CMR 073

Linking the Balanced Scorecard to Strategy

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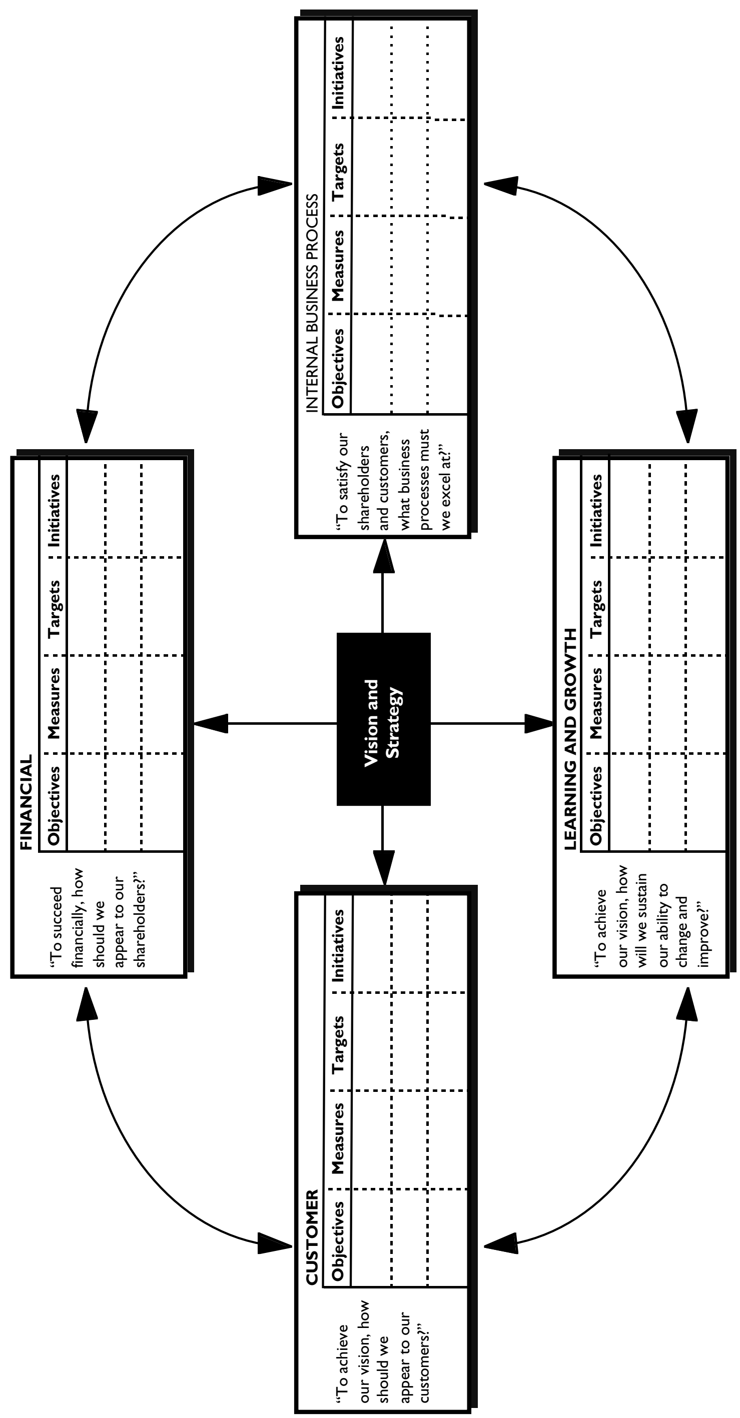
Several years ago, we introduced the concept of a "Balanced Scorecard" for motivating and measuring business unit performance.[1] The Scorecard, with four perspectives—financial, customer, internal business processes, and learning and growth—provided a balanced picture of current operating performance as well as the drivers of future performance (see Exhibit 1).

Can Business Operate with a Balanced Scorecard?

Some argue that managers cannot operate with multiple measurements of business-unit performance. While they recognize that aggregate financial measures (such as operating income, return on investment, and economic value added) are not perfect by themselves, they claim that financial measures at least are well understood and provide clear, unambiguous, and objective goals on which all organizational participants can focus. Such people feel that multiple measures—some financial and some non-financial—are confusing and lead to ambiguous, often conflicting, signals about what the organization values.

We disagree. Imagine entering the cockpit of a jet airplane and observing that there is only a single instrument. How would you feel about flying on that plane after the following discussion with the pilot:

EXHIBIT 1. Translating Vision and Strategy: Four Perspectives



Q: I'm surprised to see you operating the plane with only a single instrument. What does it measure?

A: Airspeed, I'm really working on airspeed this flight.

Q: That's good. Airspeed certainly seems important. But what about altitude. Wouldn't an altimeter be helpful?

A: I worked on altitude for the last few flights and I've gotten pretty good on altitude. Now I have to concentrate on proper air speed.

Q: But I notice you don't even have a fuel gauge. Wouldn't that be useful?

A: Fuel is important, but I can't concentrate on doing too many things well at the same time. So this flight I want all my attention focused on air speed. Once I get to be excellent at air speed, as well as altitude, I intend to concentrate on fuel consumption on the next set of flights.

Probably no one would choose to be a passenger on this plane after such a conversation. Even if the pilot did an exceptional job on air speed, we would be concerned about colliding with tall mountains or running low on fuel. In reality, no pilot would ever consider flying an airplane through crowded air space with only a single instrument to guide performance. Pilots process information from a large set of indicators to operate their airplanes. Managers are like pilots. Navigating today's enterprises through complex competitive environments is at least as complicated as flying an airplane. Why should we believe that executives need anything less than a full battery of instrumentation to guide their journey?

Is a Mixture of Financial and Non-Financial Measures a Balanced Scorecard?

Many managers and consultants who agree to the basic rationale for a Balanced Scorecard believe they have created one when they supplement traditional financial measures with non-financial measures. But many of the most popular non-financial measures, such as customer satisfaction and employee attitudes, have some of the same limitations as financial measures. First, they are lagging measures, reporting how well the organization's strategy worked in the past period but providing little guidance on how to navigate to the future. Second, the non-financial measures they use are generic and are not related to specific strategic objectives that will provide sustainable competitive advantage. Scorecards built upon lagging, non-strategic indicators represent only a limited application of the full power of the Balanced Scorecard.

Our experience in observing and building more than 100 scorecards reveals that the financial and non-financial measures on a Balanced Scorecard should be derived from the business-unit's unique strategy. The Balanced Scorecard provides executives with a comprehensive framework that can translate a company's vision and strategy into a coherent and linked set of peformance measures. The measures should include both outcome measures and the performance drivers of those outcomes. By articulating the outcomes the organization desires as well as the drivers of those outcomes, senior executives can channel the energies, the abilities, and the specific knowledge held by people throughout the organization towards achieving the business's long-term goals.

Many people think of measurement as a tool to control behavior and to evaluate past performance. Traditional control and performance measurement systems attempt to keep individuals and organizational units in compliance with a pre-established plan. The measures on a Balanced Scorecard are being used by executives in a different way—to articulate the strategy of the business, to communicate the strategy of the business, and to help align individual, organizational, and cross-departmental initiatives to achieve a common goal.[2] These executives are using the scorecard as a communication, information, and learning system, not as a traditional control system. For the Balanced Scorecard to be used in this way, however, the measures must provide a clear representation of the organization's long-term strategy for competitive success.

Choosing Strategic Measures for the Four Perspectives

The four perspectives of the scorecard permit a balance between short-term and long-term objectives, between desired outcomes and the performance drivers of those outcomes, and between hard objective measures and softer, more subjective measures. While the multiplicity of measures on a Balanced Scorecard seems confusing to some people, properly constructed scorecards contain a unity of purpose since all the measures are directed toward achieving an integrated strategy.

Financial

The financial performance measures define the long-run objectives of the business unit. While most businesses will emphasize profitability objectives, other financial objectives are also possible. Businesses with many products in the early stage of their life cycle can stress rapid growth objectives, and mature businesses may emphasize maximizing cash flow. For our purposes, we can simplify somewhat by identifying just three different stages:

- Rapid Growth
- Sustain
- Harvest

Rapid Growth businesses are at the early stages of their life cycle. They may have to make considerable investments to develop and enhance new products and services; to construct and expand production facilities; to build operating capabilities; to invest in systems, infra-structure, and distribution networks that will support global relationships; and to nurture and develop customer relationships.

Probably the majority of business units in a company will be in the *sustain* stage, where they still attract investment and reinvestment, but are required to earn excellent returns on their invested capital. These businesses are expected to maintain their existing market share and perhaps grow it somewhat from year-to-year. Investment projects will be more directed to relieving bottlenecks, expanding capacity, and enhancing continuous improvement, rather than the long payback and growth option investments that were made during the growth stage.

Other business units will have reached a mature phase of their life cycle, where the company wants to *harvest* the investments made in the earlier two stages. These businesses no longer warrant significant investment—only enough to maintain equipment and capabilities, but not to expand or build new capabilities. Any investment project must have very definite and short payback periods. The main goal is to maximize cash flow back to the corporation.[3]

The financial objectives for businesses in each of these three stages are quite different. Financial objectives in the *growth* stage will emphasize sales growth; sales in new markets and to new customers; sales from new products and services; maintaining adequate spending levels for product and process development, systems, employee capabilities; and establishment of new marketing, sales, and distribution channels. Financial objectives in the *sustain* stage will emphasize traditional financial measurements, such as return on capital employed, operating income, and gross margin. Investment projects for businesses in the sustain category will be evaluated by standard, discounted cash flow, capital budgeting analyses. Some companies will employ newer financial metrics, such as economic value added and shareholder value. These metrics all represent the classic financial objective—earn excellent returns on the capital provided to the business. The financial objectives for the *harvest* businesses will stress cash flow. Any investments must have immediate and certain cash paybacks. The goal is not to maximize return on investment, which may encourage managers to seek additional investment funds based on future return projections. Virtually no spending will be done for research or development or on expanding capabilities, because of the short time remaining in the economic life of business units in their "harvest" phase.[4]

We have found that companies use three financial themes to achieve their business strategies:

- Revenue Growth and Mix
- Cost Reduction / Productivity Improvement
- Asset Utilization / Investment Strategy

Revenue growth and mix refers to expanding product and service offerings, reaching new customers and markets, changing the product and service mix towards higher-value-added offerings, and re-pricing products and services. The cost reduction and productivity objective refers to efforts to lower the direct costs of products and services, reduce indirect costs, and share common

EXHIBIT 2. Customizing Measures for Business Strategies and Financial Themes

Business Unit Strategy	Financial Themes: Revenue Growth and Mix	Financial Themes: Cost Reduction/Productivity Improvement	Financial Themes: Asset Utilization
Growth	Sales growth rate by segment Percentage revenue from new product, services, and customers	Revenue/Employee	Investment (percentage of sales) R&D (percentage of sales)
Sustain	Share of targeted customers and accounts Cross-selling Percentage revenues from new applications Customer and product line profitability	Cost versus competitors' Cost reduction rates Indirect expenses (percentage of sales)	Working capital ratios (cash-to-cash cycle) ROCE by key asset categories Asset utilization rates
Harvest	Customer and product line profitability Percentage unprofitable customers	Unit costs (per unit of output, per transaction)	Payback Throughput

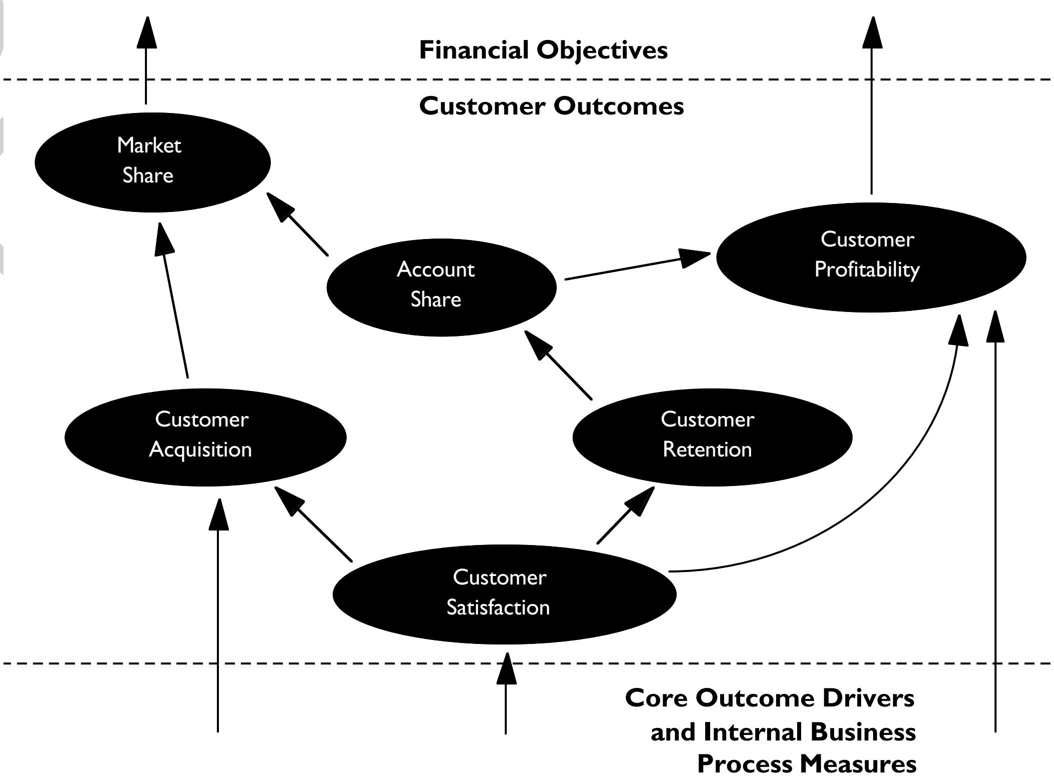
resources with other business units. For the asset utilization theme, managers attempt to reduce the working and physical capital levels required to support a given volume and mix of business.

These three financial themes can be used with any of the three generic business strategies of growth, sustain, and harvest, though the particular measures will vary, depending on the strategy, as shown in Exhibit 2. These examples show how the Balanced Scorecard can be used to make explicit the financial strategy of a business unit, and how to customize financial objectives and measures to business unit strategy.

Customer

In the customer perspective of the Balanced Scorecard, managers identify the customer and market segments in which the business unit will compete and the measures of the business unit's performance in these targeted segments.[5] The customer perspective typically includes several generic measures of the successful outcomes from a well-formulated and implemented strategy. The generic outcome measures include customer satisfaction, customer retention, new customer acquisition, customer profitability, and market and account share in targeted segments (see Exhibit 3). While these measures may appear to be generic across all types of organizations, they should be customized to the targeted customer groups from whom the business unit expects its greatest growth and profitability to be derived.

EXHIBIT 3. Customer Perspective: Core Outcome Measures



Source: R. Kaplan and D. Norton, *The Balanced Scorecard: Translating Strategy Into Action* (Harvard Business School Press, 1996); Chapter 4.

Market and Account Share

Market share, especially for targeted customer segments, reveals how well a company is penetrating a desired market. For example, a company may temporarily be meeting sales growth objectives by retaining customers in non-targeted segments, but not increasing its share in targeted segments. The measure of market share with targeted customers would balance a pure financial signal (sales) to indicate whether an intended strategy is yielding expected results.

When companies have targeted particular customers or market segments, they can also use a second market-share type measure: the account share of those customers' business (some refer to this as the share of the "customers' wallet"). The overall market share measure based on business with these companies could be affected by the total amount of business these companies are offering in a given period. That is, the share of business with these targeted customers could be decreasing because these customers are offering less business to all their suppliers. Companies can measure—customer by customer or segment by segment—how much of the customers' and market segments' business they are receiving. Such a measure provides a strong focus to the company when trying to dominate its targeted customers' purchases of products or services in categories that it offers.

Customer Retention

Clearly, a desirable way for maintaining or increasing market share in targeted customer segments is to retain existing customers in those segments. Research on the service profit chain has demonstrated the importance of *customer retention*.[6] Companies that can readily identify all of their customers—for example, industrial companies, distributors and wholesalers, newspaper and magazine publishers, computer on-line service companies, banks, credit card companies, and long-distance telephone suppliers—can readily measure customer retention from period to period. Beyond just retaining customers, many companies will wish to measure customer loyalty by the percentage growth of business with existing customers.

Customer Acquisition

Companies seeking to grow their business will generally have an objective to increase their customer base in targeted segments. The customer acquisition measure tracks, in absolute or relative terms, the rate at which a business unit attracts or wins new customers or business. *Customer acquisition* could be measured by either the number of new customers or the total sales to new customers in these segments. Companies such as those in the credit and charge card business, magazine subscriptions, cellular telephone service, cable television, and banking and other financial services solicit new customers through broad, often expensive, marketing efforts. These companies could examine the number of customer responses to solicitations and the conversion rate—number of actual new customers divided by number of prospective inquiries. They could measure solicitation cost per new customer acquired, and the ratio of new customer revenues per sales call or per dollar of solicitation expense.

Customer Satisfaction

Both customer retention and customer acquisition are driven from meeting customers' needs. *Customer satisfaction* measures provides feedback on how well the company is doing. The importance of customer satisfaction probably can not be over-emphasized. Recent research has indicated that just scoring adequately on customer satisfaction is not sufficient for achieving high degrees of loyalty, retention, and profitability. Only when customers rate their buying experience as *completely* or *extremely* satisfying can the company count on their repeat purchasing behavior.[7]

Customer Profitability

Succeeding in the core customer measures of share, retention, acquisition, and satisfaction, however, does not guarantee that the company has profitable customers. Obviously, one way to have extremely satisfied customers (and angry competitors) is to sell products and services at very low prices. Since customer satisfaction and high market share are themselves only a means to achieving higher financial returns, companies will probably wish to measure not just the extent of business they do with customers, but the profitability of this business, particularly in targeted customer segments. Activity-based cost (ABC) systems permit companies to measure individual and aggregate *customer profitability*.[8] Companies should want more than satisfied and happy customers; they should want profitable customers. A financial measure, such as customer profitability, can help keep customer-focused organizations from becoming customer-obsessed.

The customer profitability measure may reveal that certain targeted customers are unprofitable. This is particularly likely to occur for newly acquired customers, where the considerable sales effort to acquire a new customer has yet to be offset from the margins earned by selling products and services to the customer. In these cases, lifetime profitability becomes the basis for deciding whether to retain or discourage currently unprofitable customers.[9] Newly acquired customers can still be valued, even if currently unprofitable, because of their growth potential. But unprofitable customers who have been with the company for many years will likely require explicit action to cope with their incurred losses.

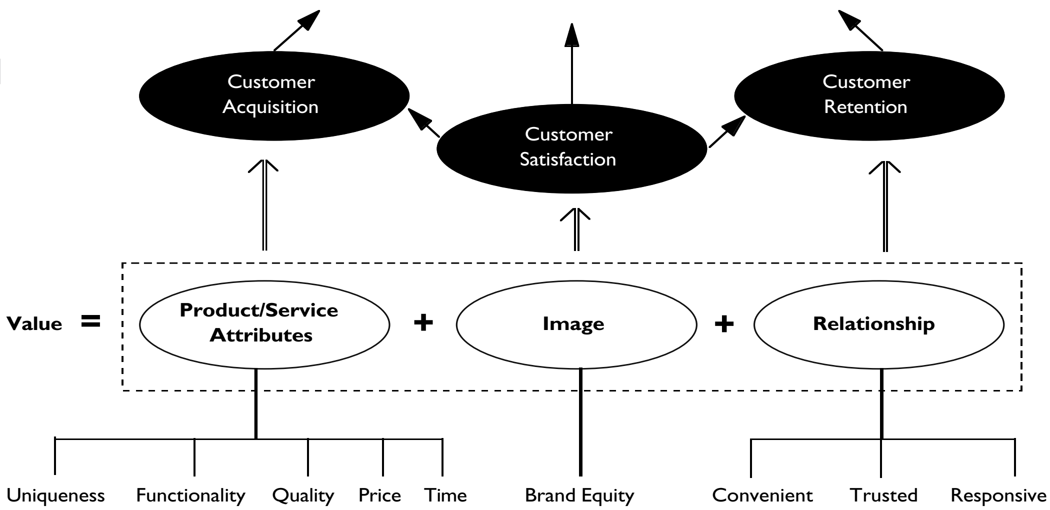
Beyond the Core: Measuring Customer Value Propositions

Customers' value propositions represent the attributes that supplying companies provide, through their products and services, to create loyalty and satisfaction in targeted customer segments. The value proposition is the key concept for understanding the drivers of the core measurements of satisfaction, acquisition, retention, and market and account share. For example, customers could value short lead times and on-time delivery. They could value a constant stream of innovative products and services. Or they could value a supplier able to anticipate their needs and capable of developing new products and approaches to satisfy those emerging needs.

While value propositions vary across industries, and across different market segments within industries, we have observed a common set of attributes that organizes the value propositions in all of the industries where we have constructed scorecards. These attributes are organized into three categories (see Exhibit 4):

- Product/Service Attributes
- Customer Relationship
- Image and Reputation

EXHIBIT 4. Customer Perspective: Linking Unique Value Propositions to Core Outcome Measures



Source: R. Kaplan and D. Norton, *The Balanced Scorecard: Translating Strategy Into Action* (Harvard Business School Press, 1996); Chapter 4.

Product and service attributes encompass the functionality of the product/service, its price, and its quality. The *image and reputation* dimension enables a company to pro-actively define itself for its customers. The *customer relationship* dimension includes the delivery of the product/service to the customer, including the response and delivery time dimension, and how the customer feels about the experience of purchasing from the company.

In summary, the customer perspective enables business unit managers to articulate their unique customer and market-based strategy that will deliver superior future financial returns.

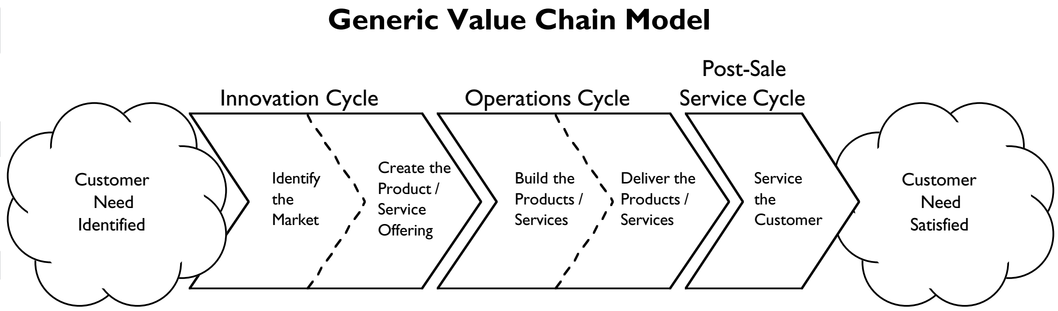
Internal Business Process

In the internal business process perspective, executives identify the critical internal processes in which the organization must excel. The critical internal business processes enable the business unit to:

- deliver on the value propositions of customers in targeted market segments, and
- satisfy shareholder expectations of excellent financial returns.

The measures should be focused on the internal processes that will have the greatest impact on customer satisfaction and achieving the organization's financial objectives.

EXHIBIT 5. The Internal Perspective



The internal business process perspective reveals two fundamental differences between traditional and the Balanced Scorecard approaches to performance measurement. Traditional approaches attempt to monitor and improve existing business processes. They may go beyond just financial measures of performance by incorporating quality and time-based metrics. But they still focus on improving existing processes. The Balanced Scorecard approach, however, will usually identify entirely new processes at which the organization must excel to meet customer and financial objectives. The internal business process objectives highlight the processes most critical for the organization's strategy to succeed.

The second departure of the Balanced Scorecard approach is to incorporate innovation processes into the internal business process perspective (see Exhibit 5). Traditional performance measurement systems focus on the processes of delivering today's products and services to today's customers. They attempt to control and improve existing operations—the *short-wave* of value creation. But the drivers of long-term financial success may require the organization to create entirely new products and services that will meet the emerging needs of current and future customers. The innovation process—the *long-wave* of value creation—is, for many companies, a more powerful driver of future financial performance than the short-term operating cycle. But managers do not have to choose between these two vital internal processes. The internal business process perspective of the Balanced Scorecard incorporates objectives and measures for both the long-wave innovation cycle as well as the short-wave operations cycle. We will illustrate the development of specific objectives and measures for the internal business process perspective in the two case studies presented later in this article.

Learning & Growth

The fourth Balanced Scorecard perspective, Learning & Growth, identifies the infra-structure that the organization must build to create long-term growth and improvement. The customer and internal business process perspectives identify the factors most critical for current and future success. Businesses are unlikely to be able to meet their long-term targets for customers and internal processes using today's technologies and capabilities. Also, intense global competition requires that companies continually improve their capabilities for delivering value to customers and shareholders.

Organizational learning and growth come from three principal sources: people, systems, and organizational procedures. The financial, customer, and internal business process objectives on the Balanced Scorecard will typically reveal large gaps between existing capabilities of people, systems, and procedures and what will be required to achieve targets for breakthrough performance. To close these gaps, businesses will have to invest in re-skilling employees, enhancing information technology and systems, and aligning organizational procedures and routines. These objectives are articulated in the learning and growth perspective of the Balanced Scorecard. As in the customer perspective, employee-based measures include a mixture of generic outcome measures—employee satisfaction, employee retention, employee training, and employee skills—along with specific drivers of these generic measures, such as detailed indexes of specific skills required for the new competitive environment. Information systems capabilities can be measured by real-time availability of accurate customer and internal process information to front-line employees. Organizational procedures can examine alignment of employee incentives with overall organizational success factors, and measured rates of improvement in critical customer-based and internal processes.

Linking Multiple Scorecard Measures to a Single Strategy

Many companies already use a mixture of financial and non-financial measures for senior management reviews and communication with boards of directors. Especially in recent years, the renewed focus on customers and process quality has caused many organizations to track and communicate measures on customer satisfaction and complaints, product and process defect levels, and missed delivery dates. In France, companies have developed and used, for more than two decades, the *Tableau de Bord*, a dashboard of key indicators of organizational success. The Tableau de Bord is designed to help employees "pilot" the organization by identifying key success factors, especially those that can be measured as physical variables.[10] Does a dashboard of financial and non-financial indicators supply a "Balanced Scorecard?"

Our experience is that the best Balanced Scorecards are much more than collections of critical indicators or key success factors organized into several different perspectives. The multiple measures on a properly constructed Balanced Scorecard should consist of a linked series of objectives and measures that are both consistent and mutually reinforcing. The metaphor should be a flight simulator, not a dashboard of instrument dials. Like a flight simulator, the scorecard should incorporate the complex set of cause-and-effect relationships among the critical variables, including leads, lags, and feedback loops that describe the trajectory, the flight plan, of the strategy.

Cause and Effect Relationships

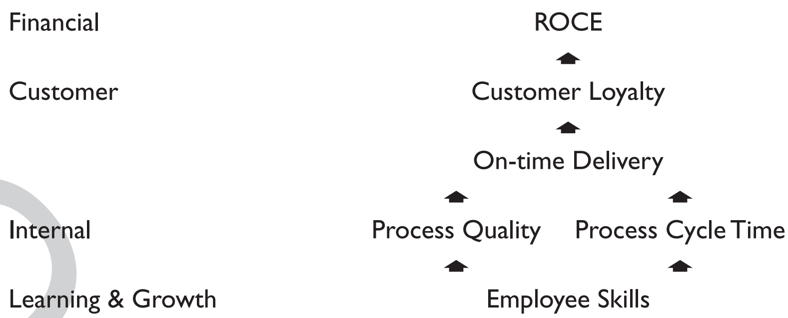
A strategy is a set of hypotheses about cause and effect. Cause and effect relationships can be expressed by a sequence of *if-then* statements. For example, the organization can establish a link between improved sales training of employees to higher profits through the following sequence of hypotheses:

> *If* we increase employee training about products, *then* they will become more knowledgeable about the full range of products they can sell;
>
> *If* employees are more knowledgeable about products, *then* their sales effectiveness will improve.
>
> *If* their sales effectiveness improves, *then* the average margins of the products they sell will increase.

A properly constructed Scorecard should tell the story of the business unit's strategy. The measurement system should make the relationships (hypotheses) among objectives (and measures) in the various perspectives explicit so that they can be managed and validated.

The chain of cause and effect should pervade all four perspectives of a Balanced Scorecard. For example, return on capital employed (ROCE) may be a outcome measure in the financial perspective. The driver of this financial measure could be repeat and expanded sales from existing customers, the result of a high degree of loyalty among existing customers. So, customer loyalty gets put on the Scorecard (in the Customer perspective) because it is expected to have a strong influence on ROCE. But how will the organization achieve customer loyalty? Analysis of customer preferences may reveal that on-time delivery (OTD) of orders is highly valued by customers. Thus, improved OTD is expected to lead to higher customer loyalty which, in turn, is expected to lead to higher financial performance. So both customer loyalty and OTD are incorporated into the customer perspective of the Scorecard.

The process continues by asking what internal processes must the company excel at to achieve exceptional on-time-delivery. To achieve improved OTD, the business may need to achieve short cycle times in operating processes and high-quality internal processes, both factors that could be Scorecard measures in the internal perspective. And how do organizations improve the quality and reduce the cycle times of their internal processes? By training and improving the skills of their operating employees, an objective that would be a candidate for the learning and growth perspective. We can now see how an entire chain of cause-and-effect relationships can be established as a vertical vector through the four Balanced Scorecard perspectives:



In a very similar vein, recent work in the service profit chain has emphasized the causal relationships among employee satisfaction, customer satisfaction, customer loyalty, market share, and, eventually, financial performance.[11]

Outcomes and Performance Drivers

All Balanced Scorecards use certain generic measures. These generic, or core outcome, measures reflect the common goals of many strategies, as well as similar structures across industries and companies. The generic measures include profitability, market share, customer satisfaction, customer retention, and employee skills. The *drivers of performance* are the ones that tend to be unique for a particular business unit. The performance drivers reflect the uniqueness of the business unit's strategy: the drivers of profitability, the market segments in which the unit chooses to compete, the value propositions delivered to customers in the targeted market segments, and the particular internal processes and learning and growth capabilities that enable the financial and customer objectives to be achieved.

A good Balanced Scorecard should have a mix of core outcome measures and performance drivers. Outcome measures without performance drivers do not communicate how the outcomes are to be achieved. They also do not provide an early indication about whether the strategy is being implemented successfully. Conversely, performance drivers (such as cycle times and part-per-million defect rates) without outcome measures may enable the business unit to achieve short-term operational improvements, but will fail to reveal whether the operational improvements have been translated into expanded business with existing and new customers—and, eventually, into enhanced financial performance. A good Balanced Scorecard should have an appropriate mix of core outcome measures and the performance drivers of these outcomes.

A test of whether a Balanced Scorecard truly communicates both the outcomes and the performance drivers of a business unit's strategy is its sensitivity and transparency. One division president reported to his parent company's president when he turned in his first Balanced Scorecard:

> "In the past, if you had lost my strategic planning document on an airplane and a competitor found it, I would have been angry but I would have gotten over it. In reality, it wouldn't have been that big a loss. Or if I had left my monthly operating

review somewhere and a competitor obtained a copy, I would have been upset, but, again, it wouldn't have been that big a deal. This Balanced Scorecard, however, communicates my strategy so well, that a competitor seeing this would be able to block the strategy and cause it to become ineffective."

Linked To Financials

With the proliferation of change programs underway in most organizations today, it is easy to become preoccupied with goals such as quality, customer satisfaction, and innovation for their own sake. While these goals can lead to improved business unit performance, they can also become ends in themselves. The financial problems of some Baldrige Award winners give testimony to the need to maintain a link to economic results.

A Balanced Scorecard must retain a strong emphasis on financial outcomes, like sales growth, return-on-capital-employed, or economic value added. Many managers—infatuated with local and isolated improvement programs such as total quality management, cycle time reduction, reengineering, and employee empowerment—have failed to link such programs to future financial performance. For such organizations, the improvement programs have been taken as ends in themselves and have not been linked to specific targets for improving customer and, eventually, financial performance. The inevitable result is that such organizations eventually become disillusioned about the lack of tangible payoffs from such efforts. *Ultimately, causal paths from all the measures on a Scorecard should be linked to financial objectives.*

The Balanced Scorecard, unlike ad hoc performance measurement systems, should articulate the "theory of the business." By having an explicit set of linkages among the Balanced Scorecard measures, managers can test the business theory's hypothesized causal chain of performance drivers and outcomes. Executives should establish short-term targets that reflect their best forecast about the lags and impacts between changes in performance drivers and the associated changes in one or more outcome measures. For example, how long before improvements in employee training and information system availability enable employees to cross-sell multiple financial products to existing and new customers, and how large will the effect be? What is the impact of a 10 percent improvement in on-time delivery on customer satisfaction? How long is the delay between quality improvements and increases in customer retention?

Obviously, specifying such relationships is much easier said than done. Initially, these impacts must be done subjectively and qualitatively. Eventually, however, as more data and evidence are accumulated, organizations may be able to provide more objectively grounded estimates of cause-and-effect relationships. At that point, the Balanced Scorecard can be captured in a systems dynamics model that provides a comprehensive, quantified model of a business's value creation process.[12]

With specification of the relationship, in both time and magnitude, between performance drivers and outcomes, monthly and quarterly reviews become opportunities to learn about the validity of the strategy and how well it is being executed. The output from such a dialogue may be to re-affirm belief in the current strategy. Alternatively, the intensive strategic review may reveal that an entirely new strategy may be required in light of the new knowledge about market conditions and internal capabilities. In either case, the Scorecard will have stimulated the learning among key executives about the viability and validity of their strategy.

In summary, the Balanced Scorecard is more than a collection of financial and non-financial measurements. It is the translation of the business unit's strategy into a linked set of measures that define both the long-term strategic objectives, as well as the mechanisms for achieving and obtaining feedback on those objectives.

Strategic versus Diagnostic Measures: How Many Measures on a Balanced Scorecard?

Consider that each of the four perspectives in the Balanced Scorecard can require between four and seven separate measures, thus creating a scorecard with up to 25 measures. Given our objective of helping to clarify and focus an organization, some obvious questions arise. Are 25 measures too many? Is it possible for any organization to focus on 25 separate things? The answer to both questions is NO! If a scorecard is viewed as 25 (or even 10) independent measures, it will be too complicated for an organization to absorb.

The Balanced Scorecard should be viewed as the instrumentation for a *single* strategy. When the scorecard is viewed as the manifestation of a single strategy, then the number of measures on the scorecard becomes irrelevant. Our experience indicates that companies can indeed formulate and communicate their strategy with an integrated system of approximately two dozen measurements.

But most organizations today already have many more than 16 to 25 measures to keep themselves functioning. They are incredulous that a Balanced Scorecard of no more that two dozen measures can be sufficient for measuring their operations. They are, of course, correct in a narrow sense, but are failing to distinguish between *diagnostic measures*—those measures that monitor whether the business remains "in control" and are able to signal when unusual events are occurring that require immediate attention—versus *strategic measures*—those that define a strategy designed for competitive excellence.

A simple example clarifies this point. Many aspects of our bodily functions must perform within fairly narrow operating parameters if we are to survive. If our body temperature departs from a normal 1-2° window (away from 98.6° F or 37° C) or if our blood pressure drops too low or escalates too high, we have a serious problem for our survival. In such circumstances, all our energies (and those of skilled medical professionals) are mobilized to restore these parameters back to their normal levels. But we don't devote enormous energy to optimizing our body temperature and blood pressure. Being able to control our body temperature to within 0.01° of the optimum will not be one of the strategic success factors that will determine whether we become a chief executive of a company, a senior partner in an international consulting firm, or a tenured full professor at a major university. Other factors are much more decisive in determining whether we achieve our unique personal and professional objectives. Are body temperature and blood pressure important? Absolutely. Should these measurements fall outside certain control limits, we have a major problem that we must attend to and solve immediately. But while these measurements are *necessary*, they are not *sufficient* for the achievement of our long-run goals.

Similarly, corporations should have hundreds, perhaps thousands, of measures that they can monitor to ensure that they are functioning as expected and that will signal when corrective action must be taken. But these are not the drivers of businesses' competitive success. Such measures capture the necessary "hygiene factors" that enable the company to operate. These measures should be monitored diagnostically with deviations from expectations noted rapidly; in effect, management by exception.

The outcome and performance driver measures on the Balanced Scorecard should be the subjects of intensive and extensive interactions among senior and middle-level managers as they evaluate strategies based on new information about competitors, customers, markets, technologies, and suppliers. Unlike the strategic measures selected for inclusion on the Balanced Scorecard, diagnostic measures are not the basis for competitive breakthroughs.[13] As one executive remarked, after he had implemented his first Balanced Scorecard:

> "Our division had always measured hundreds of operating variables. In building a Balanced Scorecard, we chose 12 measures as the key to implementing our strategy. Of these 12 measures, seven were entirely new measurements for the division."[14]

The Balanced Scorecard is not a replacement for an organization's day-to-day measurement system. The measures on the scorecard are chosen to direct the attention of managers and employees on those factors expected to lead to competitive breakthroughs for the organization.

Balanced Scorecards that Tell the Story of the Strategy

We can illustrate the translation of strategic objectives into Balanced Scorecard performance measures with two case studies: Metro Bank and National Insurance.

Metro Bank

Metro Bank was the retail banking division of a major money center bank. It had 30% market share of the region's core deposit accounts but with deregulation, increased competition, and a lower interest rate environment, income from these retail accounts could no longer be sustained. A strategic review revealed excessive reliance on these accounts and a cost structure that could no longer profitably serve 80% of the bank's retail customers. Metro embarked upon a two-pronged strategy to deal with these two problems:

- *Revenue Growth Strategy*—Reduce the volatility of earnings by broadening the sources of revenue with additional products for current customers.
- *Productivity Strategy*—Improve operating efficiency by shifting non-profitable customers to more cost-effective channels of distribution (e.g., electronic banking instead of personal banking).

In the process of developing a Balanced Scorecard at Metro, these two strategies were translated into objectives and measures in the four perspectives. Particular emphasis was placed on understanding and describing the cause-and-effect relationships on which the strategy was based. A simplified version of the results of this effort is shown in Exhibit 6.[15] For the Revenue Growth Strategy, the *financial* objectives were clear: *broaden the revenue mix.* Strategically, this meant that Metro would focus on its current customer base, identify the customers who would be likely candidates for a broader range of services, and then sell an expanded set of financial products and services to these targeted customers. When customer objectives were analyzed, however, Metro's executives determined that its targeted customers did not view the bank, or their banker, as the logical source for a broader array of products such as mutual funds, credit cards, and financial advice. The executives concluded that if the bank's new strategy were to be successful, they must shift customers' perception of the bank from that of a transactions processor of checks and deposits to a financial adviser.

Having identified the financial objective, *Broaden Revenue Mix*, and the new customer value proposition dictated by the financial objective, *Increase Targeted Customers Confidence in our Financial Advice*, the scorecard design process then focused on the *internal* activities that had to be mastered for the strategy to succeed. Three cross-business processes were identified: Understand Customers, Develop New Products and Services, and Cross-Sell Multiple Products and Services. Each of these business processes would have to be redesigned to reflect the demands of the new strategy. The selling process, for example, had historically been dominated by institutional advertising of the bank's services. Good advertising plus good location brought the customers to the banks. The branch personnel were reactive, helping customers to open accounts and to provide ongoing service. The bank did not have a selling culture. In fact, one study indicated that only 10% of a salesperson's time was spent with customers. A major reengineering program was initiated to redefine the sales process. The goal of the process was to create a relationship-selling approach where the salesperson became more of a financial advisor. Two measures of this process were included on the Balanced Scorecard. The *Cross-Sell Ratio*—the average number of products sold to a household—measured selling effectiveness. This "lag indicator" would

EXHIBIT 6. A Strategy Is a Set of Hypotheses About Cause and Effect
The Metro Bank Strategy

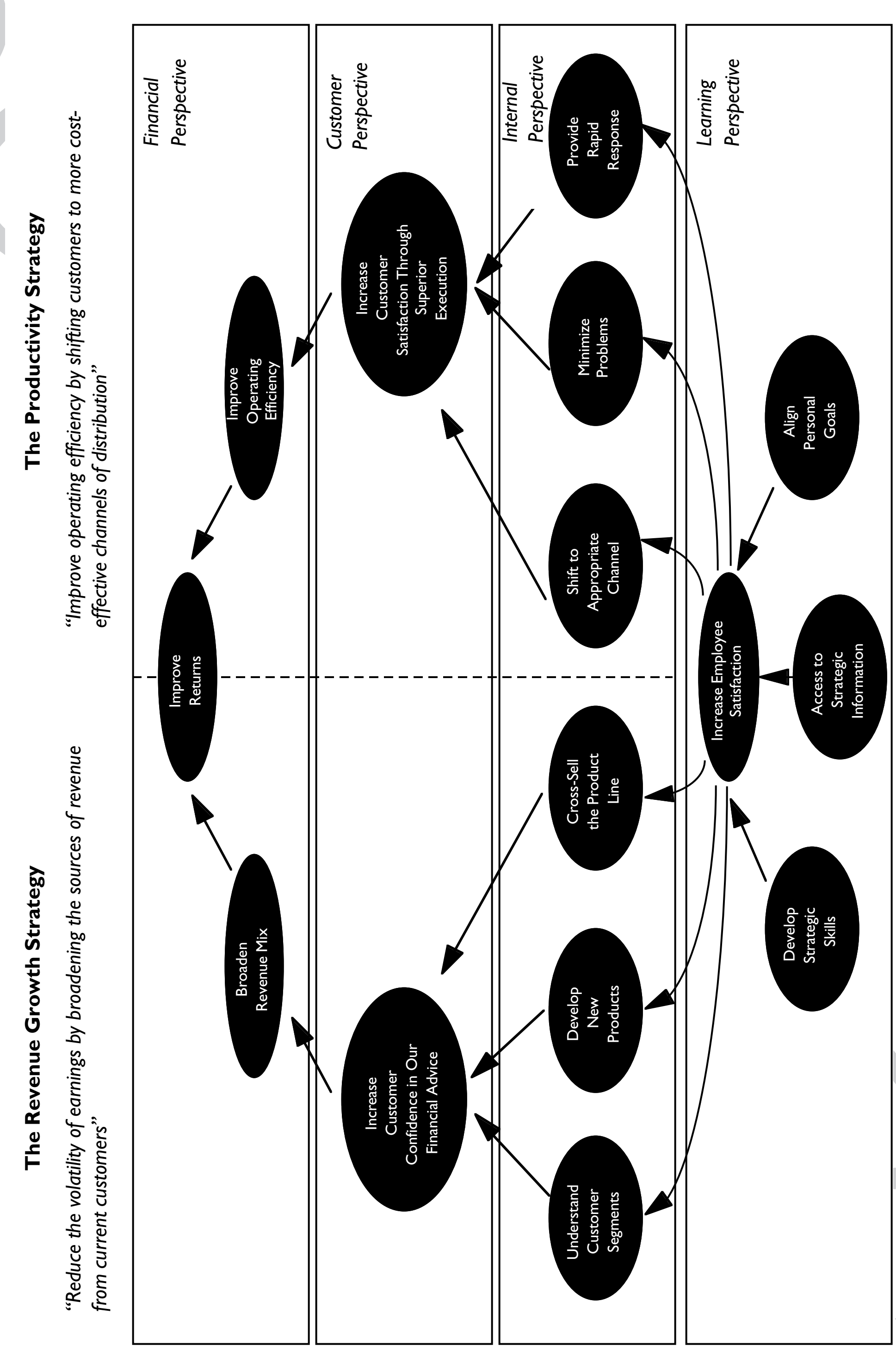


EXHIBIT 7. The Balanced Scorecard (Revenue Strategy)

	Strategic Objectives	Strategic Measures	
		Lag Indicators	Lead Indicators
Financial	F1 - Improve Returns F2 - Broaden Revenue Mix	• Return on Investment • Revenue Mix • Revenue Growth	
Customer	C1 - Increase Customer Satisfaction (Knowledgeable People) (Convenient Access) (Superior Service)	• Customer Retention • Depth of Relation	• Customer Satisfied Survey
Internal	I1 - Understand Our Customers I2 - Create Innovative Products I3 - Cross-Sell Products	• Share of Segment • Revenue from New Products • Cross-Sell Ratio	• Product Development Cycle • Hours with Customers
Learning	L1 - Build Strategic Information L2 - Develop Strategic Skills L3 - Focus Resources L4 - Employee Effectiveness	• Revenue per Employee • Employee Satisfaction	• Strategic Information Availability • Strategic Job Coverage • Personal Goals Alignment

tell whether or not the new process was working. The second measure, *Hours Spent With Customers*, was included to send a signal to salespersons throughout the organization of the new culture required by the strategy. A relationship-based sales approach could not work unless face-to-face time with customers increased. *Hours Spent With Customers* therefore was a "lead indicator" for the success of this piece of the strategy.

The internal objectives led naturally to a final set of factors to implement the Revenue Growth strategy. The learning and growth component of the scorecard identified the need for salespersons to undergo a major role change. This role change would require a broader set of skills (e.g., a financial counselor with broad knowledge of the product line), improved access to information (e.g., integrated customer files), and realignment of the incentive systems to encourage the new behavior. The lead indicators focused on the major changes that had to be orchestrated in the work force: the upgrading of the skill base and qualified people—*Strategic Job Coverage Ratio*; the access to information technology tools and data—*Strategic Information Availability Ratio*; and the realignment of individual goals and incentives to reflect the new priorities—*Personal Goal Alignment*. The "lag indicators" included a productivity measure, *Average Sales per Salesperson*, as well as the attitudes of the work force as measured by an *Employee Satisfaction Survey*.

Exhibit 7 summarizes the objectives and measures for Metro Bank's Balanced Scorecard, indicating the mixture of leading and lagging indicators on the scorecard. Not surprisingly, the financial and customer measures contain few lead indicators; most of the leading or driving indicators occur for both the internal business process and the learning and growth measures. Exhibits 6 and 7 show how Metro's scorecard describes a system of cause and effect relationships, incorporating a mix of leading and lagging indicators, all of which eventually point to improving future financial performance.

National Insurance Company (Long-Lag Times)

The importance of linking outcome measures to performance drivers is perhaps most powerfully illustrated in the insurance industry. The insurance industry is characterized by long delays between the time that routine decisions are made and the corresponding outcomes occur. For example, the effectiveness of the central event of underwriting—evaluating a risk and pricing it—is not known until subsequent claims are made and resolved. The incidence of insured events and resolution through the claims process can take between two to five years, although in extreme cases—as in the claims surrounding asbestos and Superfund sites—the exposure can go on for decades. In such a setting, having a mixture of leading and lagging measures is vital for motivating and measuring business unit performance.

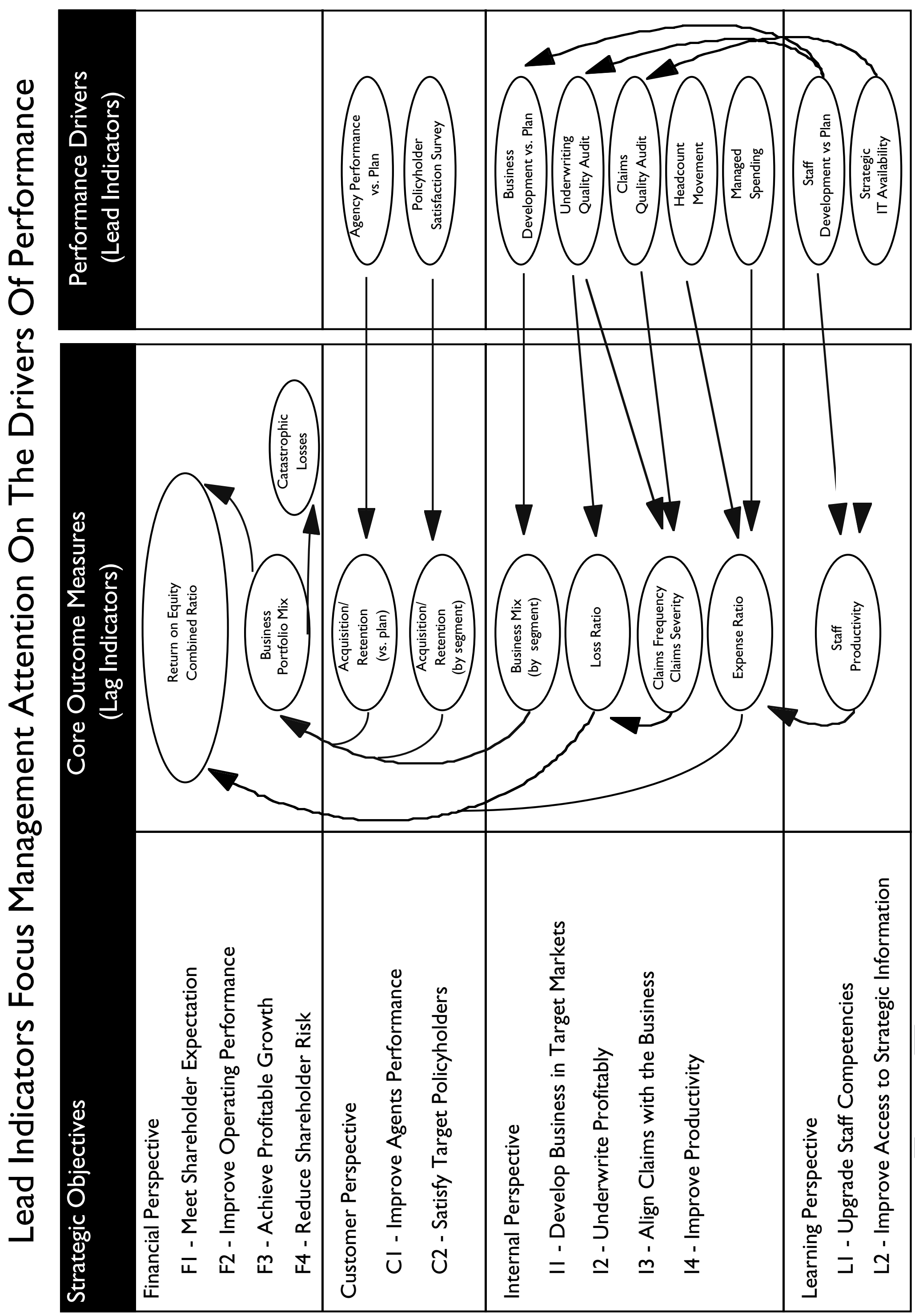
National Insurance was a major property and casualty insurance firm that had been plagued by unsatisfactory results for the past decade. A new management team was brought in to turn the situation around. Their strategy was to move the company away from its "generalist" approach—providing a full range of services to the full market—to that of a "specialist," a company that would focus on more narrowly defined niches. The new senior executive team identified several key success factors for its new specialist strategy:

- become better at understanding and targeting desired market segments;
- better select, educate and motivate agents to pursue these segments;
- improve the underwriting process as the focal point for executing this strategy; and
- better integrate information about claims into the underwriting process to improve market selectivity.

The executives selected the Balanced Scorecard as the primary tool for the new management team to use to lead the turnaround. They selected the Scorecard because they believed it would help clarify the meaning of the new strategy to the organization, and provide early feedback that the ship was turning.

In the first step, the executives defined the strategic objectives for the new specialist strategy. These are shown in the left-hand column of Exhibit 8. They selected measures to make each objective operational by gaining agreement on the answer to a simple question, "How would we know if National Insurance achieved this objective?" The answers to this question yielded the set of measures shown in the center column, "Core Outcome Measures," of Exhibit 8. The core outcome measures were also referred to as "Strategic Outcome Measures"

EXHIBIT 8. National Insurance: Lag and Lead Indicators



because they described the outcomes that the executives wished to achieve from each part of their new strategy.

As with many outcome measures, the measures shown in the center column of Exhibit 8 were the obvious ones that any company in the property and casualty insurance industry would be using. The scorecard would not be meaningful if such industry-specific measures did not appear, but these measures, by themselves, would be inadequate to signal the factors that would lead to superior performance within the industry. Besides having only industry-generic measures at this point in the scorecard development process, however, an additional problem became obvious. Every one of the outcome measures was a lagging indicator; the reported results for any of the measures reflected decisions and actions taken much earlier. For example, if new underwriting criteria were enacted, the results would not be reflected in the *Claims Frequency* for at least a year; the impact on the *Loss Ratio* would occur with an even longer delay.

The Strategic Outcome Measures presented a "balanced" view of the strategy, reflecting customer, internal process, and learning and growth measures in addition to the traditional financial ones. But a scorecard consisting only of lagging indicators did not satisfy management's goal of providing early indicators of success. Nor did it help them to focus the entire organization on the drivers of future success: what people should be doing day-by-day to enable successful outcomes to be produced in the future. While the issue of balancing lagging outcome measures with leading performance driver measures occurs for all organizations, the extremely long lags between actions today and outcomes in the future was more pronounced in the property and casualty insurance company than in any other we have encountered.

National Insurance executives went through a second design iteration to determine the actions that people should be taking in the short-term to achieve the desired long-term outcomes. For each Strategic Outcome Measure, they identified a complementary performance driver (see right-hand column of Exhibit 8). In most cases, the performance drivers described how a business process was intended to change. For example, the Strategic Outcome Measures for the underwriting process were:

- Loss Ratio
- Claims Frequency
- Claims Severity

Improving performance of these measures required a significant improvement in the quality of the underwriting process itself. The executives developed criteria for what they considered to be "good underwriting." The criteria defined the actions desired when underwriting a new opportunity. The executives introduced a new business process, to audit, periodically, a cross-section of policies for each underwriter to assess whether the policies issued by the underwriter were in conformance with these criteria. The audit would produce a measure, *The Underwriting Quality Audit Score*, that would show the percentage of new policies written that met the standards of the new underwriting process. The theory behind this process is that the Underwriting Quality Audit Score would be the leading indicator (the performance driver) of the outcomes—loss ratio, claims frequency, and claims severity—that would be revealed much later. In addition to the Underwriting Quality Audit, similar programs were developed for outcome objectives related to Agency Management, New Business Development, and Claims Management. New metrics, representing performance drivers for these outcomes were constructed to communicate and monitor near-term performance. These included:

Outcome Measure	Performance Driver Measures
Key Agent Acquisition/Retention	Agency Performance vs. Plan
Customer Acquisition/Retention	Policyholder Satisfaction Survey
Business Mix (by segment)	Business Development vs. Plan
Claims Frequency and Severity	Claims Quality Audit
Expense Ratio	Headcount Movement; Indirect Spending
Staff Productivity	Staff Development vs. Plan; IT Availability

The right-hand column of Exhibit 8 shows the new set of leading indicators (the performance drivers) selected by National Insurance. The exhibit illustrates two directional chains of cause and effect: from learning and growth and internal business process objectives to customer and financial objectives; and from performance driver measures linked to each outcome measure in the customer, internal, and learning perspectives.

The National Insurance case again illustrates how the process of building a Balanced Scorecard creates change and results. Development of the performance-driver metrics forced executives to think through the way that work should be done in the future, and to introduce entirely new business processes—the underwriting quality audit, the claims quality audit, and specific programs to enhance staff skills and expand information technology to employees. In addition to providing measures for the scorecard, the criteria developed by the executives for the underwriting quality and claims quality audits helped to develop improved underwriting and claims processes that could be communicated to the workforce. The underwriting and claims quality audit scores were not off-the-shelf measures. The executives developed unique, customized measures to reflect the new underwriting and claims processes they wished to see implemented at National Insurance.

The detailed contents of the measures described National's strategy for success. The chain of cause and effect relationships diagrammed in Exhibit 8 represents the executives' hypotheses about the relationship of processes and decisions done today that were expected to have a favorable impact on various core outcomes in the future. The underwriting and claims quality audit measures were not intended to audit work in a punitive sense. The intended action after revelation of poor underwriting or claims processing performance would be additional training, not dismissal. Therefore, the measures were intended to communicate the specifics of new work processes to the organization. The logical process of identifying the strategic priority, the strategic outcomes and the performance drivers led to reengineered business processes. The process of measurement was indeed "the tail that wagged the dog (of operations)."

The ultimate success from this turnaround program at National Insurance will take some time to play out and will, of course, be influenced by many factors beyond the measurement system. But executives readily concurred that the Balanced Scorecard has been a major part of their turnaround strategy and near-term success. The Balanced Scorecard, by providing short-term indicators of long-term outcomes, has become National Insurance's guidance system to the future.

Summary: Using Measurement to Tell the Story of the Strategy

The Metro Bank and National Insurance cases illustrate the translation of an SBU business strategy into a measurement framework. The Balanced Scorecard is not really a "strategy formulation" tool. We have implemented scorecards in organizations where the strategy has already been well articulated and accepted in the organization. However, we have more often found that even when the senior executive team thought they had prior agreement on the business unit's strategy, the translation of that strategy into operational measurements forced the clarification and redefinition of the strategy. The disciplined measurement framework enforced by the Balanced Scorecard stimulated a new round of dialogue and debate about the specific meaning and implementation of the strategy. And this dialogue and debate usually led to elevating specific management processes into matters of strategic necessity.

Why is it important to build a scorecard that accurately tells the story of a business unit's strategy? First, the scorecard describes the vision of the future for the entire organization. If the vision is wrong, the fact that it is executed well becomes irrelevant. Second, the scorecard creates *shared understanding*. It creates a holistic model of the strategy that allows all employees to see how they can contribute to organizational success. If the model is wrong, individuals and departments will unknowingly sub-optimize their performance. Third, the scorecard *focuses change* efforts. If the right lead indicators are identified, investments and initiatives will drive desired long-term outcomes. If not, investments will be wasted. And finally, the scorecard permits organized *learning* at the executive level. By making the cause-and-effect hypotheses among objectives and measures explicit, businesses can test their strategy in real-time and adapt as they learn. Without explicit cause-and-effect linkages, no strategic learning can occur.

Notes

1. R.S. Kaplan and D.P. Norton, "The Balanced Scorecard: Measures that Drive Performance," *Harvard Business Review* (January/February 1992); R.S. Kaplan and D.P. Norton, "Putting the Balanced Scorecard to Work," *Harvard Business Review* (September/October 1993).
2. R.S. Kaplan and D.P. Norton, "Using the Balanced Scorecard as a Strategic Management System," *Harvard Business Review* (January/February 1996).
3. This simple classification of business strategies is not immutable. Changes in regulation, technology, or the company's marketing strategy can transform what had been a mature, commodity-like product into a rapid growth business. For example, Sony used miniaturization technology to transform the mature transistor radio product into the rapid growth Walkman product line, deregulated telecommunications companies are attempting to expand their POTS (plain old telephone service) to offer multi-media communication services to households, and Frank Purdue created a brand image for what had been a common commodity product. The scorecard should be embedded in a dynamic process in which the measures and objectives change as the business unit strategy evolves. See Kaplan and Norton (1996), op. cit.
4. And finally, some businesses will no longer fit the strategic objectives of the company or can no longer generate adequate cash or financial returns. These businesses must just be maintained sufficiently for the company to implement an "exit" strategy, either through sale or an orderly shutdown. In the exit stage, financial measurements must focus on sustaining existing value. The measurements for businesses in this stage must be derived from a clear understanding with the company CEO and CFO about what is required to prepare the business for an orderly and value-maximizing sale. Factors that might jeopardize the marketability of the unit, such as growth in liabilities, environmental contamination, or customer dissatisfaction, can all be closely monitored.
5. We are articulating strategy as choosing the market and customer segments the business unit intends to serve; identifying the critical internal business processes that the unit must excel at to deliver the value propositions to customers in the targeted market segments; and selecting the individual and organizational capabilities required for the internal, customer, and financial objectives. We recognize an alternative view in which companies compete by exploiting unique capabilities, resources, and core competencies. See C.K. Prahalad and G. Hamel, "The Core Competence of the Corporation," *Harvard Business Review* (May/June 1990), pp. 79-91; R. Hayes, "Strategic Planning—Forward in Reverse," *Harvard Business Review* (November/December 1985), pp. 111-119; and D. J. Collis and C.A. Montgomery, "Competing on Resources: Strategy in the 1990s," *Harvard Business Review* (July/August 1995), pp. 118-128. Companies deploying such a strategy can, in building their Balanced Scorecard, first identify the critical competencies and capabilities for their Internal Business Process perspective, and then, for the Customer perspective, select customer and market segments where these competencies and capabilities are most effectively deployed. The Balanced Scorecard is primarily a mechanism for strategy implementation, not for strategy formulation. The Balanced Scorecard can accommodate either approach for formulating business-unit strategy—starting from the customer perspective or starting from excellent internal business process capabilities.
6. J. Heskett, T. Jones, G. Loveman, E. Sasser, and L. Schlesinger, "Putting the Service Profit Chain to Work," *Harvard Business Review* (March/April 1994), pp. 164-174.

7. T.O. Jones and W.E. Sasser, "Why Satisfied Customers Defect," *Harvard Business Review* (November/December 1995), pp. 88-99.
8. R. Cooper and R.S. Kaplan, "Profit Priorities from Activity-Based Costing," Harvard Business Review (May/June 1991), pp. 130-135.
9. The interplay among customer acquisition, retention, and lifetime profitability is at the heart of the comprehensive measurement system proposed in "The Right Measures," Chapter 8 of F.F. Reichheld, *The Loyalty Effect* (Boston, MA: Harvard Business School Press, 1996), pp. 217-253. The approach advocated by Reichheld, including explicit incorporation of the value drivers to and from the customer, is highly compatible with the approach we have articulated for the customer perspective of the Balanced Scorecard.
10. M. Lebas, "Managerial Accounting in France: Overview of Past Tradition and Current Practice," *European Accounting Review* (1994), pp. 471-487.
11. Heskett et al., op. cit.
12. In effect, the causal and dynamic relationships in a Balanced Scorecard can be modeled with a systems dynamics approach. See J.W. Forrester, *Industrial Dynamics* (Cambridge, MA: MIT Press, 1961); E.B. Roberts, ed., *Managerial Applications of System Dynamics* (Cambridge, MA: Productivity Press, 1978); and, especially, F. Kofman, N. Repenning, and J. Sterman, "Unanticipated Side Effects of Successful Quality Programs: Exploring a Paradox of Organizational Improvement," MIT Sloan School Working Paper D-4390-1 (August 1994).
13. The important distinction between the measures monitored in the organization's diagnostic control systems and those that are part of the continual interactions among managers has been articulated in Robert L. Simons, *Levers of Control: How Managers Use Innovative Control Systems to Drive Strategic Renewal* (Boston, MA: Harvard Business School Press, 1995).
14. Experience reported in "An Interview with Larry D. Brady" in Kaplan and Norton (1993), op. cit., p. 143.
15. For simplicity, we show the cause-and-effect relationships as uni-directional. In practice, feedback loops exist (see reference to systems dynamics models in note 12); for example, higher financial performance generates free cash flow that can be reinvested back into developing new products and services, enhanced employee skills, and greater processes capabilities. Also, improved customer satisfaction can feed back to higher motivation and morale among employees.