

# LET'S CERTIFY THE QUALITY OF A MANAGER'S INFORMATION

BY GARY COKINS, CPIM; K.J. EUSKE; GEORGE MILLUSH; PETER NOSTROM; AND ALAN VERCIO, CPA

**W**hy do nations around the world require financial or cost audits performed by certified public accounting firms like the Big 4 to attest to the compliance and accuracy of an organization's financial reporting, but no such certification audit exists for processes, procedures, and practices that produce internal managerial information used for decision making?

For one thing, some executives believe that much of their cost structure is composed of sunk costs, such as purchased equipment, and fixed costs, such as office staff. They believe that a substantial portion of their costs can't be significantly impacted, so they don't see sufficient value in understanding so-called nonvariable costs. The flaw in this thinking is that all capacity is eventually adjustable with time and that there are modeling approaches—not available with traditional managerial accounting practices—that can assist in adjusting resource capacity expenses. In other words, the more important decisions are strategic decisions where the longer time frame allows many of the resources to be variably adjusted.

Additionally, there's a commonly accepted belief that internally managed information systems are probably *good enough* for decision making because their design is controllable by a management team that obviously needs the internal information. Those managers assume that good data is continuously being provided.

## IS GOOD ENOUGH REALLY ENOUGH?

Who's to say that operational and cost measurement data is "good enough"? How do you think most managers would answer these questions: "How satisfied are you that the information your organization provides you and your coworkers is sufficient for making good decisions?" "Do you believe you have financial transparency and visibility from operations?...regarding the organization's technology?...regarding its supply chain management?... regarding its human resources function?" When pressed, most managers are dissatisfied. Many complain that they're drowning in data but starving for information. They complain that they get data that communicates *what* happened, but it isn't structured or transformed into information in a way to help them also understand *why* something happened and *what best actions* to take.



## WHO CARES ABOUT MANAGERS' INFORMATION NEEDS?

Who's looking out for the best interests of managers and employee teams? We would like to think it's the accountants. But evidence from a survey by the Institute of Management Accountants (IMA®) and Ernst & Young (E&Y), titled *2003 Survey of Management Accounting*, revealed that the majority of accountants acknowledge their cost information is significantly flawed in terms of cause-and-effect relationships although the cost information is precisely accurate in terms of accounting for all the resources used. There's an abundance of data but a paucity of information for decision making, and incentives to alter this situation are few.

The executive team is concerned with bigger problems, so high-level summarized reports provide the information they need. You might think the information technology folks would care since information management is their job. But IT people typically focus on the technology, not the relevance of information in the context of good decision making.

The margin for error in decisions gets slimmer every year. Transactional data is *not* information—it's only the starting point to transform data into information. And if the transformation doesn't occur or is flawed, then poor decisions are inevitable, and the enterprise performance won't achieve its full potential. Then managers, employee teams, and shareholders are shortchanged.

## A NEW TYPE OF ASSESSMENT

Some might ask, "Don't regulations or certifications such as ISO 9000, the Malcolm Baldrige Award, the European Foundation for Quality Management (EFQM) Award, or the Sarbanes-Oxley Act (SOX) help assure that relevant data is provided to decision makers?" Others might think that such popularly accepted assessments from quasi-standards-setting bodies somehow cover the quality of an organization's operational data and cost measurement information. But they don't. The assessments are excellent for determining if an organization has sufficient controls in place and if it is complying with regulations. The method used by the assessments is based on first asking "Do you have a defined process?" and then "Do you adhere to it?" But what if the process is poor or wrong? Those assessments don't judge that condition. The focus is on identifying the presence of a process, not how effective it is. And even if someone could judge processes, the assessments don't do an in-depth analysis of the foundational data or whether the information is valid, flawed, or incomplete.

The assessment we're proposing in this article is designed to measure the quality of operational data used for planning and execution and to measure the quality of measured cost information used for budgeting and decision making. Its primary purpose is to surface gaps between an organization's existing and potential data, information, processes, procedures, and practices and to provide prescriptive advice to mitigate deficiencies and close those gaps. It isn't designed to be a report card to punish organizations that may receive a low assessment score.

A secondary purpose is to highlight any absence of consensus and the existence of internal inconsistencies where one function claims it provides or receives different or no information described by the other function with which it interacts. For example, Purchasing asserts that it provides meaningful input to Production regarding supply capabilities. The assessment would disclose whether Production regards the information as compliant with its requirements for decision making. This provides an opportunity to improve the communication

between the two. If one of the two functions misunderstands the other, the assessment reveals the differences in the perspectives.

Who should be assessed? The assessment could be an enterprise-wide one, a department one (e.g., an IT shared center), or a subcontractor assessment where the latter follows the same mission of the enterprise, behaving as a “business within the business” to serve its customers.

We’re proposing two assessments: one for Operations and the other for Finance. (When this article refers to “Operations,” we don’t mean only employees of the production functions. We mean all employees involved with distribution, sales, marketing, and those administration activities related to fulfilling customer needs.)

The reason for two assessments is that incurred costs are a consequence of operational decisions and their resulting impact. That is, cost information is a reflection of operational data, and cost information can’t be better than the operational source data from which cost measurements are derived. Therefore, a cost measurement assessment must be coupled with an operational data assessment. Said another way, financial transparency is dependent on operational transparency.

## PROFESSIONAL ORGANIZATION INVOLVEMENT

We hope that several accounting and operations associations and societies globally will participate in the final development of the assessment instrument and its deployment and development of certification examiners who will actually do site inspections. Thus far we’ve received expressions of support for the effort from the American Institute of Certified Public Accountants (AICPA), the Society of Management Accountants of Canada (CMA Canada), the Institute of Internal Auditors (IIA), and IMA. While we value the encouragement of the accounting organizations, expressions of support from societies with members who are primarily in operations are vital for the success of the project. The initial plan is to test and revise the assessment survey with the input and support of the accounting and operations organizations and then to proceed with a formal certification program.

A major reason to introduce the rigor of a formal assessment tool to judge the efficacy of an organization’s operational costs and cost measurement is the prevalence of:

- ◆ Organizations with primitive resource capacity planning methods, especially methods for addressing staffing levels and purchases. They tend to be reactive rather than proactive, thus experiencing the consequences of shortages, service-level deterioration, or unnecessary

costs relative to demand. As an example, technology shared services may display inadequate financial and operational transparency. The lack of driver-based transparency limits the insights necessary for capacity supply-and-demand planning. The result is a default to reactive capacity decision making.

- ◆ Misallocated indirect expenses to calculate product and service-line costs. If capacity planning isn’t in place, drivers will be missing that associate the number of resources (supply of capacity—people, equipment, space) with the work required of the work center (demand for capacity). Without drivers provided by Operations, Finance must allocate cost based on overhead pools and arbitrary allocation techniques, or they must create their own cost drivers. Either solution is likely to misallocate costs to products and processes.

- ◆ The relative absence of tracing “cost-to-serve” expenses for channel and customer profitability reporting. This information is considered increasingly important because, arguably, the more important information is below the gross margin line.

Despite the absence of any clamor for an assessment of data quality, we believe there’s a compelling case for its value.

## WHO SHOULD ULTIMATELY CARE ABOUT MANAGERS’ INFORMATION NEEDS?

So far, we haven’t answered the question, “Who will care about managers’ information needs?” We rationalized why sufficient caring won’t come from the organization’s accountants, executive team, or IT. You would think that at least a CFO, CEO, or CIO would be the ombudsperson for managers, but they already have other agendas. Then who should care?

If we look to the history of the ISO 9000 certification movement, it was driven by customers. Initially it was the manufacturers near the back end of the supply chain who needed much greater assurance regarding zero-defect deliveries from their suppliers of components and raw materials. Manufacturers no longer could tolerate a supplier’s broken promises—they wanted an objective-third-party’s certification that a supplier had implemented processes and procedures to mitigate shipping anything that didn’t meet specifications or was defective. ISO 9000 certification addressed this and eventually spread to the service industries as well.

But a measure of the quality of internal management information isn’t available or accessible for trading partners in a value chain to evaluate each other. And why

should they care? The customer's indication of realized compliance, even with an ISO 9000 certification, is with the quality of the delivered outputs.

It's our opinion that the strongest and loudest advocate for an Operational Data and Cost Measurement Assessment should be an organization's board of directors. The board already has a fiduciary responsibility, and it relies on a financial audit committee to assure that the financial controls prevent fraud and that the stakeholders' investment isn't destroyed. But there are no standards or compulsory regulations for internal management accounting practices to mirror operating processes so that the accountants don't violate the basic cause-and-effect principle for calculating costs. The two facets of oversight—(1) overseeing that sustainable profit growth comes from managers at all levels having good operational data and cost measurements and (2) visibility to make good decisions—are congruent with the board's other responsibilities.

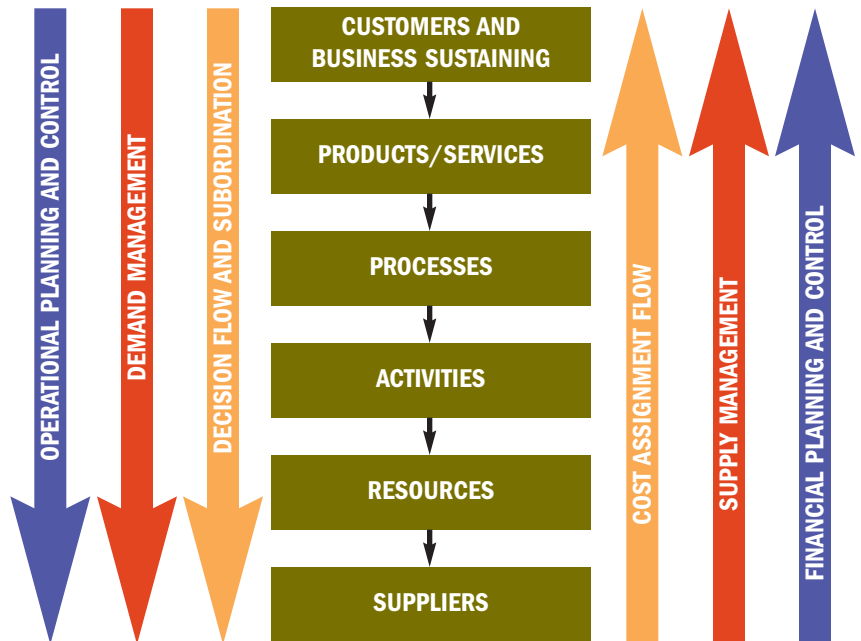
Other professional societies have much broader assessment criteria than what is proposed in our Operational Data and Cost Measurement Assessment. For example, the Malcolm Baldrige Award examines leadership, strategic planning, consumer and market focus, knowledge management, human resource focus, and business results performance measures. Other assessments entail governance, partnership management, and corporate social responsibility. Our assessment focuses exclusively on a rigorous examination of data generation and how the data is transformed into decision information.

### THE QUEST TO MATCH DEMAND AND SUPPLY OF RESOURCES

Our evaluation begins with Operations. The operational assessment tool has more than 200 questions. As illustrated in the left-hand side of Figure 1, the operational data assessment evaluates each to/from relationship across an organization's internal and extended value chain from the end customer to the suppliers and each participant in between. These participants are discussed in terms of

## Figure 1: Operational Data and Cost Measurement Data Flow

In each decision domain, data is needed for operational planning and cost measurement.



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their different decision domains.

The downward arrows indicate that the demand for resources begins with customers. Ideally, the supply and availability of the correct level and capability of those resources are well managed. Problems occur when resources aren't well managed. Examples of problems include product shortages, poor customer service, or missed opportunities for more sales. Have you ever walked out of a store because it had other products but not the one you came to purchase? You get the idea.

The operational assessment for the quality of data entails three types of queries:

- ◆ **Describe** how the organization addresses the “issue” raised in the operational data assessment question.
- ◆ **Explain** the rationale for why the organization took this approach rather than other approaches.
- ◆ **Demonstrate:** Provide tangible evidence that the organization performs according to what was described in the answer to the first question (i.e., walks the talk).

The “issues” raised in the first inquiry address a whole range of requirements, such as how data is structured (e.g., customer segments), relationships (e.g., which product requires which processes), consumption rates

(e.g., the unit-level rate of what's needed), and a whole host of concerns dealing with administration of each of the topics just described, such as policies, standards, training, tools, controls, quality assurance, and improvement methods.

As illustrated in the right-hand side of Figure 1, the cost measurement assessment evaluates the same to/from relationships of the decision domains across the same value chain for Operations. It does so because the premise is that costs must “mirror” Operations. But the purpose of the cost measurement assessment is to evaluate how well Finance reflects and monetizes the consumption of the resources. That is, how good is the mirror?

The upward arrows in Figure 1 provide the cost measurements that trace (not allocate) how resource expenses are consumed. When costs are measured well, they also provide “cost visibility” of the details. Cost visibility (often called cost transparency) enables questioning, analysis, discovery, and problem solving. When costs are “hidden,” it's because reported costs are excessively aggregated or summarized, and this impairs decision making and pursuit of improvements.

## YOUR EXISTING CONDITION ESTABLISHES A STARTING POINT FOR IMPROVEMENT

Figure 2 uses a grid to illustrate the relationship between operational data and cost measurements. This grid is a high-level summary. The two summary scores of an assessed organization will be located somewhere on the grid as a single point of intersection.

◆ **The horizontal axis displays the quality of the operational data.** The scores for this assessment improve from left to right. They improve because the organization evolves from a worst case of little or no data, to a condition of scattered and unstructured data, to ultimately all the relevant information, including forecasts, that is tightly integrated.

◆ **The vertical axis displays the quality of the cost measurement system.** Quality is usually synonymous with cost accuracy, but it also includes other characteristics such as timeliness, accessibility, and scope. A broader scope means going beyond measuring product and standard service-line costs and includes customer-related “cost to serve” from selling, distribution, and administration expenses. As assessment scores improve from bottom to top, the organization evolves from a worst case of having only expense data (such as payroll) and purchasing

expenses (that may be excessively aggregated), to calculated yet still flawed or incomplete costs (e.g., product costs, but not channel or customer costs), to costs derived from informal estimates, to costs derived directly from operational data. In summary, the quality of cost measurements clearly depends on the quality of the operational data.

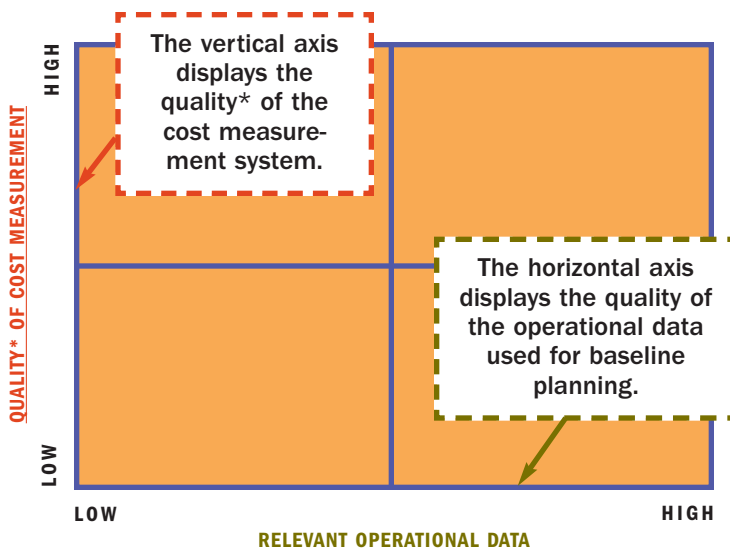
The executive running Operations should have the organizational responsibility for the operational data, and the CFO is responsible for the cost measurements and visibility.

## NOBLE EFFORTS BY CARING ACCOUNTANTS

At this point, you might ask, “Can any organization be located in the extreme upper-left quadrant if there's no operational data? Isn't it a nonviable or invalid location?” The answer is the position is attainable because of the mechanics of accounting. Here's why. By law, for external financial reporting, including tax reporting, an organization must at a minimum record its financial transactions each time period. Therefore, an organization's total expenses will exist, and, generally, you can presume they

### Figure 2: Graphical View

The CAM-I Operational Data and Cost Measurement Assessment 2X2 is a summary view of two comprehensive assessments.



\*Quality implies accuracy of the calculated cost information.

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are relatively reliable.

The recorded cost data could be used to estimate product cost to move up the vertical scale in Figure 2. For instance, imagine a very small company with absolutely no operational data that produced and sold a dozen types of products. In one time period, it incurred a month's spending of \$500,000 and produced and sold 5,000 units of all 12 products. Limited to this data only, the CFO could legitimately calculate a product's unit cost of \$1,000 each. Did *each* different product of the dozen types actually cost \$1,000? Of course not. The simpler products to make would cost relatively less, and the more complex ones requiring more effort would cost relatively more. So there's a cost accuracy problem resulting in overcosted and undercosted product costs. The main point here is that calculating a unit cost derived from the total expenses and volume information is *feasible*. Admittedly, the quality of cost information will be terrible, but a cost measure is achievable because, by law, the financial accounting system must capture all expense transactions.

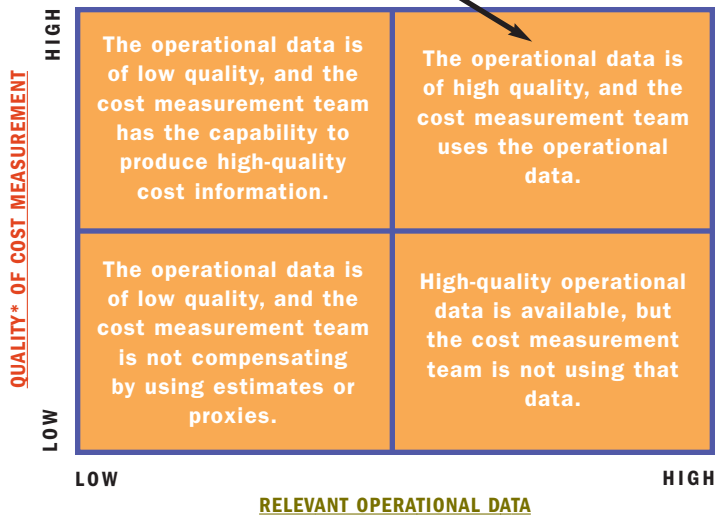
By his company being located on the extreme far left on the horizontal axis, the CFO has no operational data. He can *compensate* for this bad situation by simply interviewing some knowledgeable employees to provide him with very rough estimates of where they and others spent their time and how they used the purchases during that month. In addition, the CFO could ask them to estimate how many units of each of the 12 products would be necessary to total 5,000 units. These are all estimates—not guesstimates—because they were provided by employees involved in the operations. The CFO could crudely associate and apportion the \$500,000 of expenses to the 12 products and then divide those 12 amounts by each product's volume. As a result, 12 different product costs are calculated. Some are over \$1,000, and the others must be under. Is each product cost 100% accurate? Of course not, but compared to the \$1,000 calculated with no effort, at least the accuracy improved a bit with little administrative effort.

By compensating for missing information, the CFO is able to move the quality of the cost data up the vertical axis of the grid in Figure 2. But he shouldn't need to expend the extra time and resources to collect data that Operations arguably should already be collecting for the purposes of control and planning. Also, the *ad hoc* solu-

### Figure 3: The Assessment Grid

Where an organization's intersection is located determines its next steps.

**Best-in-class organizations perform in this quadrant.**



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tion promotes an “organizational silo” orientation that the assessment is trying to prevent, or at least reduce.

#### WHAT ARE THE CONSEQUENCES OF NOT BEING BEST IN CLASS?

Figure 3 shows the four quadrants and what it means for an organization's assessment summary score intersection to be located in each of them.

The lower left quadrant is a bad place to be scored because it reflects two problems: First, Operations isn't collecting the necessary data, or what is collected is of poor quality. Second, the management accounting method Finance uses is a minimal attempt to compensate for the weak operational data. For example, Finance's reported expenses may be overly summarized by type of expense or too aggregated across departments or cost centers. Worse, Finance has made little or no attempt to trace the resource spending using cause-and-effect relationships, which implies that Finance places no priority on measuring costs for managers' decision making.

In the upper left quadrant, the operational data is of low quality, but Finance's cost measurement team *compensated* to produce high-quality cost information. As



with the example in the preceding section, this is far from ideal, but at least Finance is making the effort to provide reasonably accurate and relevant profit-and-loss information for strategic decision making. To be assessed with a score for providing cost measurement and visibility closer to the top of the vertical axis means a more inclusive scope of measured costs beyond just products and standard service lines for types of channels and customers—ultimately for *each* customer.

In the lower right quadrant, high-quality operational data is being collected and used by Operations. The data is available to Finance, but the cost measurement team isn't using all of that data even though it could increase the amount of costing information. If an organization is in this situation, it should ensure that the operational data is made available to Finance and then address the reasons Finance isn't using it. Reasons may include organization silos, incentive systems, communication, education and training, and resistance to change.

The upper right quadrant is the location any organization should aspire to be in—it is best in class. The operational data is of high quality for Operation's purposes, and Finance's cost measurement team uses that portion of operational data that it needs.

## **BOTH OPERATIONS AND FINANCE HAVE A JOURNEY**

The steps an organization should take to improve its condition depend on its starting location on the grid.

1. If the condition of information is poor for both Operations and Finance, then both need to improve their data, procedures, and practices.

2. If one but not the other scores high on the assessment, then there are organizational behavior issues and/or possibly information technology integration issues that need to be resolved.

What are the benefits from both of the assessments?

◆ Organizations that perform operational planning can use the assessment to identify where they have good data and where they don't.

◆ The assessments are comprehensive, beginning with the external customer and ending with suppliers.

◆ Since the assessment can be applied to the entire organization, it can be used as a "heat map" to visually display where "react" or "knee-jerk" activities are likely to occur because of poor or missing operational data.

◆ The combined assessments will help organizations bridge the gap between Operations and Finance. This integration puts more visible control over costs incurred in or driven by Operations, and cost measurements

become visible, understandable, and usable by Operations.

◆ The assessment will provide an independent source for evaluation. Independent assessments will reduce the potential for manager or departmental bias.

◆ The assessments will improve accountability and therefore reduce finger-pointing.

◆ The assessments provide neutral ground for benchmarking.

The assessment we discussed will provide visibility and insights that can lead to higher-quality, actionable information. This information then becomes a coordinated image of the organization, incorporating the insights of both Operations and Finance. The result: The coordinated effort should produce better, more valuable information that the organization can use to make the best possible decisions. ■

**Note:** The work described in this article is a project of CAM-I, an industry-led collaborative research consortium. All of the authors are part of the CAM-I team that's working on the Operational Data and Cost Measurement Assessment project. The article is primarily the results of the efforts of Gary Cokins.

*Gary Cokins, CPIM, is a strategist and Global Product Marketing Manager for Performance Management at SAS, a provider of data management, business intelligence, and analytical software. He also is the author of five books in the areas of activity-based costing, activity-based management, and performance measurement. You can reach Gary at (919) 531-2012 or [gary.cokins@sas.com](mailto:gary.cokins@sas.com).*

*K.J. Euske, Ph.D., is professor of control and accounting at the Graduate School of Business and Public Policy at the Naval Postgraduate School. You can reach him at [kjeuske@nps.edu](mailto:kjeuske@nps.edu).*

*George Millush is retired director of Financial Process Planning for Chrysler Corp. You can reach him at [gbm5@wowway.com](mailto:gbm5@wowway.com).*

*Peter Nostrom works for Bank of America where he has responsibility for client profitability on commercial banking clients. You can reach him at [peter.d.nostrom@bankofamerica.com](mailto:peter.d.nostrom@bankofamerica.com).*

*Alan Vercio, CPA, works for Barclays UK Retail Bank where he has responsibility for strategic cost measurement. You can reach him at [alan.vercio@barclays.com](mailto:alan.vercio@barclays.com).*