

# Changing strategic management practice within the UK construction industry

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- *The aim of this paper is to review the current use of strategic management within UK construction organizations. Assessments are made on such aspects as its degree of formality, the tools and techniques used, the role of individuals, the strengths and weaknesses of current processes, the time frames adopted and the attitude of management to the strategic management process. This assessment has been used to identify how the strategic management process could be improved within construction organizations.*
- *Data were obtained through a literature analysis, detailed postal questionnaire survey, follow-up telephone interviews and case studies. This paper mainly deals with the information obtained through a questionnaire survey and included the following topics: the structure of the strategic management process; the tools and techniques adopted; the perceived strengths and weaknesses and contextual questions relating to the background of strategic leaders, size of the organizations and type of work.*
- *Many large construction organizations were found to be rapidly developing their strategic management capabilities and allocating substantial resources to the task. However, strategic management was found to be a low-profile activity within many small and medium-size construction organizations.*

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## Introduction

Although strategic management has until recently been a low-profile activity within many construction firms, it is now becoming more widely used by many large organizations who are allocating substantial resources to the task. Junnonen (1998) examined strategy formation in construction firms and concluded that strategic thinking has become

increasingly important to construction organizations as a result of the industry's dramatically changing business environment. Chinowsky and Byrd (2001) emphasized that the complex project environment that the industry operates within today makes it essential that construction organizations become more strategically aware. However, many large firms have yet to formalize the strategic process. This paper is based on the findings of a literature review, industrial questionnaire and telephone interviews. It briefly reviews key literature and aims to establish: the degree of formality attached to the process of strategic management; how effectively and efficiently

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construction organizations are using strategic tools and techniques; and how the adopted processes differ between small, medium and large construction organizations. A more comprehensive review of issues raised in the literature has been presented elsewhere (Price and Newson, 2003). The paper also discusses the classification of strategy from a construction perspective and explores the linkages between quality management and strategic management.

### ***Terminology: classification of company size***

Previous research suggests that there is no accepted definition of what constitutes either a small or medium-size organization. Researchers have adopted different terminology to suit their particular requirements (see, for example, Beaver and Jennings, 2000). The definitions contained within Appendix 2 of The Department of Trade and Industry, Companies Act (DTI, 1985) have been adopted in this paper, as shown below:

- Small — less than 50 employees and £2.8m turnover.
- Medium — less than 250 employees and between £2.8m and £11.2m turnover.
- Large — more than 250 employees and £11.2m turnover.

### ***Strategic planning***

Strategic planning is the process of setting missions, goals and objectives, clarifying policies and principles, and searching for opportunities and threats whilst preparing to exploit the first and avoid the second. The process can be formal or informal, regular or otherwise.

Thompson (1998) defined strategic planning as determined actions for achieving stated and desired objectives and defined the following as three dimensions of strategic planning, contending that they usually exist together but in different proportions from organization to organization:

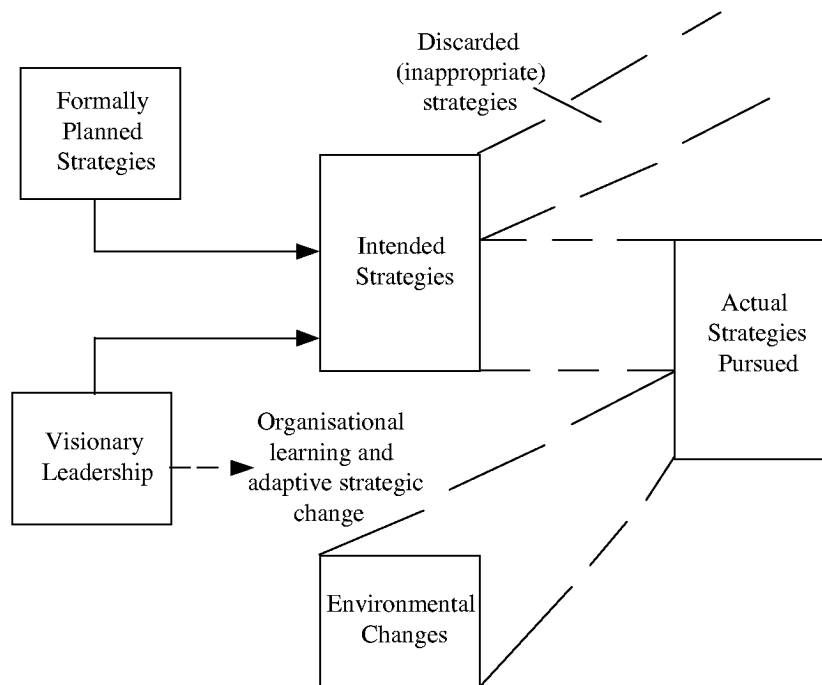
- Planning — formal or informal.
- Vision and visionary leadership — based on the vision and awareness of the strategic leader.
- Emergent strategies, or logical incrementalism — incremental changes to predetermined, intended strategies and adaptive additions with learning and responsiveness to opportunities and threats.

He also developed a model of strategy creation (as illustrated in **Figure 1**) that demonstrates the relationships between intended strategies (the result of formally planned strategies and visionary leadership) and the actual strategies pursued.

Human resources strategies in construction appear to be emergent, however, Maloney (1997) emphasized the rate of change in the external environment that has made it essential for construction organizations to pay increased attention to strategy formation, especially with regard to human resources, taking into account factors such as the organization's strategic vision, workforce availability and diversity.

### ***Classification of strategy***

Strategy is a means to overcome threats and better exploit opportunities with limited resources, thus achieving a better position in the business environment with respect to an organization's competitors. All organizations have to make decisions in order to survive and can find it extremely difficult to operate in the ever-changing business environment without a strategy or a plan. However, organizations plan and develop strategies in very different ways with significantly different degrees of success. Some strategies are deliberately planned, for



**Figure 1.** Thompson's model of strategy creation.  
 Source: Adapted from *Strategic Management*, 1998, p. 38.

example, to enter new markets or to gain a specific competitive advantage by introducing a new product or service. Unplanned strategies require decisions to be taken only when facing new problems or opportunities and can be considered as a reactive rather than a proactive approach. Porter (1980) defined the following three types of generic strategies that organizations may adopt:

- *Cost leadership* — offering low-cost products with comparison to the competitors.
- *Differentiation* — over-competing rivals through differentiating products and services, adding extra value, creating image or brand name.
- *Focus* — concentrating on certain market niches and applying either differentiation or low-cost strategy.

These three generic strategies can be considered from a construction perspective. Cost leadership strategies have been encouraged in construction through traditional tendering processes. However, it has been recognized

that the cost leadership strategies traditionally adopted by many organizations have tended to encourage low initial tender costs for the construction phase. This approach all too often results in adversarial relationships and low whole-life value to the client (Latham, 1994; Egan, 1998). New approaches to procurement based on best value and/or partnering have encouraged many construction organizations to make better use of differentiation strategies. Hillebrandt and Cannon (1989) argued that there are also many ways to differentiate through design and build packages, construction management and facilities management. Differentiation can also be in response to the procurement and tendering strategies adopted by the client and by the pressure placed on the industry to respond to clients' diverse requirements through new forms of product and service (Pinnock, 1996). Differentiation and cost leadership strategies often tend to be mutually exclusive. There are many examples of focus strategies within construction, including: partnering projects, regional specialization, the provision of high added value skills

by downsizing to core competencies, and design and build. The approach to focus strategies has changed significantly over recent years as a result of increased integration of activities throughout construction supply chains. Many organizations have joined consortia that are able to offer diverse services such as finance, design, build and operate. The resulting build operate and transfer projects can be viewed as a niche market that certain organizations have decided to focus on. Porter (1980) suggested that the worst situation occurs when an organization falls between the above-mentioned generic strategies, as is the case with many construction organizations.

Mintzberg and Quinn (1991) went further in the classification of strategies by the degree of being planned or sudden, and defined the following eight types of strategy:

- Planned strategy — where the route is laid out in great detail and over a lengthy period of time.
- Entrepreneurial strategy — where the strategy's main target is specified but where the route is very flexible and fluid.
- Ideological strategy — which is pushed outward with a firmly held idea and set of values.
- Umbrella strategy — which sets down the parameters that guide strategic decisions and implementation.
- Process strategy — which sets down the rules of engagement for evolving and implementing strategy, but does not dictate the outcomes or decisions.
- Unconnected strategy — where decisions are made and implemented in relative isolation from one another.
- Consensus strategy — which is formed gradually by building agreement rather than by central direction.
- Imposed strategy — which is introduced from the outside and where there is little discretion over its content (the what) and process (the how).

Mintzberg (1994) contended that there is always a mix of the above strategies and the

type of strategy will affect the content of strategic planning but not the framework of strategic management process, which he defined as a continuous cycle of analysis-choice-implementation.

### ***Conceptual linkages between quality and strategy***

The emphasis on quality management over the past two decades has improved managers' awareness of strategic issues and has thus had substantial impact on most organizations' approach to strategic management. Srinindhi (1998) stated that effective quality management cannot be practised in isolation from other initiatives and should form part of the

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*Emphasis on quality management has had substantial impact on strategic management*

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overall strategy of the organization. He also stated that Strategic Quality Management (SQM) is: '*the formulation and deployment of quality management within the overall framework of strategic planning, in a way that is aligned with all the other initiatives such as process re-engineering, cost management, inventory control and target analysis*'. However, the alignment of quality initiatives is not an automatic process and requires a systems framework and management mechanisms for deployment.

The practice of strategic management has been significantly influenced by the work of Deming (1982, 1986). Vinzant (1999) described the history to strategic and quality management and highlighted specific areas where Deming's contributions have influenced and strengthened strategic management. Furthermore, Vinzant and Vinzant (1996) demonstrated that at least from a theoretical standpoint, the two approaches are potentially

quite complementary. In particular, many US government organizations have been encouraged to adopt both a Deming-based approach and a strategic management approach. For example, the 1993 Gore Report on reinventing government recommended that public organizations '*improve government performance through strategic and quality management*' (Gore, 1993). Similarly, Hyde (1992) suggested that conceptions of TQM include:

- Strategic planning.
- The human relations perspectives of Juran (1989) and Crosby (1979).
- The participatory management and statistical measurement approaches of Deming.

### **Research methodology: research structure**

The research on which this paper is based comprised six phases: a literature review; case studies and interview sessions; exemplar case studies; two industry workshops; a postal questionnaire survey and follow-up telephone interviews; and dissemination. This paper summarizes the findings of the postal questionnaire survey and follow-up telephone interviews, whilst drawing on some aspects of the literature.

### **Postal questionnaire**

Data were obtained through a detailed 22-page postal questionnaire survey issued to construction organizations located in the UK. The questionnaire comprised the following 11 sections.

- Business Classification.
- Defining Strategy.
- The Strategic Management Process.
- Process Framework.
- Mission Statements.
- Analysis of the Business Environment.
- Tools and Techniques.
- Communication and Implementation.
- Personnel Involvement.
- Time-scale.
- Successful Strategic Management.

### **Selection of organizations and questionnaire response**

It was realized early on that it would not be easy to obtain a large response, especially from small construction organizations, due to the length of the questionnaire. It was decided not to further shorten the questionnaire but to support it with face-to-face and telephone interviews, since many of the issues were highly interrelated and some of the questions covered several points requiring detailed responses. Of the 200 questionnaires issued to the large and medium-size organizations, 45 completed questionnaires were returned. Of these 34 were fully usable: 12 from large organizations and 22 from medium-size organizations. A further 9 large organizations were interviewed face-to-face as part of the detailed case studies based on the questionnaire. In addition, 25 small organizations were interviewed over the telephone using the questionnaire. In total, results were obtained from 68 organizations: 21 large organizations, 22 medium organizations and 25 small organizations. The questionnaires returned from the large and medium firms contained detailed and high-quality information.

### **Telephone interviews with small organizations**

Small and medium-size enterprises account for around 99.8% of all construction organizations and their proportion appears to have been increasing over the last 15 years. Moreover, the position of small firms as a source of employment is also of major importance as they provide some 65% of all employment (Harvey and Ashworth, 1996). However, the management and decision-making processes within small organizations have been very much neglected in all industries, including construction. For example, Brouthers *et al.* (1998) stated that '*surprisingly little research exists that examines strategic decision-making in small firms... The research that exists mostly examines the activities of managers in large multinational firms*'.

The low level of response from small organizations during the postal survey suggested that these organizations may have had little knowledge of key strategic issues and do not employ strategic planning tools and techniques. This view was reinforced by conducting interviews over the telephone with 25 small firms, all with less than 30 employees. Over half of the interviewed small firms stated that they had no plans for future expansion and all of them stated that they:

- Did not undertake long-range planning, and
- Had no mission statement nor any specific objectives — their main aim was to survive and continue in operation with an acceptable level of profitability.

### ***Results and analysis: formal and documented strategic management processes***

75% of the large organizations and 50% of the medium-size organizations stated that they had a formal strategic management process. It was also established that the strategic management process tends to be documented substantially more in larger organizations (67%) than in medium-size organizations (55%). This also corresponds to the degree of formality within the process. These results reinforce the idea

that organizations tend to develop and formalize their strategic planning process as they grow (Berry, 1998).

There are many indications that construction organizations are becoming more strategically aware and have made significant changes to their strategic management process, with many implementing new procedures. All of the large organizations had recently reviewed their processes and 86% of medium-size organizations had recently reviewed their processes. Of the remaining 14%, 10% were planning to review and only 4% did not review or plan to review their current processes. Most organizations gave more than one principal reason behind recent reviews of the processes. The three principal reasons given were Market Conditions, Efficiency and Effectiveness, and Growth. These have been grouped and presented in **Table 1**.

### ***Aims of the strategic management process***

Strategic management has evolved from its early emphasis on planning into a comprehensive management process that helps organizations to achieve strategic change by aligning organizational direction with organizational goals. Chandler (1962), in one of the first works to discuss the use of strategic

**Table 1.** Principal reasons behind recent reviews

| Principal reasons            | Example of reasons behind recent reviews  | Large (%) | Medium (%) | All (%) | Rank |
|------------------------------|---|-----------|------------|---------|------|
| Market                       | The need to assess, monitor and be aware of changes in the market                               | 25        | 50         | 46      | 1    |
| Efficiency and effectiveness | Improving or maintaining efficiency, profitability and cost benefits                            | 42        | 41         | 42      | 2    |
| Growth                       | Securing, sustainability, the need to plan for growth and incorporation of industry limitations | 25        | 41         | 36      | 3    |
| People                       | Human resource development, incentives, motivation, ensuring teamwork and communications        | 8         | 32         | 24      | 4    |
| Management                   | Succession of management, change in ownership or management                                     | 17        | 23         | 21      | 5    |
| Competition                  | Compare performance with competitors  | 25        | 13         | 18      | 6    |
| Customer                     | Improving customer care and satisfaction  | 25        | 9          | 15      | 7    |
| Product                      | Product development and marketing improvement   | 6         | 6          | 6       | 8    |

**Table 2.** Principal aim of the strategic management process

| Aim of the strategic management process        | Large (%) | Medium (%) | All (%) | Rank |
|--|-----------|------------|---------|------|
| Clarifying the organization's goals and policy | 42        | 27         | 32      | 1    |
| Producing strategic plan                       | 17        | 33         | 27      | 2    |
| Better allocation of resources                 | 17        | 14         | 15      | 3    |
| Assuring unified opinion of executives         | 8         | 10         | 9       | 4    |
| Measure organizational performance             | 8         | 10         | 9       | 4    |
| Improving/ensuring profit                      | 17        | 5          | 9       | 4    |

management, defined it as '*the determination of the basic long-term goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources necessary for carrying out these goals*'. The principal reasons for undertaking strategic management, as identified in the responses to the questionnaire, have been presented in **Table 2**. Clarifying the goals and policy of an organization was assessed as the most important aim of the strategic management process. It was also found to be more important to larger organizations than medium-size organizations and coincides with the findings of Larsen *et al.* (1998) but to a lesser degree. This is more important for larger firms and suggests that as an organization grows its business processes and environment become more sophisticated; it becomes increasingly important that the direction is clear, and that it strives for the same purpose and in the same way.

### **Framework of strategic management process**

According to the seminal work of Chandler (1962), the strategic planning process comprises the following 10 steps:

1. Development of a plan.
2. Identification of organizational mandates.
3. Clarifying organizational mission and values.
4. External and internal environmental assessment.
5. Strategic issue identification.
6. Strategy formulation.
7. Strategy and plan review and adoption.
8. Development of a description of the organization in the future — its vision of success.
9. Implementation.
10. Strategy and planning process reassessment.

More recently, Johnson and Scholes (1997) further developed a framework for the strategic management process. This process was provided in the questionnaire, as presented in **Figure 2** and respondents were asked to map their own processes alongside this.

Twenty respondents provided maps of the strategic management process as applied by their organization. An example of one of these has been presented in **Figure 3** and will be discussed in a later paper. Most of these maps were generally in keeping with the provided framework and associated sequence of tasks. The respondents also made some interesting additional comments, for example:

- Few organizations stated that environmental scanning should be done before setting objectives or even before formulating a mission.
- 25% stated that they did not formulate a mission.
- 30% did not establish performance indicators.
- 20% stated that they do not identify critical success factors.

Some of the organizations included monitoring, measuring performance and corrective

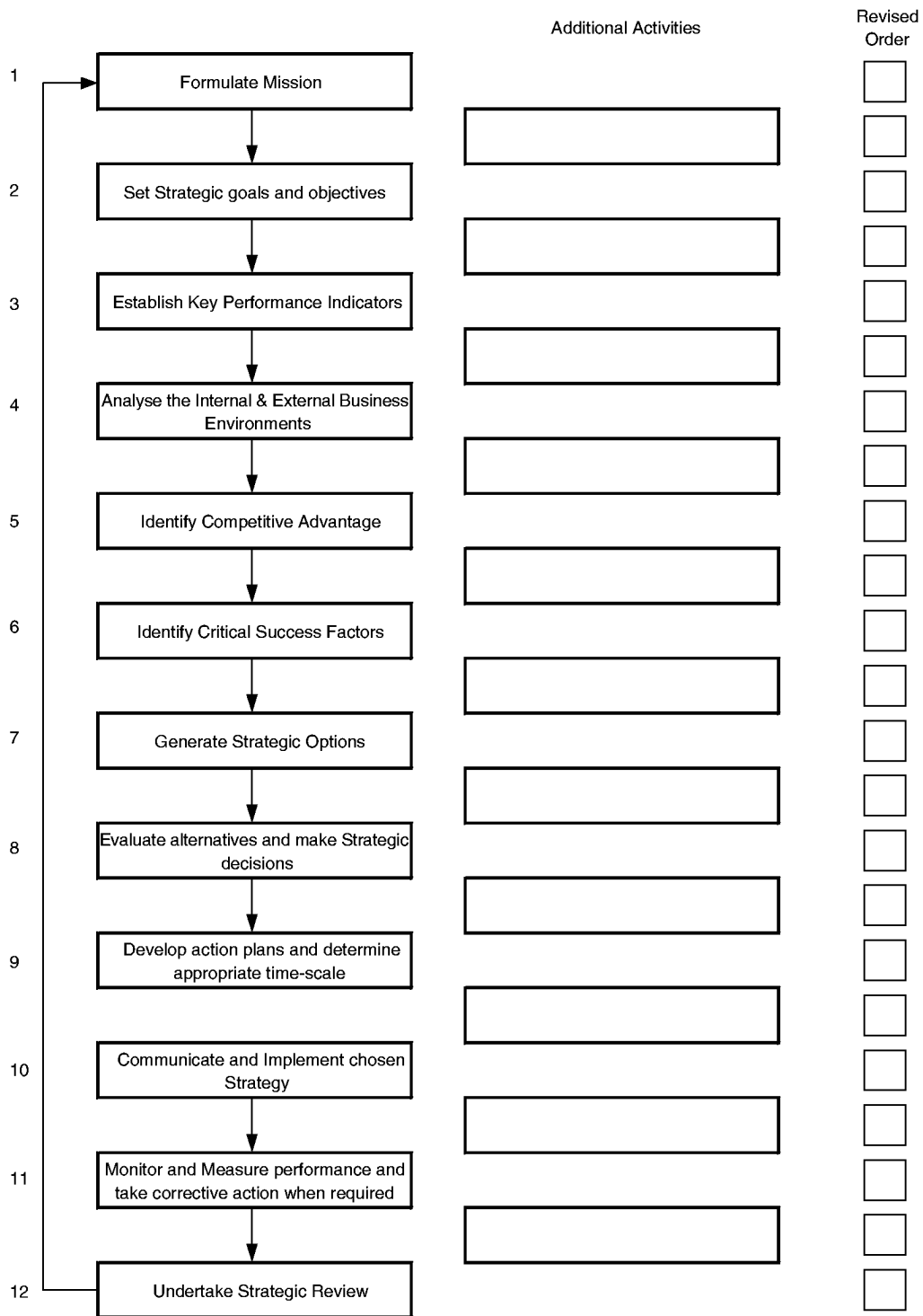


Figure 2. Details of the strategic process as provided in the questionnaire.

action within the process of developing strategies but not as part of the implementation phase, thus highlighting that care must be taken to ensure there is a continuity of staff

involved in both the development and implementation phases. This does not mean that plans have to be developed and implemented by one group of people, but the group leading





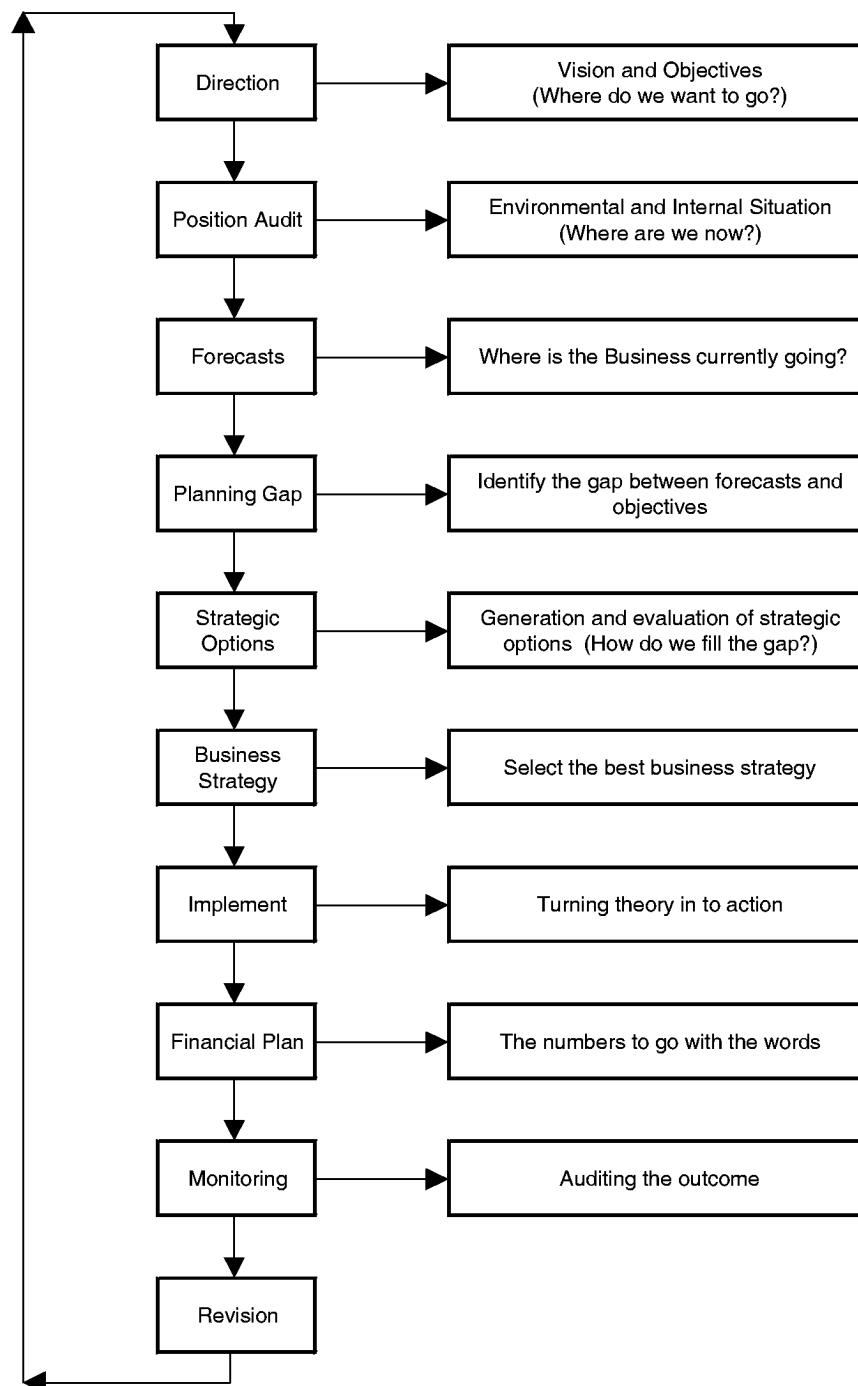


Figure 3. Strategic process as provided by one of the respondents.

the development process also has an important role to play during implementation. However, the process of implementation has to be looked at in detail because many of the performance issues are measured from an operational rather than a strategic perspective.

Kaplan and Norton (1992) introduced the balanced scorecard concept to complement financial measures and operational measures on customer satisfactions, internal process and the organization's innovation. They also described how the balanced scorecard could

be used as a strategic management system. The results demonstrate that the construction organizations surveyed need to develop and adopt tools that specifically measure strategic performance, such as the balanced scorecard.

### **Mission statements**

35% of organizations did not have mission statements. Of the 65% that had them, 85% had formal strategic management processes. No correlation was found between the size of an organization and the existence of a mission statement. Organizations that did not possess a mission statement provided the following reasons:

- They operated in very diverse markets and have very diverse services, so that it is hard to formulate a mission statement.
- They had a series of objectives instead.
- There was a mission statement for the group of which they were a part.
- The mission statement had been replaced by a vision statement.

A content analysis of the mission statements (Table 3) revealed a list of categories and the percentage of organizations that had made reference to them within their mission statements.

### **Key industry drivers**

The most important industry driver was considered to be *the government and the new*

*legislation it produces* (see Table 4). Several responses were grouped under this heading, for example health and safety legislation, privatization and European legislation. *Market trends* were also perceived as an important driver, but were of more importance to the larger organizations, especially those that were concerned with emerging foreign markets — many were eager to take advantage of the Far Eastern markets and the emerging markets in post-Soviet countries. Under the heading of *market trends*, medium-size organizations were more concerned about the cost of land and changing client preferences, referring to local or European rather than global markets. They were also much more concerned about *technological advancement*, especially with rising standards of quality and reliability, whereas the large organizations had more capability to invest in research and development and advanced technologies. Both large and medium-size organizations were highly concerned about the consequences of the Latham (1994) and Egan (1998) reports and of potential changes in the way the industry operates. Partnering and other recent trends have also been included in this group.

### **Competitor and customer intelligence ratios during day-to-day operations**

Organizations appear to have become more effective in the way they manage their knowledge and information. As a consequence, operational decisions are more frequently being based on factual information. However, there is only a limited amount of time that companies can spend collecting competitor and customer intelligence during their routine operations. None of the large organizations spent more time on competitor rather than customer intelligence during day-to-day operations, and 63% of both the large and medium-size organizations had ratios of either 2:8 or 1:9. The most common ratio was 2:8 for large organizations and 1:9 for medium-size organizations, with the large organizations spending a higher percentage of their time on

**Table 3.** Content analysis of mission statements

| Categories                            | Occurrence (%) |
|---------------------------------------|----------------|
| Clients/customers                     | 95             |
| Philosophy/values/aspirations         | 95             |
| Services/markets/products             | 85             |
| Concern for employees                 | 75             |
| Economic survival/profitability       | 70             |
| Concern for public image              | 60             |
| Self-concept/strengths and weaknesses | 50             |
| Technology                            | 40             |
| Location/geographical spread          | 35             |

**Table 4.** Key industry drivers

| Industry drivers  | Large (%) | Medium (%) | All (%) | Rank |
|---|-----------|------------|---------|------|
| Government and the new legislation it produces  | 42        | 53         | 48      | 1    |
| Market trends — cost of land, emerging foreign markets, changing client preferences, procurement forms, etc.              | 58        | 37         | 45      | 2    |
| Government as client through spending policy and plans  | 50        | 37         | 42      | 3    |
| New trends emerging out of Egan and Latham reports — partnering, teamwork, co-operative culture, prefabrication, etc.     | 50        | 37         | 42      | 3    |
| Economic situation — strength and growth of economy, changing financial margins   | 33        | 37         | 35      | 5    |
| Environmental issues — global warming and its impact on energy, weather patterns, pollution control, energy, etc.         | 33        | 37         | 35      | 5    |
| Lack of trainees/apprentices/skills shortage  | 33        | 32         | 32      | 7    |
| Technological advancement — raising standards of quality/reliability/price certainty, advancement of processes/procedures | 8         | 42         | 29      | 8    |
| Intensive levels of competition   | 17        | 26         | 23      | 9    |
| PFI (private finance initiative)  | 8         | 21         | 16      | 10   |
| Best value legislation/limitation   | 0         | 21         | 13      | 11   |
| IT development  | 17        | 5          | 10      | 12   |

competitor intelligence than the medium-size organizations. More attention is given to customer intelligence, indicating a strong quality culture. However, competitors are not completely forgotten! Most construction organizations try to build good relationships with customers in order to ensure repeat work, which is considered as a primary source of all work, rather than 'over-competing' with rivals to attract their customers. The current growth in partnering reinforces this viewpoint.

#### ***Competitor and customer intelligence ratio during the strategy process***

Competitor and customer intelligence both have important roles to play in the strategic management process. However, companies have to decide where to allocate their efforts based on the most significant factors and the availability of information. During the strategic management process, the ratio of competitor to customer intelligence for 65% of the respondents lay between 3:7 and 1:9. The most common ratio was 2:8 for large organizations and 5:5 for medium-size organizations. This

suggests medium-size firms are more concerned than large ones about competition. Also, large organizations may be in a better position, because of their capabilities, to undertake large projects, develop a brand name, enter overseas markets and adopt new types of contracts (e.g. maintenance or joint operations). 91% of the organizations had repeat clients as a primary source of work, 82% stated that clients obtained through recommendations were their secondary source of work and 80% had new clients as the third source of work.

#### ***Strategic capabilities***

The respondents were asked to identify up to five key issues that contributed to their strategic capabilities. The responses, grouped under several headings, have been presented in **Table 5**. Organizational structure was clearly the most important, particularly for the medium-size organizations. Human resources, efficiency and productivity followed, and resources, IT capability and business processes were also highly ranked. However, concern must be expressed over the low

**Table 5.** Key characteristics contributing to strategic capability

| Key characteristics contributing to strategic capability  | Large (%) | Medium (%) | All (%) | Rank |
|---|-----------|------------|---------|------|
| Organization structure (flexibility, communication, culture, etc.)  | 58        | 64         | 62      | 1    |
| Human resource and related issues (training, retention of staff, knowledge sharing, investment in people, etc.) | 58        | 41         | 47      | 2    |
| Efficiency and productivity   | 42        | 50         | 47      | 2    |
| Resources   | 42        | 45         | 44      | 4    |
| IT capability   | 33        | 45         | 41      | 5    |
| Business processes and procedures   | 25        | 41         | 35      | 6    |
| Technological advancement/progress (investment in plant and equipment, innovative capabilities)                 | 17        | 23         | 21      | 7    |
| Research and development  | 8         | 23         | 18      | 8    |
| Customer care (client satisfaction)   | 8         | 14         | 12      | 9    |
| Market (available work, current products, timing of opportunities)  | 8         | 9          | 9       | 10   |
| Products  | 17        | 4.5        | 9       | 10   |

ranking of research and development, the market and products. The highly ranked key issues to strategic capability appear to focus more on how business is conducted rather than what is produced.

### ***Strategic tools and techniques***

The most frequently used strategic tools and techniques were those that could be used for purposes other than strategic management, such as financial analysis, brainstorming, management of objectives and benchmarking (see **Table 6**). SWOT analysis, competitor analysis and resource audits were also frequently used. Many other tools and techniques developed for strategic management were used infrequently. The more sophisticated techniques such as Porter's Five Forces and value chain analysis were exploited more by the larger organizations, possibly due to available skills. Highly sophisticated tools such as a SPACE matrix, portfolio analysis and simulation that are frequently used within other industries were not used at all.

Basic tools and techniques such as brainstorming and financial analysis were considered to be the most useful (see **Table 6**). Many tools and techniques received a low score, which could be due to their lack of use. The

infrequent use of many simple strategic tools and techniques does not necessarily mean that they are not useful to construction. It may mean that the skills to use them are not available and the benefits are not fully understood.

### ***Effectiveness of tools for communicating strategy***

The effectiveness of several tools for communicating strategy was assessed and the results have been presented in rank order of effectiveness in **Table 7**. The most effective approach for the communication of a chosen strategy was identified as 'word-of-mouth', especially for medium-size organizations. *Management seminars and conferences* and *client briefings* were also assessed as very effective. Several items such as *staff briefings*, *team briefings* and the *Internet* were also assessed as not being used or not effective.

### ***Monitoring the implementation process***

More than a third of all organizations (38%) stated that they did not use a programme to monitor strategy implementation — 85% of these had adapted an informal strategic management process. The low level of attention to monitoring suggests that the success of imple-

**Table 6.** Strategic tools and techniques

| Strategic tools and techniques               | Use of    |            |         | Most useful |            |         |
|--|-----------|------------|---------|-------------|------------|---------|
|  | Large (%) | Medium (%) | All (%) | Large (%)   | Medium (%) | All (%) |
| Brainstorming                                | 100       | 82         | 89      | 40          | 56         | 50      |
| Financial Analysis                           | 83        | 100        | 94      | 30          | 63         | 50      |
| Management by Objectives                     | 75        | 77         | 76      | 30          | 31         | 31      |
| SWOT Analysis                                | 83        | 64         | 71      | 20          | 31         | 27      |
| Benchmarking                                 | 83        | 59         | 67      | 40          | 12         | 23      |
| Competitor Analysis                          | 75        | 59         | 65      | 20          | 12         | 15      |
| Resource Audit                               | 50        | 59         | 56      | 10          | 19         | 15      |
| Market Opportunity Analysis                  | 58        | 45         | 50      | 10          | 12         | 11      |
| Service or Product/Market Evolution Analysis | 33        | 36         | 35      | 10          | 12         | 11      |
| PEST or PEEST Analysis                       | 42        | 27         | 32      | 10          | 6          | 8       |
| Stakeholder Analysis                         | 25        | 23         | 24      | 10          | 6          | 8       |
| Strategic Gap Analysis                       | 25        | 23         | 24      | 0           | 12         | 8       |
| Strategic Group Analysis                     | 33        | 18         | 24      | 0           | 6          | 4       |
| Sustainable Growth Model                     | 33        | 14         | 20      | 10          | 0          | 4       |
| Porter's Five Forces Analysis                | 42        | 9          | 20      | 10          | 0          | 4       |
| Multiple Scenarios Analysis                  | 17        | 23         | 20      | 10          | 0          | 4       |
| Value Chain Analysis                         | 33        | 9          | 18      | 10          | 0          | 4       |
| Experience Curves                            | 8         | 18         | 15      | 10          | 0          | 4       |
| Directional Policy Matrix                    | 8         | 14         | 12      | 10          | 0          | 4       |
| Product Life Cycle Analysis                  | 8         | 14         | 12      | 0           | 0          | 0       |
| Portfolio Analysis                           | 8         | 9          | 9       | 0           | 0          | 0       |
| PIMS Analysis                                | 8         | 4          | 6       | 0           | 0          | 0       |
| McKinsey 7-S Analysis                        | 8         | 0          | 3       | 0           | 0          | 0       |
| Fit for Purpose Relationship                 | 8         | 0          | 3       | 0           | 0          | 0       |
| Process Value Management                     | 8         | 0          | 3       | 0           | 0          | 0       |
| Customer Expectation Audit                   | 8         | 0          | 3       | 0           | 0          | 0       |
| Sector Profitability                         | 8         | 0          | 3       | 0           | 0          | 0       |
| Employee Competence Analysis                 | 8         | 0          | 3       | 0           | 0          | 0       |
| Government Payers Legislation                | 8         | 0          | 3       | 0           | 0          | 0       |
| Simulation Technique                         | 0         | 0          | 0       | 0           | 0          | 0       |
| SPACE Matrix                                 | 0         | 0          | 0       | 0           | 0          | 0       |
| Portfolio Analysis                           | 0         | 0          | 0       | 0           | 0          | 0       |

mentation cannot always be demonstrated or quantified. Most of those who did not have a specific monitoring programme stated that implementation was monitored through a review process on a monthly, quarterly or yearly basis, or at Board Meetings. Some organizations only reviewed financial targets. The remaining 62% had specific monitoring processes and 72% of these formal strategic management processes. Some of those who had monitoring processes also stated that it was based on measurement of key performance indicators against a programme or action plan and critical success factors continuously monitored against agreed time scales or on an annual basis. There was a good corre-

lation between monitoring of the implementation process and the degree of formalization of the strategic management process.

### *Extent of personnel involvement*

The involvement of internal personnel and external organizations was assessed. The results have been presented in **Table 8**. The key players were found to be the Managing Director, the Board of Directors, Top Management and the Chief Executive. Westphal and Frederickson (2001) have developed a theory of Board-directed strategic change. The findings show that while the experience on new CEOs appears to predict future corporate

Table 7. Effectiveness of tools used for communicating strategy

| Means of communication | Large companies    |                          |                               | Medium companies   |                          |                               | All                |                          |                               |
|------------------------|--------------------|--------------------------|-------------------------------|--------------------|--------------------------|-------------------------------|--------------------|--------------------------|-------------------------------|
|                        | Very effective (%) | Moderately effective (%) | Not effective or not used (%) | Very effective (%) | Moderately effective (%) | Not effective or not used (%) | Very effective (%) | Moderately effective (%) | Not effective or not used (%) |
| 'Word-of-mouth'        | 60                 | 32                       | 8                             | 63                 | 23                       | 14                            | 62                 | 26                       | 12                            |
| Management Seminars    | 50                 | 33                       | 17                            | 36                 | 37                       | 27                            | 42                 | 35                       | 23                            |
| Client Briefings       | 50                 | 33                       | 17                            | 32                 | 36                       | 32                            | 38                 | 36                       | 26                            |
| Strategic Plan         | 8                  | 42                       | 50                            | 23                 | 50                       | 27                            | 18                 | 47                       | 35                            |
| Strategic Summary      | 8                  | 25                       | 67                            | 18                 | 32                       | 50                            | 15                 | 29                       | 56                            |
| Company Magazine       | 16                 | 17                       | 67                            | 14                 | 31                       | 55                            | 15                 | 26                       | 59                            |
| Roadshow               | 33                 | 17                       | 50                            | 5                  | 5                        | 90                            | 15                 | 9                        | 76                            |
| Intranet               | 0                  | 8                        | 92                            | 14                 | 18                       | 68                            | 9                  | 15                       | 76                            |
| Mission Statement      | 0                  | 42                       | 58                            | 9                  | 50                       | 41                            | 6                  | 47                       | 47                            |
| Annual Report          | 8                  | 42                       | 50                            | 5                  | 40                       | 55                            | 6                  | 41                       | 53                            |
| Team Briefings         | 8                  | 25                       | 67                            | 0                  | 5                        | 95                            | 3                  | 12                       | 85                            |
| Staff Briefings        | 8                  | 8                        | 84                            | 0                  | 0                        | 100                           | 3                  | 3                        | 94                            |
| Internet               | 0                  | 17                       | 83                            | 0                  | 55                       | 45                            | 0                  | 41                       | 59                            |

Table 8. Extent of personnel involvement

| Personnel            | Large companies             |                          |                              | Medium companies            |                          |                              | Total                       |                          |                              |
|----------------------|-----------------------------|--------------------------|------------------------------|-----------------------------|--------------------------|------------------------------|-----------------------------|--------------------------|------------------------------|
|                      | Significant involvement (%) | Moderate involvement (%) | Little or no involvement (%) | Significant involvement (%) | Moderate involvement (%) | Little or no involvement (%) | Significant involvement (%) | Moderate involvement (%) | Little or no involvement (%) |
| Managing Director    | 66                          | 17                       | 17                           | 77                          | 9                        | 14                           | 73                          | 12                       | 15                           |
| Board of Directors   | 42                          | 50                       | 8                            | 50                          | 23                       | 27                           | 48                          | 32                       | 20                           |
| Top Management       | 58                          | 25                       | 17                           | 41                          | 41                       | 18                           | 47                          | 35                       | 18                           |
| Chief Executive      | 50                          | 33                       | 17                           | 32                          | 13                       | 55                           | 38                          | 20                       | 44                           |
| Clients              | 25                          | 25                       | 50                           | 14                          | 31                       | 55                           | 18                          | 29                       | 53                           |
| Other Employees      | 17                          | 25                       | 58                           | 9                           | 23                       | 68                           | 12                          | 23                       | 65                           |
| Middle Management    | 8                           | 58                       | 34                           | 9                           | 41                       | 50                           | 9                           | 47                       | 44                           |
| Other Management     | 8                           | 25                       | 67                           | 9                           | 27                       | 64                           | 9                           | 26                       | 65                           |
| External Consultants | 0                           | 50                       | 50                           | 14                          | 27                       | 59                           | 9                           | 35                       | 56                           |
| Suppliers            | 8                           | 25                       | 67                           | 5                           | 22                       | 73                           | 6                           | 23                       | 71                           |

change, these effects can disappear after Board experience has been taken into account. Very few clients had any significant involvement within the strategic management process. There was only moderate or little involvement of all other managers, other employees, consultants/facilitators and suppliers. This appears to be a very traditional top-down approach. Employees may have little input to the overall process and consequently little commitment to it. Moreover, almost no involvement of suppliers suggests that this area is not well exploited by construction organizations. The reasons may be the project-based feature of the industry and a tendency to use many different suppliers.

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*Very few clients had any significant involvement within the strategic management process*

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### **Background of strategic leaders**

The strategic management process was led by the following: the Managing Director within 59% of organizations; the Chairman within 15%; the Board of Directors in 9% and the Chief Executive Officer (CEO) and other senior managers/directors or partners in the remaining 17%. Most leaders of the strategy process had both a technical and managerial background — 75% in large organizations and 64% in medium-size firms. In the large companies, the remaining strategic leaders had a managerial background and none had just a technical background. In the medium-size organizations 27% had a managerial only background and the remaining 9% had a technical background only.

### **Strategic management time horizons**

Most of the organizations (59%) set objectives and planned over five-year horizons. However, 30% of the organizations planned for two years

or less. Although many organizations planned for five years, this was seen in terms of overall direction, with the first two years being considered as the most important part because of the ever-changing business environment. Most of the organizations (59%) stated that they expected their horizons to remain constant. The main reasons were that it is difficult to look further than the present and the processes were well established which made it difficult to change time frames. However, a significant proportion (24%), mainly those with horizons of less than three years, stated that they intend to increase their horizons. The reasons given were the need to: develop new businesses and expand, match clients' changing views, and assess long-term procurement and management issues. In addition to these reasons, high investment in people requires longer-term horizons. Only 12% stated that time horizons would be decreased. These were mainly in the group of firms with current horizon of five years and the main reason was that the changing business environment resulted in a large degree of uncertainty regarding many long-term issues.

### **Timeframe for the strategic management process**

Many of the respondents — some 59% — undertook the strategic management process once a year, 18% undertook it occasionally, only 9% biannually and 14% *when required*. Most of the organizations that undertook it more frequently tended to have a formal strategic management process and almost all organizations that did it occasionally or when required had informal processes. The majority of organizations, some 68%, stated that they expected the current frequency to stay the same and 30% intended to increase the frequency of their strategy process. The main reasons were that the speed of change being driven by external factors is increasing and that sector growth requires continuous manoeuvring. None of the organizations surveyed said that they intended to decrease the frequency. The duration of the process was



three months in 82% of the large organizations (with 9% taking two months). There was considerable variation in the duration taken by medium-size organizations (with the biggest proportion of 33% also taking three months but with 20% taking 12 or 18 months to complete the process). Most of the organizations with three-month duration had a formal strategic management process.

### **Key strengths within current processes**

Only 24% of the respondents stated that they were satisfied with their strategic management process and identified such factors as regularity, continuousness, staff involvement, flexibility/structure, quality, fast reaction to customer needs, employee awareness/internal communication and implementation as key. The remaining 76% indicated that their processes required improvement. The most important areas for improvement were identified as implementation, monitoring and staff involvement. Irregularity, internal and external communications, and greater utilization of strategic models, tools and techniques were listed as the second most important areas for improvement. Finally, development of objectives, responsibility allocation, client/stakeholder involvement and greater formalization were also listed as key areas for improvement.

### **Factors restricting improvements to the strategic management process**

The respondents were also asked to identify the factors that restrict improvements to the current process and the results have been presented in **Table 9**. Large organizations identified the lack of specialist skills as the main factor but medium-size organizations identified time constraints. Resistance from either owners or directors who underestimated the benefits also created significant barriers in some medium-size organizations.

### **Conclusions**

The strategic management process within many construction organizations was found to be informal and not well documented. The process was generally not very sophisticated, with limited application of strategic tools and techniques. Most organizations recognized that their current processes had considerable limitations and needed to be improved.

### **Small construction organizations**

Most of the small organizations interviewed stated that their main aim was to survive with a certain level of profit rather than to grow or increase profit. The small construction organizations were also found to have little or no

**Table 9.** Factors restricting improvements to strategic management process

| Factors   | Large (%) | Medium (%) | Total (%) | Rank |
|---|-----------|------------|-----------|------|
| Time constraints  | 29        | 74         | 62        | 1    |
| Lack of specialist skills   | 86        | 42         | 54        | 2    |
| Lack of financial resources   | 29        | 37         | 35        | 3    |
| Lack of understanding of senior management/directors/owners                                 | 0         | 21         | 15        | 4    |
| Turbulence of business environment, changing economic situation, opportunities, competition | 14        | 5          | 8         | 5    |
| Disagreement on long-term objectives  | 0         | 10         | 8         | 6    |
| Lack of ambition for staff  | 0         | 5          | 4         | 7    |
| Lack of information/access  | 0         | 5          | 4         | 7    |
| Government policy   | 0         | 5          | 4         | 7    |

strategic management or long-term planning. They also tended to lack the skills and resources to perform either formal or informal strategic management. Brouthers *et al.* (1998) established that the strategic decision-making process in small firms is much more irrational than in larger ones, with the main reason being the reliance on intuition rather than analysis. Small organizations tend to be skills-driven and failure to retrain taking into account future changes will curtail the life of such organizations. Berry (1998) stated that the entrepreneur's strategic awareness will determine the nature of planning and the quality of leadership provided by management is a key feature of successful small firms. Many of the small organizations were led by owners/managers from a technical background.

#### **Medium-size organizations**

Most of the medium-size organizations recognized the importance of strategic management to successful operation and growth but stated that they have informal processes that were performed only occasionally or when required. This suggests a reactive style of strategic management. A more proactive approach would enable market forces to be identified and acted upon earlier. Half of the medium-size organizations had a formal and well-documented process, however, many strategic tools and techniques were not being fully exploited. Moreover, the lack of communication with, and involvement of, staff and external stakeholders were restricting the effectiveness of the process. The most important industry drivers were market-related issues and trends. Significantly, greater emphasis was placed upon customer analysis than competitor analysis during both day-to-day operations and the strategic management process. This can be partly explained by the relatively low technology advancement rate in construction, lack of opportunity for product differentiation and the difficulty of developing a brand name for medium-size organizations. However, competition is fierce and some form of competitor analysis is required.

#### **Large construction organizations**

Most of the large organizations had formal well-documented strategic processes performed on a regular basis. Tools and techniques were also better exploited. Communication of strategy was considerably more developed within the large organizations. Tools other than 'word-of-mouth' were used, although there was considerable variation between organizations. The large organizations tended to pay considerably more attention to client analysis than competitor analysis. However, this client orientation could be significantly improved as very few of the large and medium-size organizations stated that they involved clients during their strategic management process.

#### **Recommendations: small construction organizations**

Most small organizations take an informal approach to strategic management based on the vision of the entrepreneur. The increase in partnering and strategic alliances should encourage small organizations to take a longer-term perspective, but support is needed to help small construction organizations to access, understand and apply the various tools and techniques.

There may not be a need for regular structured planning meetings and during the early stages of the strategic process it does not have to be highly formalized (Berry, 1998), but as Smith (1998) established, in analysis of successful small firms, a clear strategic direction and detailed plans for the closest future are required.

The process should include the main components of strategic management but, due to limited resources, only use basic tools and techniques that do not require specialist skills. Smith (1998) established a correlation between intensive information gathering followed by appropriate analysis and the performance of small firms undertaking strategic management. Emphasis should therefore be placed upon information gathering, analysis and implementation of appropriate strategies.

Niche-filling or focus strategies, as Porter (1998) described them, seem to be the most appropriate for small organizations. The lack of opportunities for differentiation makes low-cost strategies necessary. However, many small organizations may be disadvantaged by economies of scale and during recession periods cannot compete with large organizations that tend to significantly reduce their prices and sometimes operate on negative margins when required to do so.

### **Large and medium-size construction organizations**

Large and medium-size construction organizations have tended to pursue low-cost strategies. However, as Hillebrandt and Cannon (1989) discussed, differentiation is also possible through different types of contracts such as design and build, and build operate and transfer. The emergence of partnering in the UK has resulted in some shift away from low-cost strategies to differentiation. Increased technological advancement within construction should also encourage differentiation. This approach is more likely to succeed with large organizations that have the capacity to invest in research and development or advanced equipment and highly skilled labour.

Large organizations have to deal with complex issues and each organization's direction and policies have to be widely understood. Consequently, the strategic management process has to be formal, regular and well documented. More formality is required for medium-size organizations in the documentation of mission, objectives and plans, in order to improve communications. Regularity of the process must be maintained if a proactive approach is to be achieved.

The heavy reliance on repeat clients emphasizes the need for increased client involvement in the process and more effective customer/client analysis techniques. Greater client involvement requires a process of customer feedback, analysis and implementation of changes/improvements. It also implies client briefings and direct involvement in the strategic management process.

There needs to be greater involvement and improved communication within the strategic process and greater involvement of both internal staff and external organizations.

Large organizations appear to be familiar with and use many of the strategic tools and techniques. However, clarification and greater awareness of the difference between strategic thinking, strategic management and strategic planning is required.

Many large construction organizations were found to have recently developed longer-term strategies, appointed key individuals with strategic expertise and allocated resources to the process. Many very different good practices are starting to evolve within individual organizations. These organizations should be encouraged to network and benchmark their process in order to learn from one another as new ideas emerge.

### **Biographical notes**

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