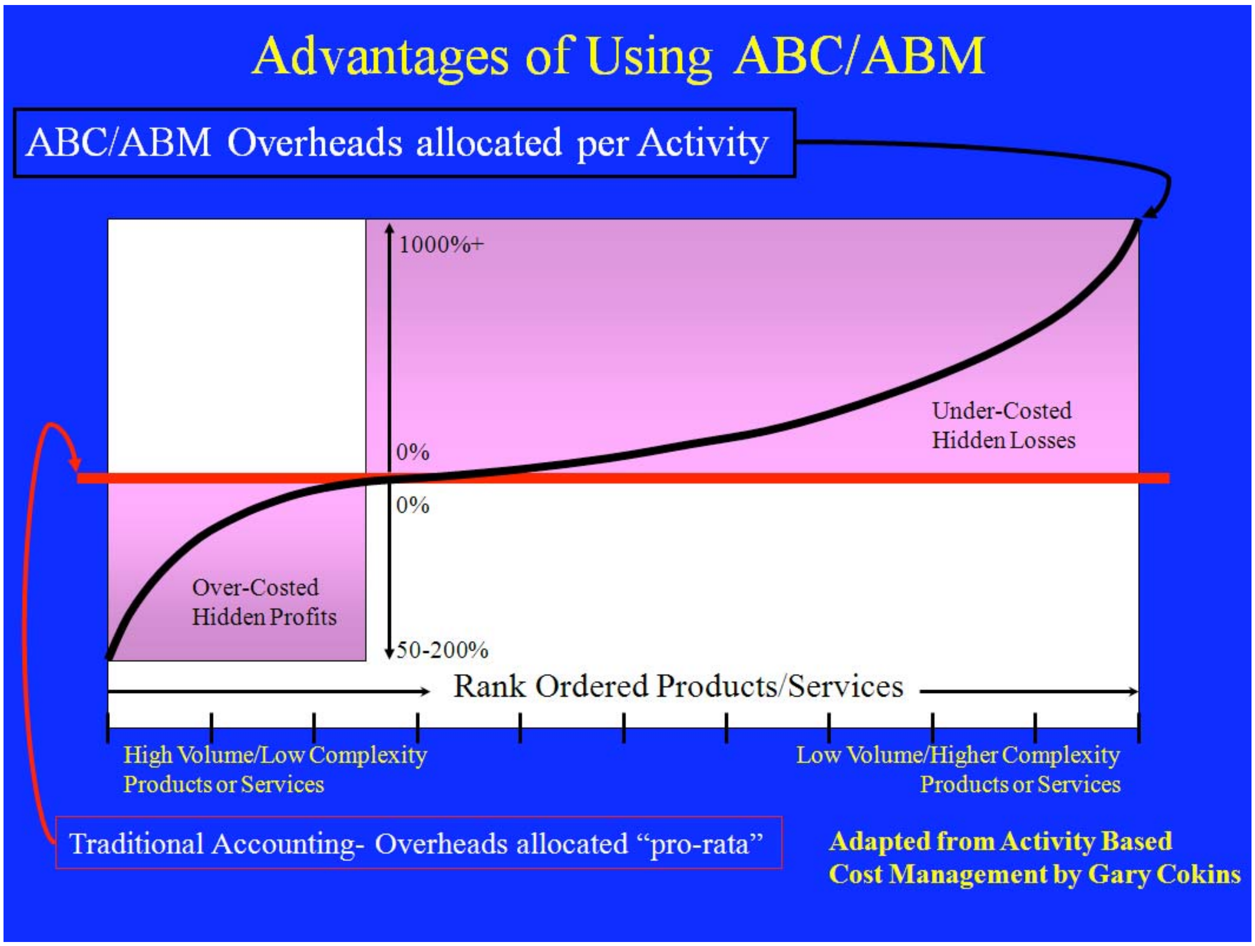

Illustration 2- Activity Based Costing Explained

As Gary Cokins has shown in Activity Based Cost Management- An Executive's Guide (Cokins, 2001, page 14, Fig 1.5) using traditional accounting approaches results in high volume, low complexity products or services being OVER costed, (by as much as 200%) while low volume/high complexity products or services are being UNDER costed by up to 1,000%) As we know that project management, by definition, produces "unique" products or services, and project management is a methodology ideally suited for developing highly complex products or services, doesn't it make sense that using Activity Based Costing is the ONLY accounting method which will fairly give us a selling price that reflects the fair and true costs associated with that project or service?

To summarize, given that activities are the very basis for project management as a delivery method; given that earned value management is the only fair way to compensate contractors for doing work in substantial conformance to the required specifications while fulfilling the contractual obligations, and given that contractors are competing in an ever more competitive global market, doesn't it make sense that like love and marriage, Activity Based Costing and Earned Value Management "go together like a horse and carriage"?

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