Using a Balanced Scorecard to Implement Sustainability

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Developing social and environmental balanced scorecard measures helps EH&S managers identify the key performance factors that link their department's work to the company's strategic objectives. © 2001 John Wiley & Sons, Inc.

Leading companies recognize the critical importance of systematically and proactively managing corporate social and environmental impacts. But there are two significant impediments to implementing sustainability:

- Environmental, health, and safety (EH&S) managers often do not provide an effective business case to senior managers in order to obtain the necessary resources for social and environmental programs. Competing pressures often make trade-offs necessary and expenditures for corporate sustainability are often seen as discretionary.
- Managers often do not know how to implement a strategy of sustainability and translate the strategy into action. Moving a company of 100,000 employees to take actions that are more sensitive to social and environmental impacts is difficult.

In developing strategic responses, senior executives want to understand the causal relationships between sustainability performance and financial performance, appreciate the payoffs from social and environmental improvements, and create a culture where all employees understand and work toward corporate social and environmental goals.

Managers in corporate social and EH&S departments also find that to get expenditures approved, they need to measure and communicate the value of these expenditures to CFOs and CEOs. To do so, EH&S managers need to clearly explain the business value of sustainability to the organization.

Just as the balanced scorecard is being adopted by corporations throughout the world to help them implement corporate strategy, it can be used by organizations to implement a sustainability strategy and to link corporate sustainability objectives with appropriate corporate actions and performance outcomes.

For additional discussions on how companies can more effectively implement sustainability strategies, see Epstein (1996) and Epstein and Wisner (2001).

THE BALANCED SCORECARD

The balanced scorecard is a strategic management system that links performance measurement to strategy using a multidimensional set of financial and nonfinancial performance metrics.

The balanced scorecard is a strategic management system that links performance measurement to strategy using a multidimensional set of financial and nonfinancial performance metrics. The term "balanced scorecard" refers to the framework first described by Kaplan and Norton in 1992 and further expanded upon in *The Balanced Scorecard* (1996) and *The Strategy-Focused Organization* (2000).

The traditional model contains four dimensions that relate to the strategy and core values of the company. These dimensions are financial, customer, internal business processes, and organizational learning and growth. In practice, many managers use the term "balanced scorecard" to refer to any set of financial and nonfinancial measures that link performance indicators to corporate objectives.

The four perspectives in the balanced scorecard represent four key components of creating and sustaining corporate value:

- The financial perspective focuses on the shareholders' interests and shows the link between strategic objectives and financial impacts.
- The customer perspective focuses on measures that reflect how the company is creating customer value through its strategy and actions.
- The internal business processes perspective contains measures that indicate how well a company performs on key internal dimensions.
- The learning and growth perspective stresses measures of how well the company is preparing to meet the challenges of the future through leveraging its organizational and human assets.

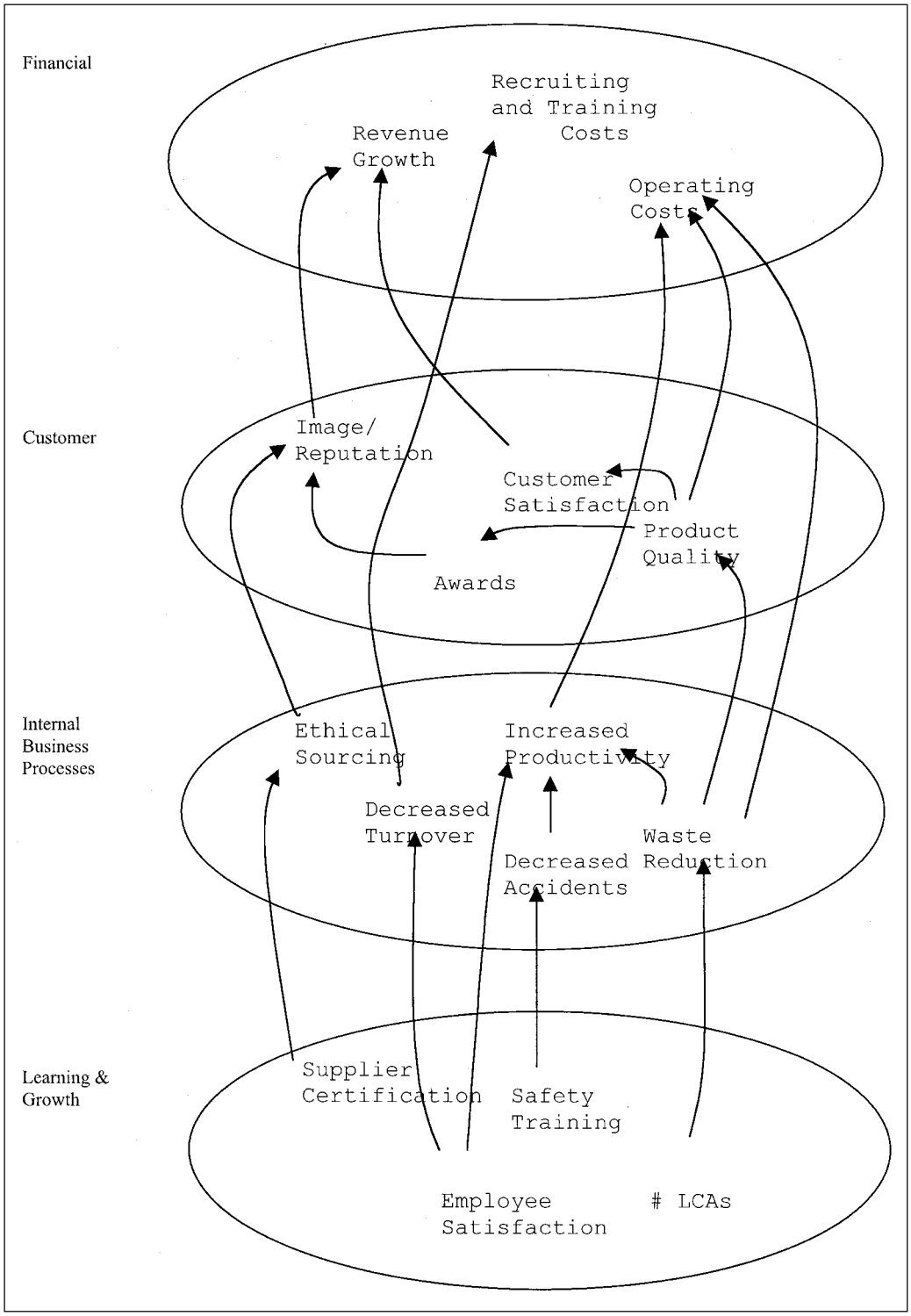
In addition to the balance achieved by including both financial and nonfinancial performance indicators, the balanced scorecard helps managers improve corporate decision making and accountability by including both leading and lagging measures of performance. Leading indicators are generally thought of as input or process indicators that link more closely to operations, while lagging indicators relate more to outcomes achieved through the management of leading indicators. However, leading and lagging indicators should be thought of as a continuum, or as part of a complex flow of causes and effects.

For example, a facility's toxic emissions are a lagging measure of process efficiency, and also a leading indicator of environmental costs. Employee turnover is a lagging measure of employee benefit expenditures, but a leading measure of recruitment and training costs. Most leading indicators would drive to future financial performance through reduced costs, increased revenues, and improved reputation.

To more effectively determine performance measures, managers must understand the causal links between actions that create organizational capabilities and the impact of those actions on operational performance, customer value, sustainability performance, and financial performance. As shown in **Exhibit 1**, the four perspectives of the balanced scorecard connect through chains of cause and effect—learning and growth actions impact internal business process outcomes, internal business process actions impact both customer and financial outcomes, and improved customer value leads to stronger financial performance.

Essentially, one category of measurement drives performance in the next sets. Overall, these indicators link together and reinforce each other, jointly contributing to measuring the accomplishment of corporate strategy and the creation of corporate value.

Exhibit 1. Causal Chain of Performance



Telenor: A Balanced Scorecard Example

Telenor, the large Norwegian telecommunications company, wanted to better control costs related to employee absence, including the cost of hiring temporary workers and the cost of overtime pay. The company's managers identified four primary drivers of absenteeism: substance abuse, accidents, carpal tunnel syndrome, and eyestrain/headaches.

Telenor undertook a study of causal actions that focused on the linkages between organizational learning and growth actions, business process outcomes, customer impacts, and the ultimate financial impacts. **Exhibit 2** displays Telenor's performance indicators in a causal links model aligned with the balanced scorecard framework. (See Epstein and Westbrook, 2001, for a more complete discussion of causal links analysis.)

Using the information from their causal links analysis, Telenor's management determined that an investment of corporate resources in employee health, safety education, and workstation redesign would pay off in terms of decreased employee absence. Telenor's causal links model also showed that employee absenteeism negatively impacted productivity and service quality, so a decrease in absenteeism would positively impact internal business processes and customer value.

Telenor management calculated that just a 2.2 percent decrease in absenteeism would reduce the costs of overtime, hiring and training of temporary workers, and administrative time by over $1 million. Through building this causal links model, Telenor management was better able to establish the business value to the organization of investing in occupational health and safety initiatives.

USING THE BALANCED SCORECARD FOR IMPLEMENTING SUSTAINABILITY STRATEGIES

Discussed below are two examples of companies that have used the balanced scorecard approach for implementing sustainability strategies.

Bristol-Myers Squibb

Bristol-Myers Squibb (BMS), the multinational pharmaceutical giant, provides one example of a balanced approach to measuring and managing sustainability performance. Though not originally displayed in a balanced scorecard format, BMS has identified a variety of employee, operational, customer, and financial metrics as key performance indicators for social and environmental responsibility (**Exhibit 3**).

Exhibit 2. Telenor Causal Links Model

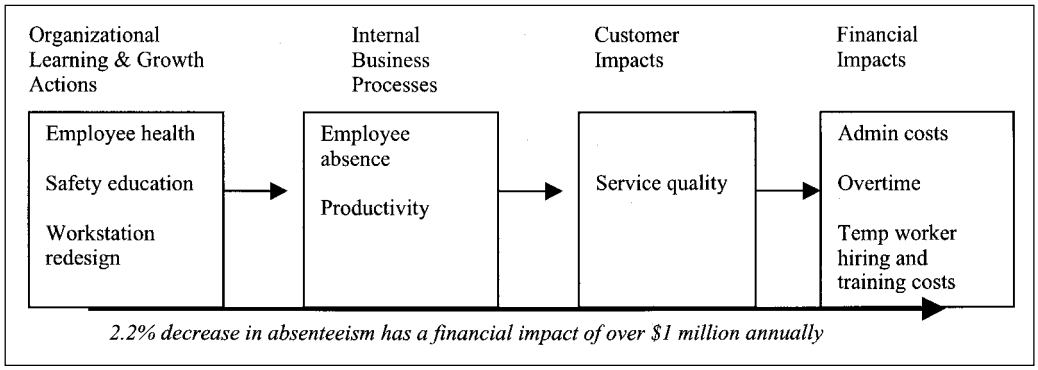


Exhibit 3. Sample Scorecard Using Bristol-Myers Squibb Social and Environmental Performance Objectives and Measures

Learning and Growth Perspective	Internal Business Process Perspective	Customer Perspective	Financial Perspective
Employee Practices • training hours • ergonomic reviews • diversity Transfer of Best Practices • # ISO 14001 certifications • # Product Life Cycle reviews	Environmental Performance • water use • packaging reduction • % solvents recycled • energy use • hazardous waste generated • # supplier reviews • # fines • worker exposure Employee Performance • # lost workdays • # work-related injuries or illnesses	External Customer Support • product safety • post-consumer waste recycled • consumer education • # product safety brochures distributed Good Citizenship • # awards • philanthropic $ • product donations	Cost Savings • $ saved from accident reduction • $ saved from PLC reviews Investments • $ spent on EH&S capital projects • remediation costs • preventative costs • community improvements Revenues • sales of socially and environmentally positioned products

• Measures

The comprehensive and focused approach taken by BMS assures that the company's strategy of social and environmental responsibility is implemented throughout the corporation—at corporate headquarters, within all divisions, and in each of the company's facilities. This approach also leads BMS toward improved analysis and disclosure of the benefits of EH&S investments in their sustainability report.

BMS management ties these performance metrics to corporate and business unit strategy to provide for an effective implementation of their concerns for social and environmental issues.

Severn Trent

Another innovative approach is seen in the environmental performance indicators matrix reported by Severn Trent, an international provider of water, waste, and utility services based in the United Kingdom. The company, with about 12,500 employees, uses a performance matrix that focuses on the four main objectives of the company, along with 14 indicators to measure progress (**Exhibit 4**). Severn Trent's objectives and measures closely align with those that the UK government has identified as being important for socially responsible development.

CHOICE OF MEASURES TO INCLUDE

There is no rule for the right number of measures to include in a balanced scorecard, although including too many tends to distract from pursuing a focused strategy. Generally, a complete balanced scorecard contains perhaps three to six measures in each perspective.

A rich set of potential measures reflects the complexity of business today. The measurement mix should be a combination of leading/lagging, financial/nonfinancial, external/internal, strategic/tactical, process/product, people/technology, and input/output measures (Epstein & Birchard, 1999).

Measures chosen for the scorecard should be quantifiable, in either absolute or percentage terms, as well as complete and controllable (Epstein & Manzoni, 1998). "Complete" in that the measure sums up in one number the contribution of all elements of performance that matter; for example, profitability is a summary measure of revenue generation and cost control. "Controllable" in that employees in the organization can actually

Exhibit 4. Severn Trent Plc. Environmental Performance Indicators

Severn Trent's four main objectives and 14 headline indicators are as follows:

Maintenance of high and stable levels of economic growth and employment	Social progress that recognizes the needs of everyone	Effective protection of the environment	Prudent use of natural resources
Economic growth measured by company turnover **Social investment** measured by total annual investment **Employment** measured by number of full-time (equivalent) employees	**Health** measured by population receiving water & waste services from Severn Trent **Education and training** measured by employee days training in a year **Housing quality** measured by all domestic properties receiving water, sewerage, or refuse collection services from Severn Trent companies	**Climate change** measured using the UK government's greenhouse gases indicator **Air pollution** measured by acidic gas emissions (NO_x and SO_x) **Transport** measured by total distance traveled for operational & business purposes **Water quality** measured by proportion of rivers with "good or fair" quality classification **Wildlife** measured by number of trees planted by Severn Trent businesses **Land use** measured by area of land restored	**Use of natural resources** measured by the amount of water leaking from our water mains **Waste** measured by total waste disposed of from Severn Trent businesses

influence improvement in the factor measured.

Our recent research shows that many companies are already measuring and reporting social and environmental impacts. **Exhibit 5** provides examples of performance measures currently being used by leading companies to measure and manage sustainability. These measures include both leading and lagging indicators of financial, customer, internal business process, and organizational learning and growth performance.

There may be some discussion over which perspective these measures belong in, or whether a fifth sustainability perspective in the balanced scorecard is appropriate. But that is usually determined through a careful analysis of the drivers of success and how critical social and environmental performance is to a company's strategy and performance.

The measures included in Exhibit 5 are not meant to be a comprehensive set of sustainability performance indicators. Rather, they are an example of various metrics that companies are using to measure social and environmental impacts.

CREATING A FIFTH SUSTAINABILITY PERSPECTIVE

Using a balanced scorecard for environmental and social performance measurement is one way to tie performance metrics for sustainability to a company's strategy. Each organization defines sustainability differently. Therefore, the performance indicators chosen will be based on the strategy and goals of the particular organization or business unit. Correspondingly, the weight given to the various dimensions of the balanced scorecard or to the stakeholders identified by the organization will also depend

Exhibit 5. Examples of Balanced Scorecard Measures for Sustainability

Financial		Customer	
Environmental	**Social**	**Environmental**	**Social**
– environmental $ saved – $ fines/penalties – EH&S costs (% of sales) – % proactive vs. reactive expenditures – increase in relative % of proactive expenditures – % environmental costs direct-traced – $ capital investments – energy costs – disposal costs – recycling revenues – revenues from green products – $ operating expenditures – reduction in cost of debt – cost avoidance from environmental actions	– philanthropic $ contributed – $ workers compensation costs – # employee lawsuits – $ employee benefits – legal actions / costs – training budgets – reduction in hiring costs – revenue from socially positioned products – increased sales from improved reputation	– $ cause-related marketing – # "green" products – product safety – # recalls – customer returns – unfavorable press coverage – % products reclaimed after use – # stakeholder communications – product life – functional product eco-efficiency (e.g., energy costs of a washing machine)	– customer perceptions – # of cause-related events supported (e.g., breast cancer, AIDS) – $ community support (parks, safety, recreation, etc.) – # community meetings – customer satisfaction – social report requests – # product recalls – customer group demographics

Internal Business Processes		Learning and Growth	
Environmental	**Social**	**Environmental**	**Social**
– # LCAs performed – % materials recycled – % waste to landfill – # certified suppliers – # accidents/spills – # audits/year – # truck miles – % office supplies recycled – internal audit scores – energy consumption – % facilities certified – % of product remanufactured – packaging volume – nonproduct output – # supplier audits/year – fresh water consumption – greenhouse gas emissions – air emissions – water emissions – hazardous material output – vehicle fuel use – habitat changes due to operations	– # employee accidents – # lost workdays – # days work stoppages – hours overtime work – average work week hours – $ warranty claims – $ minority business purchases – # plant tours/visitors – # non-employee accidents – certifications – # suppliers certified – # supplier violations – environmental quality of facilities – observance of international labor standards – # safety improvement projects	– % of employees trained – # training programs/hours – reputation per surveys – inclusion in "green" funds – # employee complaints – # community complaints – # shareholder complaints – unfavorable press coverage – # violations reported by employees – # of employees with incentives linked to environmental goals – # of functions with environmental responsibilities – management attention to environmental issues – % of employees using car pools	– workforce diversity (age, gender, race) – management diversity – # internal promotions – employee volunteer hours – average length of employment – # involuntary discharges – employee education $ – # family leave days – $ employee benefits – salary gaps between genders/races – employee satisfaction – $ "quality of life" programs – % of employees owning company stock – # applicants/job openings – # employees with disabilities – # employee grievances – workforce equity

on the mission, the culture, and the goals of the firm.

Many companies include sustainability "key success factors" and "key performance indicators" in each of the four perspectives of the balanced scorecard, choosing perhaps one or two key measures in each dimension (as suggested by Kaplan and Norton). Others choose to define sustainability as an internal business process, and incorporate social and environmental indicators into this perspective only.

The choice of where on the balanced scorecard to include social and environmental indicators is dependent upon the challenges facing the organization. Where one company may be more sensitive to community stakeholder pressures because it is located in an urban area, an-

other may focus more on employee measures because it operates in a tight labor market and views human capital as a more fundamental strategic asset.

Companies that have identified sustainability as a key corporate value or strategic imperative of the organization may choose to expand the balanced scorecard by creating a fifth perspective. This dimension would include social and environmental performance indicators that link with the other four balanced scorecard perspectives, and would serve to highlight the importance of social and environmental responsibility as a corporate objective.

Companies that have identified sustainability as a key corporate value or strategic imperative of the organization may choose to expand the balanced scorecard by creating a fifth perspective.

The weight given to this fifth perspective would be dependent on the relative priorities of the organization, and the measures included would depend upon the drivers of performance that the managers of the company have identified. Among the reasons that companies establish a separate balanced scorecard perspective for sustainability are the following:

- Social and environmental responsibility is seen as core to the strategy of the organization, creating competitive advantage (through factors such as corporate image, reputation, and product differentiation), as opposed to being seen as a means to improve operational efficiency.
- The fifth perspective becomes a tool to focus managerial and employee attention on social and environmental responsibility as a core corporate value. Having a fifth balanced scorecard perspective communicates management's strong concern about these issues and objectives.
- When a company has high-profile or high-impact social and environmental issues, having a fifth perspective helps to highlight the importance of these issues. Companies in industries that have had problems (recent examples include chemicals, oil, apparel, and footwear) may be more likely to focus internal attention on social and environmental objectives and measures.
- Where the resource allocation to social and environmental responsibilities is relatively large, companies may want to highlight the link between the use of those resources and company strategy.

CASCADING SCORECARDS

Sustainability strategies reflected in the corporate balanced scorecard should be cascaded down to the strategic business units (SBUs) of the organization, and ultimately to the support functions, including EH&S. While the corporate-level scorecard clarifies corporate values and beliefs and identifies actions that create corporate synergies, the scorecards for SBUs can be customized to reflect the market and operational challenges faced by each SBU.

For example, Unilever, the multinational consumer products company, has articulated the minimization of its "environmental imprint" as a corporate goal. Each Unilever SBU links to this goal, but in ways that are relevant to the particular SBU. For instance, some Unilever SBUs are challenged by the availability and quality of water, and focus their measures on reducing water use and effluents. For other SBUs, especially those operating in northern Europe and North America, reducing packaging waste is a priority. These SBUs focus on reducing bottle weights, developing concentrated product formulations that require less space, and creating lines of refillable products.

A cascaded set of balanced scorecard measures reflecting the strategy to reduce packaging waste could be expressed as shown in **Exhibit 6**.

Balanced scorecards for support functions, including EH&S, should align with the strategies and objectives of the

Exhibit 6. Cascaded Balanced Scorecard Measures

Corporate	Minimize environmental impact
Geographic unit	% reduction packaging waste
Business unit	# product reformulations (concentrated) % refillable products
Manufacturing	Unit packaging reduction Container weight reduction
EH&S department	Life-cycle analyses on product lines Integration of environmental concerns into product design Tons of waste

corporation and the SBUs, thereby reinforcing performance alignment. Many companies are now extending their social and environmental oversight activities to their suppliers as issues such as child labor practices and environmental responsibility pass through the supply chain. A number of support functions could link their scorecard measures to this objective. For example:

- EH&S
  —number of supplier audits
  —percentage of suppliers with environmental certifications
- Purchasing
  —percentage of materials purchased from ISO 14000 certified suppliers
- Human Resources
  —number of audits of contract labor firms
  —number of suppliers complying with corporate codes of conduct.

A complete balanced scorecard for the EH&S and other departments would likely contain performance measures in each of the four scorecard perspectives, reflecting each department's role in supporting corporate objectives and strategy. Thus, successfully cascaded balanced scorecards provide clear linkages between the strategies and performance metrics at the various levels in the organization. They also offer guidance to employees throughout the organization as to how they can contribute to both overall corporate financial performance and sustainability performance.

PAYOFFS OF USING A BALANCED SCORECARD TO IMPLEMENT SUSTAINABILITY

Recent research has shown a strong and positive link between successfully implementing a social and environmental strategy and corporate value. The payoffs of improved sustainability performance can include increased employee satisfaction, lower operational and administrative costs, improved productivity, enhanced image and reputation, increased market opportunities through niche markets, better shareholder relationships, and stock market premiums.

Incorporating social and environmental performance measures into a balanced scorecard communicates to the organization the importance of a company's sustainability strategy and improves the likelihood of success in achieving the firm's strategic objectives. It increases social and environmental accountability by explicitly including performance metrics related to social and environmental goals, and by recognizing their interconnection with a multidimensional set of corporate objectives.

In addition, incorporating social and environmental metrics into the balanced

scorecard can help senior managers reposition their organizations toward improved corporate responsibility. Developing and implementing a balanced scorecard is beneficial because it creates a succinct set of measures that links vision and strategy to objectives, specific metrics, and performance. It communicates and translates company strategy into quantifiable indicators that are manageable throughout the organization.

Implementing a balanced scorecard causes managers to integrate financial measures with other key performance indicators around customer, internal business processes, organizational learning and growth, and perhaps sustainability perspectives. It increases social and environmental accountability by explicitly including performance metrics related to sustainability goals, and by recognizing their interconnection with a multidimensional set of corporate objectives. Companies using the balanced scorecard can position themselves to generate the profitability, and demonstrate the accountability, demanded by customers, shareholders, employees, and the communities around them.

Both internal managers and external constituents seek reassurance that a company operates with acceptable, if not superior, performance. A balanced scorecard of social, environmental, and economic performance measures helps to demonstrate accountability for these issues and shows that the company deserves a "license to operate." It provides an effective way to implement a sustainability strategy and drive it through corporate, business units, and support functions to make all company employees more sensitive to issues of sustainability.

The process of developing social and environmental balanced scorecard measures also helps EH&S and other managers identify the key performance measures that link their department's work to strategic objectives. Through using a causal chain analysis to link performance metrics to business value and strategic objectives, managers have a tool to communicate the business value of sustainability actions to the CEO and CFO of the organization, to help justify resource allocations to EH&S initiatives, and to tell the story of sustainability in business language.

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