

**PARTNERSHIP FOR PERFORMANCE:
THE BALANCED SCORECARD PUT TO THE TEST AT
THE UNIVERSITY OF CALIFORNIA**

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In the early 1990's, the State of California was in the midst of a deep recession, which imposed steep budget cuts and a new era of fiscal constraint on the state's higher education institutions. Adding to the escalating pressures on our colleges and universities were demands from the legislature to curb mounting education costs, to deliver more value for taxpayers' investment, to increase productivity and eliminate the "fat" in administrative bureaucracies. Prompted by a transition in leadership, the University of California (UC) engaged in a comprehensive reevaluation of the role of business administration and operations in sustaining excellence into the 21st century. The administrative management systems that had supported the rise of the University of California to preeminence among worldwide research universities were no longer suited to the demands of the 1990's and beyond. Future administrative functions would, by necessity, become more innovative, consumer-oriented, streamlined and decentralized. They would demonstrate accountability by delivering consistently high degrees of productivity and service quality for fixed or decreasing cost to the University.

A PERFORMANCE ARCHITECTURE TO ADDRESS ACCOUNTABILITY

One of the University of California's initiatives to transform its administrative culture targeted organizational accountability--the need for UC campuses, departments and business units to continuously assess and strive to improve their performance. The University's management and control systems had been built over time to address the phenomenal growth in size and complexity of the nine campus UC system, to standardize policies and procedures, to ensure compliance and to minimize risk and exposure. The underlying need for effective controls is as pressing today as it has ever been. It is the nature and implementation of these controls, however, that imposes formidable obstacles to evolving to an innovative, efficient and service-oriented operation. The University has recognized, at the root of the problem, the need to shift the emphasis in UC's control systems from those that are primarily procedural in nature (i.e., rules, regulations, policies, restrictions) to controls that can play a diagnostic role (i.e., goal setting, performance measurement and evaluation). This change in focus to a management style of self-evaluation will also encourage and stimulate a dialogue about institutional priorities, culminating in new levels of organizational effectiveness.

In 1994, the University committed to developing a performance “architecture”, which would add diagnostics and performance measures to the current system of internal controls for managing its business. A performance architecture would enable business administration and operations departments to:

- Focus on the future;
- Set strategic goals and performance objectives; and
- Track progress over time in achieving these goals through a meaningful set of performance metrics.

Managing this way would offset the need for multiple layers of reviews, approvals, signatures, checks and audits. Decision-makers would have at their disposal timely, accurate, relevant performance information to assess their business functions and processes, to compare themselves to others both inside and outside higher education, to diagnose problems and, most importantly, to make the kinds of changes and improvements required to support the teaching, research and public service mission of the University of California into the next century.

Unfortunately, the University of California could not rely on its traditional planning processes to build this new performance architecture. As is the case with most higher education institutions, the budget process has traditionally driven the planning process at UC. It has also dominated critical measures. The budget review process forces the institution to look back in time, at past mandates, workloads, staffing levels and programs. Formulating the budget for the next year or biennium takes past performance as a baseline and projects it into the future. Institutional or departmental “plans” focus primarily on financial operations, budgets, people resource allocations and funding strategies. Strong performance is described as “staying within budget” (i.e., spending no more--and no less--than the allocated budget). Moreover, traditional financial measures tell management nothing about *how* and *how well* the policies, processes and practices of the institution are working. With a legislature and Board of Regents demanding evidence of good business management and increased administrative efficiency and productivity, traditional financial measures of past performance do little to convince the skeptics. In fact, they often serve primarily to defend institutional growth, program expansion or budget increases (Rush, 1994).

Traditional models for measuring higher education performance also are constrained by departmental boundaries, which encourages unit managers to be concerned only with their portion of a process that may span multiple work groups or units within the institution. Allowing the budget process to drive performance measures does not take into account the critical outside perspectives of customers and stakeholders as well as the dimensions of performance that are meaningful to them, such as time, cost and quality of service. Finally, there is no opportunity to tie individual performance objectives and performance evaluation processes to institutional performance.

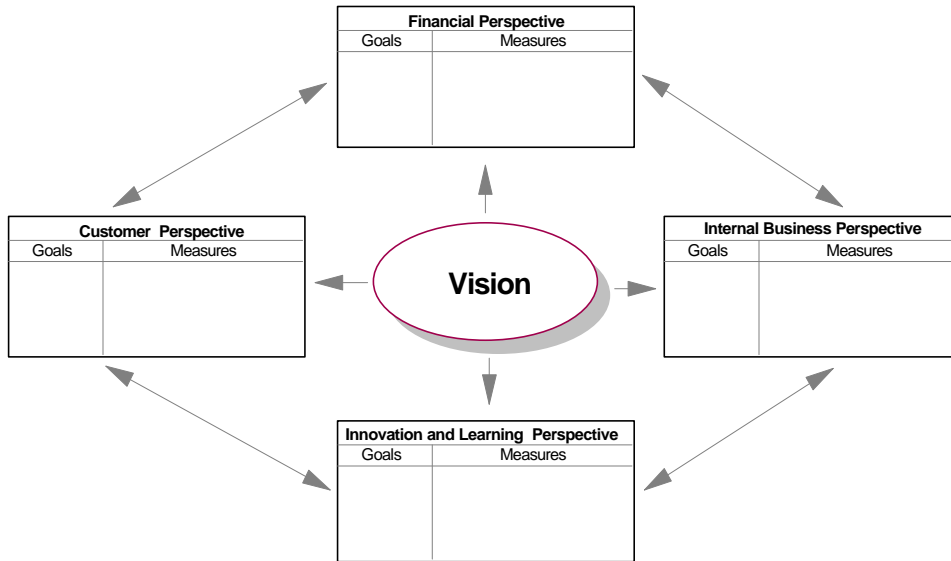
Private sector organizations recognized long ago that financial indicators alone do not offer the navigational information they need. They know that a measurement system is a critical communication vehicle and that it needs to address a number of different dimensions of performance. They understand that performance measures must link directly to vision and strategy. They have learned that reams of data do not constitute a good measurement system; rather, data must be gathered in support of specific goals and objectives. They have learned the hard way to listen to the voice of their customers and employees and to design their products and services to meet customer needs in order to remain competitive. They know that internal efficiency, productivity and product/service quality are keys to success and that their ability to attract and retain motivated, highly skilled employees is critical to sustaining a competitive advantage.

THE BALANCED SCORECARD: PUTTING THE FUTURE IN FOCUS

Acknowledging that, while it is not a business, the University of California can benefit from innovative business practices, the UC selected the balanced scorecard to shape its performance architecture. With consulting assistance from IBM, UC administrative leadership launched an initiative called "*Partnership for Performance*." The UC *Partnership for Performance* today refers to the collaborative performance management efforts of the University of California Office of the President, the nine UC campuses and the three national laboratories managed by the University under contract to the United States Department of Energy.

The balanced scorecard model for measuring performance was originally developed by Robert Kaplan and David Norton (Kaplan and Norton, 1992 a, b, c). "Balanced" points to the need to view and calibrate strategy and performance from multiple perspectives. The "scorecard" notion communicates the need for a simple, concise, measurement framework for managers to consult in both strategic and operational decision-making.

Balanced Scorecard



Source: Robert S. Kaplan and David P. Norton, The Balanced Scorecard - Measures That Drive Performance, Harvard Business Review, January-February, 1992.

Figure 1.

Kaplan and Norton's work addressed the barriers to implementing strategy found in the short-term, financial indicators around which traditional management systems are designed. Complementing financial measures in the balanced scorecard are measures of customer satisfaction, internal operational efficiency/effectiveness and the organization's innovation and continuous improvement activities (Figure 1). The balanced scorecard focuses an organization's goals and performance measures on the attainment of its future vision. Goals are roadmaps to achieving the vision and measures are indicators of progress in achieving the goals. Measures pull the entire organization toward the vision, toward the kind of organization that it is trying to become in order to succeed over time.

"Think of the balanced scorecard as the dials and indicators in an airplane cockpit. For the complex task of navigating and flying an airplane, pilots need detailed information about many aspects of the flight. They need information

about fuel, air speed, altitude, bearing, destination and other indicators that summarize the current and predicted environment. Reliance on one instrument can be fatal. Similarly, the complexity of managing an organization today requires that managers be able to view performance in several areas simultaneously." (Kaplan and Norton, 1992).

When adapted to the administrative, service-oriented practices of both the UC campuses and the Office of the President, each dimension of performance in the balanced scorecard would provide valuable management decision-making information to division and departmental business managers. In an environment that is extraordinarily decentralized and consensual in nature, performance measures offer the opportunity to develop a common "organizational language" to motivate action and change. They also address an important message to external stakeholders that the University of California sets clear directions for itself, both at the individual campus and at the University-wide level.

The University of California consists of nine distinctly different campuses (UC Berkeley, Davis, Irvine, Los Angeles, Riverside, San Diego, San Francisco, Santa Barbara and Santa Cruz) governed by a single Board of Regents. The University's commitment to developing a performance architecture presented the opportunity to address institutional performance both at the University-wide business area level and at the individual campus level. The University-wide *Partnership for Performance* was created to implement the balanced scorecard performance architecture through participation and collaboration among all nine campuses. In addition, several individual campuses (e.g., UC San Diego and UC Davis) have adopted the balanced scorecard for managing their administrative operations at the campus level.

By design, the *Partnership for Performance* faced an enormous challenge: to engage nine institutions, each proud of, and invested in its uniqueness and, in many ways, competing with the others, in an exercise designed to identify common goals and performance measures. This challenge is compounded by a pervasive concern that sharing and comparing performance data among the nine institutions will result in negative repercussions at both the campus and system-wide level. While we have made progress in overcoming these obstacles, we rely on the ongoing support, commitment and involvement of University senior management to emphasize the business improvement value of performance measurement. As a result, our administrative managers increasingly recognize the value of the effort.

While corporations originally viewed the balanced scorecard as a strategic performance measurement model, it has contributed to a new strategic management system in many organizations that have integrated it into the fabric of their decision-making. Each perspective in the balanced scorecard is a lens through which to view performance. When looked at in total, the balanced scorecard goals and measures should communicate what is really important to

the department in question. They also function as a set of “levers” which can be used to adjust and maintain the balance among those factors critical to the department’s success. All four balanced scorecard perspectives have given our business units new information and insights into their operations.

HOW DO CUSTOMERS SEE US?

UC administration is increasingly comfortable with the notion of “the customer.” There is growing acceptance that University administration must understand and address the wants, needs and requirements of those it serves. Taking the customer view means focusing on responsiveness, timeliness, product and service quality and cost--from the customer point of view. For revenue generating operations such as campus bookstores, parking facilities and dining and catering services, it also means retaining and expanding the existing customer base. We assess our performance from the perspectives of both customers who receive the services (students, faculty, staff, alumni, etc.), as well as the stakeholders who judge our effectiveness and have a direct impact or effect on our success or failure (legislators, regents, donors, grant agencies, etc.). Identifying key customers and stakeholders and understanding their requirements is a first step in designing customer-focused measures. The *Partnership for Performance* developed a set of customer satisfaction survey tools which have been employed by the business area teams to gather information in such areas as: importance/performance of key services in the eyes of the customer; customer needs and requirements that are not being addressed; and customer perception of the value and effectiveness of services being provided.

AT WHAT MUST WE EXCEL?

Internal operational measures focus inward into the internal workings of the business area, on those processes and activities that deliver critical services to both internal and external customers. These are the measures that tell the story of timely and accurate travel expense reimbursement, effective recruiting and hiring, quick turn-around on employee inquiries into retirement benefits and efficient hazardous waste disposal programs. Internal business process measures address such things as productivity, accuracy, cycle time, core competencies and effective use of people and information resources. In their simplest form, these indicators cast productivity in terms of ratios of resources to outputs (e.g., number of payroll transactions per central payroll office FTE). In their more complex form, they require process analysis techniques that identify and quantify the steps and critical resources required by a business process.

HOW DO WE LOOK TO OUR KEY STAKEHOLDERS AND RESOURCE PROVIDERS?

Traditional financial indicators retain an important role in the University’s balanced scorecard initiatives. A set of key financial ratios assess the financial

health of the UC institution as a whole. These are “top of the pyramid” measures, such as net operating ratio, facilities condition, reinvestment rate, research funding competitiveness and debt capacity. At the operational level, financial goals and measures focus on the cost/quality of service equation and on cost reduction or cost avoidance strategies within specific business areas. Revenue generation goals and measures enter the mix for auxiliary services areas such as parking and bookstores.

CAN WE CONTINUE TO IMPROVE AND CREATE VALUE?

This category of the balanced scorecard addresses the organization’s ability to sustain high performance levels over time. Here, we examine the more subjective factors that contribute to high performance, such as workplace climate, employee morale, skill alignment, professional development strategies and effective use of technology. At the University of California, business areas increasingly recognize the value of assessing these factors as they contribute to business unit or department performance. No one underestimates, however, the challenge of identifying the most effective methods of performing this kind of culture tapping. Both individual campuses and the University-wide *Partnership for Performance* initiative have developed survey tools to assess organizational climate at the work group, department, division or institution level. These surveys focus on such factors as leadership and management styles, decision-making, teamwork, morale, communications, training and skills, motivation and rewards and attitudes toward change. When combined with focus groups and other employee input techniques, these surveys can identify trouble areas in need of management focus and attention.

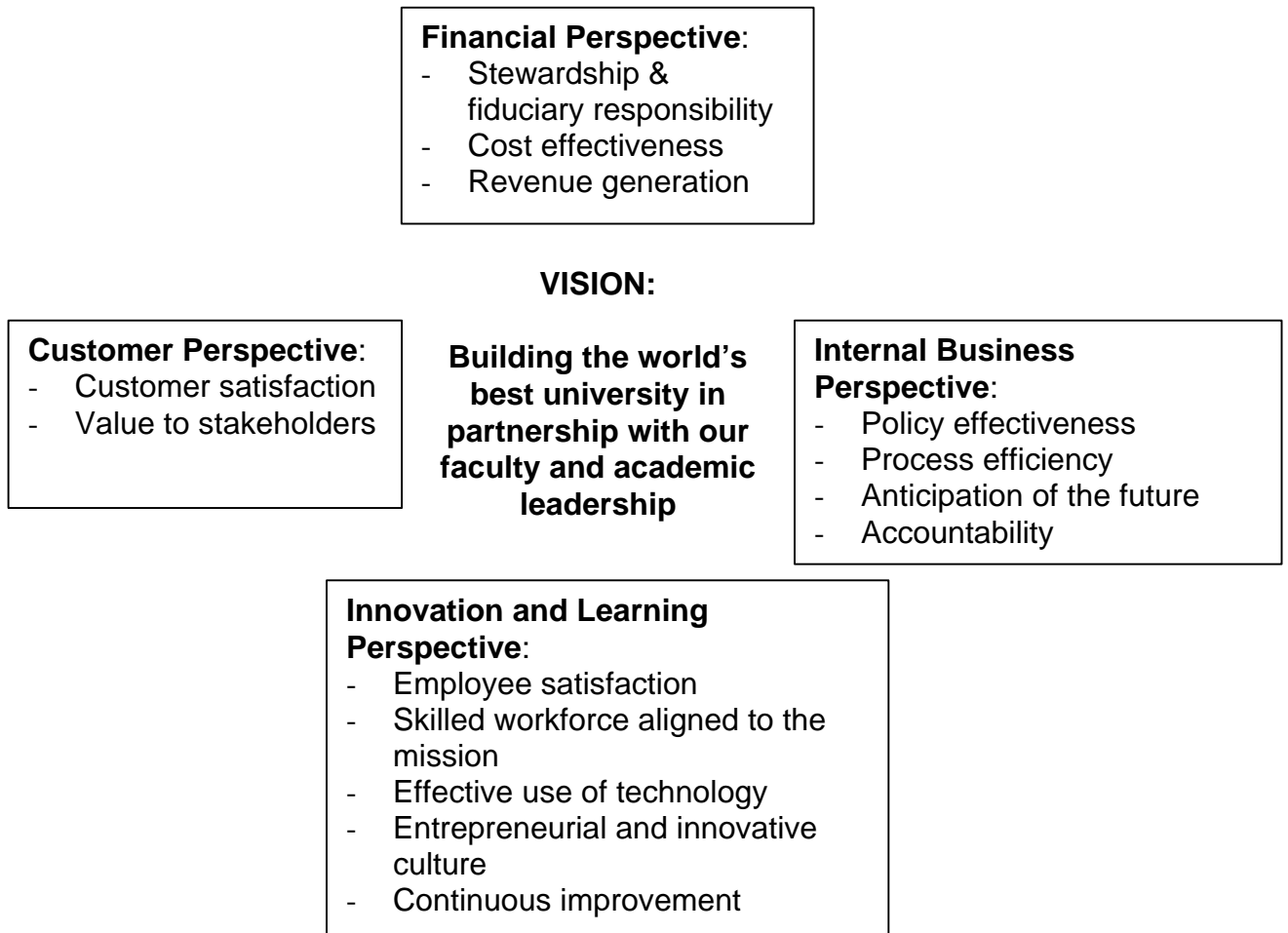
The balanced scorecard has proven effective in resolving the inability of traditional management systems to link long-term strategy to short-term actions. At the University of California, it has served as a catalyst for developing and translating a University-wide vision for administration; for communicating goals and strategies and linking them throughout the organizational hierarchies; for integrating performance measurement into business planning; and for providing a forum for the ongoing transfer of knowledge among our institutions. Most importantly, performance measures are helping us establish and support a continuous process of self-evaluation and correction at all levels of the organization. Their role is to provide feedback about areas needing attention on a University-wide level and to support our managers’ efforts to direct energy and resources to improvement efforts.

BUILDING CONSENSUS AROUND THE VISION AND STRATEGY FOR UC ADMINISTRATION

While many of the UC campuses have articulated their vision and goals for how campus administration can best support the teaching, research and public service mission of the institution, the nine campus University of California system had not developed a vision and strategic goals for administration as a whole. The

Partnership for Performance initially brought together the campus Vice Chancellors of Administration and the senior business and finance executives in the Office of the President to develop and align their vision and goals for the University administration (see Figure 2 below). This strategic view is still in focus today because it is broad, general and directional enough to weather the test of time, and because the goals are translatable into more specific goals for each administrative business area.

SUMMARY OF UNIVERSITY OF CALIFORNIA VISION AND GOALS FOR BUSINESS ADMINISTRATION AND OPERATIONS (Figure 2)



The fact that senior administrative managers from all the UC campuses participated in their creation made these goals a compass for business area managers and a catalyst for University-wide collaboration.

The pivotal role of the University's senior administrative management team did not end with the development of the vision and university-wide goals for business administration and operations. They have continued to act as a steering group over the life of the effort, providing ongoing direction, prioritization, problem

solving, encouragement and motivation for staff to participate. Their visible endorsement and support of the *Partnership for Performance* has provided the necessary impetus when new business area teams are launched or when the challenge of reaching consensus among nine institutions appeared to be an insurmountable obstacle to the campus business managers.

LINKING THE VISION TO DEPARTMENTAL PERFORMANCE VIA STRATEGIC GOALS AND MEASURES

A performance architecture allows UC managers to communicate their strategy up and down the organization and eventually to link it to departmental and individual performance objectives. The University chose five key business areas to pilot the development of common balanced scorecard measures for the nine campuses. These are the core administrative functions: human resources, facilities management, environment health and safety, information technology and financial operations. The senior managers responsible for each activity area formed the *Partnership for Performance* team and began by translating the University-wide goals into strategic goals specific to their area. For example, one financial goal is to “ensure UC financial integrity and demonstrate fiduciary responsibility for capital and financial assets throughout the system”. When translating this goal into facilities management, the UC facilities managers looked to budget systems, internal controls and accounting systems for performance indicators for financial integrity. They focused on their stewardship role as witnessed by the condition of facilities, responsible maintenance expenditures and adequacy of maintenance budget allocations. Facilities performance measures which support this goal include:

- Annual facilities operations, maintenance and physical plant expenditures as a percentage of current replacement value;
- Deferred maintenance backlog (\$) as a percent of current replacement value;
- Facilities renewal requirements (\$) as a percent of current replacement value.

Likewise, the environment health and safety directors from the nine campuses mapped the strategic goals for UC administration into their business area.

- UC Business Administration and Operations Financial Goal: “We deliver our services in an efficient, cost effective manner. The value we create exceeds the cost of creating it.”
 - Environment, Health and Safety Financial (EH&S) Goal: “EH&S programs and services are delivered in a cost effective manner that contributes value to the campus.”
 - EH&S measures in support of this goal include:
 - Total hazardous chemical waste cost per kg of hazardous chemical waste managed;

- Radiation safety cost per authorized user and radiation worker;
- Biological/medical waste cost per kg of biological/medical waste managed.

Each of the performance measurement teams created a set of goals for their business area, arranged in the balanced scorecard categories to ensure that performance can be assessed from multiple perspectives. With the goals outlined, the teams selected key measures of performance to assess their progress over time in achieving each goal. These measures give them the ability to assess and track their unit's performance and to compare it to the performance of their UC peer institutions. Some measures are directed at assessing progress and diagnosing problems and obstacles; others highlight end results. The teams defined each measure clearly to ensure an "apples to apples" comparison from campus to campus. In addition, the data gathering strategy was laid out, down to the location of the data elements, the frequency of data collection and the format for reporting the data.

CREATING A PERFORMANCE MEASUREMENT CULTURE

When the University launched the *Partnership for Performance*, the area business managers on the nine campuses were the logical points of departure. While these groups (e.g., Human Resources directors) meet periodically to share information and collaborate on common operational or policy issues, they do not typically engage in collective strategic planning. Those teams that have been most successful in defining common goals and performance measures have benefited from a champion and leader from within the team. A structured approach, training in performance measurement and facilitated team work sessions have also helped to keep the focus and momentum.

The size, complexity and decentralized nature of the University of California also required a strategy for sharing performance management information and for engaging campus leadership in an ongoing dialogue on the topic. The UC has benefited greatly from the performance measurement expertise of the UC-managed national laboratories (Los Alamos, Lawrence Livermore and Lawrence Berkeley). Due to their pioneering work with the Department of Energy to transform their operations from contract compliance to performance management, the national laboratories have received national recognition as "best in class."

A University wide "think tank," the Performance Champions group, meets quarterly as a forum for this regular dialogue and exchange on the many aspects of organizational performance measurement and management. The group, which includes our measurement team leaders and a broad range of campus and Office of the President advocates, reviews measurement team initiatives and best practices; explores trends and models in use in other industries; provides important guidance and direction to the *Partnership for Performance*;

and functions as a conduit of information to their respective campuses. The *Partnership for Performance* has also created a web site (<http://www.ucop.edu/ucophome/businit>) to disseminate a broad range of information throughout the University:

- UC vision, mission, values and goals for business administration and operations,
- the balanced scorecard approach and objectives,
- work in progress by the measurement teams,
- downloadable customer satisfaction and organizational climate surveys,
- presentation materials,
- team status reports,
- links to campus initiatives, and
- white papers on performance measurement-related topics.

STRATEGIC BUSINESS PLANNING USING THE BALANCED SCORECARD

Two UC campuses--UC Davis and UC San Diego, in particular--have adopted the balanced scorecard as a strategic business planning tool for business administration. UC San Diego (UCSD) has received national recognition for its leadership in successfully adapting it to the internal management of the Business Affairs Division. Business Affairs at UCSD is responsible for a diverse set of business services, including campus computing, police, transportation and dining services, campus financial operations, facilities management, human resources and environment, health and safety programs.

The four quadrants of the balanced scorecard guide the business planning within each department and a division-wide process for gathering critical performance data provides systematic, consistent information for review by the division management team at annual planning retreats. Customer satisfaction surveys are administered annually, to faculty, staff and students as customers of the division's primary services. Financial and productivity metrics are tracked longitudinally for each business area. An organizational climate survey, administered annually to administrative management and staff, provides feedback on a broad range of workforce climate issues. The entire management team reviews the performance measurement data, business area by business area, providing a system view of the division's performance and an opportunity for dialogue and collaboration across business area boundaries. The data enables the management team to assess the impact of prior events and strategies on the performance outcomes of each unit and to identify focus areas for the coming year.

The UCSD Business Affairs Division now has the ability to trend five years of data in many areas, which offers new insights and the longer-term impacts of the management team's focus and strategy. Several factors have contributed to the success of the UCSD Business Affairs team:

- Strong support and involvement by the Vice Chancellor and the business area managers;
- A clear set of strategic goals for the division;
- Direct linkage of the measurement data to the business planning and budget process;
- Broad communication and sharing of the information created (it is available on the UCSD web site); and
- Investment in the resources required to ensure that the performance measurement data is collected and analyzed on a systematic basis.

“Now in its fifth year, UCSD’s balanced scorecard program demonstrates that performance improves when it is effectively and routinely measured, analyzed and addressed. But more importantly, the balanced scorecard approach provides an institution with a roadmap on where it should focus its energies, priorities and resources in addressing administrative support services. So often, in the absence of relevant and timely information, campus leaders will call for change when a single incident occurs, believing it is indicative of a chronic problem. Or a chronic problem may go unnoticed for years until a crisis occurs. The balanced scorecard establishes an objective framework for continually assessing the effectiveness of campus administrative services using real data from customers, peer institutions and the people providing the services.” (Relyea, 1998).

PERFORMANCE MANAGEMENT AS A LEARNING EXERCISE

The rapid growth of the University of California has forced each of our institutions to grapple with tough decisions about how to create and sustain an environment equipped to handle this growth with no additional administrative resources. A performance architecture creates a common language for the nine campuses to assess the effectiveness of their programs and services, and ultimately, to learn from each other. The UC campuses are a natural cohort group to discuss and compare business practices and to leverage the benefits of being a “system.” Previous efforts to participate in national higher education performance benchmarking have not been successful, in part, because UC campuses did not always find the right mix of cohort institutions for meaningful comparisons and because the measures often did not relate to campus or business area strategic goals. While our campuses look for ways to compare themselves to other institutions, this exercise requires a foundation of common practices, processes, definitions and denominators that ultimately provide information that can lead to actions and results.

The *Partnership for Performance* teams began with a clean slate and identified goal-oriented performance measures for their specific UC cohort group. Giving the managers responsibility for developing the business area goals and measures has been a critical success factor for the *Partnership for Performance*. Several teams have invited non-UC institutions to collaborate with them in

comparing performance and have incorporated relevant industry benchmarks at their discretion. The Facilities Management team, for example, invited the Stanford, Cal Tech and University of Southern California (USC) facilities managers to join the performance measurement team, thus naturally extending the cohort group to California-based private institutions.

The real value of measuring performance in a comparative way is to view it in context, to understand what it reveals and why and to use this as a springboard to sharing good practices from one campus to another. In addition to sharing performance data, the Environment Health and Safety Directors share risk and program self-assessment models. Payroll managers are deploying a common customer satisfaction survey of departmental users to provide them feedback to develop payroll process improvement strategies. Travel managers participated in a national travel management best practices study with companies doing business globally, and incorporated these findings into their collective recommendations for improving travel reservation, booking and expense reimbursement processes university-wide. Facilities managers compare campus strategies for building and landscape maintenance services, reviewing approaches and costs in relation to individual campus priorities.

This kind of dialogue and sharing among the managers about individual campus operations eventually led to decisions to take collective action to improve service cost and quality across the UC system. When the Environment, Health and Safety directors realized that there were significant discrepancies in their costs of hazardous waste disposal, they collaborated on a system-wide rebid of these services, which resulted in an average 25% savings per campus. Facilities Managers collaborated with capital budget and planning, design and construction counterparts to quantify the University's facilities renewal needs and to arrive at a common working definition of "current replacement value". The UC partnered with the California State University system to reduce utility costs by \$16 million over a four-year period.

At the University of California, administrative management and staff in every business area are directing their energy toward bridging the gap between our current performance and future potential. We are changing the way we manage many of our business functions. The balanced scorecard has helped sharpen our focus and better align our day-to-day activities with longer-term strategies. In the process, we are also building trust, better collaboration and dialogue, higher levels of active employee participation in shaping the future of our operations, and a culture of evidence, where performance information is woven into the fabric of our administrative management philosophy. The wisdom of the Farmers' Almanac dictates: "A halo has to fall only a few inches to become a noose." Paying attention to measures of success is our best survival mechanism.

University of California Performance Management Process

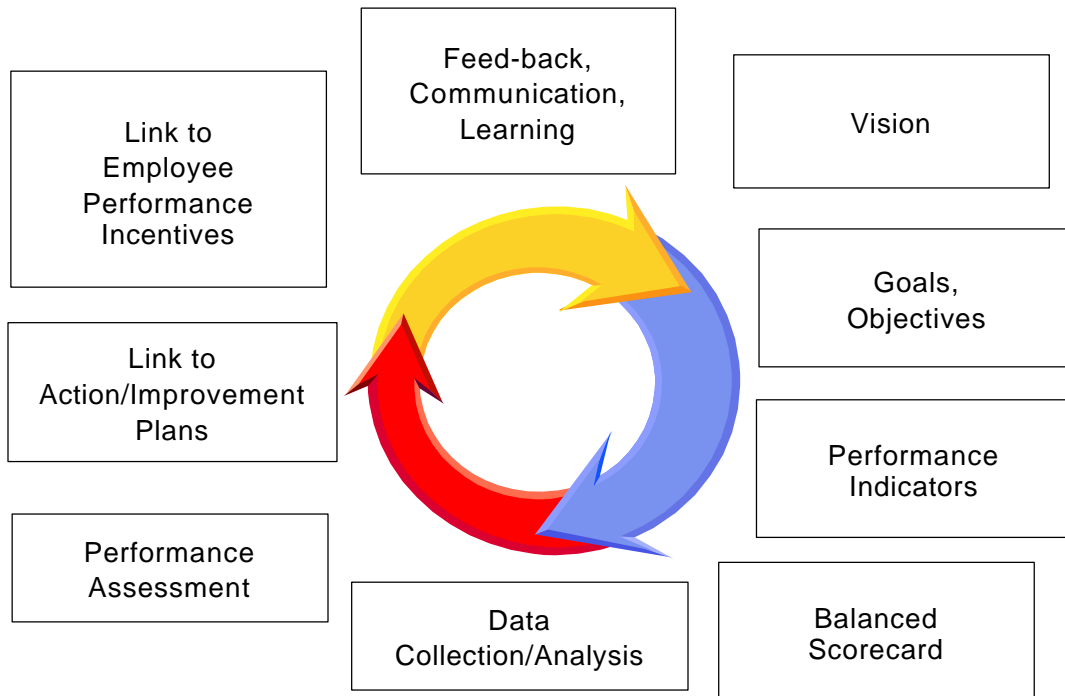


Figure 3.

BUILDING A BALANCED SCORECARD: HOW TO MAKE IT WORK

While there is no single formula for building a successful balanced scorecard, there are several necessary steps and precautions for higher education institutions to take.

1. Define the scope of the business area for which the balanced scorecard will be used: its mission, core products and services and primary customers. Identify the business units responsible for delivering these products and services, and involve them in the effort, even if they are located in other parts of the organizational structure. Engage the management with direct responsibility for the functions and processes being measured.
2. Involve the senior management of the institution/department by first presenting the balanced scorecard concept and articulating the benefits of a vision-driven approach to performance measurement. Define a continuing

sponsorship role for the senior management team that will span the duration of the creation of the balanced scorecard.

3. Engage the senior management of the institution or department in the process of creating the vision and strategic goals, which provide the necessary context for assessing performance. Balance the institution's typical requirement for broad participation, consultation and consensus with the need to identify future direction and strategy.
4. Seek input from key stakeholders and customers during the process of building the balanced scorecard to ensure that the view that emerges reflects *their* needs and expectations for performance.
5. Involve department management in both: developing long term goals for their departmental operations and selecting the measures of performance to track progress in attaining these goals over time. Recognize that empowering business unit managers to identify the right performance indicators for their business area is key to gaining their support and buy-in. Provide training in strategic thinking and in developing performance measures to all team members.
6. Identify what kinds of measures are appropriate for different levels of reporting. At the Board of Trustees/Regents level of reporting, at a maximum, three to four indicators of performance in each balanced scorecard category suffice to communicate the message. The operational level requires more information and greater detail. Measures proposed during the building of the balanced scorecard should therefore be sorted, weighted and prioritized. For every performance measure selected, you should know what information will be produced, why it is valuable and to whom. Ultimately, you need to know what actions you can take based on this information. To start with, focus on the few critical measures that will tell you what you most need to know. Then, expand and refine your measures over time.
7. Define clear ownership of the process of maintaining the scorecard as well as collecting and analyzing the data. In the university world of "shadow" computer systems, duplicate databases and inconsistent/incompatible data, the task of linking the measures to databases and information systems is a challenging one. This becomes easier when the data sources for measurements are clearly identified.
8. Clearly communicate the role of the scorecard in managing the unit, department or institution. Understand that, taken out of context, measurement information can not only be misinterpreted, it can be misused. In a complex environment such as UC, institutional and business unit level outcomes vary because of differences in campus locations, resources and goals, among other factors, all of which are outside management control.

Punishing lack of performance will undercut the value of a performance measurement initiative. Performance shortfalls must be treated not as problems, but as opportunities. Above all, it is important to recognize and reward business managers' involvement in the process--as much for the value of the measurement information it provides as for the cultural change that the process effects within the institution. Make the balanced scorecard framework widely available, keep it visible, reference it often and encourage the development of second-level metrics in operational units or decentralized parts of the organization to drive the performance measurement message as deep as possible into the culture of the institution. Ultimately, each employee's performance plan should reflect institutional goals and objectives.

9. Review the balanced scorecard periodically and ask the following kinds of questions:
 - Are we measuring the right things?
 - Does the cost of gathering the data exceed the value we receive?
 - Is performance measurement changing the way we do business? Are we making better decisions as a result?
 - How can we improve our measures to get the information we most need?

Revisit the department's vision, goals and measures as needed to ensure that they present an accurate view of your focus and future direction. This feedback and review process allows you to monitor short-term results and to benefit from real-time learning. Make sure that your performance measures are not encouraging the kind of counter-productive behavior that has plagued some for-profit companies and most recently the Internal Revenue Service--managing the numbers rather than fixing the underlying problems.

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