SAP Strategic Enterprise Management

Translating Strategy into Action: The Balanced Scorecard

Written by David Norton, The Balanced Scorecard Collaborative, Inc., and by SEM Product Management, SAP AG

SAP AG ● Neurottstraße 16 ● 69190 Walldorf ● Germany

Contents

This Paper describes SAP's vision for the SAP SEM Balanced Scorecard solution. It has been prepared jointly with The Balanced Scorecard Collaborative, Inc. (www.bscol.com). The Balanced Scorecard Collaborative is the global center of expertise of the Balanced Scorecard concept and was founded by the inventors of this concept, Robert Kaplan and David Norton. In developing Strategic Enterprise Management, SAP is working closely with the Balanced Scorecard Collaborative to ensure that this next-generation solution will be based on "best practices" and will support companies in translating strategy into action.

This and further reading on the respective topics can be found in the media centers on our homepage.

http://www.sap.com or directly http://www.sap.com/sem

Needed: A New Approach to Managing Strategy

The single most important skill in any business is the ability to translate strategy into action. This is increasingly difficult in larger or more complex organizations, where the distance between those who formulate the strategy and those who carry it out is significant. With size and complexity comes the necessity for communicating strategic intent and for providing a management framework that aligns the capabilities of the business with the requirements of the competitive marketplace. The challenges to successfully implementing strategy have never been so formidable.

A *Fortune* magazine article, based on a survey of management consultants, reported that less than 10% of strategies are successfully implemented. Tom Peters referred to that figure as "wildly inflated,"[1] suggesting that formulating strategy is not a valuable activity if it can't be translated into action. This is the reason behind the general decline of strategic planning over the past two decades.[2] What's needed is not more planning, but a way to translate strategy directly into action.

Strategy has never been more important. As the economy moves rapidly away from the "Industrial Age" to the "Information Age," which is characterized by global and knowledge-based competition, every organization must rethink the fundamental assumptions on which it competes. As the global economy becomes more tightly connected, each business must build its own feedback systems to effectively monitor its own activity and to achieve its own strategic objectives.

Every organization must develop a new vision on how it will compete in the emerging networked economy. And every organization must translate this vision into actions that will transform them into Information Age competitors. In other words, if organizations are to survive this economic transition, they must learn to successfully implement strategy. They must learn to beat the 90% failure rates experienced by their peers. They must make Strategic Enterprise Management (SEM) a core competency of their organizations.

This white paper describes an integrated management approach that enables complex businesses to effectively harness their capabilities and to achieve their strategic objectives. The combination of a Balanced Scorecard approach to translating strategy into action, along with enterprise-wide connectivity provided by SAP, constitutes a competitive breakthrough for executives intent on achieving their strategic vision.

SAP Strategic Enterprise Management provides the concepts and tools you need for setting your strategic direction and achieving the benefits of your strategic vision. This paper will familiarize you with the Balanced Scorecard approach to developing and sharing the story of your strategy, which is an essential element to aligning enterprise resources with your strategy. It

provides an overview of the components of Strategic Enterprise Management and concludes with a summary of the process and technology necessary to make it happen.

Why Is It So Difficult to Implement Strategy?

Strategy guru Michael Porter describes the foundation of strategy as the "activities" in which an organization elects to excel.

> *"Ultimately, all differences between companies in cost and price derive from the hundreds of activities required to create, produce, sell, and deliver their products or services …differentiation arises from both the choice of activities and how they are performed."*[3]

If the foundation of strategy is, as Porter maintains, the "selection and execution of hundreds of activities," then strategy cannot be limited to a few people at the top of an organization. Strategy must be understood and executed by everyone. The organization must be *aligned* around its strategy. "performance management systems" are designed to create organization alignment. Herein lies one of the major causes of poor strategic management.

MOST PERFORMANCE MANAGEMENT SYSTEMS ARE DESIGNED AROUND THE ANNUAL BUDGET AND OPERATING PLAN. THEY PROMOTE SHORT-TERM, INCREMENTAL, TACTICAL BEHAVIOR.

In their survey of 200 major companies, the consulting firm Renaissance Worldwide and CFO Magazine found that several barriers are built into the typical performance management system.[4]

- *Visions Are Not Actionable.* Vision is not translated into operational terms that provide useful guides to action. Only 40% of middle management and less than 5% of line employees clearly understand the vision of their organizations.

- *Goals and Rewards Are Not Linked to Strategy.* Goals and incentives are linked to annual financial performance rather than long-term strategy. Only 50% of executives, 20% of middle management, and less than 10% of line employees have goals and compensation linked to strategy.

- *Resource Allocation Is Not Linked to Strategy.* Capital allocation and discretionary program funding are based on short-term budgets and financial criteria, not long-term strategy. Only 43% of organizations have a strong linkage between their long-range strategy and their annual budget.

- *Feedback Is Tactical, Not Strategic.* The feedback and review process concentrates on the control of short-term operating performance instead of long-term strategic performance. Forty-five percent of management teams spend *no* time at their monthly management meetings making strategic decisions. Eighty-five percent of management teams spend less than one hour per month.

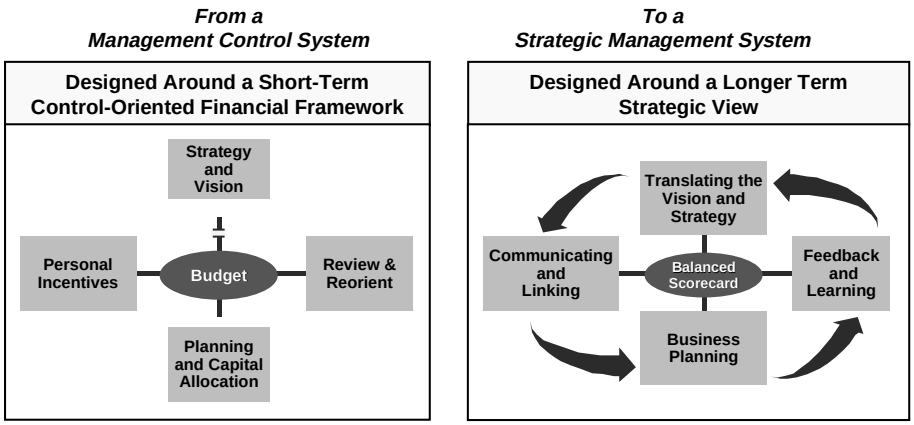
This profile paints a clear picture of the typical performance management System used to align activities within an organization today. It is a system designed to influence short-term, operational, tactical behavior. While this is a necessary part of management, it is not enough.

YOU CANNOT MANAGE STRATEGY WITH A SYSTEM DESIGNED FOR TACTICS.

The Balanced Scorecard: A New Approach to Implementing Strategy

A new approach to implementing strategy has emerged. The Balanced Scorecard, developed by Harvard Business School professor, Robert Kaplan, and management consultant, David Norton, was first introduced in a 1992 *Harvard Business Review* article.[5] The idea has spread rapidly. A recent survey conducted by Bain & Company indicates that approximately 50% of companies now use "Balanced Scorecards" to help manage their organizations.[6]

The Balanced Scorecard (BSC) is a technique to translate an organization's strategy into terms that can be understood, communicated, and acted upon. A BSC uses the language of measurement to more clearly define the meaning of strategic concepts like quality, customer satisfaction, and growth. Once a scorecard that accurately describes the strategy has been developed, it then serves as the organizing framework for the management system. As summarized in Figure 1, such a scorecard puts strategy at the center of the management process. In effect, the Balanced Scorecard becomes the "operating system" for a new Strategic Management Process.



Source: The Balanced Scorecard Collaborative, Inc.

Figure 1: The Balanced Scorecard Changes The Premise Upon Which The Management System Is Based

Organizations that were early adopters of the Balanced Scorecard have shown impressive results to date. Consider the following case studies:

Mobil Oil. In 1992, Mobil Oil's US Marketing & Refining division was performing poorly. It was last in the industry in profitability, producing large negative cash flows and an ROI that was unacceptable. In the opinion of the new management team, Mobil had lost touch with its market. Its large national organization had caused it to become inwardly focused, bureaucratic, and inefficient; in other words, it had become a set of functional silos. A new strategy was developed to decentralize the organization into 18 market-facing business units with P&L accountability.

These business units were supported by fourteen shared service groups. The challenge, as Mobil began to implement this strategy, was to hold these 32 units together as it attempted to adopt a broad range of new approaches and shared cultural values.

The Balanced Scorecard was introduced in 1993 to manage the roll-out of this strategy. The results were rapid and dramatic. By 1995, Mobil had moved from last place to *first place* in industry profitability. Mobil has maintained this #1 position for four consecutive years (1995-1998). The negative cash flows have been dramatically reversed, and Mobil's ROI leads all competitors. The Balanced Scorecard played a central role in this success.

> "We now see a higher degree of alignment in the organization. The *Scorecard has served as an irreplaceable agenda for discussion.*[7]
>
> Robert McCool, EVP, Mobil Oil

Cigna Property & Casualty Insurance. In 1993, the Property & Casualty Division of Cigna lost nearly $275 million. Although this poor performance was due in part to a few major catastrophes, most lines of business were marginal. In the opinion of the new management team brought in to turn the situation around, Cigna had lost control of the underwriting process—the process by which risks were evaluated and priced. The management team believed that Cigna was pursuing an obsolete "generalist" strategy, trying to be all things to all people; therefore, a new strategy was developed. Cigna would be a "specialist," focusing on niches where it had comparative advantage. The division would make underwriting an asset instead of a liability. If the strategy succeeded, Cigna would become a "top quartile" performer. The strategy was rolled out to 20 business units in 1993. The Balanced Scorecard was used as the core management process.

Again the results were rapid and dramatic. Within two years, Cigna had returned to profitability. This performance has been sustained for four consecutive years. In 1998, the company's performance placed it in the top quartile of its industry. At the end of 1998, the parent company spun off the Property & Casualty Division for a price of $3.45 billion. The Balanced Scorecard was an important part of this success story.

> *"CIGNA has used the Balanced Scorecard to manage its transformation from a generalist company to a top-quartile specialist.*[8]
>
> Gerald Isom, President, CIGNA Property & Casualty

Brown & Root Energy Services (Rockwater Division). Rockwater, located in Aberdeen, Scotland, is an undersea construction company whose clients are major offshore oil and gas producers. Rockwater was formed in 1989 by merging two previously independent construction companies—one British, one Dutch. In 1992, the company was still struggling to assimilate this merger. The vision of the combined company was not yet clear or had yet to be accepted across the organization, and the company was losing money. The division president introduced the Balanced Scorecard to his management team in 1993 to help clarify and gain consensus for the strategy. The scorecard design process accomplished that, helping to identify different views of the customer value proposition and build agreement on the approach for moving forward. Once designed, the scorecard was linked to the programs for managing the business. By 1996, Rockwater was first in its niche in both growth and profitability.

> *"The Balanced Scorecard helped us improve our communication and increase our profitability."*[9]
>
> Norman Chambers, Managing Director
> Brown & Root Energy Services

Chemical Retail Bank (now Chase Manhattan Bank). In 1992, the Retail Division of Chemical Bank enjoyed a 30% market share in the New York metropolitan area. Chemical was still struggling to assimilate a recent merger, as well as attempting to introduce more integrated financial services and greater use of electronic banking to its customers. Implementation of this new strategy was being hindered by the proliferation of new ideas and investment initiatives. There was no way to prioritize. The Balanced Scorecard was introduced in 1993 to more clearly define the strategic priorities and provide a structure to link strategy and budgeting. By 1996, the results of the new strategy were becoming apparent. In the space of three years, profitability had increased by a factor of 20.

> *"The Balanced Scorecard has become an integral part of our change management process. The Scorecard has allowed us to look beyond financial measures and concentrate on factors that create economic value."*[10]
>
> Michael Hegarty, Vice Chairman, Chemical Bank

The experience of these four organizations illustrates the power of the Balanced Scorecard approach. The fact that these executive teams successfully executed their strategies (when 90% of their colleagues could not) is impressive enough. But the *speed* with which the results were achieved spotlights the potential that exists for every organization. The rapid strategic benefits realized by these companies show us that the capabilities to achieve success were already present in these organizations. People had the skills and knowledge needed to execute these strategies. What they lacked was focus, alignment, and understanding of where the organization was trying to go. The Balanced Scorecard eliminated these barriers. It provided the understanding, focus, and alignment that unlocked these assets—assets which, although hidden, existed all along. It unlocked and focused the strategic skills and knowledge of the organization.

Each of these four organizations, and many others like them, orchestrated a complex process of change over an extended period of time. However, the essence of their approaches can be distilled into two basic steps:

1. *Create Strategic Focus – The Balanced Scorecard.* Create a Balanced Scorecard to help clarify, consolidate, and gain consensus around the strategy of the organization.

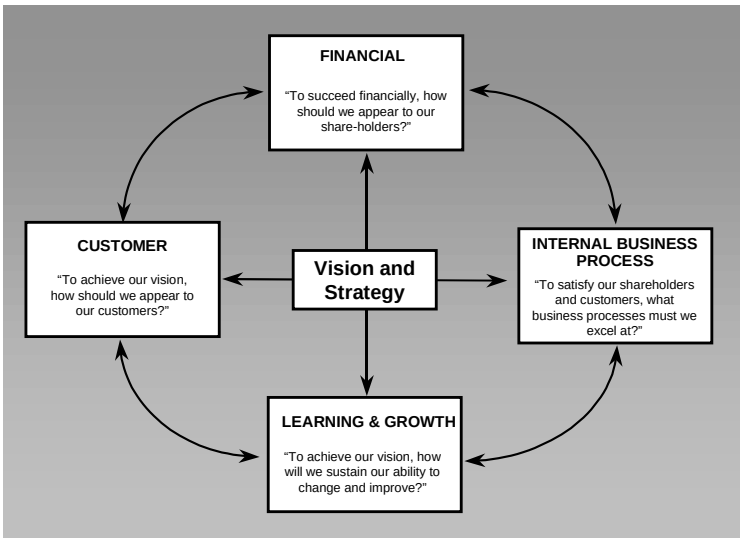
2. *Translate Strategy to Action – Strategic Enterprise Management (SEM).* Link the Balanced Scorecard to all facets of the management process to ensure that change is focused on the strategy.

The lessons learned in these successful companies can now be applied to the development of a management system available to all. They are the foundation for SAP's approach to Strategic Enterprise Management.

Creating Strategic Focus: The Balanced Scorecard

Performance management programs are used to align an organization with its strategic goals and tactical objectives. At the center of any performance management program is a framework on which the various alignment programs (measurement, goal setting, compensation, and investments) are focused. Historically, financial frameworks such as ROI or the annual budget have dominated. More recently, new performance management frameworks have evolved around quality, shareholder value, customer satisfaction, business processes, and core competencies. While each of these perspectives is important to the success of a business, each represents only a small part of a broader picture. To manage only one of these perspectives is to invite sub-optimization. The only logical focus for a performance management program is *strategy*. Leveraging the concept of the Balanced Scorecard the SAP Strategic Enterprise Management process puts strategy at the center to create strategic focus and strategic alignment and to enable organisations to translate strategy into action.

The Balanced Scorecard approach begins with the premise that financial measures are not sufficient to manage an organization. Financial measures tell the story of past events. They are not helpful to guide the creation of future value through investments in customers, suppliers, employees, technology, or innovation. The Balanced Scorecard complements measures of past performance (lagging indicators) with measures of the drivers of future performance (leading indicators). The objectives and measures of the scorecard are derived from an organization's vision and strategy. These objectives and measures provide a view of an organization's performance from four perspectives.



Reference: Robert Kaplan and David Norton, "The Balanced Scorecard"

Figure 2: The Balanced Scorecard: Four Perspectives

1. *Financial* – the strategy for growth, profitability, and risk viewed from the perspective of the shareholder.

2. *Customer* – the strategy for creating value and differentiation from the perspective of the customer.

3. *Internal Business Processes* – the strategic priorities for various business processes, which create customer and shareholder satisfaction.

4. *Learning and Growth* – the priorities to create a climate that supports organization change, innovation, and growth.

Using the Balanced Scorecard, corporate executives can now measure how their business units create value for current and future customers. They can also learn what investments in people, systems, and procedures are necessary to improve future performance. While retaining an interest in financial performance, the Balanced Scorecard clearly reveals the drivers of superior, long-term value and competitive performance. The Balanced Scorecard tells the story of the strategy.

Designing a Scorecard to Tell the Story of Your Strategy

Once completed, a BSC will become the focus of organization change. People's goals, investments, and activities should all be linked to the objectives and measures of the scorecard. It is essential, then, that this scorecard be designed in a way that accurately reflects the organization's strategy. The design of a good Balanced Scorecard is based on three principles that link the measures to strategy:

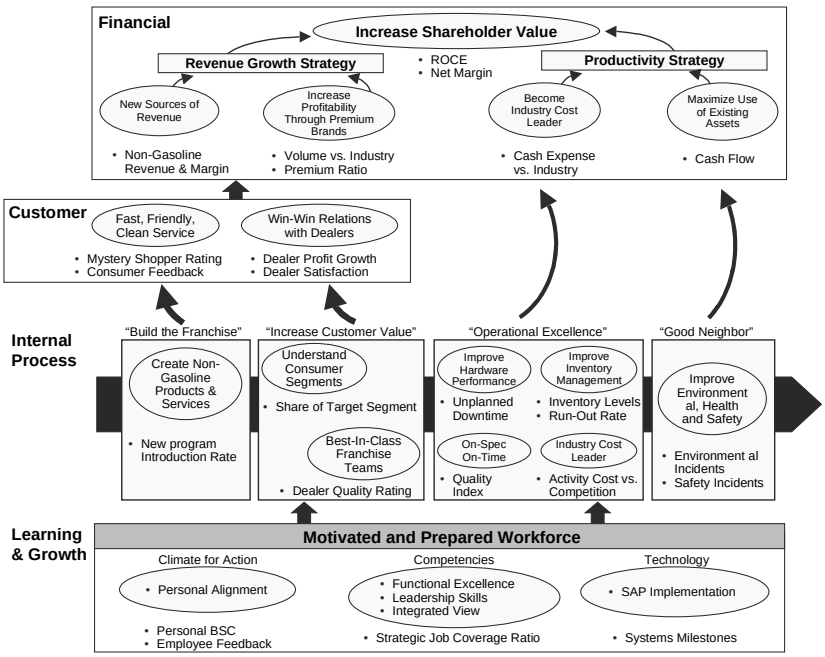
1. *Cause-and-Effect Relationships***.** A strategy is a set of hypotheses about cause and effect. A properly constructed scorecard should tell the story of the business unit's strategy through a sequence of cause-and-effect relationships. The measurement system should make the relationships (hypotheses) among objectives explicit so that they can be managed and validated. *Every objective selected for a Balanced Scorecard should be part of a chain of cause-and-effect relationships that communicates the meaning of the business unit's strategy to the organization.*

2. *Outcomes and Performance Drivers.* All Balanced Scorecards use certain generic measures. These generic measures (such as profitability, market share, and customer satisfaction) tend to be "outcome" measures, which reflect goals common across many strategies and industries. The performance drivers, the lead indicators, are the ones that tend to be unique for a particular strategy. *A good Balanced Scorecard should have an appropriate mix of outcomes (lagging indicators) and performance drivers (leading indicators) that have been customized to the business unit's strategy.*

3. *Linkage to Financials.* With the proliferation of change programs under way in most organizations today, it is easy to become preoccupied with goals (quality, customer satisfaction, innovation, and the like) for their own sake. While these goals can lead to improved business-unit performance, they may not achieve their purpose if they are taken as ends in themselves. A Balanced Scorecard must retain a strong emphasis on outcomes, especially financial ones. *Ultimately, causal paths from all the measures on a scorecard should be linked to financial objectives.*

Case Study: The Balanced Scorecard at Pioneer Petroleum

These principles can be illustrated in a case study. Pioneer Petroleum (a pseudonym for an actual company), a large integrated refining and marketing organization, was attempting to reposition itself. Traditionally, Pioneer relied exclusively on the sale of petroleum. While viewed by many as a commodity, Pioneer attempted to differentiate itself through quality and its trusted national brand image. Unfortunately, all other major national competitors had similar brand images and, hence, none realized an advantage with this strategy. Pioneer, therefore, attempted to shift from this undifferentiated, commodity-like strategy to a more consumer-driven focus. Pioneer would introduce convenience stores where petroleum was only a part of the business. To succeed with this approach, major shifts in culture and strategy would be required. Figure 3 illustrates the strategy that was deployed and the measures that were used to manage it.



Source: The Balanced Scorecard Collaborative, Inc.

Figure 3: Pioneer Petroleum Strategy Template

Financial Perspective. Every strategy has an over-arching financial objective that defines the long-term financial success of the organization. For some organizations this might be shareholder value. For others, it might be cash flow. For pioneer, a capital-intensive business, the highest level objective was to improve *Return on Capital Employed* (ROCE). A second financial objective, used more for short-term guidance, was *profitability relative to competition*. This allowed Pioneer to eliminate the distortions that price fluctuations had on its performance.

The financial strategy had two dimensions:

1. *Revenue Growth Strategy* – to grow and improve the quality of revenue by understanding customer needs and differentiating itself accordingly.

2. *Productivity Strategy* – to maximize the use of existing assets and integrate the business to reduce total cost.

The *growth* strategy had two components. First, new sources of revenue would be created by adding convenience stores around the gasoline business *(Non-gasoline Revenue & Margin)*. Second, by understanding customer segments, Pioneer would appeal to customers who prefer premium grades of gasoline where the margins were higher *(Volume vs. Industry, Premium Ratio)*. The *productivity* strategy also had two components. First, it focused on optimizing the use of existing assets *(Cash Flow)* and, second, on reducing operating costs in each area of the supply chain to industry-leading levels *(Cash Expense vs. Competition)*.

Customer Perspective. It's one thing to set financial objectives for growth and diversification. It's another to make it happen. Pioneer began by carefully segmenting its customers to determine who would be attracted by a convenience store that sold gasoline, as well as those customers who tended toward premium brands of gasoline. Their analysis concluded that these target customers would be attracted by a combination of speed, friendly service, and clean facilities. A measurement program was set up to monitor performance on these criteria through the eyes of the customer *(Customer Feedback, Mystery Shopper)*. Much of this buying experience was delivered by the dealers who ran the convenience stores/service stations. Thus, a similar effort was put in place to monitor dealer Satisfaction *(Dealer Survey)* and effectiveness *(Dealer Profit Growth)*.

Internal Process Perspective. Organizations execute strategy through sets of activities. These activities can be grouped into "business processes" that describe the way work is conducted. While thousands of activities must take place in every organization, only a few are truly strategic. The design of a BSC requires the identification of those critical few activities that affect customer satisfaction and shareholder satisfaction. At Pioneer these activities fell into four categories. The Innovation Process ("Build the Franchise") focused on the creation of non-gasoline products and services. The strategic measure was New Program Introduction Rate. The Customer Management Process ("Increase Customer Value") focused on improving customer understanding (Target Segment Market Share) and improving the quality of dealers who ultimately delivered the value proposition to customers (Dealer Quality Rating). The Supply Chain Process ("Operational Excellence")

focused on drivers of asset utilization (*Unplanned Downtime, Inventory Levels)* as well as cost drivers *(Activity Costs vs. Competition, Quality*). The Regulatory Processes ("Good Neighbor") focused on environmental and safety performance. In addition to being a good neighbor, these factors also had a significant link to productivity.

Learning and Growth Perspective. The ability to change the way work is done within the internal business processes requires an infrastructure that enables change. This includes the skills of the workforce, the tools and technology they have to work with, and the climate that motivates and empowers people. Pioneer concentrated first on the alignment of its workforce, making sure that employees understood the strategy (*Employee Feedback*) and were personally aligned with it (*Personal Scorecards*). Competency development focused on functional excellence, and leadership skills (The *Strategic Job Coverage Ratio*) measured the gap between what was needed and what existed. The many process improvements required by the new strategies necessitated a new foundation of information technologies. The SAP suite of ERP systems was the strategic solution selected by Pioneer. (Monitoring the *Installation vs. Plan* was the strategic measure.)

	Strategic Objectives	Strategic Measures
Financial	F1. Return on Capital Employed F2. Cash Flow F3. Profitability F4. Lowest Cost F5. Profitable Growth	• ROCE • Cash flow • Net margin • Cash expense (cpg) vs. industry • Volume growth rate vs. industry • Premium ratio • Non-gasoline revenue
Customer	C1. Delight the Target Consumer (Fast, Friendly, Clean) C2. Improve Dealer Profitability	• Consumer feedback • Mystery Shopper rating • Dealer profit growth • Dealer survey
Internal	I1. Build the Franchise • Create non-gasoline products I2. Increase Customer Profitability • Understand consumer segments • Best-in-class franchise teams I3. Operational Excellence • Improve hardware performance • Improve inventory management • On-spec, on-time • Industry cost leader I4. Good Neighbor • Improve EHS performance	• New program introduction rate • Share of target segment • Dealer quality rating • Unplanned downtime • Inventory levels • Run-out rate • Quality index • Activity cost vs. competition • Environmental incidents • Safety incidents
Learning & Growth	L1. Organization Alignment L2. Core Competencies and Skills L3. Access to Strategic Information	• Employee survey • Staff with personal BSC (%) • Strategic job coverage ratio • Strategic system milestones

Source: The Balanced Scorecard Collaborative, Inc.

Figure 4: Pioneer Petroleum Balanced Scorecard

The Pioneer Balanced Scorecard is summarized in Figure 4. Over 20 measures are identified. Some ask: "Is it possible to remember 20 measures?" The answer is probably "No." The more relevant question, however, is: "Is it possible to remember one strategy?" The answer is probably "Yes." The logic that is displayed in Figure 3 translates Pioneer's strategy into a few simple cause-and-effect relationships or hypotheses.

There is a strategy for growth and a strategy for productivity. The growth strategy requires a new relationship with the customer, expanding Pioneer's share of the "convenience" purchase beyond gasoline. The productivity strategy is focused on asset utilization and expense management. The details of these strategies commit easily to memory, and the 20 measures seem obvious.

When constructed in this manner, the scorecard becomes an effective way to communicate a strategy to an organization so that it can be understood and acted upon. It also provides the specificity to permit detailed targets, budgets, and initiatives to be planned and managed. Finally, it provides the basis for an executive team to monitor the strategy and to test the hypotheses in real-time.

SAP's Approach to Facilitating the Design of Effective Balanced Scorecards

Information technology that is capable of supporting an effective Strategic Enterprise Management system must be able to develop, maintain, communicate, and operationalize the Balanced Scorecard. This requires the the ability to:

- Enable smooth communication across the entire organization during the collaborative development and maintenance of corporate, business unit, and personal Balanced Scorecards.
- Leverage industry-specific best practice through ready-to-use key performance indicator (KPI) catalogs and cause-and-effect templates.
- Integrate BSCs fully into the Strategic Enterprise Management process to support BSC-based business planning and simulation, performance monitoring, and stakeholder communication.
- Link the Balanced Scorecard with the business execution system to speed up translation of strategy into action.

SAP's Balanced Scorecard solution is fully integrated into the SAP Strategic Enterprise Management product (SAP SEM) and fully supports these capabilities. SAP SEM is a set of analytical applications that leverages investments in ERP systems (such as SAP R/3) and enables an organization to move to the next level in enterprise management excellence. SAP SEM allows a company to constantly increase value for its stakeholders by translating strategy into action within its day-to-day business and by constantly adapting strategy with real-time feedback from the transaction level. It supports the development and maintenance process of a Balanced Scorecard through the following functionality:

- Definition of strategic objectives and initiatives by the four perspectives of the Balanced Scorecard.
- Definition of an influence diagram (cause-and-effect linkage) to visualize dependencies among strategic objectives on a Balanced Scorecard.

Industry standard templates provide a starting point for an organization to begin modeling its strategy.

- Definition of strategic measures for strategic objectives. The selection of measures is facilitated by the availability of industry-specific KPI catalogs. These catalogs can be extended through individually defined KPIs through the use of the KPI Builder. KPIs in a Balanced Scorecard are automatically populated with the appropriate data from ERP systems or external sources.

- Definition of multi-scorecard dependencies and linkages. Beginning with an already existing scorecard, related scorecards can be defined consistently across organizational levels (e.g., a Product Line BSC consistent with the Business Unit BSC) and dimensions (e.g., a shared service center BSC consistent with the BSCs of the supported operating units).

- Target setting for KPIs integrated across various levels and dimensions of the organization. The definition of targets is directly integrated with enterprise planning, resource allocation and the HR planning process. For example, the evaluation of competency gaps and training requirements can be directly input as planning assumptions in Web-based planning sheets together with other plan values relevant for enterprise planning such as personal targets, sales or activity estimates. This information on skills, training requirements and other resource gaps can be consolidated into e.g HR development and investment plans. Ultimately, final plan values are transferred back to the ERP, HR development and payroll systems.

- Scenario-based planning and simulation.

Once the Balanced Scorecard is developed and in place, ongoing performance monitoring is supported through:

- Single and multiple Balanced Scorecards displaying objectives and measures with targets and actual results for review and assessment by managers and staff. Each scorecard includes the capability for interactive simulation to support performance review and decision-making sessions and the ongoing definition of new initiatives and programs needed to achieve strategic targets.

- The Management Cockpit – an innovative approach to management meetings using the concept of an “Enterprise War Room.” In a Management Cockpit, the Balanced Scorecard is displayed with appropriate visuals and graphics on the walls of an ergonomically designed meeting room. Using the “Flight Deck” of the Management Cockpit, interactive measurement drill-downs and simulation capabilities support performance assessment and decision making.

- Balanced Scorecards with the relevant KPI targets and actuals for important stakeholder groups. The scorecards can be accessed through a Web browser or used within the Management Cockpit room to support management, stakeholder, and analyst meetings.

Translating Strategy to Action: Strategic Enterprise Management and SAP SEM

Once the scorecard has been designed, it must be linked to the management process to create action and results. Companies that successfully implemented Balanced Scorecards did so by reinventing every part of their management system to focus on strategy. From their experiences, we begin to see the criteria for a new management process, tailored to the needs of the new economy. We refer to this process as Strategic Enterprise Management (SEM). The SEM process is built on four principles:

1. *Strategy: A Continuous Process.* During times of transition, the future is highly uncertain. New approaches are being introduced to deal with a new economy. Strategy is a "hypothesis" about what the future will look like and how to get there. As you begin to execute a strategy, the picture of the destination will evolve and change. The SEM process must put this strategic hypothesis at the center of the organization, test it continuously, and change course as required. Strategy must be a continuous process, not an annual event.

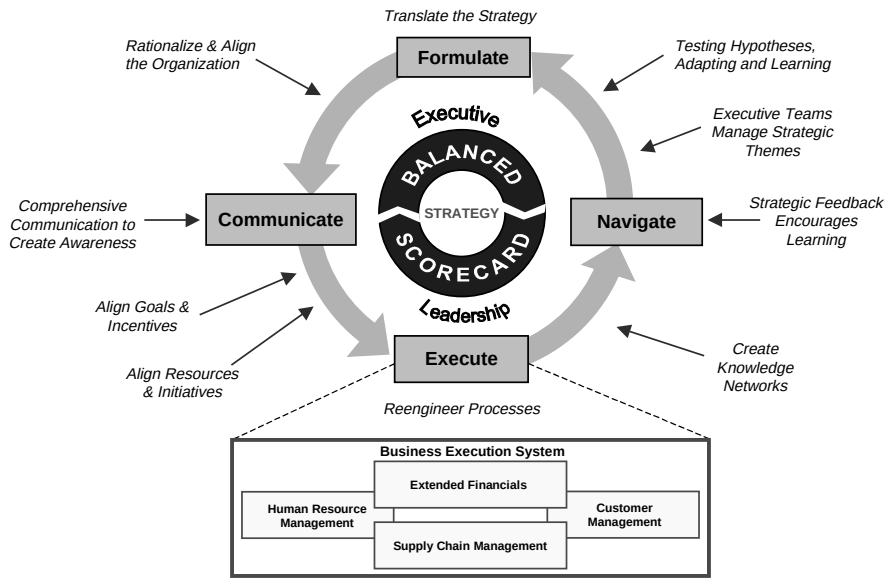
2. *Strategy: Everyone's Job.* It is estimated that approximately 50% of all work performed in industrialized countries today is knowledge work.[11] This percentage increases each year. Workforce knowledge represents an asset that we are just beginning to use effectively. In this structure, strategic information and decision-making can no longer be left to senior managers. Salesmen or customer service representatives, for example, can change a company's strategy from "low cost provider" to "solution provider" by changing the role that they play with the customer. Knowledge workers make strategic choices every day. Strategy may be formulated at the top but executed and refined at the bottom. The SEM process must ensure that everyone in the organization understands the strategy, is aligned with it, and is capable of executing it.

3. *Strategic Knowledge Networks.* Knowledge is everywhere in the organization. Truck drivers and telephone operators frequently know more about customer preferences than marketing executives or product designers. Traditional organization structures, designed around vertical, functional silos, lock this knowledge up in compartments, making it almost impossible to share. New approaches like "virtual organizations," "networks," and "self-governing teams" have created breakthroughs that allow cross-disciplinary groups to come together and share their knowledge for a common goal. The SEM process must support the work of such strategic knowledge networks, providing the infrastructure for accountability and governance.

4. *Strategic Leadership.* John Kotter, in his landmark work on leadership, stresses the distinction between leadership and management. Managers use a set of processes such as planning, budgeting, organizing, staffing, controlling, and problem-solving to keep an organization running

smoothly. If practiced well, good management has the potential to "produce a degree of predictability and to consistently produce short-term results." Leadership, on the other hand, is a set of processes that defines what the future should look like, aligns people with that vision, and inspires them to make it happen despite the obstacles. If practiced well, good leadership has the potential to produce dramatic change that help make a firm more competitive. While good management is important, executing the dramatic changes implied by strategy requires good leadership. The SEM process must be based on active participation and ownership by those responsible for strategic leadership: the executive team.[12]

These four principles translate into the management process summarized in Figure 5. The following pages describe the highlights of this process, as well as lessons learned from successful leading-edge companies, and provide an overview of the functionality of SAP Strategic Enterprise Management to support this process.



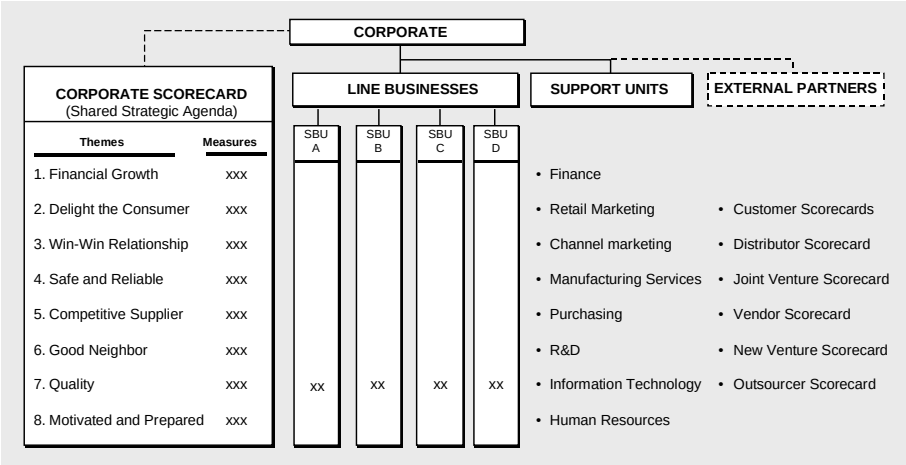
Source: The Balanced Scorecard Collaborative, Inc.

Figure 5: The Ingredients of Highly Successful Balanced Scorecard Programs

Strategic Alignment at the Top

The Balanced Scorecard is a powerful tool to describe a business unit's strategy. However, complex organizations are made up of many business units, each with different strategies. Logically, each would have a different Balanced Scorecard to describe and manage its strategy. These business units are, however, part of a larger organization because someone believes there are synergies to be achieved across the units; that is, the whole will be greater than the sum of the parts, if the business units can be coordinated. The Balanced Scorecard can and should be used to define the strategic linkages that integrate the performance of separate but related organizations.

A Strategic Enterprise Management system should make the linkages among these different business units explicit so that they can be actively managed. Figure 6 shows the linkages of a typical organization. In an ideal world, each business unit, support unit, and external partner would have a Balanced Scorecard, which describes their strategies. The business units, on the one hand, and the support units, on the other, would treat each other as "customers" or "suppliers," as appropriate to their relationship. In this way, a linkage between each unit is achieved.



Source: The Balanced Scorecard Collaborative, Inc.

Figure 6: The Strategies of Business Units Must Be Integrated If Organization Purpose and Synergy Are to Be Achieved

Achieving Synergies across Business Units. Some organizations are loosely held conglomerates with very few direct synergies. Other organizations achieve synergies through shared distribution channels, cross-selling customers, economies of scale in systems, or shared knowledge. It is the role of the corporate (or sector) level of the organization to define and manage these synergies.

The "Corporate Scorecard" should provide a high-level template that defines common goals and themes to be adopted by all business units. For example, the corporate strategy might be to share customers more openly across business units. Goals like "cross-selling" or "share of wallet" might appear on the corporate scorecard. Each business unit would be expected to reflect these goals in their own strategies. Without corporate prompting, these joint activities typically don't take place. The Corporate Scorecard is a way to ensure that these strategic linkages exist and are made effective.

Linking Shared Services with Business Unit Strategies. Shared service organizations are created to generate synergies across business units. The shared services concept creates centers of excellence for internal staff and support functions dedicated to serving business units. In this arrangement, business units can concentrate on achieving business objectives, while support functions can focus on improving process effectiveness.

Balanced Scorecards have been utilized to better define and manage the interfaces between business units and shared services. Shared service units are also complex organizations with their own strategies that may even sell their services outside the organization. Balanced Scorecards can help define and manage the unique strategies of these units as well.

Some types of shared service scorecards that are frequently found in practice include:

- *I/T Scorecards* – define the priority systems and levels of service required by the business units along with the I/T Department's strategy for delivery.
- *HR Scorecards* – define the competencies, knowledge, and climate required by the business units, along with the HR department's strategy for delivery.
- *R&D Scorecard* – because of the long-term nature of R&D, this scorecard is an effective way to clarify long-term developments from short-term deliverables.
- *Support Function Scorecards* – functional support organizations have utilized programs to create "service agreements" with their partner business units and use their scorecards to manage execution.

Linking External Partners to Your Strategy. To compete in today's business environment, companies are partnering with their suppliers, customers, and sometimes even their competitors. While the joint venture/strategic alliance relationship is increasingly part of the business landscape, it has proven to be an operational challenge. Although the synergies between two parties may be apparent in concept, putting them into day-to-day practice is not easy. The lack of clear definition regarding shared goals and the ability to foster their mutual achievement are common barriers. The Balanced Scorecard has proven to be a critical tool in overcoming these barriers by defining the shared agenda and measures of performance on which an external partnership is premised and operated. The scorecard can help to implement shared strategy, relationship management, and evaluation.

SAP Strategic Enterprise Management facilitates organizational synergy by making the strategic links among business units and departments transparent.

SAP SEM provides organizations with a common management framework and information repository where objectives, measures, and programs are stored and can be accessed from a number of different management perspectives. For example, the objectives and measures of the corporate BSC can be accessed by the management team of a business unit to provide a common starting point for their definition of the objectives, measures and programs on the business unit BSC. Likewise, the business managers and analysts in a shared service center can access the scorecards of partner business units to align their BSC and planning and performance management process with the business unit strategies. In this manner, SAP SEM ensures all activities within the organization are aligned with the corporate strategy.

To jumpstart this process and make it more efficient, SAP SEM provides more than the appropriate software functionality. SAP SEM also provides ready-to-use BSC templates as a starting point. These include industry-specific KPI catalogs and scorecard models for key organizational units — corporate, business unit, shared services (such as for I/T, Human Resource, Purchasing, R&D, and Finance) and external partners (joint ventures, vendors, and customers).

Making Strategy Everyone's Job

> *"Alignment is the necessary condition before empowering the individual will empower the whole team ."*[13]
>
> Peter Senge, The Fifth Discipline

The Balanced Scorecard is the linchpin between change initiated by a small number of people at the top and executed by a large number of people at the bottom. The scorecard is a way to translate the strategy at the top so it can be made operational at the bottom. By cascading the scorecard from the "boardroom to the backroom" a powerful new framework has emerged to create strategy-based performance-management systems. Individuals can implement strategy only when they clearly understand it and realize how they can contribute to its achievement. Traditional human resource systems and processes play an essential role in enabling this transition. The effective use of communication, education, goal-setting, incentives, and reward systems allows an organization to make strategy everyone's job. The Balanced Scorecard provides a new focus for these systems.

Communication and Education to Create Awareness

A prerequisite for implementing strategy is that all employees understand the strategy. A consistent and continuing communication program to educate the organization on the strategy, as well as reinforcing this education with feedback on actual performance, is the foundation for organizational alignment.

One organization used its annual employee survey to measure "understanding of the strategy." The awareness level was 20%. Three years later, after the introduction of a Balanced Scorecard, which was supported by a strategic communication program, awareness levels had risen to 80%. This strategic awareness represents a huge asset to an organization, even if it doesn't show on the balance sheet.

The key to successful communication is making it consistent, comprehensive, and continuous. Strategic communications should be treated as a program. All appropriate media should be used. Some examples that have proven effective include:

- *Quarterly Town Meetings* where executives brief the organization on performance and answer questions.
- *Monthly Newsletters* that define the strategy / scorecard and continually educate the organization on its meaning.
- *Education Programs* where the Scorecard is integrated into all education and training programs as a new way to manage the business.
- *Listening Posts* with intranets to encourage feedback and dialog with the entire organization.

No single medium is sufficient. Strategy must be imbedded in all communication media and be reinforced by the personal behavior of executives. Only when a good understanding of the strategy has been developed is the organization capable of the behavior changes required for its execution.

SAP Strategic Enterprise Management facilitates strategic communication both within the organization and with major external stakeholders.

Broadly understood, stakeholders include employees, customers, business partners, public organizations, and investors. When a company can improve its stakeholders' understanding of the strategy, and of the value it generates for them, this builds strong commitment among those stakeholders to both the company and the strategy. This can be an important factor in making the strategy successful and in translating the internal value-generating assets of an organization into financial value.

One important stakeholder group is employees. A company must continually communicate its strategic intent and directions to its employees

and collect regular feedback on their understanding and commitment. The reasons for this are clear:

1. Employees must know and understand the strategy of the company and the role of their organizational unit in supporting it if they are to be able to align their individual priorities to help realize the strategy.

2. Employees must be convinced that their organization's strategy is a winning one in order to commit themselves to the company and to generate commitment on the part of other stakeholders with whom they interact every day (such as customers and business partners).

The Stakeholder Relationship Management component of SAP SEM explicitly supports the strategy communication process with employees and other stakeholders, e.g. like investors or stock market analysts, by providing the following functionality:

- The stakeholder database stores information about stakeholders such as name, mail/e-mail address, stakeholder profile/information requirements, personal preferences, access rights for the internet, etc.

- Definition of stakeholder scorecards, which reflect the company's strategy and the expected value it will generate for the appropriate stakeholder group.

- Definition of electronic feedback questionnaires to collect structured feedback from stakeholders about the company's or business units' strategy. Feedback data can be stored directly in the SAP SEM database for use in management reporting or planning.

- Editing support for a variety of communication vehicles, including

  - electronic newsletters comprised of text, standard reports, and drill-down capabilities

  - stakeholder scorecards used either for reporting or for interactive simulation

  - multimedia elements such as pictures, graphs or videos (e.g., statements of board members) as well as links to other stakeholder communication vehicles (e.g., a feedback questionnaire).

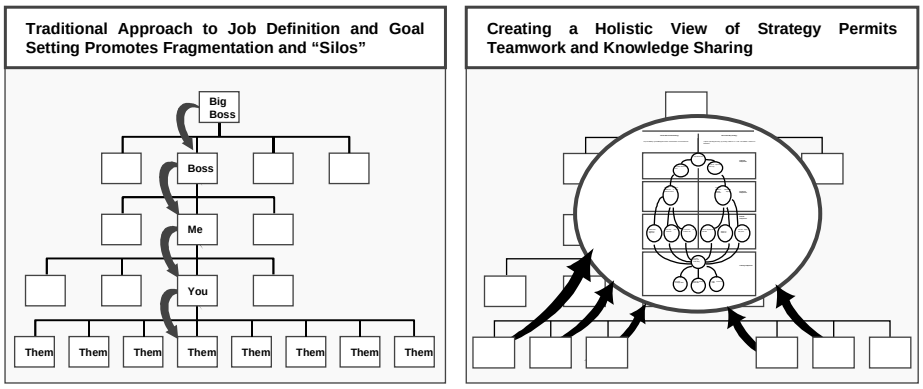
- Deployment of stakeholder scorecards, feedback questionnaires, and newsletters over the Web, through e-mail, or standard mail as stipulated in the profiles in the stakeholder database.

Aligning Human Resources

Once the strategy has been created and the message is out, it's time for personal commitment. The next performance management lever calls for team and individual commitment through the goal-setting process and creation of personal scorecards. Unlike traditional goal-setting processes that reinforce short-term financial performance and established thinking, the Balanced Scorecard ties teams and individuals to the business strategy.

Opportunities for cross-functional contributions to strategic objectives can be realized by using the four scorecard perspectives in the goal-setting process. Once the organization is committed to achieving the strategy, a competency development program targeted at the strategic work of the organization provides employees with the tools necessary to maximize performance.

Building a Personal Scorecard. This is a powerful approach to achieving personal alignment. The Management-by-Objectives (MBO) system used by most organizations provides the vehicle for this. However, traditional MBO systems have some dangerous flaws. They were built around the hierarchical, functional organization model that ensured that individual objectives would be narrowly defined within silos. Strategic management requires a broader understanding. The strategy must be communicated in its entirety. Individuals can determine how they will affect it from their position in the organization, based on what they know and on what they can influence. Goal setting becomes a bottom-up process based on top-down education.



Source: The Balanced Scorecard Collaborative, Inc.

Figure 7: Human Resource Systems Must Be Reoriented

Personal Development Programs. These provide another link in the chain that translates strategy to action. Several leading-edge organizations have used personal scorecards, which are linked to the overall strategy, as a way to develop their training programs. Individuals use their scorecards to define the competencies they will need to master. Consolidating individual scorecards creates an integrated picture of the training and competencies required by the strategy. It also allows the Human Resource department to build its programs accordingly. Most important, it ensures that the organization will provide each individual with the tools required to do his job.

Personal Development Plan			
Competencies	Impacts BSC Objectives	Personal Growth	Comments
Effective Communication	x	x	Need to communicate team results to other departments by May 1, 1999.
Delegates Effectively	x	x	Anticipate turnover on team – need to develop coaching skills to speed growth of new team members.
Forward Thinking		x	Develop a 6-12 month plan for technical roll-out. Focus on consequences and actions I plan to take to address these consequences.
Taking Initiative	x		New team – I have greatest knowledge of area. Manager has asked me to identify new approaches to increase market share 8%.
Teamwork	x	x	On a new team – Need to take a more active role in sharing my knowledge and driving team success.
Risk Taker	x		I have one technical opportunity that could grow sales 14% instead of target 8%. Must get team to review and critique plan. If feasible, get buy-in to drive this alternative to significantly increase 1996 sales.
Generate Results	x	x	Have been seen as a technical idea person – not great follow-through. Work with Manager to set more realistic goals and meet 100% of them.

Source: The Balanced Scorecard Collaborative, Inc.

Figure 8: Sample of a Personal Development Plan derived from Personal Scorecard

SAP SEM facilitates the linkage of people's goals, incentives, and skills and the organizations' education and development programs with the strategy.

Having communicated the strategy successfully to employees by means of SAP SEM functionality as described in the previous section, this is the logical next step in the Strategic Enterprise Management process. SAP SEM supports human resource alignment by providing the following functionality:

- *Support of goal-setting processes and the incentive/reward system.* An electronic version of a corporate, business unit, or department scorecard provides a powerful tool for setting personal goals in line with the overall strategy. SAP SEM will enable managers and employees to define their own electronic scorecards linked to the scorecard of their organizational unit. The proposed personal scorecard will be forwarded automatically to the appropriate manager for release, correction, and quantification of related incentives or bonuses. Incentive / bonus information and information about actual performance can be transferred from SAP SEM to the payroll system for automatic processing. By having direct access to their personal scorecards, employees and managers can monitor their actual performance against targets and calculate in real time their actual bonus amount.

- *Support of strategic education and development programs*. When defining a corporate, business unit, or personal scorecard, executives, managers, and employees will identify skills that they need to support strategic initiatives. During the planning process they can rate their actual skills and identify existing skill gaps. Because this is done via electronic questionnaires and is stored in the SEM database, this information is available in aggregated form for management reporting about major skill gaps. This information can also be transferred directly from SAP SEM to a Human Resource Development and Education Management system for detailed training program planning and management.

Aligning Financial Resources

Why is it so difficult to align budgets with strategy? In addition to the obvious fact that these are different processes run by different parts of the organization, there are structural differences as well.

- *Indirect Impact*. Most strategic initiatives don't have a direct impact on financials. They have second-order or third-order effects (e.g., a training program imparts skills that affect customer confidence, which broadens a relationship, which creates revenue). Unless this "hypothesis" of cause and effect is clearly defined, it must be taken on faith; something that most budget directors are unlikely to do.

- *Interrelated Activities.* One activity, such as training, is generally not enough to create a strategic result. Training must be complemented with technology, reorganizations, partnerships, etc., to be effective. A strategic investment is a "cluster" of activities, not a simple line item.

Sourcing & Distribution Pathway	Measurement	Target	Initiative	Budget
Financial Profitability Revenue Growth	• Operating Income • Sales vs. Last Yr	• 20% Increase • 12% Increase	• Likes Program	$xxx
Customer Product Quality → Shopping Experience	• Return Rate – Quality – Other • Customer Loyalty – Ever Active % – # units	• Reduce by 50% each yr • 60% • 2.4 units	• Quality management • Customer loyalty	$xxx $xxx
Internal "A" Class Factories ↔ Line Plan Management	• % of Merchandise from "A" factories • Items in-Stock vs. Plan	• 70% by year 3 • 85%	• Corporate Factory Development Program	$xxx
Learning Factory Relationship Skills Merchandise Buying / Planning Skills	• % of Strategic Skills Available	• yr 1 50% yr 3 75% yr 5 90%	• Strategic Skills plan • Merchants Desktop	$xxx $xxx

Source: The Balanced Scorecard Collaborative, Inc.

Figure 9: Strategic Investment Package (SIP): A Good Balanced Scorecard Provides a Prescription for Action

First, the strategy is divided into a series of "themes" or "pathways." (Sourcing & Distribution, shown in Figure 9, is one of those pathways.) A scorecard and linkage chart are constructed for the pathway. Three- to five-year stretch targets are developed. Once this has been accomplished, the initiatives required to achieve those targets are identified, along with their costs. This is the primary input to the budget. This approach has several important benefits that meet the requirements of a SEM process:

- The cause-and-effect linkage model deals with the indirect nature of strategic investments. The "hypothesis" has been established.
- The Strategic Investment Package (SIP) provides a self-contained business case, identifying the full set of initiatives, the investments required, the expected impact (including the lead indicators), and the time horizon.
- The strategic pathways and their associated SIPs provide a structure for defining accountability and for tracking results.
- A means to manage the initiatives on which the strategy depends is also provided. Initiative management is a form of project management where activities, milestones, and budgets are tracked. Initiatives are the ultimate drivers of strategic change.

The management of Strategic Pathways and Strategic Initiatives is one of the building blocks of SAP Strategic Enterprise Management.

SAP SEM facilitates alignment of financial resources with strategy by establishing the link between strategic initiative planning and enterprise planning and resource allocation.

In many organizations there is still no link between enterprise planning and strategy. Enterprise planning and resource allocation is often a more inward-oriented process focused on existing resources and businesses. Senior executives see it as a real challenge to establish this link—to make sure the company is not just doing business as usual but is concentrating on developing new business opportunities—without which no company can survive in an increasingly competitive environment. To do so, financial resource allocation must be optimized according to the company's strategy. When the market environment is changing dramatically, it makes no sense to allocate financial budgets as the company did in the past. SAP SEM will help companies efficiently create this link between strategy and enterprise planning and financial resource allocation by providing the following functionality:

- Storage of all defined Balanced Scorecards in electronic form (influence diagrams, pathways, measures, targets, and initiatives) in the SAP SEM repository.
- Grouping of initiatives to support the relevant management point of view (e.g., from a Business Unit manager's perspective) and enabling the online prioritization and rating of initiates by responsible managers or business analysts.

- Business planning of initiatives from a strategic pathway or "strategic investment package" point of view, including financial budgeting and return planning using SAP SEM Business Planning and Simulation functionality.

- Release of initiative budgets by managers through workflow functionality.

- Integration of initiative budgets into "base case" planning by incorporating released initiatives into the enterprise-planning model as an additional dimension. As the initiative budget data is already stored in the same database, this is only a definitional task carried out by the responsible business analyst or planning manager. The overall budget can be adapted to meet overall financial targets (e.g., for a specific fiscal year).

- Monitoring initiative progress and budgets using SAP SEM performance monitoring functionality (Corporate Performance Monitor and the Management Cockpit).

Strategic Knowledge Networks

Much of the value from Strategic Enterprise Management comes from the simple networking of the organization with a focus on the strategy. Communication and knowledge sharing typically take place within traditional departmental structures in shared locations. As organizations have become more diverse and scattered, the departmental structure has broken down. New approaches have emerged. *Networked organizations* don't replace traditional bureaucracies; rather, they provide a way to supplement them by organizing around emerging issues or temporary needs. Networks can be built for any purpose. The Balanced Scorecard narrows the options by focusing the organization on the critical few issues emanating from the strategy. This is where knowledge sharing and networking will have the greatest payoff.

Successful strategic knowledge networks are designed around several principles:

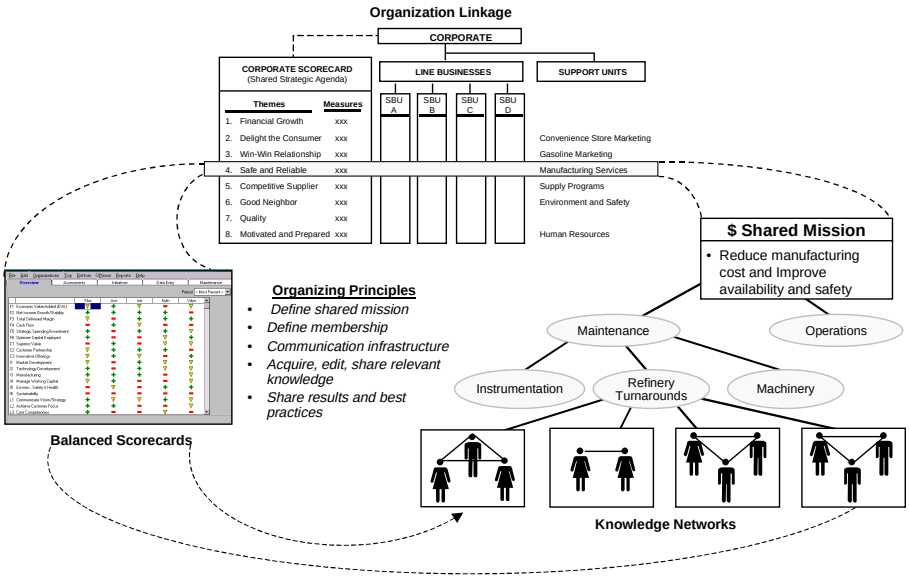
- *Shared Mission.* The Balanced Scorecard defines the shared strategic agenda. Each piece of this agenda is a potential network. In Figure 10, a Strategic Knowledge Network was established around the theme "Safe and Reliable." The mission for the network was "Reduce manufacturing cost through increased reliability and safety."

- *Membership.* Members of a network are selected based on what they know and what they can contribute to others. When individuals build their personal scorecards, they define which objectives they are responsible for and, hence, which networks they could benefit from. The figure shows how more focused networks emerge; the "maintenance" activity was further divided into "refinery turnarounds," "instrumentation," and "machinery."

- *Communication Infrastructure.* The infrastructure must be built to facilitate knowledge transfer. Both organization and technology infrastructure are needed. Protocols are required to determine what information will be gathered and how it will be edited and disseminated.

- *Share Best Practice.* Many kinds of knowledge can be shared on the network. The "low-hanging fruit" comes from sharing experiences on best-practice work approaches and insights. As the network matures, benchmark databases, procedure manuals, and joint projects help to disseminate additional strategic know-how.

- *Link to Scorecard.* The value of a network is amplified if its activities are linked to the measures on the scorecard and results are provided. Some networks will develop their own scorecard to translate their mission into action.



Source: The Balanced Scorecard Collaborative, Inc.

Figure 10: Strategic Knowledge Networks

SAP SEM facilitates strategic knowledge networks with the following functionality:

- Network database with information such as member names and job descriptions or roles, member e-mail addresses, etc.

- Employees can assign themselves to one of these networks (e.g., when defining their personal scorecards) once they know which strategic activities they must focus on.

- E-mail and workflow functionality supporting the communication infrastructure.

- Shared documents in the “Information Database” (SAP Knowledge Warehouse) with information and documents regarding meetings, best practices in relevant areas, “knowledgeware”-like project description and results, interactive multimedia capabilities for guided learning, etc.

- Development of a “network scorecard” with SAP SEM Balanced Scorecard functionality.

Strategic Feedback and Learning

The most important feature of the SEM process is the ability to “close the loop.” Strategy is only a “hypothesis.” As the organization begins to execute and the world around it changes, it must test the strategy and adapt accordingly. A strategic management process must be a learning process. The essential enabler of this process is the *Strategic Feedback and Learning Network*. This system goes far beyond the boundaries of traditional Executive Information Systems (EIS), which provide drill-down reporting on individual parameters. Since strategy is everyone’s job, reporting must take place on a network to which everyone has appropriate access. The network should facilitate dialog so that performance can be interpreted, knowledge can be transferred, and improvements can be made. Although the primary users of the system should be the executive teams at the top, many organizations make the content of these reporting systems available to everyone. They believe that knowledge is power and, if strategy is to be executed from the bottom, that the necessary knowledge must be provided there. A Strategic Feedback and Learning Network should meet several criteria:

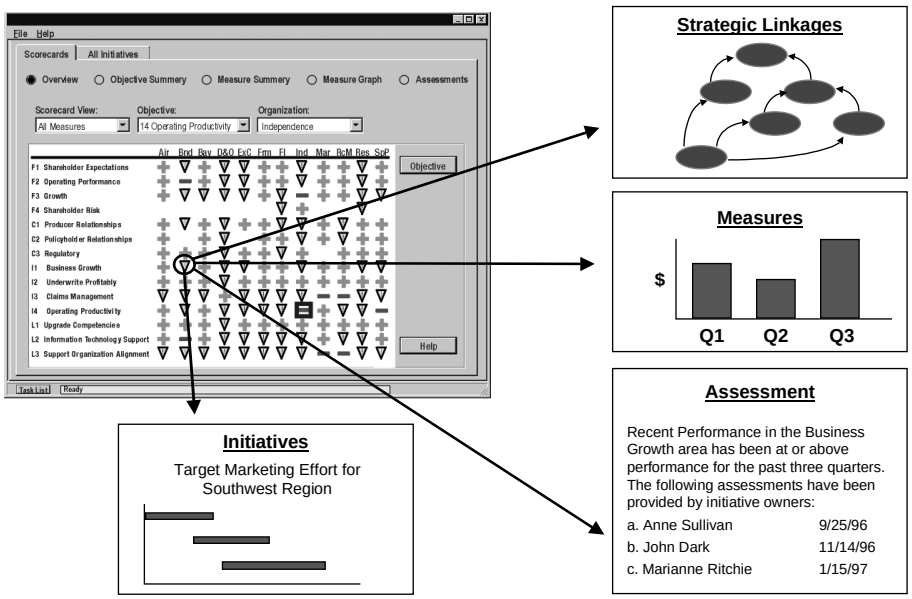
- *Performance Monitoring and Interpretation.* Basic monitoring of Balanced Scorecard measures is the starting point. Each objective and measure must have an owner who is responsible for performance. In addition to user-friendly systems graphics and displays, the system should also be network-based to facilitate issue identification, integration, and resolution through dialog. Frequently a “red-yellow-green” status reporting system with supporting dialog has a greater payoff than highly accurate data.

- *Strategic Hypothesis Testing.* The system should focus not only on individual measures but, more importantly, on the relationships among measures. In particular, the relationships specified in the hypothesis should be constantly monitored to facilitate testing, learning, and adapting. More sophisticated systems will use correlation and regression analysis to analyze and interpret trends.

- *Business Unit Linkage.* The system should permit navigation through interrelated organization units to monitor common goals and ensure that strategic linkages are taking place. The Corporate (or Group)/SBU linkage has the highest initial priority, followed by the various Shared Service units.

- *Initiative Management.* Strategic initiatives are the basic elements of work that drive strategic change. They must be monitored on a continuous basis to ensure that they are being implemented as planned and are producing the desired results.

- *External Scanning.* Often, relevant external information is hidden in newspaper or business magazine articles, business databases, competitor brochures, newsletters from news agencies, and so on. Unlike internal information, external information is mostly qualitative. That is, it lacks structure and is difficult to link to internal information. The *volume* of available external information magnifies the problem. Much of the external information required to form balanced management decisions can now be accessed electronically via the World Wide Web. An external scanning capability that filters the ever-increasing number of Web pages and matches information to the requirements of internal decision-makers is an important part of Strategic Feedback. External input is useful to both explain current performance as well as to recognize the need to update the strategy.



Source: The Balanced Scorecard Collaborative, Inc.

Figure 11: Strategic Feedback Can Be Used By the Executive Team to Create Strategic Learning

Management Cockpit

Managing strategy requires new roles for executive teams. Faced with a mass of information, today's executives and managers must learn to look beyond the details to see the big picture. The Management Cockpit is an innovative concept for the presentation of critical management information, providing collaborative intelligence that helps managers understand each other's business issues. The aim is to create an environment that encourages more efficient management meetings and boosts team performance via effective communication. To help achieve this, KPIs and information relating to critical success factors are displayed graphically on the walls of an ergonomically designed meeting room. Different scenarios can be viewed and associated with KPI sets.

Source: SAP AG and N.E.T. Research

Figure 12: A Management Cockpit room supports efficient management meetings

SAP SEM facilitates a "Strategic Feedback and Learning Network" through integrated SEM applications and a comprehensive network infrastructure.

SAP SEM supports the entire Strategic Enterprise Management process from hypothesis definition and testing, target setting, performance monitoring, communication, and feedback management. This includes the following functionality:

- Hypothesis definition through development of influence diagrams to visualize dependencies among strategic objectives and KPIs in a Balanced Scorecard. Influence diagrams are stored in the SEM database for shared access (controlled by defined authorizations).

- Monitoring of actual performance and the verification of hypotheses through either a Web-based Balanced Scorecard or in the Management Cockpit room.
- Quantification of influence diagram cause-and-effect linkages by creating a dynamic simulation model with SEM Business Planning and Simulation functionality.
- Running online simulations individually or in the Management Cockpit room. Results are stored as “selected scenarios” in the SEM database to initiate the enterprise planning process.
- Continued assessment of simulation models and scenarios during regular performance monitoring sessions where actuals are compared with targets in a BSC format using SEM Corporate Performance Monitor functionality or the Management Cockpit room. Models and scenarios are adapted to reflect changes observed in the organization or in the environment.
- Assignment of BSC “owners” who receive automatically through e-mail / workflow functionality the components of the BSC relevant to their ownership role (for example, owners of objectives, measures, or initiatives). Performance thresholds and event alerts will trigger the need for BSC owners to respond with assessments and comments that can be forwarded automatically to others as required as well as stored in the SEM database for common access. BSC owners are able—if they have the appropriate authorization rights—to navigate across the related scorecards of team members, managers, or other members of the organization.
- External (and even unstructured) information can be collected automatically through the internet and incorporated into the organization’s internal reporting structure using the SEM Business Information Collection application component. This information will be helpful in explaining current performance and triggering updates of the organization’s strategy.
- The actual status of strategic initiatives can be monitored using SEM Corporate Performance Monitor functionality or in the Management Cockpit room.

Business Planning and Simulation

In many respects, the science of management has been primitive relative to other professional disciplines. While quantitative methods and sophisticated computers have been available for some time, only recently have we begun to see the emergence of true quantitative foundations for business strategy. In part, this slow progress has been due to the inaccessibility of data, which has been fragmented and locked up in legacy systems. The ERP movement, pioneered by SAP, has eliminated this barrier. In the past, business has been able to live without quantitative foundations. But the Web has eliminated this luxury; business strategies must now be tailored to individual customers in real time. A number of technological trends are making a breakthrough possible. *Data mining* techniques permit extracting and transforming of data from multiple sources. *Data warehousing* techniques can be used to discover trends and relationships. A good R/3 foundation becomes a critical asset.

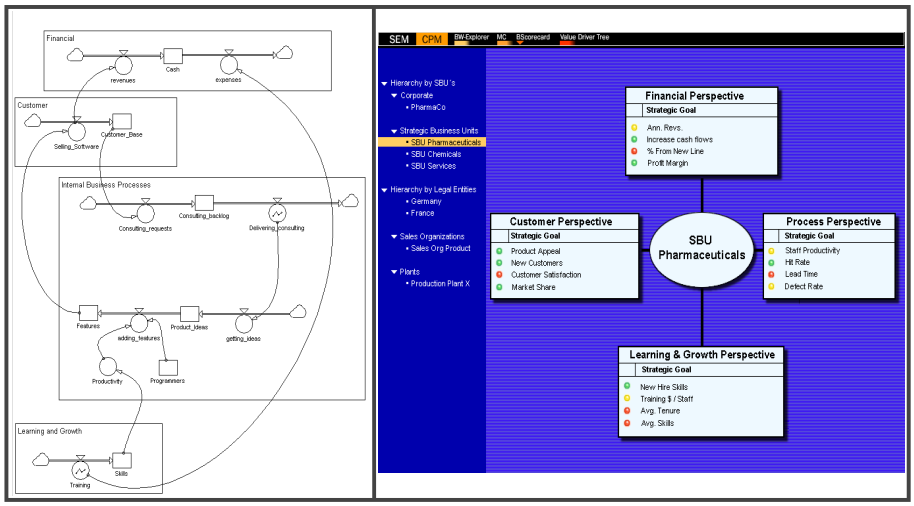
These tools and databases can take strategic management to the next level of sophistication. The high-level strategic hypotheses that are developed and monitored by executives can be explored at finer levels of granularity. A number of concepts that underlie high-level strategies can only be executed if a detailed analytic support environment is created. These data-dependent management approaches would include:

- Shareholder Value.
- Activity-Based Management.
- Customer-Relationship Management.
- Quality Management.
- Supply-Chain Management.
- Database Marketing.

The analytic approaches can be used to test hypotheses, explain higher level trends in the Strategic Feedback System, or generate new insights that update and refine the strategy.

The use of *business simulation* will dramatically increase the effectiveness of these approaches. Simulation allows the cause-and-effect linkages of the strategy to be described mathematically and used for testing scenarios.

This capability will help companies evaluate “what if” scenarios. It will allow the entire management team to participate in interactive sessions for the real-time development of strategy. Dynamic simulation could have the same impact on strategic planning that MS Excel spreadsheets have had on financial planning.



Source: SAP AG

Figure 13: Strategy Is a Dynamic Process … Dynamic Tools Are Needed*

SAP SEM facilitates Business Simulation through the functionality of the SEM Business Planning and Simulation application component.

SAP SEM supports integrated strategic and operational enterprise planning, and forecasting through business scenario simulation. This includes the following functionality:

- Definition of linear and dynamic business models integrating data from internal sources – such as transaction or other planning systems - and from external sources – such as market expectations or competitor benchmarks.
- Interactive simulation of business models that include automatic valuation of business scenarios (such as the effects from business risk evaluation).
- Definition of enterprise-planning models for resource allocation (e.g., volumes and prices, activities, headcounts, costs, cash, tax, investments, P&L, balance sheet, etc.)
- Integration of scenario planning results with enterprise planning models.
- Interactive simulations on enterprise planning models.
- Support of top-down / bottom-up planning processes.
- Rolling forecasts.

Process and Technology

We began by asserting that changing times require new ways of managing. The SAP SEM Balanced Scorecard process is designed to reflect these changing requirements. Four important principles have guided the design:

1. Active ownership and leadership by executives at the top.

2. Using the HR and Financial systems to get everyone in the organization aware, motivated, and aligned with the strategy rapidly.

3. Creating networks focused on strategic priorities that link parties with common objectives, thus allowing them to share their knowledge.

4. Facilitating organization learning through feedback systems and analytic tools, which provide more penetrating insights.

The new management process is an essential first step. A significant impact can be made on performance by changing the process alone, without the introduction of new technology. However, without technology these gains would not be sustainable. Information technology, if used properly, is both an *accelerator* and a *sustainer* of change. SAP Strategic Enterprise Management is the first solution on the market to support strategic change management and integrated management processes aligned with strategy, and based on the concept of the Balanced Scorecard (see Figure 14).

Information Systems to Support the Transformation

To properly support the translation of strategy into operational activities on an ongoing basis, information systems must have the following features:

- *Accessibility*. All the relevant information must be easily available at the point of decision-making.

- *Flexibility*. Organizational structures and processes will change over time. It must be possible to adapt the system to reflect resulting changes in information requirements.

- *Multidimensionality*. It should be possible to decompose strategy into its components, and to compare scenarios by drilling down through alternative but reconcilable hierarchies (e.g., by business, brand, channel, or country) over time.

- *Multi-user access*. There must be a common source of information, allowing people across the organization to make decisions on a consistent basis.

- *User friendliness*. While providing sophisticated functionality for advanced users, the system must also be easy to use for non-financial

and non-IT literate decision-makers. In addition, it must be easy to configure and manage.

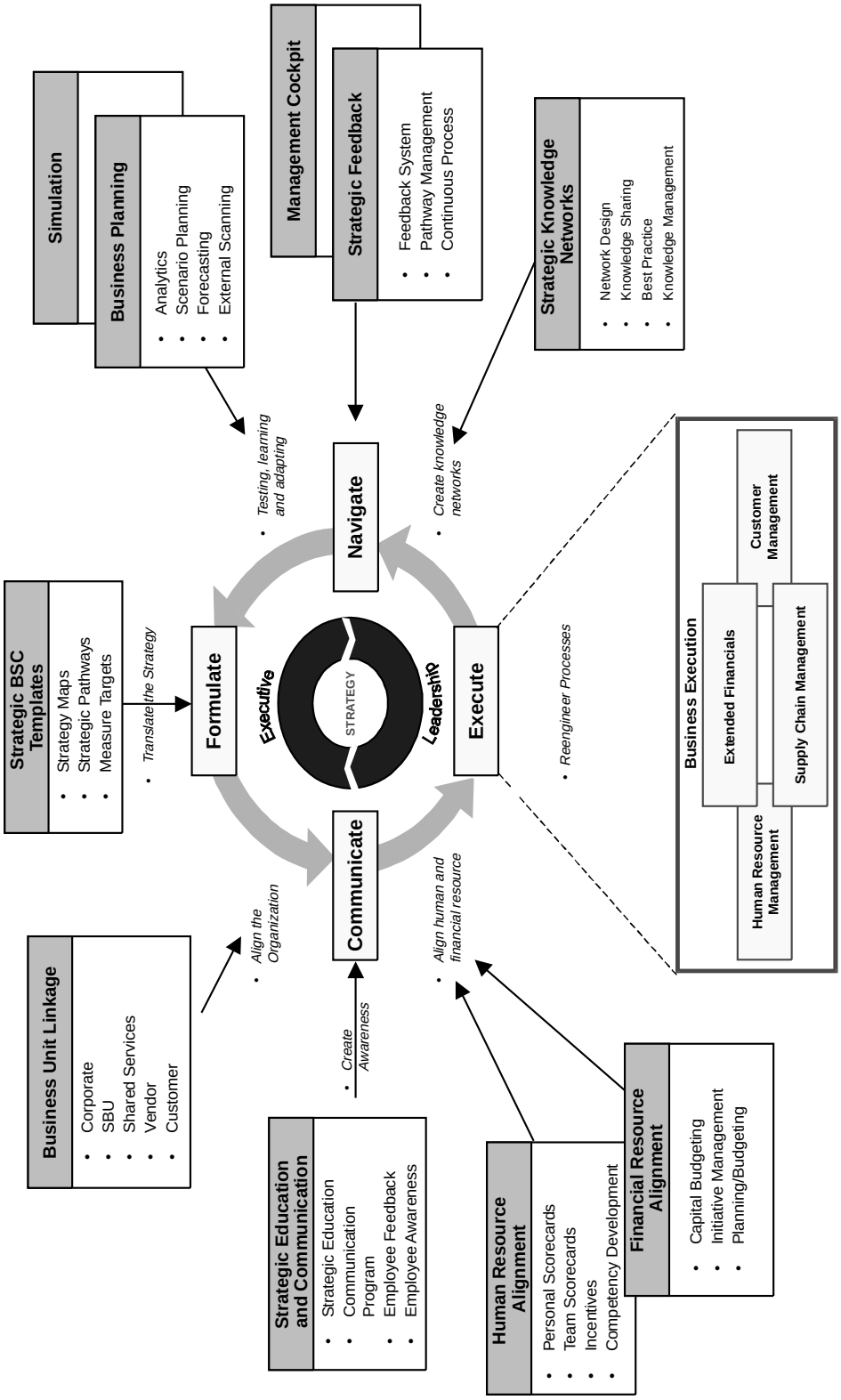
- *Speed of response.* The system should be dynamic and highly automated to support real-time decision making and to ensure that changing business conditions trigger appropriate, timely responses.

- *Openness.* However complete an integrated solution, it is unlikely to provide all the functionality that's needed. It must be possible to integrate third-party applications and allow for future developments.

- *Robustness and scaleability*. The system must be able to integrate large volumes of data from diverse sources. It must also be able to handle simultaneous queries from a large number of users dispersed across the enterprise.

- *Consistency and data integrity.* All users must have confidence in the information the system provides.

The features of a Strategic Enterprise Management system may seem similar to those of other decision-support systems. But, in terms of functionality, there are important differences. Critically, the system connects top-down communication of strategic targets with bottom-up reporting of performance, and combines both historic and predictive views to support the entire strategic management cycle. In such an integrated system, *data* from internal and external sources is consolidated and compared with targets as part of the performance measurement process—creating management *information*. This information is transformed by simulation and scenario modeling and forms the basis of the strategic planning process—creating management *knowledge.* Plans are translated into targets to drive the management of operational performance which results in new insights, new models, and new targets—creating management *learning* . And so the cycle feedback and learning is completed.



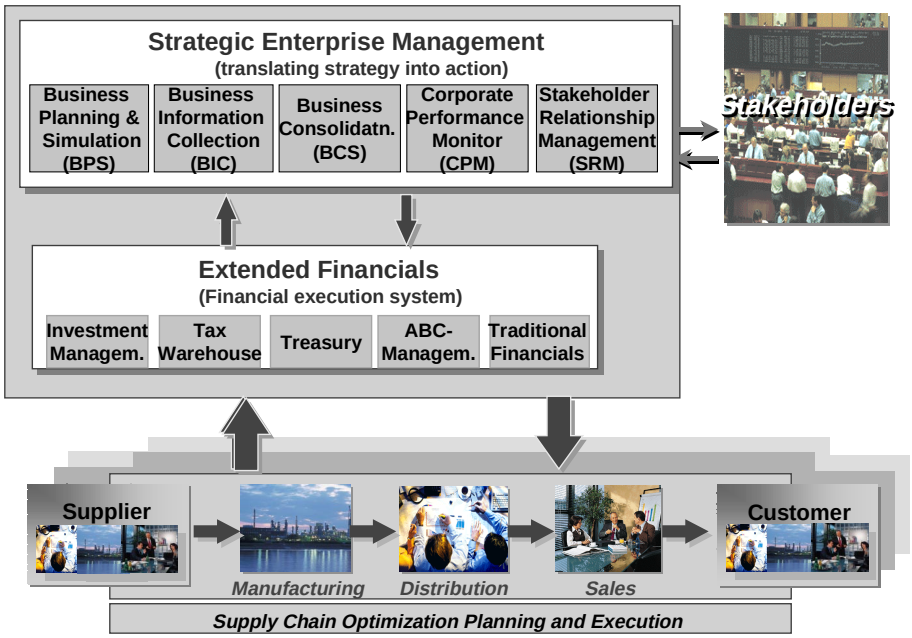
Source: The Balanced Scorecard Collaborative, Inc. and SAP AG

Figure 14: SAP´s Balanced Scorecard Solution for Stragetic Enterprise Management

SAP Strategic Enterprise Management

Modern ERP systems provide organizations with an integrated solution for planning, executing, and controlling business processes *horizontally* across the value chain. SAP R/3—the world-leading business software for client/server computing– integrates processes such as sales and materials planning, production planning, warehouse management, financial and management accounting, and HR management. This is achieved by using standard communication protocols and common objects between components, standard definitions for shared data, and standard rules for data access.

SAP Strategic Enterprise Management, SAP's next-generation solution, will extend these principles of integration *vertically* to support strategic management processes such as strategic planning, risk management, performance monitoring, and value communication[14]. SAP SEM is tightly integrated with existing business execution systems, as well as SAP's extended financials (see Figure 15). It allows a *two-way* flow of information: corporate strategists can monitor performance continuously using feedback from the business execution systems, and adjustments to the strategy can be driven down to the operational level via new targets and KPIs.



Source: SAP AG

Figure 15: SAP's Solution: Linking ERP with the Strategic Enterprise Management (SEM) System

Based on SAP's Business Framework and BAPI technology, which facilitate the speedy implementation of new solutions, SAP SEM comprises five application components[15]:

1. Business Planning and Simulation.

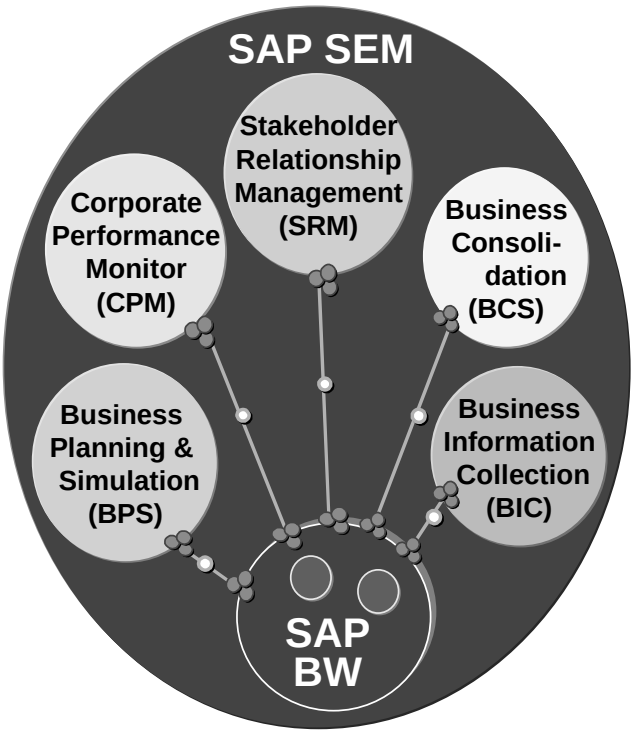
2. Business Information Collection.

3. Business Consolidation.

4. Corporate Performance Monitor (including the Management Cockpit).

5. Stakeholder Relationship Management.

Underpinning all these components is the Business Information Warehouse, which makes it possible to analyze, manage, and query complex, multidimensional data.



Source: SAP AG

Figure 16: SAP SEM: A Set of Integrated Analytical Application Components Operating on Multidimensional SAP BW Data Structures

SAP SEM enables organizations to implement Strategic Enterprise Management processes based on the Balanced Scorecard concept. The system offers therefore the following benefits:

- Guidance in Balanced Scorecard design, which improves the understanding of *strategy*.

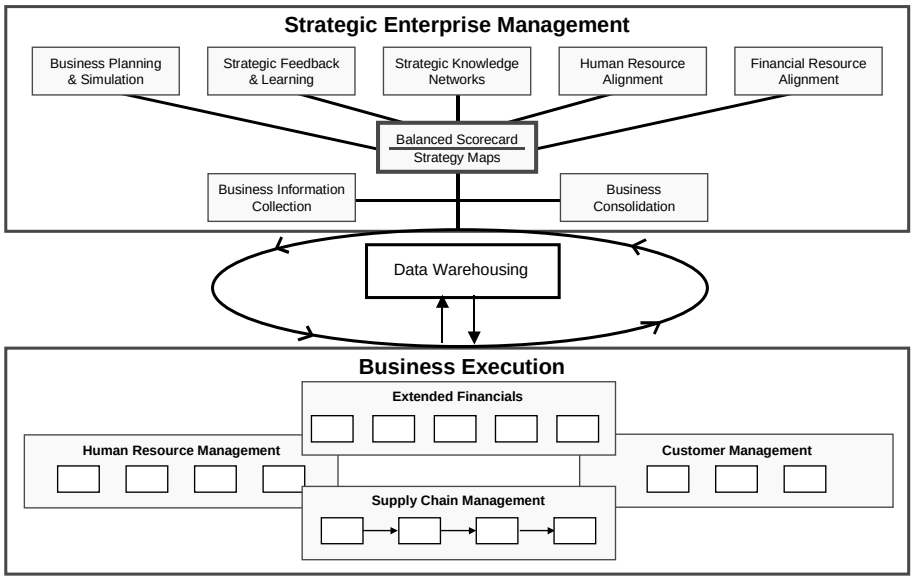
- Increased strategic *awareness* at all levels of the organization as a result of ongoing communication, personal scorecards, and detailed feedback.

- Unlocking unused *assets*—the knowledge of the workforce—through Knowledge Networks built around strategic priorities.

- Creating *learning* from the top to bottom by establishing the hypothesis of the strategy, continuously evaluating performance, and adapting accordingly.

- Creating *insight* and value through the use of database-driven analytic approaches.

Many believe that competitive advantage is not derived from the strategy, but by the ability to execute it. This process and the system that supports it enable such execution. All of which can add up to dramatic benefits, as it has for many of the organizations described earlier. Organizations that combine the Strategic Enterprise Management process with the SAP SEM and R/3 technology will create competitive advantages that achieve results that are both rapid and sustainable.



Source: The Balanced Scorecard Collabarative, Inc. and SAP AG

Figure 17: SAP SEM: Closing The Loop Between Strategy And Business Execution Through The Balanced Scorecard Concept

Making It Happen

WARNING: THE BALANCED SCORECARD IS NOT A SUBSTITUTE FOR GOOD MANAGEMENT. IT IS ONLY A TOOL. IT REQUIRES GOOD MANAGEMENT.

We have spent much time reviewing the SEM/Balanced Scorecard process and the tools that support it. It is important to stress that it requires more than a process and a tool to achieve the benefits described earlier in this report. Experience has shown over and over that the single most important condition for success is *the ownership and active involvement of the executive team*. Strategy requires change from virtually every part of the organization. Strategy requires teamwork to coordinate these changes. If those at the top of the organization are not energetic leaders of the process, change will not take place, strategy will not be implemented, and opportunity will be missed.

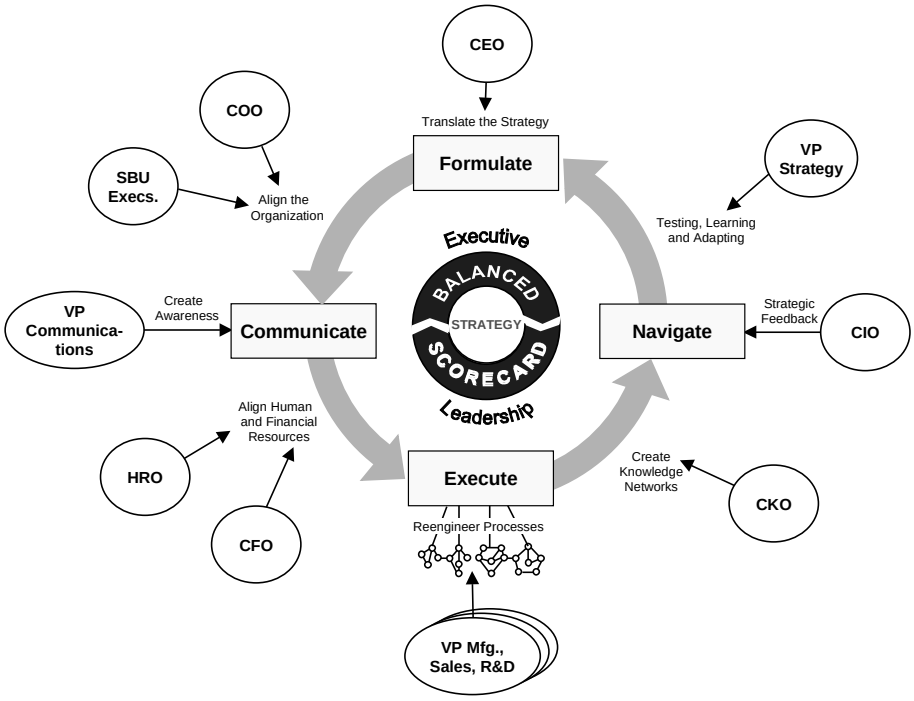
A successful Balanced Scorecard program starts with the recognition that it is not a "metrics" project; it's a change project. John Kotter, in *Leading Change*[14], describes how transformational change must begin at the top and with three discrete actions by the leaders: (1) establishing a sense of urgency, (2) creating the guiding coalition, and (3) developing a vision and a strategy. The leaders of successful Balanced Scorecard organizations clearly followed this model.

Creating the Climate for Change

Before change will occur it must be clear to the organization why change is needed; the organization must be unfrozen. In the case studies described earlier, each of the companies (Mobil, Cigna, Brown & Root, Chemical Bank) were experiencing difficult times. The obvious threat of failure and loss of jobs was a motivator that created receptivity for change. At the other extreme, organizations like General Electric have set a goal of "being #1 or #2" in the industry, or getting out. Deregulated industries or industries in dynamic growth offer different rationales. In this period of dramatic change in our economy, it is not difficult to find plausible and real reasons why the organization must change or face extinction. The first step in the change process is making this need obvious to all.

Creating the Leadership Team

Execution of the strategy affects every part of the organization. Figure 17 identifies the "players" who are typically involved and their primary roles in the SEM/Balanced Scorecard process.



Source: The Balanced Scorecard Collaborative, Inc.

Figure 18: The Executive Leadership Team

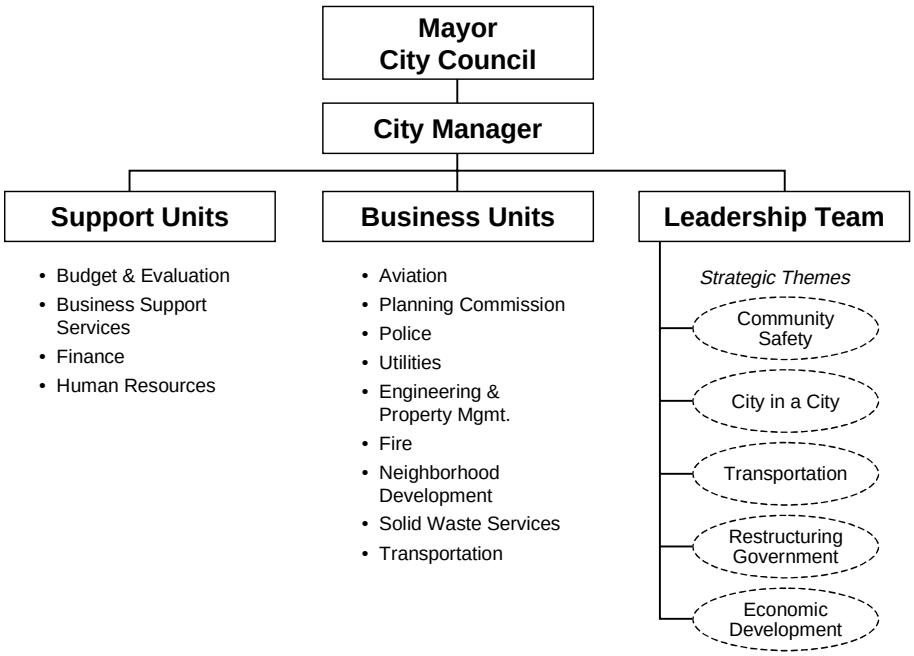
The dynamics of the executive leadership team will frequently determine whether the Balanced Scorecard successfully becomes a strategic management system. The major transition that must take place is from a collection of functional specialists to a strategically focused cross-functional team. The natural bias on executive teams is around functional separation. The careers of individuals on these teams have generally been within a single function, each of which has intense requirements for specialist knowledge. There is surprisingly little awareness of how other functions work. This narrow focus must be broadened.

Creating the Vision and Strategy

The creation of a shared vision and strategy is an effective way to create this teamwork. The framework of the Balanced Scorecard is a structured way to guide the development of the vision and strategy. It should be developed in a team setting (e.g., in the Management Cockpit room). A tremendous amount of cross-fertilization takes place as each element of the strategy is translated to the Scorecard format. The strategic issues surrounding customer segments (Marketing), yield optimization (Manufacturing), cost of capital (Finance), etc., which are generally the domain of a functional executive, now become the shared issues of the executive team. The development of the shared vision is only a starting point for building an Executive Leadership Team. The vision/strategy, translated into the Balanced Scorecard, becomes the shared agenda. Working this agenda, together, and continuously over time, leads to cultural change and teamwork at the top—and to an enabler for change at lower levels.

Creating Accountability

The lessons learned about the value of executive teamwork during the design of a strategy apply tenfold during its execution. If accountability for execution is placed within traditional functions, then the cross-functional action required by strategy can be frustrating. Many organizations have found that the logic of the Scorecard provides an alternative. Figure 18 illustrates how one organization, a city government, divided its strategy into five strategic thrusts. Accountability for the strategy was tied to these themes. Members of the Leadership Team were accountable for the themes, even though they also had responsibility for a Business Unit. In this way, cross-functional behavior was encouraged and the organization stayed focused on its strategy.



Source: The Balanced Scorecard Collaborative, Inc.

Figure 19: Executive Teams Take Responsibility for Managing the Cross-Functional Themes of the Strategy

Continuing Leadership

A strategy is not executed overnight. Some of the great success stories cited earlier achieved dramatic results in a period of two years ... *fast*, by most standards. But they found that the job wasn't done in two years. In many respects, it was just the beginning … the strategy continued to evolve, it had to be updated, communicated, aligned, funded, evaluated, and changed. So the real challenge and the real key to success are how the executive team acts once the program is designed and introduced to the organization. First and foremost, the executive team must adopt a new way of managing. As stated earlier, "managing strategy is not like managing tactics." Most executive teams have never really managed strategy. The SAP Strategic Enterprise Management process and tools and the Balanced Scorecard concept provide

an excellent framework and infrastructure to help. But it still requires leadership from the top. In the words of one executive, who had achieved dramatic successes using the Balanced Scorecard, the implementation process in his organization was:

"… like hammering a nail into concrete. You have to be patient, but you have to be persistent. Do not underestimate the time and effort that will be required."

As you consider the beginning of a strategic journey in your organization and contemplate the use of the Balanced Scorecard as a management process, heed that advice. The Balanced Scorecard has worked for others, and it can work for you. But it requires the commitment and hard work of the busiest people in the organization. However, in the words of another successful executive:

"If our job isn't executing strategy, what is it?"

References

1. Kiechel, Walter, "Sniping At Strategic Planning," *Planning Review*, (May 1984).

2. Mintzberg, Henry, "The Rise and Fall of Strategic Planning", *Free Press*, 1993

3. Porter, Michael, "What Is Strategy," *Harvard Business Review*, Nov-Dec 1996.

4. Norton, David, "Building A Management System to Implement Your Strategy," *Renaissance Solutions*, 1996.

5. Kaplan, Robert and Norton, David, "The Balanced Scorecard – Measures That Drive Performance" *Harvard Business Review*, Jan-Feb 1992.

6. Rigby, Darrell, "Management Tools and Techniques: 1998", Bain & Company, Boston.

7. Quotes from "Letters to the Editor," *Harvard Business Review*, March-April, 1996.

8. Ibid.

9. Ibid.

10. Ibid.

11. Stewart, Thomas, *Intellectual Capital*, Nicholas Brealy, London, 1998.

12. Kotter, John, *Leading Change*, Harvard Business School Press, 1996.

13. Senge, Peter, *The Fifth Discipline*, Doubleday, New York, 1990.

14. SAP AG, "SAP Strategic Enterprise Management – Enabling Value Based Management" (White Paper), 1998.

15. SAP AG, "SAP Strategic Enterprise Management – The Functions – A Closer Look" (White Paper), 1999.