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“Cost information from a well-implemented ERP system is extremely précis. Unfortunately; it’s also very inaccurate and mostly irrelevant.” – Douglas T. Hicks, CPA

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Dear Executive:

21st Century organizations invest a tremendous amount of time and resources in the implementation and maintenance of their ERP Systems. With such a major investment in information technology, it’s no wonder management strives to gain the maximum advantage possible by using their system to provide information that will enable them to optimize the company’s profitability. Unfortunately, the design of ERP software constrains the type of information management can obtain. Although software developers attempt to design systems flexible enough to accommodate everyone, such a quest is impossible. Even very simple organizations must make compromises to fit the basic economics of their business into the constraints inherent into a one-size-fits-all software package. In doing so, they compromise their ability to make the quality decisions necessary to thrive and grow in an ever more complex and competitive marketplace.

Nowhere is this truer than in the costing modules imbedded in most ERP systems. Because almost all purchasers of ERP systems are required to comply with GAAP (Generally Accepted Accounting Principles) for financial reporting, costing modules must be designed to meet the minimum demands of financial accounting. They are created to be effective “cost accounting” modules. They provide for the accurate determination of entity-wide inventory value and cost of goods sold calculations. But the cost information generated by a manufacturer’s GAAP-based cost accounting system is not an effective tool for supporting management decisions. *Cost accounting* information is not *decision costing* information. Figure 1 lists a comparison of the requirements of “cost accounting” to management’s need for “decision costing” information.

GAAP-based cost accounting limits the costs incorporated into a manufacturer’s cost system to those costs deemed to be “inventoriable” – those costs required to manufacture the company’s products. Direct materials, direct sub-contract manufacturing, direct labor, and GAAP-defined manufacturing overhead are permitted. The balance of a company’s costs are then considered “Selling, General & Administration” and accumulated by function in the general ledger, but not linked to any of the processes, products, product lines, customers or markets they support. They are, in effect, omitted from the manufacturer’s cost accounting system. In an ever more complex manufacturing environment, however, the ability to measure and assign non-manufacturing costs (material acquisition, fulfillment, distribution channel maintenance, market support, new product or customer launch, etc.) is a critical prerequisite for accurately measuring product, product line, customer, or market profitability.

Cost Accounting	Decision Costing
<ul style="list-style-type: none"> * includes only "inventoriable" costs * satisfied with entity-wide inventory and cost of goods sold calculations * populated with GAAP-based cost data * locked into one or, where alternative rates are possible, two sets of costing rates * provides for only one set of "fixed vs. variable" cost assumptions * permits the direct labor-based assignment of indirect manufacturing costs even when such an assignment is inappropriate * focuses on "fully-absorbed" costs 	<ul style="list-style-type: none"> * must include all of an organization's costs * demands accuracy at process, product and customer levels * must provide for the use of economic cost data - "different costs for different purposes" * requires the development of rates under an unlimited number of assumptions * must provide for the fact that the definitions of "fixed" and "variable" are situation specific * requires the assignment of indirect manufacturing costs based on the organization's operating realities * must provide both for the measurement of both "fully-absorbed" and "incremental" costs

Figure 1 – Cost Accounting vs. Decision Costing

The over-generalized, minimalist methods of indirect manufacturing cost assignment permitted under GAAP (such as direct labor-based assignment of indirect costs to products) and the non-assignment of non-manufacturing costs it allows may provide effective measures of overall company performance, but they seldom provide for accurate measures of cost for sub-sets (products, product lines, customers, markets, etc.) of a manufacturer's business. These methods' acceptance under GAAP provide decision makers with a misplaced confidence in the cost-related outputs from their company's ERP system. In addition to generating inaccurate product costs, they also fail to accurately measure the cost of critical processes or customer services resulting in overlooked opportunities to improve operations, manage customer expectations, or negotiate price adjustments when customer requirements change.

By their nature, cost accounting systems are built on the assumptions that "costs are costs" as defined by GAAP. In the real world of business, however, the definitions of cost are not static; they are dynamic. Decision makers require a flexible definition of costs. Should a decision be based on last cost, current cost, or future cost? Should the distortion of cost inherent in using GAAP-based depreciation expense be modified for the decision? Should a cost of capital be incorporated into costs for the decision? Are costs from the period used for the cost accounting system representative of the long-term, sustainable economics of the business? Is the volume and mix assumption being used in the cost accounting system appropriate for the decision at hand? Decision makers need a great deal more flexibility in defining costs than is possible using the cost accounting system incorporated into their company's ERP system.

A similar problem exists with the rates used in the cost accounting system. Most ERP systems allow for only one or two sets of rates. Decision makers, however, may need rates related to a unique volume and mix of business for a specific decision, rates for future periods when the products being quoted will actually be manufactured, or rates that incorporate economic costs – not GAAP-based costs – for strategic decisions. ERP systems are not designed to project costing rates under possible future operating assumptions and then incorporate those rates into the analysis of a singular business decision.

Most decisions require the determination of "incremental" costs. Cost accounting (and ERP) systems generally include hard-and-fast definitions of "fixed" and "variable" costs that can

be used to support such decisions. In reality, however, the definitions of “fixed” and “variable” are not hard-and-fast. Their definitions are situation specific. A great deal more flexibility must be provided to decision makers when determining the incremental impact of the decisions they are evaluating.

As noted earlier, GAAP allows almost any minimalist method of assigning indirect manufacturing costs to products provided that method results in an accurate “company-wide” inventory valuation and a fairly-stated “company-wide” cost of goods sold calculation. Since compliance with GAAP is mandatory while supporting management with accurate, relevant and actionable cost information is optional, a vast majority of manufacturing companies have chosen to cleave to the direct labor- or machine hour-based cost accounting systems that supported them a half-century ago when their processes and markets were much simpler. Since they need to support the financial reporting requirements of GAAP, ERP systems are designed to effectively support such direct labor- and machine hour-based costing systems – systems that have been duly implemented in innumerable companies where such an assignment of costs has no connection at all to the fundamental economics that underlie the company’s manufacturing processes.

Having already sunk hundreds of thousands – if not millions – of dollars, as well as the reputations of many individuals, into the implementation of their ERP system, most manufacturers are disinclined to 1) admit that the cost information generated by that system to support critical decisions is usually inaccurate, mostly irrelevant and often misleading or 2) reopen the system to what could be costly and time-consuming changes. Fortunately, neither of those things need be done to significantly add to the value-creating ability of the existing ERP system. All that need be done is to link that system with an economically valid and dynamic, off-line cost model.

The Economically-Valid, Off-Line Cost Model

An economically-valid cost model must be representative of the fundamental economics that underlie a company’s business. It must be capable of both projecting the cost impact of decisions and actions being considered by management and accurately assigning those costs to the company’s key processes, products, services, and customers. It must also be capable of incorporating economic costs, not just financial costs, into the cost measurement process. Although this might seem like a daunting task, it is actually well within the resource constraints of any organization. It’s not simple and requires some intellectual rigor, but the time and financial resources required are minimal compared to the value it provides to the organization.

The first – and most important – step in the process is the design of a conceptual cost model that parallels the cause-and-effect relationships that underlie the operation of the business. This is best done by applying the same concepts on which activity-based costing is based; products and services cause activities and those activities cause costs. This doesn’t mean the organization needs to implement an ABC system, just that it base its model on the same principles.

The design of the model is critical. A poorly-designed cost model will still generate inaccurate information even if the data populating it has been measured with great precision. On the other hand, a well-designed cost model will generate accurate information even if most of its data consists of reasonable estimates. After all, precisely measuring the wrong things will never give you an accurate measurement while approximating the right things will provide the insights need to enhance the quality of cost-based decisions.

By incorporating those features of the conceptual model that fit within its constraints, the ERP system will allow for more comprehensive and accurate product and customer cost and profitability information, provide additional relevant key performance measurements, more accurately identify and measure a manufactured product's routed steps, and generate information that can be incorporated into more comprehensive, informative and actionable management reports.

Conclusion

ERP systems are a vital means of capturing the data and providing the information necessary to manage a complex business organization. The constraints inherent in such a complex system, however, severely limit the quality of cost information needed to support the myriad of cost-based decisions faced by management. By developing a conceptually-valid, cause-and-effect-based cost model of the organization, constructing a physical model to perform computations in accordance with that model and then marrying that model with the company's ERP system, an organization can enhance the quality of its decision support system; a move that will ultimately improve the quality of its decisions and enhance its bottom line.

In the 21st Century's complex and competitive business environment, organizations with superior cost information will have the wherewithal to not only survive, but to thrive and grow. As Bob Dylan might put it, *"If your business to you is worth savin', then you'd better start swimmin' or you'll sink like a stone, 'cause the times, they are a changin'."*

By the way, please note our new address – 6905 Telegraph Road, Bloomfield Hills, MI 48301 – and new fax number – 248.792.6026. Telephone numbers, e-mail addresses and the like are all the same.

I hope you all survived the winter in good shape and have already begun a successful 2012. As always, feel free to forward a copy of this letter to anyone you believe might be interested (or at least amused) and do not hesitate to contact me if you have any questions or comments.

Very truly yours,

Doug

Douglas T. Hicks, CPA
President