Is It Time to Start Thinking About Strategic Accounting?

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Many writers in the field of strategy have emphasized the importance of accounting information for strategy development and implementation. Dimnik and Kudar, for example, found in a series of studies that managers voiced their dissatisfaction with the current accounting systems 8–30% of the time. Due to the crucial importance of accounting information to strategy development, strategy implementation and strategic change processes, it is imperative that the issue of strategic accounting be addressed.

A strategic accounting system differs from either a financial/managerial accounting system or an MIS system. Financial accounting systems are standardized systems that gather historical financial information for use by firm stakeholders (creditors, stockholders, employees and managers) and firm regulators (securities agencies, tax authorities). Managerial accounting systems typically provide both financial and non-financial historical information required for internal management to make shorter-term operating decisions. Most MIS systems provide management with variations of these two databases. That is to say, most MIS systems allow access to financial and managerial databases and allow the user to define the information obtained and the form of presentation. The main shortcomings of all three systems is that (1) they have a tendency to rely on financial information to a large extent; (2) they deal mainly with historical information; (3) they provide internal firm information but ignore external competitor or environmental information; and (4) what little future-oriented information that is provided is usually based on simple extrapolation of the past.

On the other hand, a strategic accounting system provides information necessary to perform the following strategic functions: (1) environmental analysis, (2) strategic alternative generation, (3) strategic alternative selection, (4) planning the strategic implementation, (5) implementing the strategic plan, and (6) strategic control. In other words, a strategic accounting system provides information necessary to perform the strategic functions that are necessary for strategic management. Strategic accounting is a new, virtually unexplored area of strategic management. Few firms have developed internal systems that can provide the strategic management information needed to make informed strategic decisions. This article provides a framework for strategic accounting built around the concept of environmental turbulence and differing information needs. For various levels of environmental turbulence, managers have different information needs in terms of the scope, structure and content of information. The framework detailed in this article defines the strategic information needs, suggests specific systems (tools) for providing the needed strategic information, and provides industry examples of firms operating at five different levels of environmental turbulence.
and (6) controlling the strategic management process. In order to fulfill these information functions, a strategic accounting system must contain information that is (1) mostly non-financial; (2) focused on the future; (3) both internal and external to the firm; and (4) based on realistic projections of the future, not simple extrapolations of the past.

Is There a Need for a Strategic Accounting System?

In a recent study, twelve managers from six leading Dutch organizations were interviewed about their present sources and uses of strategic information and the need for improvement. Interviews were taken with CEOs, Marketing Managers/ Directors, Finance Directors and managers of both Strategy and IT groups. These managers came from a variety of large Dutch organizations involved in, among other things, steel production, the aerospace industry, chemical production, and distilling. These managers described their present systems for gathering, processing and using strategic information and discussed ideas for improving these systems.

While the findings of this study varied, some similarities were observed. First, it became quite evident that different managers obtained different information from different sources inside and outside the organization, and that this information was not always shared with other managers in the organization. For example, in several companies the marketing manager obtained information on competitors and competition, although other managers in the organization mentioned that while they would like this type of information, it was not currently available. This highlights one shortcoming of current systems, the lack of formalized data gathering and dissemination. Second, there seemed to be little relationship between the level of environmental turbulence and the amount and kind of external information firms gathered. Here again, managers tended to indicate that environmental scanning systems either (1) did not exist in a formal sense and that everyone was responsible, or (2) the strategy group scanned the environment but the information was not always shared with other managers, or (3) scanning was restricted to known competitors and trade publications. These managers indicated a desire for more timely information. However, they were unsure as to the best way to get that information.

Third, the interviews revealed that none of the organizations had formalized control and evaluation systems for their strategic activities. Strategies appear to be implicitly evaluated at the beginning of each new planning cycle. The lack of control/evaluation systems meant that in many cases these organizations were unable to learn from past failures and successes. Managers again indicated a desire for these control/evaluation systems but were not aware of any systems for achieving their objectives in this area.

While the study highlights a number of strengths and weaknesses in present approaches to strategic accounting, the interviewed managers indicated their desire (1) to obtain much more qualitative information than was presently available to them; (2) to obtain more future-oriented information than they currently received; (3) to obtain a broader range of information than they had obtained in the past; (4) to obtain the information on a more timely basis; and (5) to receive information on the implementation process, progress toward strategic objectives and deviations from plans.

A Step Forward

Firm managers wishing to implant a strategic accounting system are currently at a loss. The accounting profession has only recently begun to recognize the importance of strategic accounting. This has created a situation where research lags behind firm needs. In this article, we present a framework for a strategic accounting system that can provide strategic managers with the information they need to make informed decisions. This framework is based in the accounting department since accounting staff are well versed in such tasks as gathering, processing and analyzing information. The strategic accounting system envisioned in this article provides specific strategic information, not general management information or financial management information. By centralizing the gathering, storing and retrieval processes in one department, interdepartmental disputes are minimized. Additionally, centralization can help reduce information handling, which assures more accurate information content and timely dissemination. When the strategic accounting system framework outlined below was discussed with the Dutch managers, all were anxious to see these systems become a reality in their organizations.

The Framework

The framework presented in this article is based on research from both the strategic management and accounting fields. We have selected the Ansoff strategic-success-formula (SSF) as a basis for the strategic accounting system. The Ansoff SSF states that to optimize a firm’s performance, management must align the firm’s strategies and capabilities with the state, or turbulence level of the environment (see Table 1 for a summary). It follows that for a...
firm to optimize performance, it needs the information necessary to know (1) what environmental state it is in; (2) what environmental state it should be in; and (3) if there is a need to change strategies and capabilities due to the environment changing. In reality firms face an infinite number of environmental states. However, for strategic analysis Ansoff has segmented the environment into five distinct levels or states.

For each environmental state, the strategic management needs and the appropriate strategic accounting system requirements will be discussed. An industry example is provided at each level to help explain the use of the suggested strategic accounting system tools. Table 2 contains a brief summary of the strategic accounting tools included in the discussion.

### Repetitive Environment—Level 1

Firms in a repetitive environment face a constant, unchanging, stable environment. Change is not only discouraged but actually rejected and the established policies and procedures, founded on years of unchanged experiences, are the dominant form of management. Strategic management in this situation can usually be defined as doing more of the same. Thus the strategic accounting requirements for firms facing such a situation are minimal.

Although this type of environment requires no change in strategy, firms still must be sure that the selected strategy continues to be implemented consistently. To control the internal operations of the firm—the implementation of strategies—a variance type report can be used. Unlike a management accounting variance report, the strategic variance report is based on the strategic goals, objectives and projects/programmes of the SBU. This strategic variance report would contain an analysis of any differences in planned strategic activities as compared with the actual strategic activities of the SBU or firm. Since strategies are long-term in nature the strategic variances may be reflected over long periods of time that do not coincide with the calendar year and thus some adjustments to the accounting system will be required.

Many non-profit organizations such as universities, museums, and government agencies tend to fall into the level 1 environmental turbulence level. For these organizations present and future operations are typically dictated by past actions. The University of East London (UEL) provides an example of level 1 activity, typical throughout the UK university system. UEL has established a large bureaucracy called the ‘quality department’. This department provides two stabilizing functions. First, it discourages change through an expensive, time-consuming process.
consuming process which in part acts to minimize change suggestions and in part provides extensive road blocks to any change initiatives. The second stabilizing role of this department is in strategy monitoring. Annual ‘quality’ reports are provided to the department by all university functions. These reports need to explain what activities the different university functions provided during the year and how these activities differed, if at all, from the planned activities. Thus, the university ‘quality department’ functions to (1) reduce or eliminate change in a stable environment and (2) generate and examine strategic variance reports that help to detect any variances from planned strategies.

**Framework for Level 1 Firms**

The strategic accounting system in a repetitive environment will be restricted to:

1. providing management information on changes in the level of environmental turbulence on an informal, as-identified basis;
2. keeping the firm in line with its strategic objectives during the strategic implementation process.

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<tr>
<th>Tools</th>
<th>Description</th>
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<tr>
<td>Monitoring tools</td>
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<td>Strong Signal Issues Management System</td>
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<td>Weak Signal Issues Management System</td>
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<tr>
<td>Decision-making and planning tools</td>
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<td>Capability Analysis</td>
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<td>Surprise Management System</td>
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<td>Control tools</td>
<td>Strategic Variance Reports</td>
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<td>Strategic Contribution Reports</td>
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<td>Strategic Progress Reports</td>
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A strategic variance report should be used to measure deviations from stated strategic goals and should be supplied quarterly.

Since change seldom occurs the reporting requirements are minimal. Changes in the level of environmental turbulence are reported only when a definitive change has occurred. Strategic variance reports are issued quarterly, again because things rarely change.

Expanding Environment—Level 2

In an expanding environment change does occur. However, changes occur slowly and are only incremental deviations from the past. Management must be aware of these changes and must eventually adjust strategy to stay aligned with the level of turbulence. That is to say, the firm reacts to changes occurring within the environment. Besides these slow incremental changes, firms also may face a shift in the level of environmental turbulence.

The strategic accounting system needs to provide management with four types of information, two external to the firm and two internal. The first external information need is one that can identify new technologies, new products and services, and changes in the use of existing products or services, i.e. a strong signal issues management system. The second external information requirement is for competitor analysis. This analysis focuses on changes in competitor products and services, changes in competitor strategies and the entry or exit of competitors in the industry. The internal information needs are for control, and for implementation/decision-making purposes. Implementation/decision-making requires an evaluation of the capabilities of the firm. This information will be used to maintain the equilibrium between strategy, environment and capabilities required to perform optimally. For control purposes a strategic variance report, similar to that discussed in level 1 above, should be implemented. Thus management can evaluate any deviations from planned strategies. All four information streams must take place on an SBU (strategic business unit) basis to be useful.

The global steel industry is still facing a level 2, expanding environment. The last major change in steel technology took place in the 1940–1950s with the introduction of electric ‘arc’ furnaces and continuous casting. Ispat Steel, a company founded in India, has shown how low cost competition, competitor analysis and strong signal monitoring can help grow a successful firm. Ispat’s key to success is its low cost production, based on an existing but infrequently used technology called DRI (direct-reduced iron). Knowing its capabilities in low cost production and international distribution, Ispat has successfully expanded internationally, acquiring less successful competitors. Ispat’s success story confirms the importance of utilizing a strong low cost strategy, knowing and expanding on a firm’s capabilities, and knowing your competitors.

Framework for Level 2 Firms

At the expanding turbulence level a strategic accounting system should consist of four components:

1. a strong signal issues management system, for identifying shifts in the level of turbulence;
2. competitor analysis, to highlight any changes in competitors or competitor strategies;
3. strategic variance reports, similar to those in the repetitive environment, used to control the current strategy implementation;
4. a capabilities analysis, to help identify new capability requirements if changes are detected in environmental activities.

Reports from the strong signal issues management system, competitive analysis and capabilities analysis are produced only when some event occurs which can be identified as a change. Strategic variance reports are issued quarterly.

Changing Environment—Level 3

A changing environment is one in which change is occurring at frequent intervals and the changes are incremental in nature. This environmental turbulence level is similar to the prior level except that the ‘size’ and ‘speed’ of changes is much greater and firms must anticipate change (proactively) instead of waiting for the change to occur (reactively). Although still familiar, the changes now occur at a pace faster than many firms can respond to. This increased speed in the frequency of change means that firms must make changes sooner and therefore need more information than in the previous two turbulence levels. Again the amount and type of external information will increase, while the need for internal information still exists.

The strategic accounting system at this level becomes much more complex. Firms have both internal and external information needs. To identify changes and potential changes in the environment a strong signal issues management system should be used. This system identifies potential changes in the external environment that will have a significant impact on the future profitability of the firm. A competitor analysis is also needed to provide information on changes in competitor strategies, technologies and markets. These systems must be
implemented on an SBA (strategic business area) basis to gather all types of information that could affect the firm’s markets and products or services. Once issues have been identified and evaluated, internal information can be used to measure the ability of the firm to take action to develop and implement new strategies. A capabilities analysis is needed to identify current firm capabilities and those required to be successful under the new strategy (i.e. acquire or expand core competencies).

Project impact analysis can be used to help evaluate the potential effects of various strategic options and select strategic projects for implementation. This analysis should be prepared each time a potential new strategy (or project) is proposed. The implementation process can be controlled through strategic variance reports, as described above, which should be prepared monthly. Thus management will be informed of deviations from planned strategic programs and of any barriers to or problems with strategic implementation. Strategic contribution reports should also be used to measure the impact or success of new strategies. Strategic contribution reports measure the contribution, by strategic projects, toward firm goals such as market share growth, sales growth, increased firm or brand prestige, or whatever criteria the firm has set as a goal for the particular strategy. The strategic contribution report should be prepared at least quarterly and contain data gathered over the life of the strategic projects.

The global automobile industry provides a good example. Mercedes–Benz’s introduction of the Smart car in 1996 was part of a continuing campaign by this industry leader to provide future growth in an industry which was once dominated by three large US producers. Mercedes–Benz has successfully defended its luxury/quality/engineering image despite strong competition at home (from BMW) and abroad (especially from the Japanese). Having continuously analysed competitors, identified competitive strengths and examined strong signals, Mercedes–Benz has entered the small car market. One of the most important determining factors in this decision has been the perception that in the future there may be less demand for large cars because of tighter government pollution controls. Thus, early entry into this small but expanding market will allow Mercedes–Benz to create the capabilities necessary to compete in the future.

Framework for Level 3 Firms
When a firm is in a changing environment, the strategic accounting system must be more comprehensive.

1. this requires a strong signal management system at the SBA level;

2. a competitor analysis is needed to identify potential incremental changes;

3. once potential changes have been identified and potential strategies formed, project impact analysis can be used to select the most feasible alternative;

4. a capabilities analysis is required to be sure the firm can identify and correct deficiencies in internal competencies;

5. strategic variance reports can be used to control the strategy implementation;

6. to evaluate the overall performance of the strategies selected, a strategic contribution report can be used for measuring progress towards goals.

Because the speed and number of changes have increased for firms in this turbulence level, strong signal issues management reports, as well as reports from the competitor analysis, project impact analysis, and capabilities analysis systems should be provided monthly. The strategic contribution report should be provided quarterly.

Discontinuous Environment—Level 4
In a discontinuous environment firms are faced with major changes with which they are not familiar. The size and frequency of changes are much greater than in the changing environment and firms must react more quickly to change, often before much is known about the exact nature of the change. Discontinuities can come from a number of areas: new technologies in the industry, new competitors from other industries or from abroad, and changes in the needs, wants and desires of customers. The speed of change creates a situation where firms must act to initiate change prior to having full knowledge of the change and its potential impact, which creates several problems: (1) firms must identify potential discontinuities, or sources thereof; (2) firms must determine when a discontinuity will affect them and how; (3) management must invest financial resources to address these potential discontinuities long before they can be sure of the outcomes.

The strategic accounting system must provide management with information that is often tentative and changing, and management must make decisions earlier in the information gathering process. To begin with a weak signal issues management system is needed. Such a system will provide management with the basic knowledge of what is occurring in potential new technologies, and where new competitors may come from. This weak signal system can also focus on customers and try to identify potential shifts in their needs, wants and desires. The system will aid management in filtering out low
impact or unimportant changes in the environment and help identify the ‘real’, most likely changes. Once potential changes have been identified consideration must be given to the appropriate response. Management must continuously monitor the identified weak signals. As they become clearer management may find that there is a need to shift or adjust strategies and implementation processes to address the more reliable information. This can be accomplished through a strong signal system. The focus of the weak signal issues management system must be on the SBA.

To develop appropriate responses to the weak signals, management will need to use a number of tools. First, a capabilities analysis of internal competencies, systems, people, and so on, will be required. New strategies may require competencies that the firm does not yet possess. To acquire these competencies firms may acquire other firms, create alliances with firms, or prepare ‘crash’ internal development programmes. Second, potential responses (or a range of potential responses based on a variety of potential effects of the discontinuities identified) must be developed and a step by step implementation started. To perform this task, the strategic accounting system should provide the information needed to develop scenarios and project impact analysis. Scenario analysis can be used to identify potential future product/market combinations, while the project impact analysis can be used to select the most appropriate projects to fill the future needs of the firm. Once projects are selected funds must be committed, but to maintain flexibility large resource commitments are postponed for as long as possible. Continuous feedback about both the environment and the strategic steps being implemented must be maintained through a reporting system that focuses not only on exceptions and variances, but supplies management with information about future financial commitments. A strategic progress reporting system then can be used to show the timing of upcoming financial commitments and the last date for commitment. As the signals become stronger management may go back and adjust strategies and implementation.

When the Dutch consumer electronics giant Philips introduced the CD-i (interactive) system in the early 1990s it utilized an approach similar to that described for level 4 organizations. Two sets of weak signals were identified that led to the new CD-i product. First, changes in the way consumers wanted to access information were leading in two separate directions: information retrieval through the Internet and through CD-based systems. The CD-i system as originally conceived by Philips was a method of addressing both methods of information access in one tool. The second weak signal which lead to the CD-i product was the change in computer technology. These changes were beginning to make both CD-based systems and Internet systems more efficient. Alternative configurations of CD-i were explored and a preliminary CD-i product selected. Fortunately for Philips the capabilities needed for producing such a machine were already available in-house, based on their previous work on CD and PC technologies. As Philips introduced the CD-i product the environment continued to change. Philips remained flexible in how it regarded the CD-i product, and now the CD-i system has changed shape and has been repositioned not as a consumer information/game box but as a useful business tool for such organizations as Burger King and Procter & Gamble.

Framework for Level 4 Firms
In a discontinuous environment the strategic accounting systems must rely strongly on:

1. an SBA-based weak signal management system;
2. once potential discontinuities have been identified, potential strategies can be formed using scenario analysis;
3. projects can be selected using project impact analysis;
4. a capabilities analysis is required to be sure the firm can identify and correct deficiencies in internal competencies;
5. strategic variance reports can be used to control the strategy implementation;
6. to evaluate the overall performance of the strategies selected, a strategic contribution report can be used for measuring progress towards goals;
7. to maintain flexibility due to the high risk and uncertainty associated with the early implementation of strategic decisions, an internal strategic progress reporting system needs to be used to monitor current projects and compare them with the changing knowledge of the environment.

Time is of the essence here, so weak signal issues management systems should report potential changes as they are detected. Then scenarios can be built, projects analysed and capabilities evaluated. Strategic variances, strategic contributions, and strategic progress reports should be prepared monthly.

Surpriseful Environment—Level 5
The surpriseful environment is distinguished by the fact that the industry itself may be ill-defined and the markets and uses for the industry’s products or services not yet fully established. This level of environmental change is distinctive because the changes are discontinuous (quite large, frequent and unpredictable). The number and diversity of compa-
ties, products, services and technologies are so diverse and numerous that the industry may appear to be somewhat like a free-for-all. New products based on new or existing technologies may be introduced daily. Sometimes these new products make other firms’ products obsolete. At other times new products open new markets to all their competitors. The ability of a firm to exist and grow in such an environment is based on its ability to create technologies and products and its ability to identify (and create) markets. Because the industry is so ill-defined the information needs of managers are great. However, the ability to obtain reliable long-term data is non-existent. Instead managers focus on the internal and external changes and must continuously survey the market for opportunities and competitor activities. If the firm is not creative enough or fast enough, it may find itself continuously playing a game of catch-up. The use of old technologies spells defeat (as in the case of the video games introduced by Atari), as does the introduction of a technology that the market does not accept (e.g. the portable computers from KayPro Computers). There is only one successful strategy choice and all firms must follow it. That strategy is the creativity strategy. The concern for costs (i.e. a low cost strategy) is practically non-existent, the need for differentiation is high, and manifests itself in the form of new innovative technology.

Managers need to know what is happening within their firms, with particular emphasis on the product development side. In addition, management needs information on markets and competitors, both external information needs. As was discussed earlier, strong signals come too late in the more turbulent environments. A weak signal issues management system is needed. Weak signals may provide some information, but these weak signals may quickly change to strong signals or to actual products, practically overnight. A surprise management system will be needed to address the quickly changing environment and to manage systematically the unexpected events that occur.

Currently, the biotechnology industry can be classified as having a surpriseful environment. Amgen, the US biotechnology pharmaceutical company, has become an industry leader by utilizing the creativity strategy. Unlike other biotechnology firms, Amgen is science-based and looks for unique markets developed from good science. Amgen continually scans the environment to identify opportunities within the vast range of scientific findings funded from government sources. This has proven to be an extremely successful strategy for this rapidly growing company. Its two products already generate over $1 billion a year in sales. Future products, based on creating new markets from new products based on good science, are just around the corner. Watching technology, not the market place, appears to be the secret.

**Framework for Level 5 Firms**

In a surpriseful environment strategic flexibility is needed, first because of the need for early commitment (so the firm does not fall behind), and second because of the high levels of uncertainty in deciding which strategy to implement. The strategic accounting system in a surpriseful environment should consist of:

1. a weak signal issues management system;
2. a surprise management system;
3. an internal strategic progress reporting system.

These combined systems are needed to achieve the desired level of strategic flexibility. Reporting frequency must be very high and cannot be fixed by the calendar, but should be driven by the frequency of change in the environment. While firms in repetitive environments would report only if a change occurs, firms in a surpriseful environment must follow the same rule, realizing this may mean weekly updates to management.

**Conclusions and Recommendations**

For effective strategic management, managers need to know what level of environmental turbulence the firm is going to face in the future and if there is a need to change strategies and capabilities because the environment is changing. In addition, management must be aware of the status of strategy implementation-management needs to monitor the firm’s progress toward its current set of goals and objectives. Information is also needed for strategic decision making and for planning the strategy implementation. This article has developed and presented a strategic accounting framework that we believe can provide strategic managers with the information they need. For each level of turbulence the strategic management needs were described and the appropriate strategic accounting system requirements were derived. These strategic accounting requirements are summarized in Table 3.

This article highlights a number of important issues that managers must face to improve strategic management in their firms. First, since information appears to be an important key to strategic success, we recommend that the process of gathering, recording and reporting information be centralized so that one department has responsibility for this task. We recommend the accounting department for this job, since accountants are already well trained in these tasks. True, accounting normally focuses on in-
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<tr>
<th>Dimension of Information</th>
<th>Repetitive Environment (no change)</th>
<th>Expanding Environment (slowly changing)</th>
<th>Changing Environment (fast incremental change)</th>
<th>Discontinuous Environment (discontinuous predictably changing)</th>
<th>Surpriseful Environment (discontinuous unpredictably changing)</th>
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<tr>
<td><strong>Scope</strong></td>
<td>Monitoring the environment/trigger mechanism</td>
<td>informal system for identifying major discontinuities</td>
<td>‘strong’ signal issues management system on new products and/or technologies and changes in existing products and services; competitor analysis</td>
<td>‘weak’ signal issues management system on potential new technologies and new competitors and shifts in customer needs; containing a ‘strong’ signal issues management system to monitor changes in weak signals</td>
<td>‘weak’ signal issues management system to identify potential products, markets, technologies; continuously surveys (potential) markets and competitors for opportunities and threats</td>
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<td><strong>Strategic decision-making and planning implementation</strong></td>
<td>reactive in nature, only if turbulence level changes</td>
<td>reactive in nature; evaluation of capabilities of SBUs in relation to the information on strong signals and changes in competitor activity</td>
<td>proactive in nature; capabilities analysis; project impact analysis</td>
<td>proactive in nature; capabilities analysis; scenario analysis; project impact analysis</td>
<td>emphasis on developing learning capabilities, innovation and flexibility; ‘surprise’ management system developed and available when needed</td>
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<td><strong>Controlling implementation and execution</strong></td>
<td>quarterly strategic variance reports</td>
<td>quarterly strategic variance reports</td>
<td>monthly strategic variance reports; quarterly strategic contribution reports</td>
<td>monthly strategic variance reports; monthly strategic contribution reports</td>
<td>continuous: strategic progress reports</td>
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### Dimension of Information

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<th>Turbulence Level</th>
<th>Repetitive Environment (no change)</th>
<th>Expanding Environment (slowly changing)</th>
<th>Changing Environment (fast incremental change)</th>
<th>Discontinuous Environment (discontinuous predictably changing)</th>
<th>Surpriseful Environment (discontinuous unpredictably changing)</th>
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<tr>
<td><strong>Structure</strong></td>
<td>SBU-based; reporting only if there is a change or a variance; historic focus</td>
<td>SBU-based; reporting only if there is a change or a variance; historic focus</td>
<td>SBA for monitoring and decision-making; strategic projects for planning and controlling implementation; reporting changes upon occurrence; focused on the present</td>
<td>SBA for monitoring and decision-making; strategic projects for planning and controlling implementation; focused on the future</td>
<td>SBA for monitoring and decision-making; strategic projects for planning and controlling implementation; focused on the future</td>
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<tr>
<td><strong>Content</strong></td>
<td>predominantly internal and quantitative</td>
<td>predominantly internal and quantitative</td>
<td>internal and external, quantitative and qualitative</td>
<td>predominantly external, qualitative, with a long-term focus (3–5 years)</td>
<td>predominantly qualitative and focused on learning capabilities and innovativeness</td>
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ternal, historic, quantitative information, but with proper training a new team of strategic accountants can be developed. These strategic accountants can bridge the gap between traditional accounting and strategic management and provide strategic managers with the type of information they need to make informed, timely decisions.

Second, we recommend that different data gathering and analysis tools be used depending on the level of environmental turbulence. Not all firms need to utilize all the tools we outlined in Table 2; it varies with the level of environmental turbulence. Third, the frequency of reports from strategic accounting to management varies with (1) the type of information and (2) the importance or impact of the information. As we suggest in Table 3, some information is reported on a continuous basis while other information is reported on an exception basis. Fourth, we cannot emphasize enough the importance of qualitative information. Much that is dealt with in strategy is about ideas, and the strategic accounting system must capture and report these qualitative measures as well as more traditional quantitative information.

Strategic accounting is a new, virtually unexplored area of strategic management. Few firms have developed internal systems or people who can provide the strategic management information needed for each of the six areas of strategic management described above. Yet decisions are continually made in each of these areas. This article offers a comprehensive system, based on proven tools, that can be centralized and managed in one department, thus providing consistency and accountability. The framework outlined in this article is only a first step. As strategic accounting systems become more sophisticated, other tools may be developed that can either replace the tools recommended here, or can enhance the effectiveness of the strategic management tools identified in this article. Additionally, research in specific industries could be used to specify the exact type of information to be contained in the system.

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