Measurement in the 21st Century

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They have been convicted by popular opinion, but what does the evidence show? Misbehavior and fraud aside, should leaders at the corporate helm really get paid more than 500 times what a typical hourly employee takes home? Although companies have begun to rein in stock options and squeeze some of the exorbitant excess out of the scale, CEO compensation packages are still skewed; additionally, they are heavily linked to the stock market and not the company’s actual performance. As critics decry the disparity between company performance and stock performance, the question to examine is: Is the current executive pay scheme a legitimate and necessary means of achieving the purpose for which it was established?

The answer to this question involves the critical foundation on which corporate—and executive—performance rests: measurement. If variable compensation should be a reward for performance, whether you are the CEO or a front-line employee, then how do you effectively measure performance?

APQC has studied measurement and its impact on the corporate world for more than 27 years. A recent survey of 80 cross-industry members from APQC’s virtual measurement community and interviews with thought leaders contributed to this paper and prompted a closer look at how effective measurement systems are built, used, and altered to meet the challenges of a dynamic business environment.

THE PRIMARY CHALLENGES IN MEASUREMENT
From APQC’s work with thousands of organizations as well as leading experts, it is clear that although significant collective progress has been made, many organizations still struggle with fundamental but complex issues. There are four major challenges:

1. linking measures to strategy, budget, and compensation;
2. finding the critical few meaningful measures that truly determine organizational health;
3. balancing financial and other measures as well as blending leading and lagging indicators; and
4. ensuring the organization is integrated and focused on strategy and goals in such a way that measurement drives desired behavior.

Linking to Strategy, Goals and Objectives, and Compensation—A significant challenge is focusing the entire organization on the critical few measures (and thus, important organizational outcomes) and driving desired behavior at every level. Commonly, organizations are not successfully linking measures to strategy, budgeting, and compensation. Failure to provide this link renders the measurement system useless because it is not intertwined in “running the business.” An organization’s inability to
link measures to strategy, goals, and objectives is widely considered critical, yet more than 40 percent of the companies recently surveyed by APQC do not.

**Selecting Measures**—Too often, whether due to lack of time or information, organizations find themselves picking measures that fit into a generic mold as opposed to identifying essential drivers of performance. And, because “you get what you measure,” this approach will not help much. If you are not measuring the “right” things, then the ability to impact performance and outcomes will be beyond reach. The appropriate set of measures varies by organization, based on its vision, mission, values, goals, and objectives. Are these five fundamentals clear? What measures will determine success by the organization’s standards? What are the vital few measures that will define how the organization is performing against these goals and objectives? Will the measures drive the behaviors required? Can valid and reliable data be collected? It is a matter of determining the critical few measures that reflect specific goals and will impact outcomes (not giving in to the temptation to measure everything) that depict organizational health.

**Accounting Rules Refuse to Recognize All the Assets or Predict the Outcomes**—Measuring the softer side of business is tough. Executives are conditioned to think about the organization’s performance in financial terms. Human capital is shown as an expense (labor/payroll) on the income statement. Yet the highly motivated and satisfied employees and their ability to meet or exceed customer expectations have proven to be a corollary to financial performance. Consequently, executives must balance financial and nonfinancial measures to draw out indicators of trends and changes to act on. Although there is no perfect formula, organizations must use financial, nonfinancial, leading, and lagging indicators; and these must link to important organizational outcomes and then cascade down to the employee level. Such a balance is proving a challenge to the significant number of organizations that are trying to: break away from traditional accounting measurement systems, causally link nonfinancial measures to outcomes, and identify those predictive measures that truly drive performance.

**Aligning All Levels**—Measures are often not cascaded far enough down into the organization, which prevents aligning everyone’s focus on the same goals, making those strategic goals relevant to all individuals, and reinforcing those goals by assigning accountability for each individual’s piece of the pie. When accomplished, the alignment of measures throughout the organization leads to a clearer role for managers and employees and provides a guiding principle for what is important to the organization.
Encouragingly, many organizations are taking action to rectify deficiencies in their measurement systems. They indicate work ahead of them by selecting good nonfinancial and predictive measures, improving efficiencies and accuracy, and improving the links and alignment. Some are breaking away from traditional ways of defining customer and employee measures; leading organizations are acknowledging the importance of knowledge management. In a handful of leading firms, softer measures are being tied to the impact on financial performance. But overwhelmingly, organizations still struggle to understand how and what to measure.

To complicate measurement further, organizations must not only tackle the current challenges, but also look ahead to future challenges. With the recent passage of the Sarbanes-Oxley Corporate Responsibility Act (SOX), many organizations are trying to get their arms around the impact and requisite changes. Some anticipate future ethics and corporate governance measures to pop up on the five- and ten-year horizon. With or without congressional oversight, however, it behooves organizations to get their measurement house in order—not for just the investment community, but all stakeholders.

MEASUREMENT EVOLUTION
Historically, corporate performance measurement focused more on the tangible, financial measures such as return on investment (ROI), cash flow, and cost of sales. In the 1980s, as Total Quality Management and its dependence on nonfinancial measures became increasingly popular, the accounting professionals began to acknowledge what the operating managers already knew: traditional financial tools alone were inadequate for prospectively managing organizations in a dynamic environment. Activity-based costing, an attempt to more realistically link costs to the underlying drivers of operating processes and their use of “factors of production” (i.e., labor, materials, capital, and knowledge), and the balanced scorecard emerged from this additional emphasis on nonfinancial measurement. With the emergence of the balanced scorecard approach came the factors contributing to customer satisfaction, loyalty, and behaviors on scorecards.

The evolution of how companies have grappled with their break-away from traditional accounting measurement to create a more robust business management tool can be tracked through APQC’s measurement consortium studies, which began in 1995. An early study brought together a group of 30 organizations, who were engaged in developing business cases for measurement systems or adopting a strategy to develop and deploy; the organizations were seeking to identify innovative and proven practices in the development and deployment of corporate performance measures (including
the implementation of balanced scorecards), the links of these systems to strategic initiatives, and the methods for aligning these systems throughout an organization.

Having identified proven practices in developing measurement frameworks that link to strategy and align throughout, the study’s successor involved many of the same companies that sought to define the next generation of measurement as it examined the alignment that occurs in truly integrated measurement systems, predictive measurement (leading indicators), employee buy-in to the measurement system, and methods of data gathering and reporting.

The third study in 1998 focused on developing sophisticated measurement systems that moved beyond merely financial measures. This study, again, took a look at how companies integrated measures with strategy, but it also focused heavily on the collaborative uses of financial and nonfinancial measures to achieve organizational goals.

By 1999, APQC’s study findings showed that even the most advanced users of performance measurement did not have fully integrated scorecards in use throughout their organizations. In addition to their continuing struggle to clearly articulate strategy and identify drivers of success, study participants encountered challenges in changing the organizational culture to positively embrace the impacts to individual compensation, career advancement, and emphasis on teamwork. Although 73 percent of the study participant organizations reported that they link non-management compensation and rewards to measures and have demonstrated financial and nonfinancial success using measures, only 11 of 21 participants reported a strong link between the measurement system and long-range strategic plans. During their evolution processes, organizations commonly found they “over-measured,” which distorted focus and created change management issues. Over time, a few leading organizations’ executives defined the “vital few” measures that cascaded from strategic goals and assigned responsibility to business units for developing “actionable” individual and group scorecards to encompass those measures and influence behavior and performance at all levels of the organization.

In APQC’s 2002 balanced scorecard study, participants again delved into the scorecard link to strategy, technology enablers, change management, and monitoring/assessment. In this study, less than a quarter of organizations were successfully linking compensation to scorecards at the department, work team, or individual levels; more organizations reported successful compensation links at the corporate level and business unit level. Only two-thirds of the best-practice participants reported their balanced scorecards have become fully integrated into their management systems as a
planning and management tool. And the same number of best-practice participants reported a “significant change” in their balanced scorecards since first implemented. Leading organizations overcame some change management challenges by better communicating strategies, creating stronger links between strategy and action (through cascaded scorecards), and establishing ownership.

According to APQC’s recent measurement community survey, problems persist today: less than 60 percent of companies report a clear and consistent link between their measurement systems and strategic planning, budgeting, and compensation; 24 percent use only traditional accounting measures; 52 percent indicate they plan to change or upgrade their current measurement systems; and an encouraging 70 percent report that measures are used for decision making at the top.

APQC’s benchmarking report *Effectively Managing Performance Measurement Systems* again surfaces common issues such as strategy links, alignment, monitoring and assessment, and change management activities (e.g., identifying and addressing behavior-based challenges). Best-practice organizations highlighted in the report clearly understand several important issues, including how to make measures more meaningful and effective by defining the critical few measures and truly understanding the effect of measures on work performance.

Arguably, some of the change management problems—securing buy-in to the measurement system from people at all levels and adequately rewarding them—stem from organizations’ inability to establish the right measures in the first place. If there is no well-defined set of measures that drive the desired behavior, then people will balk, systems will be manipulated, and CEOs will be rewarded for poor company performance while lower-level heads are rolling. Not a consistent message, by far. Thus, today, it is apparent that organizations are still wrestling with building a firm measurement foundation: selecting a measurement approach that best meets their needs, populating it with the critical few measures that are meaningful, and linking these measures across the organization to provide focus and accountability for all levels.

**MEANINGFUL MEASUREMENT**

Successful organizations are marked by good planning, execution, and decision making in terms of corrective action and adjustments to strategic efforts. These actions stem from a strong measurement system. The key to marketplace longevity and competitiveness is finding the measurement framework that provides a balanced picture of organizational health by designing measures that are important to organizational strategic objectives and actionable, linking those to important
organizational systems, aligning measures top to bottom, monitoring measures, and using internal and external benchmarking to improve the numbers and achieve goals.

Leading organizations have proved that the endeavor to identify, implement, and use the right measures is a profitable, but complex, one. When organizations include intangibles such as quality and customer satisfaction in their measurement frameworks as a basis for integrating financial and nonfinancial measures, rolling out strategic measures to local levels, and embedding predictive measures, they achieve a more balanced approach that portrays a sharper picture of overall organizational health. This measurement system should become a business management model they can use to more effectively make decisions and improve the business. When successfully implemented, measures should:

• focus the enterprise on what is important (desired behaviors and outcomes),
• link strategy and tactics,
• help assess performance against a baseline,
• provide feedback that guides change, and
• supply a basis for a business case.

MEASUREMENT FRAMEWORK
Today, organizations seek to achieve the aforementioned successful characteristics by first establishing a measurement framework that links measures to strategy, goals, and objectives and cascades down the organization to align goals and anchor accountability at every level (Figure 1).
Measurement frameworks are critical to linking organizational objectives to the business unit and individual levels by ensuring everyone understands not only how roles align with organizational objectives, but also how each unit and individual contributes to the outcomes. The end result is a scorecard that provides a strategic framework, alignment, and balanced measures that link to critical success factors and meaningful aggregation.

Key measurement frameworks include balanced scorecards, family of measures, and APQC’s Input-Output Measurement Framework™. Each of these measurement frameworks, whether used individually or in support of another, provides structure for organizational measurement. These frameworks enable an organization to realize crucial benefits by unifying its focus through: communication using agreed-upon and consistent definitions; an aligned set of performance targets using validated, normalized data; and a collective, diagnostic tool to identify areas for improvement and set priorities.

Ideally, measures should be reflected in a balanced, cascading scorecard. A balanced scorecard helps to align measures with key strategies, enable progress tracking, assign accountability, capture gains already made, predict future movement, and connect current strategic and tactical improvement activities. Organizations can achieve this balance by establishing measures in four quadrants that reflect key objectives.

1. **Customers**—measures performance against expectations (e.g., satisfaction, loyalty, retention, acquisition, and profitability)
2. **Financial**—measures economic consequences of actions already taken (e.g., income, return on equity, return on investment, growth, and cash flow) and predicts future performance
3. **Operational**—measures effectiveness, adaptability, and efficiency of internal processes (Such measures may identify a need for new processes.)
4. **People**—measures employee skills, information exchange, and organizational procedure

The key is that organizations engage in thoughtful and thorough analysis to determine not only the best measures that truly affect these balanced domains, but also the weights assigned to each category based on organizational priorities.

The family of measures framework focuses on a cluster of measures that should track at least four of the following process variables: productivity, quantity, quality, timeliness, cycle time, resource utilization, or costs. For each characteristic, condition, or variable (i.e., a critical success factor), a process measure can be identified as a reference standard for quantitative comparison. Two examples follow for the customer
complaint handling process.

1. **Category: Cost**
   - Critical success factor: Complaint handled efficiently
   - Process measure: Cost per complaint, percentage of total budget, etc.

2. **Category: Quality**
   - Critical success factor: Call resolution
   - Process measure: Volume of calls resolved within first call or x timeframe from inception of call (durational)

APQC’s Input-Outcome Measurement Framework is yet another means of presenting a snapshot of an organization’s performance. It:
- provides strategic alignment throughout the organization,
- is based on a cluster of measures,
- has quadrants defined based on the organization’s needs,
- converts inputs to outputs,
- identifies core processes,
- aligns with business outcomes, and
- balances internal and external focus.

This method focuses on the core processes of an organization, which are linked to outcomes. It defines core processes that convert inputs to outputs by aligning the key activities with business outcomes. For example, in a sales process, the framework converts budgeted cost categories such as labor (input) into negotiating and closing sales (activities), which leads to closed sales (output) and increased revenue (outcome) (Figure 2).
The bottom line is that organizations must select a measurement framework that presents a balanced picture of organizational performance. Mark Graham Brown—a special adviser for one of APQC’s measurement benchmarking studies, former Baldrige examiner, and author of Baldrige and balanced scorecard books—said to APQC: “The reason so many organizations have become interested in the balanced scorecard approach to measurement is that they have found that their traditional lagging indicators of financial performance do not provide an adequate view of the overall health of the enterprise. Companies have shut their doors with good sales and profits until the day they went out of business.”

When asked to identify the type of performance management system that best describes those used in their organizations, 80 survey respondents most commonly reported employing a hybrid measurement framework: “a custom mix of measurement practices designed to fit the specific needs of the organization” (Figure 3). Twenty-eight percent use a balanced scorecard, but a discouraging 24 percent are still stuck in the traditional accounting/operational metrics. Forty-one percent reported that their current systems have been used for more than six years. Slightly more than half (52 percent of 79 respondents) indicated they have plans to change or upgrade the current performance measurement system.

Importantly, when asked if their measurement systems are used in decision making, 70 percent (n=80) of the survey respondents reported “there is evidence that the collected
metric data is routinely used at the top of the organization in key decision making, both for routine reviews and special projects and investments.” Ten percent said measures are used at the top only in the event of major unplanned change. If not for routine use to understand and act upon business performance, then what is the basis for measuring?

**MEASUREMENT DESIGN**

Identifying relevant key performance measures is a common challenge faced by organizations. What should they measure? APQC’s research shows that organizations must begin by selecting measures that align with strategic objectives, demonstrate results, and focus on outcomes. They must work to produce measures that:

- are meaningful;
- respond to multiple organizational priorities;
- encourage operational improvements;
- provide a complete, accurate, and believable picture of performance; and
- blend leading and lagging indicators.

Easily said, of course, but difficult to implement. War stories abound of organizations carelessly selecting measures, stuffing them into the balanced scorecard “boxes,” and then finding out they are sending conflicting messages, collecting invalid or unreliable data, driving the wrong behavior, or collecting irrelevant measurement information that has no causal link to outcomes.

An example of the extreme possibilities and bad measurement linked to compensation in a way that ultimately creates havoc across an entire industry is that of “round trip trading,” which occurred during 1999 to 2001 within the energy sector. Round trip trading involves frequently repurchasing and selling a product to distort the overall financial pictures and also is typically the basis for at-risk compensation. Upon close examination one could argue that the measure of trading volume and its link to compensation left unchecked is the underlying factor that drove the behavior in the first place. It is the success stories that prove good measurement systems translate to profits and achieving objectives. Measures provide the road map of where you are, a picture of where you want to be, and the vital information about the routes your organization needs to take to get there.

Crown Castle International, a leading independent owner and operator of shared wireless communications, emerged as a success story from the telecommunications industry meltdown and demonstrated stellar results by revamping its strategy and adopting Kaplan and Norton’s balanced scorecard in 2001 to link strategic objectives,
measures, targets, and initiatives. Executives formulated a four-step strategy focused on operational excellence.

1. Grow revenue organically.
2. Expand recurring margins by driving efficiencies in existing business.
3. Allocate capital to projects that achieve higher returns with lower execution risks.
4. Expand revenue around existing assets.

To implement the scorecard program and related performance enhancements, Crown Castle established a new function, Global Performance, led by Senior Vice President Bob Paladino. During the course of three years, the company had developed a strategy map and more than 40 scorecards primarily focused on the largest operation in the United States, four levels deep and also across global operations, by assigning measures to individuals for performance review. Streamlining strategic initiatives using the balanced scorecard was crucial; U.S. leaders, for instance, used the balanced scorecard to select from a list of 185 measures the 12 with the greatest impact on strategy and cash flow.

In 2003 the company tweaked its strategy map to provide even further clarity and guidance to employees executing strategy. Although alignment continues to be a challenge, the company considers the balanced scorecard an important tool in surmounting that challenge because it is the best way to clearly convey expectations to employees.

With the passage of SOX, company executives approached compliance as an opportunity. The company integrated its disciplines of balanced scorecard, knowledge management, and process improvement to better comply, which resulted in an overall improvement in its core processes and financial results. Crown established CCI-Link, its KM portal for employees to access the foregoing. By mapping several of its core processes with the help of auditors, the company was able to identify where those processes generate financial results, which established the causal link to outcomes. In the process mapping initiative, Crown Castle captured several innovative methods for project management, tracked performance using a balanced scorecard measure (“manage projects timely, accurately, and profitably”), and linked it to the “expand recurring margins by driving efficiencies in existing business” strategic objective.

These innovative practices, when captured and shared in CCI-Link, created the opportunity for knowledge transfer, standardization of best practices, and ownership, and link to company measures to secure accountability. Paladino said the company has reduced its order fulfillment cycle time from 365 days to 150 days in a matter of two years (with an internal best-in-class benchmark of a 60-day cycle time) and seen
bottom-line results. “Our stock price has appreciated from $1 to $13 in the last year and has beaten leading market indexes by over 300 percent,” Paladino said. “We’ve actually been demonstrating our capability for increasing revenue and cash flow.”

Standard processes (including documentation, training materials, SOX controls, and measures that tie into the balanced scorecard) are part of the company’s strongest strategy management tool, CCI-Link. CCI-Link contains links to software that houses the company’s automated scorecards, including actual, forecasted, and target results by month and quarter. In such a highly decentralized organization, the balanced scorecard provides the strategic focus and framework for decision making, and CCI-Link enhances alignment and efficiencies.

By adopting the balanced scorecard; using the scorecard to communicate strategy, assigning owners for measures; and linking strategic objectives to strategic planning, business planning, budgeting, and compensation, Crown Castle has clearly defined its road map and checkpoints. The company’s hard work has paid off: improved cost efficiencies, cash flow, capital management, operational performance, and customer results. Customer and operational performance improved in some areas by 400 percent. And recently, Kaplan and Norton selected the company to receive their coveted “Hall of Fame” award.

A successful road map does not include what Brown calls “superstitious measures,” which he explained are based on hope and faith and not backed by research or linked to important organizational outcomes such as profits, happier customers who bring in more business or refer others, or a happier and safer place to work for employees. As an example, he cited pharmaceutical sales representatives’ visits to doctors: How does measuring the number of visits translate to more drug prescriptions? Or why do call centers measure the length of phone call when a better measure is problem resolution? Such measures do not drive desired behavior and only serve to clutter and confuse the road map. Brown said, “The test of a good process or behavior measure is that there is proof indicating that it predicts a meaningful outcome and that it drives the right behavior from employees.”

To design this road map, organizations must first strive to examine business strategies and objectives. “More than half of the business and government organizations I consult with do not have a clear mission, vision, or set of values to start with, and hence their scorecard is built on a shaky foundation,” said Brown. “The basics of your core strategy need to be figured out before the scorecard can be built.”
**Step 1: Establish clarity around strategy and goals at the top**

The first step is to make certain that in the corporate strategy, goals and the organization’s competitive advantage in the marketplace are clear and can be communicated throughout the organization. A mission statement alone will not clarify it. There must be a clear and concise set of goals that articulate success of the corporate strategy. Goals must be quantifiable. They must reflect how the organization is performing against its strategy, where the performance gaps are, and what factors are driving performance.

Ultimately, the measurement system must reflect performance against the organization’s strategy and goals and identify where expectations are being met, what drives performance, and the levers that impact performance.

**Step 2: Determine critical success factors**

What will be different when the goal was achieved? What important outcomes will be realized? In short, what determines success? These critical success factors should then be used to develop a rational, meaningful, and balanced set of measures and key performance indicators. Once developed, the measures should link to the critical success factors. These critical success factors will lead to the primary areas of the organization that are essential to the desired outcomes.

Are these areas currently aligned to achieve the goals? For example, if the goal is to become the leading cellular service provider in a designated market, then what terms define “leading”? Would it involve market share in terms of customers served or minutes used? A retention measure in a highly dynamic market? Being the lowest cost provider? Or would it be a combination of a number of measures?

**Step 3: Develop and assess effective measures**

Ask yourself how the organization will determine success and how success should be measured. In developing effective measures, you must also determine if they can be integrated into the workflows of the organization. A good litmus test when developing measures is if the answer was provided and what action could and would be taken as a result. As you are developing measures, you must also determine if a measure can be tracked, if the measure directly links to a critical success factor, and if the outcome of a measure can be influenced.

Potential measures should be assessed for:
- **relevancy**—is worth collecting and answers a question to support decision making,
- **validity**—measures what it claims to measure,
- **reliability**—returns consistent value with each measurement,
• **accuracy**—matches the true value of the attribute, and
• **cost effectiveness**—is not too costly to track and report.

Types of performance measures to consider include baseline (starting point), trending (process performance), control (inside/outside predetermined boundaries), diagnostic (problem identification), and planning (prediction/future planning). Measures may come from activity-based costing (e.g., hours or cost), surveys (e.g., customer, supplier, and internal), and databases. Measurement snapshots present a quick overview of key operating details such as key drivers, enablers, and results.

Measures represent both qualitative and quantitative elements. The latter, often referred to as “metrics” or “key performance indicators,” are crucial to understanding the performance itself and identifying the gap or opportunity. Metrics are those numbers that demonstrate how the organization is performing for a given measure. Metrics are critical to internal and external benchmarking and thus process improvements. For comparability, defined standard definitions for specific measures allow organizations to make comparisons within and outside of their industries. (One example of this type of measure frequently used at the corporate level is EBIT, or earnings before income tax.)

CenterPoint Energy provides one example of how companies are grappling with linking strategic objectives to key performance indicators. Executive Director of Strategic Planning Scott Prochazka said CenterPoint is midstream in the process of defining meaningful measures linked to strategic objectives and driving those measures down through the organization. The company’s vision is to be “America’s leading energy delivery company ... and more,” with “leading” defined as top quartile performance for four stakeholder sets: customers, shareholders, employees, and communities.

In 2003 CenterPoint moved from its initial strategy of creating “one company” to focusing on the next step: “get it right,” which is requiring close attention to operational measures that link to and support strategic objectives (Figure 4, page 18.) (The company foresees putting greater focus on the third and final stage, “grow,” in 2005.) To define strategic objectives, the company engaged in an interactive process with its business units to define business-strategic initiatives that link to company strategy. Responses were gathered and grouped into four common strategic themes.

1. Run the business (e.g., operational measures)
2. Growth (e.g., market position and profitability)
3. People (e.g., succession planning, satisfaction, and development)
4. Managing significant events
Thus, the company is currently scrutinizing its operating efficiencies to better “run the business.” One efficiency measure is lower costs. Prochazka said that although operating measures are business unit-specific, some common measures apply, such as cost per customer. For instance, in the electric delivery business unit, “operation and maintenance cost per customer” is measured and monitored. These costs are then broken down and assigned accountability by department level (transmission, substation, and distribution) and compared to relevant external benchmarks. Prochazka said the company is focused first on identifying, implementing, and monitoring meaningful measures down to the department levels (Figure 5). Once it is comfortable with that set, individual performance measures will be identified and linked where it makes sense.

It cannot be emphasized enough that the key to building effective measures is ensuring that performance measures link to an important outcome for the organization. To help avoid pitfalls in selecting measures for a framework, APQC advises to focus on measures that drive behavior and measure real work outputs and accomplishments, ensure usefulness and relevance by tying a specific performance measurement to a specific user by name or position, and develop measurement collection tools that provide adequate warnings of negative change.

**Step 4: Establish goals and baseline performance**
Now comes the hardest part. The measures have been identified; it is time to determine how the organization is performing against the measures. Once the goals
have been established and translated into quantitative terms, we must understand the performance today. Identifying the gap in existing performance and goals is a critical step in the process. This is also the step in which credibility for closing the gap is gained.

APQC’s research findings over the past 10 years reflect that an organization’s ability to successfully implement a measurement system is largely based upon the change management principles that accompany the process. Employees support corporate missions, visions, and values at the emotional level, but transferring them into behavioral realities are reserved for those organizations who build in credibility along the way. Who doesn’t want to work for the world’s leader in __________? Defining “world leader” and how to get there becomes the challenge. When effectively established, goals provide purpose and direction for employees. Clear, concise goals provide the “line of sight” for employees. Whether corporate, business unit, departmental, or individual, linked and explicit measures give employees something with which to associate their performance.

**Step 5: Assess Performance**

Once the goal is established, it is time to understand how performance compares to the goal. In determining current performance levels, it is critical for employees to trust the process and believe that the outcome is credible. When employees do not believe that data provided about performance is credible, they will react in denial and disbelief and then reject any need to improve.

“You can’t measure anything without the person on the other end of the measurement being affected,” said C. Jackson Grayson Jr., founder and chairman of APQC. “So you’ve got to be careful in designing it—that you are going in the direction you want
to go. You’ve got to be conscious of the fact that if you measure performance, then that performance is going to be altered because you are measuring it—for good or bad.”

Brown provides one example of how employees can easily lose faith in and reject the process. “Salespeople are often measured on ridiculous behavior measures such as how often they call on customers [and] whether or not they prepare clearly written call reports, show up for sales meetings, go to training, and any number of other process measures,” he said. “Yet the most successful salespeople often get the worst scores on these process measures.”

Brown considers such measures “very dangerous” because “they give management a false sense of security that everything is fine when, in fact, it probably isn’t.”

When assessing performance, it is first important to look at how the internal organization is performing against a target or expectation. However, best-practice organizations do not lose sight of the need to use external data to establish targets and assess performance. Organizations striving for best-practice performance frequently benchmark their performance against others both within and outside of their industries.

To effectively compare, organizations are realizing what experts have long been encouraging as a critical need: standardized definitions housed in a common data repository that enable organizations to quickly and confidently conduct effective comparisons within and outside their industries. Grayson said the country has a real need for a repository of standardized data that organizations will embrace and use as “open standards” and ultimately wield as a competitive advantage by using the information to close performance gaps. (An example of a source of standard measures is described in the side bar.)
Carl Thor, president of Jarret-Thor International, a consulting firm specializing in performance measurement and related issues, asserts that this type of benchmarking is “absolutely important and must be done.” It is crucial for not only individual organizations and industries, but also more effective Wall Street analysis in order to, at last, truly align corporate performance with shareholder value. Thor said an industry-level benchmark using open standards will take Wall Street analysis to a much more meaningful level by focusing on critical industry driver data (e.g., cycle time, productivity, customer satisfaction, and supplier relationships) rather than “slavishly look[ing] at profitability as currently defined based on fairly arbitrary accounting standards and run[ning] the stock accordingly.”

Thus, a common, standardized database in which to confidentially share this information, such as through the Open Standards Benchmarking Collaborative Research will enable: organizations to confidently benchmark their performance using commonly defined industry drivers and make improvements in these critical areas, industries to publicize whole-industry trend data, and financial analysts to assess performance based on a comprehensive set of drivers (without revealing individual company driver numbers). Said Thor, “Wall Street analysts covering that industry might start becoming smarter about the drivers as opposed to just the results.”

ROLE OF METRICS
Once the measurement framework is established, organizations can use specific metrics—normalized, objective, and quantitative measures—to drive progress and results. Metrics are used to gauge operational performance, allocate resources, and identify opportunities for improvement.

Metrics are quantitative key performance indicators, which are essential to understanding operational health. Key performance indicators result from operational objectives, are based on outcomes, and are central to measuring impact on key stakeholders (i.e., stockholders, customers, and employees). Key performance indicators also include supporting detailed indicators that disaggregate the parts and become key in statistical testing. Qualitative drivers, such as management practices and systems, are a necessary component to key performance indicators; their relationships must be understood.
Based on APQC’s research, organizations establish metrics in four common categories.

1. **Cost effectiveness**—indicates how well operating costs are managed. Key performance indicators usually include cost per unit, cost as a percentage of revenue, cost as a percentage of total budget, and actual cost compared to budgeted cost. Supporting indicators usually include cost components as a percentage of total and disaggregated cost per unit.

2. **Staff productivity**—indicates output for each full-time equivalent (FTE) employee. Key performance indicators usually include units of output (e.g., invoices and purchase orders) per FTE and workload (e.g., customers and general ledger accounts) per FTE. Supporting indicators usually focus on factors that influence staff productivity, such as hours of training per FTE and employee tenure.

3. **Process efficiency**—indicates how well procedures and systems are supporting the operation. Key performance indicators may include error rate and forecast accuracy rate. Supporting indicators may focus on factors that influence process efficiency, such as system downtime rate and the degree of process automation.

4. **Cycle time**—indicates the duration to complete a task. These key performance indicators are measures in units of time and may include processing time and the time to resolve customer inquiry. Supporting indicators usually focus on factors that influence cycle time, such as the frequency of system breakdowns.

Examples of customer service/call centers metrics follow.

- **Cost effectiveness**—cost per call and cost per reported complaint
- **Staff productivity**—calls per representative and resolved complaints per FTE
- **Process efficiency**—first-call resolution rate and total resolution rate
- **Cycle time**—average time to answer and average time to resolve complaint

Metrics allow organizations to understand operational performance, which can be tracked over time, relative to external benchmarks (e.g., industry average or top performers) as well as internal ones. Designing a tool of key performance drivers helps organizations not only better manage internal processes, but also identify key external practices that can be adopted to improve performance. By looking beyond the numbers at the qualitative drivers, management can also reveal the factors that most influence favorable performance. Thus, by choosing metrics wisely, organizations can focus on and improve performance in the most critical areas.

APQC’s Road Map From Measurement to Implementation™ (Figure 6) illustrates the continuous improvement process of establishing meaningful measures, defining metrics, and using benchmarking data to close performance gaps.
In establishing metrics, organizations should beware the potential challenges, which are summarized below from the previous sections.

- Complexity—too many metrics, excessive detail, or burdensome data capture—can make metrics too difficult to use.
- Metrics aimed at short-term performance often have unintended long-term consequences, because employees tend to do well on what is measured rather than what is not.
- Know the difference between in-process and end-process metrics. In-process metrics are used to help understand what is working. End-process metrics measure process effectiveness.
- Quantitative metrics often miss important subjective elements (i.e., qualitative factors).
- Lagging, current, and leading metrics must all be included. Know the past so that it can be changed, understand the future to determine if change is occurring, and predict the future based upon sound data.

**THE CRITICAL FEW**

As stated previously, many organizations are still struggling with implementation. They know, in theory, that they need a balanced framework for a clearer picture of organizational health and metrics within that framework for benchmarking and improving performance. The problem is often a lack of focus.

If measures should focus the whole organization on the few key things needed to create superior performance and organizational health, then what kind of structure creates the strongest measurement foundation? Whereas no “magic bullet” measurement
template exists, the critical few measures to accurately depict organizational health need to balance and link to important organizational outcomes.

“Balance” encompasses those few factors that truly contribute to a healthy organization, ensures performance in one critical strategic area is not compromised for another resulting in short-term gains and longer-term problems (e.g., increased profits for decreased customer satisfaction), and includes forward-looking measures to help predict future performance and identify where corrective action should be taken before it is too late.

Michael Contrada, executive vice president of the Balanced Scorecard Collaborative, said organizational health, like individual health, is not just one thing. “Winning” at performance, according to Contrada, is being able to execute on strategy; thus, measures must reflect organizational goals and the key drivers that lead to results. “That brings us back to … our four perspectives of the balanced scorecard,” he said. “You need financial results, you need results for customers, and you need core organizational capabilities to win on a consistent basis over a long period of time.”

Brown said the biggest trap people fall in today is measuring only the past and “counting things that don’t really mean anything.” He said that once organizations ensure they have a clear mission, vision, and values, they need scorecards with different perspectives to measure their health, both financial and nonfinancial as well as a three-dimensional view for each section of the scorecard: past, present, and future. He describes having a balanced scorecard as a well thought-out set of gauges that provide a picture of an organization’s health yesterday, today, and tomorrow and from the point of view of all of its important stakeholders. Balanced scorecard is not about trying to measure everything, but instead eliminating the majority of measures that do not provide meaningful data.

And Carl Thor said the right set of measures depends on the organization, but the seven categories within his “family of measures” approach apply in most companies: profitability, productivity, process quality, customer, workplace (e.g., employee satisfaction, turnover, and safety), partnering (e.g., supplier measures, environmental measures, and union relationships), technology, and innovation. These seven categories can be mapped to the broader four categories of the balanced scorecard approach, with the latter three serving as an explosion of “learning and growth,” and productivity and process quality representing a distinction within “internal processes.”

In defining the critical few measures, organizations must be cognizant of the need for two primary factors. One is a balance of financial and nonfinancial indicators,
and second is a balance of leading, current, and lagging indicators. Too frequently, scorecards are dominated by financial and lagging measures; this leaves a rear view look at what happened last month or in previous months but no way to understand why or predict what needs to change in the future. Measures must identify what levers to pull when the outcomes they are reflecting are not producing the desired results.

1. Financial versus Nonfinancial

Selecting and using nonfinancial measures is a major challenge for most organizations. Only half of the survey respondents’ measurement structures include at least 50 percent nonfinancial measures, with 21 percent reporting that nonfinancial measures account for more than 75 percent of their measures (Figure 7). This latter structure is more ideal.

Experts such as Brown, Grayson, Contrada, and Thor agree that financial measures should not account for more than approximately two-thirds of an organization’s performance measures. Brown said factors like customers, people, and ethics “can put you out of business if you are not careful.”

Although experts agree that nonfinancial measures should be the bulk of organizations’ performance measurement, Grayson said this is exactly the opposite of what he has witnessed in boardrooms, where the discussions center on finances. When asked what drives organizations to focus on financials much more heavily, Grayson attributed executive behavior to “the bottom line, their own stock options, pay, their
performance in the marketplace, [and] their performance relative to peers.” Could another factor be the complexity of choosing good nonfinancial measures?

Picking nonfinancial measures based on gut-level belief is not enough. They must be causally linked to strategic outcomes. Christopher Ittner and David Larckner, in their November 2003 Harvard Business Review article (“Coming Up Short on Nonfinancial Performance Measurement,” pp. 2-3) contend that although an increasing number of organizations are measuring nonfinancial performance—an acknowledged improvement to traditional accounting measures—only a few organizations are realizing the benefits because “they fail to identify, analyze, and act on the right nonfinancial measures.” Their research of 60 manufacturing and service companies supplemented with 297 senior executive surveys revealed that companies had made unimpressive efforts to identify nonfinancial measures that advance specific strategies; and most of these companies had not “demonstrated a cause-and-effect link between improvements in those nonfinancial areas and in cash flow, profit, or stock price.”

Ittner and Larckner found that too few companies go far enough and actually validate the links and understand the drivers behind performance measures. “Businesses that do not scrupulously uncover the fundamental drivers of their units’ performance face several potential problems. They often end up measuring too many things ... [and] can’t tell which measures provide information about progress toward the organization’s ultimate objectives and which are noise.” Further, they claim that nonfinancial measures can be “equally, if not more, susceptible to manipulation as financial accounting” because self-serving managers can choose those measures they can most easily manipulate to earn a fatter reward.

Brown also contends there is a need for carefully selecting nonfinancial measures based on their link to outcomes and the danger of manipulation when soft measures are linked to compensation. He said that if a company has researched and proved that improvement of a valid, soft measure such as customer satisfaction is linked to a corresponding improvement in financial measures, then a company can use that measure and link compensation to it. “The key is to have integrity in the soft measures,” he said. “But without the data to prove the links, what you will do is pay people for things you get no value for.”

In his experiences, companies have good lagging operational and financial measures in place but need work with more predictive indicators that link to outcomes; and they rarely do a good job selecting employee or customer measures. He said too many companies have questionable measures that drive the wrong behavior, like tracking
the length of a customer call. For complicated issues such as customer satisfaction, employee morale, or safety, where a single metric will rarely provide a good overall view, he found most good measures are indices made up of several sub-measures.

Three nonfinancial measures Brown believes most critical to portraying organizational health are employee morale, customer relationships (whether customers really think they get good value and believe the organization is ethical), and a future-focused measure that links to vision—one gauge that indicates whether the organization is making progress toward its vision. Importantly, he warned organizations to avoid falling into the trap of just conducting annual surveys for the first two measures.

For example, for a customer relationship measure that links to bottom-line results, he has seen success with a measure that encourages relationships with the most important and attractive customers. This measure is an index of two major components: customer attractiveness and customer relationship. Attractiveness is based on factors such as profit margin, volume of business, fast payment of invoices, history or partnering with suppliers, and ease of working with the customer. Relationship factors include years of working together, number of products purchased, personal relationships, exit barriers, and knowledge of customer’s business and needs.

2. Leading versus Lagging
   Lagging indicators are “results indicators” important to show output or outcomes. Leading indicators are vital because they can be used to glean information, guide decision making and next steps, and assess the likelihood for success. There is no consensus on a perfect blend between leading and lagging, but organizations must seek to include this balance for better short- and long-term business management. Although survey respondents currently use mostly lagging indicators at every organizational level, an encouraging percentage reported employing an even balance or using mostly leading indicators (Figure 8, page 28). Several survey respondents confirmed their focus on more predictive measures for the future, with some grappling with a better understanding of the true drivers or predictors of performance.

Balancing leading and lagging indicators, according to Contrada, “goes to the heart of the notion of the balanced scorecard, which is made up of outcomes and drivers.” He said organizations must really understand the link between drivers and results before putting a measure on a scorecard; but once they understand their business models and everyone has a clear understanding of these interlinked performance drivers, organizations can be confident that actions will lead to results they want and can forecast what the results will be.
Thor said leading indicators should represent 75 percent to 80 percent of measures at all organizational levels, except CEOs who could be measured more on an even balance between drivers and results. Thor views most of the measures within six of his seven measurement categories as drivers or leading indicators; profitability is a result.

Brown is a proponent of an even balance. In his experience, he said, organizations typically have four to six sections on their scorecards; for each of these, he recommends not only leading and lagging indicators, but also current indicators that differ from lagging indicators because organizations “can still do something about” these. For example, he cited two sets of measures (Figure 9).
MEASUREMENT AND THE ROLE OF KNOWLEDGE MANAGEMENT

Increasingly, organizations are realizing that knowledge management (KM) is an integral piece of the measurement puzzle, as an activity that bolsters performance. Its true value is its power to enable business processes and improve results. With bottom-line results well established in APQC’s benchmarking report *Measuring the Impact of Knowledge Management*, many organizations have confirmed million-dollar savings, and some such as Ford Motor Co. track savings in the billions.

Because knowledge management improves performance, it makes sense that measuring KM efforts will lead to improved results on the overall performance measures detailed throughout this paper. And by establishing KM measures, organizations send a message that KM really matters. Like with other measures, KM measures must reflect the value proposition. To increase revenue, organizations need to understand the intervening processes that contribute to revenue enhancement and which of those processes are actually going to be impacted by a knowledge initiative. You must understand the expected relationship between the process changes and the business outcome.

Many of the early outcomes will not be financial ROI. Benefits that APQC’s best-practice partners talk about at the early stages are more intangible, but measurable. These include reuse of materials and expertise, eliminating redundant efforts, avoiding making the same mistake twice, and finding information quickly and easily. Leading indicators include activity and access, participation and contribution, perceived utility, and success stories. Lagging indicators are those such as cost avoidance, time to competency, time-to-market, customer satisfaction, and ultimately, financial outcomes. Early measures are collected to make a business case and determine what is or is not working.

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Early KM adopters like Siemens and the World Bank took specific examples of time savings or revenue generated and extrapolated those parts to other parts of their organizations that were not yet using their KM tools. Siemens has seen an ROI of 10:1 in terms of additional revenue after the initial investment in their knowledge-sharing program for consultants. Most often, APQC is seeing a return of 2:1 up to 5:1 among organizations.

APQC’s research indicates that organizations undergoing significant KM initiatives predictably move through five stages and types of measurement challenges.

1. Stage one involves learning from others through external benchmarking. This includes collecting success stories. The kinds of results you benchmark are reflective of a traditional organizational measurement system. Have other organizations experienced revenue increases or cost reductions? Can we expect a similar outcome?

2. Stage two involves continuing to collect and share stories, assessing the potential payoff for KM initiatives in order to select initiatives, and assessing readiness for KM. The KM advocates are trying to pick areas with the highest initial payoff; management and participants need to see improvement within three to six months.

3. Stage three involves building measures into the pilot design with leading indicators (input, activity, or process) and output measures, as well as anecdotal indicators. This is where people make mistakes if they do not build those measurement systems—and understand what processes they expect to change and how.

4. Stage four organizations correlate KM measures with business performance measures (outcomes), extrapolate gains from pilots or early initiatives to underwrite expansion of KM, and assess maturity and robustness of the KM infrastructure (people, process, and technology) and the costs to scale up.

5. Stage four requires fewer KM-specific measures as KM becomes institutionalized and organizations cannot imagine functioning without KM—much like accounting or marketing.

As KM becomes institutionalized, the importance of KM-unique activity measures diminishes (particularly at the business unit or enterprise level), whereas the organizational performance measures begin to reflect the value of KM and KM becomes a cost of doing business. (However, groups actively participating in KM activities may continue to reap benefits of input, activity, and output measures.) But the majority of organizations have a long way to go before KM is considered a way of doing business. Until then, KM-specific measures are necessary to underscore company goals, drive and reinforce behavior, assess progress, and provide a business case to continue KM efforts.
Xerox provides a good example of directly tying measurement to strategic goals. It added knowledge sharing to its organizational beliefs and core values and articulated the “desired state” and the corresponding core measurement, which was tied to specific behaviors and outcomes. Measures of input, activity, quality, and output are currently used, including the: number of database visitors, number of tips authored by region, validation of tips within 14 days, cleanliness of databases, success rates on tips, and savings generated by the reuse of customized product solutions among different local sales units.

Similarly, Best Buy linked measures to its strategic goals when it launched a KM pilot to improve sales and build the business case to expand to further retail communities.

- **Investment of Choice**
  - Reduced store training costs
  - Increased gross margin return on labor
- **Process/Discipline**
  - Improved store assessment scores (adherence to standards)
  - Better integration with enterprise
- **Employer of Choice**
  - Improved viewpoint scores (employee growth and learning)
  - Lower employee turnover
- **Retailer of Choice**
  - Improved customer loyalty scores
  - Fewer customer relations calls

Best Buy then linked these goals in its balanced scorecard and cascaded them to individual levels. Leading measures (behavior and outputs) included access (Web trends), participation (tips submitted), ratings, behaviors (sales offering measured by Mystery Shopping), perceived usefulness and timeliness, and compelling stories. Lagging indicators included the business results of gross margin and sales. At the end of its pilot, it used measures to demonstrate the business case: sales proficiency benefits to $18 million gross margin for three years; increased training attendance and sales proficiency knowledge; and a $250,000 annual paper reduction.

**MEASUREMENT LINKS AND ALIGNMENT**

Once organizations have surmounted the challenge of designing meaningful measures that serve as progress checkpoints along the road map defined by strategy, goals, and objectives; they must link these measures to important organizational systems such as strategic planning, budgeting, and compensation for effective decision making. Without these links, the numbers become something “separate” and are not used
for their purpose: to manage the business. According to responses to APQC’s recent survey, a dichotomy between measurement and these organizational systems continues to exist in a significant percentage of companies (Figure 10).

<table>
<thead>
<tr>
<th>Links</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is there a clear and consistent link between your organization’s strategy and its measurement system?</td>
<td>56% (n=61)</td>
</tr>
<tr>
<td>Is the measurement data linked to your organization’s budgeting process?</td>
<td>58% (n=62)</td>
</tr>
<tr>
<td>Is the measurement data linked to your organization’s compensation process?</td>
<td>57% (n=63)</td>
</tr>
</tbody>
</table>

When asked how they linked measures to budgeting, several survey respondents explained as follows.

- Strategic initiatives have a line-item budget and three-year forecast. Strategies, business plans, budget, and scorecards are linked.
- Budgets are assigned to specific projects and areas depending on past and expected outcomes.
- All requests for new budget allocations must be justified by linking them to one or more of our six strategic goals. Also, priorities for cutting costs in recent years have been based on minimizing the impact on the strategic goal programs. Work is underway to tie quantitative performance results to budget allocations. The process to measure these results is under development.
- Project priorities and investments are selected based on impact to all of the balanced scorecard metrics.
- Shareholder value, customer satisfaction, individual performance objectives, and budget commitments are all tied into everything we strive to accomplish throughout the year as a team from top management on down through the ranks.
- Strategy and risk assessments are developed prior to budget preparation; performance measures include achievement of budget. There is a quarterly process to update strategies and risks.

Based on APQC’s measurement work with member companies, it is clear that tangibly linking measures to strategy, budgets, and compensation enables workers to think strategically and behave locally in such a way that impacts outcomes. However, creating this link may be the most difficult task of a successful measurement system. Many organizations stop short of the finish line in linking individuals to departments; departments to business units, and business units to a corporate structure. Why?
APQC President Carla O’Dell stated four reasons some organizations hesitate to link all measures to outcomes and to other units’ outcomes.

1. Management is not totally convinced that the measures (except for financial) really reflect the key drivers of the business. Therefore, they hesitate to tie too much to them.

2. Because they also know how messy the strategy- or budget-setting process is and how it is close to throwing darts, budget, and strategy are seen as a rolling reality. They may be right. In fast-changing markets, management can hesitate to tie consequences to nailing one strategy when another one might even be better.

3. Tying one unit’s employee compensation to the performance of other units removes the “line of sight” and control, so they hesitate to enforce a common fate.

4. Past experience shows that the consequences of linking are not going to be followed through by management anyway. There are always justifications why this year is different.

“More often, these are just excuses for not wanting to hold anyone accountable for anything,” said O’Dell. “Starting a plan and sticking with it for a while can really help. Start simple then change over time. Never start complicated.”

• Most strategies are general and high level, and they depend on many people working together to achieve the strategy. Thus, it is difficult to tie specific performance measures to something that requires division- or department-wide participation; and, unless you use total team measures, it is hard to decompose who contributed what.

• Budgets are more specific and a little easier if the organization has a hierarchical chain of command, sets goals and measures at the top, and then uses the Japanese Hoshin Planning approach to systematically decompose pieces of the total to individual units like a cascade. Hoshin Planning emphasizes active participation at each level to align goals and measures. In this more desirable approach, organizations create high-level strategies and budgets and then engage in interactive discussion with the next level down to reach an agreement on goals and measures, which continue to be filtered down, discussed, and agreed upon at each successive level. The easiest approach, however, is a true, bottoms-up budget (provided that people building the budget also think of the measures they can live with to achieve those goals).

Again, if work is organized into teams, then it is often difficult to isolate how an individual contributed to the goals (thus the popularity of using gainsharing).

Grayson attributes the difficulty in links to the complexity of decomposing high-level strategies and budgets to individual contribution and the top-down approach most
organizations take to set strategy and budgets first without contemplating measures and accountability. Instead, he said, it is much easier to have cascading measures and accountability if these are created in the beginning with active participation.

Grayson said, “You don’t have to [completely adhere to the] Hoshin Plan, if you can think from the beginning of setting a goal or a strategy, what the processes are that make up the entire system, and then build measures around processes, rather than individuals, and assign responsibility for performance to specific steps in the processes.”

And Brown has found many of the problems in linking measures to strategy result from unclear vision and mission that lead to a shaky foundation for scorecards. It is critical to clearly define and distinguish the two to establish a clear direction with appropriate links. He believes that 75 percent of an organization’s measures should relate to its mission (i.e., goals for financial, customer satisfaction, employee satisfaction, and meeting operational requirements for productivity and quality) and 25 percent should provide gauges on how the organization is progressing toward its vision.

A top-down, bottom-up alignment, although difficult to achieve, is critical to focus everyone. Without this, people work toward conflicting goals and undesired outcomes. As pointed out by Grayson, organizations need to engage in an interactive process. This involves identifying stakeholders, decision makers, information needed, the potential impact at each level, and data sources. Scorecards force alignment, by cascading the organization’s critical few measures all the way down to individuals, which reveals how each individual contributes to important organizational outcomes (Figure 11).

Brown added, “Unless the scorecard is cascaded down to small teams and even individual employees, it has very little chance of changing behavior. Many, if not most, large organizations make the mistake of not developing scorecards for teams and individual employees and then wonder why employees are not more interested in company performance.”

When designing individual measures, it is, again, important to determine how measures drive the right behavior throughout the organization. Leaders are tasked with deciding whose behavior will be impacted and how. Holding individuals accountable and compensating them based on measures demands a careful approach because employees focus on what gets measured.
CHALLENGES ON THE HORIZON
Organizations will face a number of challenges in the next five years, including:
finding measures that truly gauge organizational health, balancing results (financial/ nonfinancial and short term/long term) and indicators (lagging, current, and leading),
linking compensation to performance, and developing common standards to measure performance. A discussion of each challenge follows, along with the perspectives of respondents to APQC’s recent survey and this paper’s subject matter experts.

As accounting rules change to try to enforce ethics and governance among executives, organizations still struggle to broadly and systematically measure performance in such a way that provides a true picture of organizational health. Executives and managers alike are continuing to place the majority of their emphasis on the short-term monthly and quarterly results and often avoiding measuring nonfinancial measures and less tangible assets such as knowledge. If measurement is truly to provide the insight to organizational health, then it must be tied successfully to what is expected. Tied to the strategy and goals of the organization in such a way that performance can be identified, drivers of performance are explicit and the result of the measurement system provides insights into which levers to pull to change performance. If we want higher levels of employee retention, then our measurement system must not only...
reflect the goal and where we are today; it must also reflect what we believe are the vital few things that drive change in the final outcome.

Although financial results are critical, there must be balance between financial and nonfinancial results, between short-term and long-term results, and among lagging, leading, and current indicators. Understanding this softer side is often counter to how we think about measurement itself. Measurement by design implies quantitative results. So measuring the impact of employee behavior on customers becomes challenging but a must.

Lastly, compensation is still not being linked to organizational health over time. Corporations like IBM, GE, and Microsoft Corp. are making significant progress in how executives are compensated. Although these leading-edge firms are forging new ground, there is work to be done in how compensation throughout most organizations is linked to outcomes.

Another challenge is the ability to develop common standards around how performance is measured and defined so that effective comparisons within and across industries can be made. This level of transparency will provide a significant breakthrough in the marketplace, with the ability to identify the improvement opportunities and focus on change providing a stark contrast to debating the numbers and the source of the data. (APQC’s formation of the Open Standards Benchmarking Collaborative research and database is designed to provide organizations with the most reliable, comprehensive collection of process information worldwide. The formation of the OSBC’s advisory council is reflective of the need in the marketplace. The advisory council consists of senior executives from a wide range of industries who are committed to developing common measures that are relevant, across industries.)

Survey respondents anticipated a wide array of future challenges. Figure 12 details challenges they cited for the next five and ten years.

Brown believes the biggest challenge facing organizations relates to soft measures such as ethics, employee morale, and customer satisfaction. He suggested that the biggest area organizations should focus on is finding better, causally linked process metrics. He said that whereas manufacturers like paper mills have outstanding process measures in place and know what variables need to be controlled to get good results, service-oriented companies tend to have more superstitious measures based on what they think are good measures rather than evidence linking them to meaningful outcomes. He considers the top ten most innovative and useful metrics to be: communication effectiveness, customer relationships (the index discussed above), employee satisfaction
(a combination of sub-measures such as absenteeism, complaints, voluntary turnover, stress levels, etc.), brand image, distraction index (a measure of how much time employees at all levels spend doing what they were hired to do), trust index (corporate ethics and integrity), aggravation index (how difficult it is for customers to do business with your organization), supplier/partner index, project management index, and intellectual capital (right people with right mix of knowledge).

Grayson agrees that the ability to define and frequently collect meaningful customer satisfaction measures is an issue for organizations today. He said the biggest challenge to implementing effective measurement systems is collecting the metrics to have the data to support what the organization calls measures. He said, “Not enough corporations have the data nor use the data well enough; and that is what Six Sigma is really so good at: forcing people to use data in order to make decisions.” The more organizations use data, with as much detail and analysis as possible, the better the performance.

Contrada said that organizations’ understanding of their business models and becoming better at forecasting what they think will happen for several quarters or one to two years out, depending on the industry, is a challenge today. However, a bigger challenge he witnesses in organizations is how to simplify measures; they have too many measures and are drowning in information. He said in the next couple of years, organizations will need to define “the standard [they] are going to apply to get clarity and coherence around all the information [they] have.” Ideally, he said, this
will propel them to adopt a combination of performance measures that everyone will agree are at the heart of their business model. To these common standards, Contrada said, organizations will need to add measures specific to their strategy to differentiate themselves from competitors.

Linking and alignment—the flow of planning, measuring, accountability, monitoring, and managing existing in a “completely uninterrupted continuum”—is the biggest performance measurement challenge Thor sees in the next five years. “Measures don’t exist in a vacuum; they are created based on what the company needs to do,” Thor said. “I’m looking at the linking or the alignment between strategic plan (or its equivalent), the measures of performance, and the accountability of the individual manager and worker—making that connection whole.”

Looking ten years into the future, Contrada, Thor, and APQC agree that generally accepted industry standard measures are essential. Contrada feels that organizations will eventually be able to distill the “atom bomb of information that has gone off in their organizations” down to the critical few measures; but the next challenge will be adopting commonly defined standards set by each industry to meet the demands (of which SOX is part) for more publicly available, transparent information for external reporting. Thor said once organizations solve their internal problem of linking and aligning measures, the external issue of educating financial analysts must be attacked: “Get them to understand that excellence in drivers is what should be pricing companies—not necessarily results—particularly in the long run.”

**GOVERNANCE AND ETHICS**

Although it is not clear how and the degree to which governance and ethics measures will eventually materialize on organization scorecards, current events and APQC’s recent survey show that those issues are certainly under the public’s microscope.

Opinions regarding the federal government’s recent passage of Sarbanes-Oxley are mixed, but in its current version, the law does not necessarily impact existing measurement systems. Thor considers SOX “the top of the iceberg,” which requires people to “be much more careful about the financial results and leaving trails and bigger and better footnotes.” But the much bigger part, the part of the iceberg under the surface and most important to ethics, he said, is integrating ethics into driver measures more than results measures; these drivers then give earlier warnings of looming ethical problems.

APQC believes SOX provides leading organizations the opportunity to go beyond Section 404 compliance and map core processes and fundamentally improve those
processes through knowledge management and balanced scorecards. Organizations that already have a strong foundation are more easily able to comply with SOX and, in turn, run a better business. For them, SOX is not just another cost to the system, but instead is actually one of those catalyzing events that leads to better business results. Crown Castle provides a good example of leveraging this opportunity: by integrating its disciplines of balanced scorecard, knowledge management, and process improvement to better comply with SOX, the company achieved an overall improvement in its core processes and financial results. Paladino said: “Companies can use SOX, knowledge management, and balanced scorecard to identify their business practices and then challenge themselves to put in the control points that enhance their processes. It’s dual track: one is compliance and the other is process improvement.”

Brown said regardless of SOX, organizations today have an increased focus on values, culture, ethics, and integrity. However, he said, the problem is that few organizations know how to measure ethics; too many focus on behavior (number of people who attended training) rather than outcomes. He proposed that all organizations should have an ethics index on their scorecards. An example follows.

1. **Knowledge** (10 percent)—a test of employee knowledge of rules, values, and policies
2. **Deployment** (10 percent)—a project management metric that typically counts progress against milestones of implementing programs and actions to ensure ethical behavior
3. **Perceptions** (25 percent)—anonymous surveys of employees, customers, and others to determine the extent they trust management, believe the company lives by stated values, etc.
4. **Behavior** (25 percent)—the number of “write-ups” or other ways of tracking unethical, rule-breaking behavior
5. **Outcomes** (30 percent)—based on result of behaviors (e.g., number of regulatory violations, whistle-blower reports, negative press articles, lawsuits, and dismissal for ethics problems)

Although Grayson believes it would be difficult to have standard ethics measures to apply across all companies, he said that organizations can write a code of ethics to measure ethical behavior inside their own walls. Thor believes such ethics measures should be included in workplace and partnering (community) measures; he said organizations have already incorporated some ethical aspects (e.g., environmental, legal disputes, and safety) and are increasingly attributing importance to such measures and finding ways to include them in their measurement systems.
MEASUREMENT’S IMPACT ON EXECUTIVE COMPENSATION

It is obvious that executive compensation, in particular CEO compensation, in most cases is not sufficiently linked to balanced measures that reflect the true health of the organization. When asked their opinions on the current executive compensation structure that rewards for financial measures such as stock price and revenues, experts offered different perspectives but agreed that current executive pay schemes must be amended to include a more solid link to the nonfinancial measures that drive long-term results (and thus increased shareholder value): a more balanced approach to “pay for performance” than the widely used financial definition. But, as this paper has stated, such a reward in only as effective as the underlying measurement system you have built. Suggestions from this paper’s subject matter experts follow.

• Brown said executive compensation should link to overall company health, not just stock price, which is a combination that is not easily manipulated. In addition to the financial measure, he suggested CEO performance measures include the three nonfinancial measures discussed above: employee morale, customer relationships, and a future-focused measure that links to vision.

• Thor said that most CEO compensation formulas lack links to long-term strategy and drivers and too often heavily focus on stock price, which he believes is not even a result and should not be part of CEO measures. Instead, he said, the formula should consist of results (e.g., profitability and market share), which could be weighted as heavily as 50 percent, and three to four key drivers from the last year’s strategic plan (e.g., new product launch or new deal), which would change from year to year.

• Grayson supports a balanced scorecard approach to executive compensation, with 70 percent of the weight on nonfinancial performance “because those are going to lead to financial gain, [from] which [the CEO] and everybody else would benefit.” He believes stock options should be expensed and gains extended out over a forecasted period (e.g., five years) to force the corporation and the executive to look at options as a long-term investment.

• Contrada agrees a more balanced approach holds executives accountable for their direct responsibility of strengthening the organization. He said that it is important to connect executive compensation to the long-term financial valuation of the organization; “but in order to drive sustainability, you have to focus on the intangibles.” These intangibles are investments in organizational capabilities—the nonfinancial quadrants of the scorecard—that ultimately drive up shareholder value. Thus, executives must execute against critical drivers most relevant to the organization (employee turnover, innovation, etc.).

Ideally, then, balanced measures would bring company performance, shareholder value, and executive compensation in line and render shocking stock option “rewards,” such as those illustrated below, a thing of the past. Figure 13 lists the 15 most lucrative
stock options in 2002, which were awarded despite a stock value decline for 11 of these companies.

<table>
<thead>
<tr>
<th>Company</th>
<th>CEO</th>
<th>Potential Value of Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travelers Property and Casualty</td>
<td>Robert I. Lipp</td>
<td>$127,499,387</td>
</tr>
<tr>
<td>Honeywell</td>
<td>David M. Cote</td>
<td>$117,155,109</td>
</tr>
<tr>
<td>Anheuser-Busch</td>
<td>Patrick T. Stokes</td>
<td>$107,718,060</td>
</tr>
<tr>
<td>Cisco Systems</td>
<td>John T. Chambers</td>
<td>$99,238,817</td>
</tr>
<tr>
<td>Tyco International</td>
<td>Edward D. Breen</td>
<td>$87,972,140</td>
</tr>
<tr>
<td>SBC Communications</td>
<td>Edward Whitacre, Jr.</td>
<td>$80,462,140</td>
</tr>
<tr>
<td>Procter &amp; Gamble</td>
<td>Alan G. Lafley</td>
<td>$79,123,507</td>
</tr>
<tr>
<td>Tenet Healthcare</td>
<td>Jeffrey C. Barbakow</td>
<td>$72,387,783</td>
</tr>
<tr>
<td>Alcoa</td>
<td>Alain J. P. Belda</td>
<td>$66,661,410</td>
</tr>
<tr>
<td>Wells Fargo</td>
<td>Richard Kovacevich</td>
<td>$64,266,673</td>
</tr>
<tr>
<td>Sun Microsystems</td>
<td>Scott G. McNealy</td>
<td>$61,236,092</td>
</tr>
<tr>
<td>PepsiCo</td>
<td>Steven S. Reinemund</td>
<td>$60,431,288</td>
</tr>
<tr>
<td>Washington Mutual</td>
<td>Kerry K. Killinger</td>
<td>$60,379,592</td>
</tr>
<tr>
<td>Pfizer</td>
<td>Henry A. McKinnell</td>
<td>$59,239,407</td>
</tr>
<tr>
<td>Verizon Communications</td>
<td>Ivan G. Seidenberg</td>
<td>$58,400,500</td>
</tr>
</tbody>
</table>

2 based on stock price appreciation of 10 percent over the life of the option; 3 first day of trading was March 22, 2002.

Sources: Investor Responsibility Research Center, USA TODAY research

In response to shareholder and the public outcry, numerous organizations have begun redefining stock option policies. Some large companies have voluntarily begun expensing stock options. Microsoft Corp., for example, ended its former stock option policy in favor of restricted stock grants, which convey immediate shareholder status to employees. And IBM has led the way in indexing stock options for executive compensation; under its premium-priced stock options program for its top 300 executives, stocks must increase by at least 10 percent from their grant prices before executives are allowed to exercise options (collecting only those gains beyond the initial 10 percent), which vest over four years. In 2005 IBM executives also will be

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7 “Stock Options: As Goes IBM... Its plan to reward executives and shareholders could be a model for techdom,” Business Week, n 3873, March 8, 2004, pp. 36 to 38.
able to take advantage of another options program, the “buy-first” plan; eligibility requires executives to first buy shares on the open market using up to 10 percent of their annual bonuses and hold the stock for three years. These two new programs will affect all 5,000 of IBM’s executives beginning 2005.

Despite these leaders’ promising steps, much work remains. The majority of organizations need to follow this lead in gaining control over stock incentives, yet most have not adequately addressed the underlying performance measurement system these rewards are supposed to reflect.

CONCLUSION

In summary, APQC strongly recommends organizations take a closer look at their measurement systems and use these best practices to make systems more effective. Do not be tempted to think of measurement as an off-the-shelf solution. It first entails careful thought and planning concerning the organization’s core strategies and the vital few measures that will adequately gauge performance and depict a comprehensive picture of organizational health. Then, the organization must implement and constantly monitor a performance measurement system using traditional change management principles.

It is important not only what the measures are, but also how they are used. “That, to me, is one of the biggest gaps in the whole measurement system, because people can measure everything and still fail,” said Grayson. “It’s like the difference between knowing and doing: they can know a lot through the measures, but not much may happen unless they do something with the measure.”

Keep thinking of the road map. Where are you going? How are you going to get there? How do you ensure every person in the organization understands and follows the road map? Deviations will result in lost time and money and give way to competitive threats. Once defined, how do you best monitor progress toward goals and take action? Although organizations have made substantial progress, the evidence clearly shows organizations have a long way to go in fully capitalizing on meaningful measurement, including a clearer focus, better decision making, goal achievement, and possibly even a CEO compensation structure more firmly rooted in reality.

To participate in APQC’s OSBC database or measurement community, please visit www.apqc.org/OSBCdatabase.

"Stock Options: As Goes IBM... Its plan to reward executives and shareholders could be a model for techdom." Business Week, n 3873, March 8, 2004, pp. 36 to 38.