Abstract: Self-assessment is a method for reviewing the activities and performance of an organization. This paper reports the findings of a study in four organizations of their management of this process. Each company followed the key self-assessment stages of planning, developing awareness, implementation and review but carried out the process in a different manner. The level of total quality management (TQM) maturity, available resources and organizational culture were the main factors for the differences.

The key to successful self-assessment is effective management and the use of a team to manage the process. The most important activities were identified as: selection of a suitable model, appropriate approach(es) for the assessment, provision of appropriate training, monitoring the progress of improvement actions, establishment of a ‘closed-loop’ structure for the improvement cycle and integration of improvement with the strategic business plan. It is also pointed out that self-assessment is not without difficulties, including scarcity of time, overemphasis on scoring and scores, failing to follow-up improvement actions and lack of communication.

Keywords: self-assessment, quality awards, continuous improvement, total quality management

NOTATION

CAD computer aided design
EFQM European Foundation for Quality Management
EOQ European Organization for Quality
EQA European Quality Award
MBNQA Malcolm Baldrige National Quality Award
QOS quality operating system
RSA Royal Society for the Encouragement of Arts
TQM total quality management

1 INTRODUCTION

Self-assessment is still a fairly new concept to many businesses, even though the publicity associated with quality awards such as the European Quality Award (EQA) and the Malcolm Baldrige National Quality Award (MBNQA) have brought it into the limelight. The Appendix contains a brief summary of the models underpinning these two awards. In recent times there has been a considerable number of papers written on the subject of self-assessment. However, apart from the studies of Finn and Porter (1), van der Wiele et al. (2, 3) and Coulambidou and Dale (4), there is a paucity of empirical research on the subject.

The research reported in this paper is an attempt to close this gap.

The study comprised an examination of the management of the self-assessment process in four organizations. The main areas studied included the reasons for conducting self-assessment, the approaches adopted, the ways in which improvement actions are developed from the self-assessment, the benefits, difficulties and lessons learnt. The companies were selected for their different expertise in self-assessment and degree of TQM (total quality management) maturity. They differ in aspects such as the nature of product and service offerings, size, organizational structure and culture, and commitment to continuous improvement. The companies can be classified by their broad product offerings as telecommunications (Company A), utility (Company B), automotive (Company C) and information technology (Company D). Using the TQM adoption model of Lascelles and Dale (5) they can respectively be classified as ‘tool-pusher’, ‘improver’, ‘improver’ and ‘world class’. The research was carried out by semi-structured interviews with a cross-section of company personnel supported by examination of relevant company documentation.

The paper opens by examining the continuous improvement ethos of the four organizations. In relation to the self-assessment process, the issues examined are the reasons for its introduction, the methods and mechanisms employed, benefits, difficulties experienced and the factors that influence the management of the process.
2 COMPANY BACKGROUND IN CONTINUOUS IMPROVEMENT

2.1 Company A

The majority of the directors and senior managers did not fully understand the philosophy and implications of TQM, viewing company performance solely in financial terms, typically displaying the features of 'yesterday companies' (6). As a result, there was an evident lack of leadership and commitment to improvement initiatives, which tended to be fragmented and contributed little to business results. Symptomatic of this, the improvement activities were focused on manufacturing. The Quality and Customer Satisfaction Department had turned to self-assessment to indicate to the directors the lack of impact of the improvement initiatives and to illustrate what was involved with TQM.

2.2 Company B

This company has been involved in formal improvement activities for around 5 years but had only started to embrace the principles of TQM in the last 2 years. It has developed a long-term education and training programme to enable employees to better serve their customers. The responsibilities for implementing improvement initiatives are shared among the different members of the organization, involving senior and middle managers and quality champions. This has helped to make the improvement process robust.

2.3 Company C

This company has been involved in improvement initiatives for the last eight or so years. It has successfully put in place all the initiatives demanded by its major automotive customers. However, the improvement initiatives and management of the self-assessment activities are strongly dependent upon a small number of key managers.

2.4 Company D

This company has been engaged in TQM for more than 15 years and had won a number of major quality awards. The organizational structure is participative and process-oriented. The company is also a protagonist of strategic benchmarking and has in place an integrated system of internal and external performance measurements. Policy deployment is also used to incorporate improvement into the strategic planning process and day-to-day work activities, and there is keen focus on improving the core business processes.

2.5 Summary

Finn and Porter’s (1) and van der Wiele et al.’s (2, 3) research findings and the practical advice of Sherer (7) and the Deming Prize Committee (8) have shown that an organization has to be fairly advanced in TQM to be able to use self-assessment effectively. This is in contrast to Alcatel Austria which had little TQM experience yet claimed to have conducted successfully a self-assessment against the European Foundation for Quality Management (EFQM) model for business excellence [see Loveday (9)]. However, based on the findings of the study reported in this paper it is not simply a matter of how much a company knows about TQM or how long it has been involved with the concept but rather upon the existence of the critical factors which were found in the case of Alcatel Austria (i.e. top management commitment and leadership and a receptive attitude among employees). This seems to be borne out by Company B, which is relatively inexperienced in TQM but yet has made significant progress with self-assessment, because of the high degree of commitment by top management to TQM, in general, and self-assessment, in particular.

3 REASONS FOR IMPLEMENTING SELF-ASSESSMENT

From the literature [e.g. see references (4) and (10) to (13)] various reasons for undertaking self-assessment have been identified. These were used to provide the template for examining the findings from the study. It is clear that the variation in reasons for companies deciding to undertake self-assessment depends upon the length of time they have been engaged in continuous improvement. In general, the findings from fieldwork support the literature in that the criteria underlying the MBNQA and the EFQM models have helped the management team to achieve consensus on what needs to be done to focus upon a common business direction and the areas where improvement is most needed.

3.1 To find opportunities for improvement (all four companies)

It was believed that, by comparing the current condition of business activities with the model criteria, areas for improvement could be identified. For example, Company D considered that the use of self-assessment could identify not merely the opportunities for improvement but more importantly the vital business process that, through improvement, could contribute to optimizing business performance.

3.2 To pursue continuous improvement (Companies B, C and D)

As a ‘world-class’ company, Company D aims to identify continuously those products and/or service factors or characteristics that will increase customer satisfaction and ensure that the goal of everyone in the organization is the never-ending pursuit of complete customer satisfaction. Companies B and C have also looked to self-assessment to facilitate continuous improvement to satisfy their
customers. These companies laid little importance on the non-prescriptive nature of self-assessment which allows companies to develop their own solutions to cope with the ever-changing business environment, as outlined by Heaphy and Gruska (10) and Reimann (14).

3.3 To monitor and measure the progress of the improvement initiatives (all companies)

Company D implemented self-assessment to monitor and measure the progress of its improvement initiatives. In contrast, Company A implemented self-assessment to measure its fragmented attempts to introduce various quality initiatives and to identify the link, if any, with the company’s business results.

3.4 To create quality awareness by focusing on the model criteria

While all four companies believe that the self-assessment models of the EFQM and MBNQA portray a TQM philosophy, linking key business activities to business results, only Company A actually stated this as a reason for implementation. Its Quality and Customer Satisfaction Department believed that by using self-assessment, the TQM concept could be communicated more readily to employees, beginning with their directors and senior managers. Company C only realized this after it had carried out its first self-assessment, while, on the other hand, Companies B and D implemented self-assessment in an existing culture of quality awareness.

3.5 To acknowledge best practices

Company C stated that its approach to self-assessment was developed with the intention of acknowledging best practices from within the organization. Companies B and D, which have made the most use of benchmarking, did not mention this as one of their reasons for undertaking self-assessment.

3.6 To facilitate advance quality planning

One of the objectives of Company C for applying self-assessment was to facilitate advance quality planning, helping management to incorporate quality into the strategic planning process. Company B had similar objectives. These two cases demonstrate the link between the level of TQM maturity and the expectations from the self-assessment process. Company A, due to its lack of TQM maturity, did not consider this.

3.7 Winning an award

Winning an award was raised only by Companies B and C. The American parent of Company C had based its internal model on the MBNQA criteria, with the motive of applying for the award in 1998. The directors of Company B have the expectation of making a formal application for the EQA around the turn of the century.

4 MODELS USED FOR SELF-ASSESSMENT

In the literature, information about the development of the quality awards, approaches, examination procedures, use of the criteria for self-assessment and success stories abound (10, 11, 13, 15–20). From this a variety of views emerge on the merits and disadvantages of the MBNQA and EFQM models. For example, the latter is regarded by Conti (21) as a model that offers a broad spectrum of assessment criteria where preferences may be expressed by redistributing weights. He believes that, based on this common matrix, a range of different customized models may be developed. In the case of the MBNQA, Heaphy and Gruska (10) have outlined clear objections to organizations changing, renaming or renumbering the criteria.

Among the four companies studied, Companies C and D (which are American owned) have developed their own self-assessment model based on the MBNQA criteria, while Companies A and B (British owned) use the EFQM model criteria, without modification. Company D believes that the MBNQA model criteria clearly focus employee’s attention on the vital factors that drive the company towards its year 2000 vision. Company C considers that the core concept of the MBNQA criteria is the most appropriate for it to model in pursuit of a world-class competitive status. Company B claimed that the EFQM model provides a mechanism for setting quality targets and measuring progress, while Company A said that the EFQM model was chosen because it was recognized by many successful companies as a model for business excellence. Both companies said that EFQM model criteria were easy to understand and Company B, in particular, felt that the information required for self-assessment is that which management should be producing in the normal course of managing the business, and no extra work was required to collect the data relating to its nine criteria.

Companies (C and D) have adapted the MBNQA model criteria to suit their circumstances. Company D has modified the criteria to establish its own ‘management model’. Comparison of the criteria indicates that even though the headings are not dissimilar, the key elements under the ‘management model’ criteria cater for the particular requirements of their business environment. While customer satisfaction is still the focus of the Company D business processes, the content of the criteria and key elements indicate a growing emphasis on information technology and the greater use of tools and techniques than is the case with the MBNQA’s criteria. Company C has developed its own model, following closely but not identical to the MBNQA criteria, placing more emphasis upon the leadership and the human resources factors. The changes made and the

relative values ascribed to the criteria were made to clarify the TQM principles used in the company and to provide more emphasis on areas of special importance.

5 METHODS USED FOR SELF-ASSESSMENT

In the literature [e.g. see references (11) and (13)] the main self-assessment approaches are considered to be award simulation, matrix method, workshop, peer involvement and questionnaire. Each of the four companies uses one or more of these approaches, which, however, they have adapted to suit their own needs.

Companies A and B used a questionnaire approach. The former used, without modification, the questionnaire ‘Determining Business Excellence’, developed by the EFQM. In contrast, Company B designed their own questionnaire, believing that it was important to keep the wording of the questionnaire and scoring system relevant, simple and clear. Both companies involved their senior and middle managers and the quality representatives in the discussion of questionnaire results and produced a feedback report. Company B used the same team of managers to link the self-assessment results to the strategic business direction, although Lascelles and Peacock (13) believe that the results from using a questionnaire approach are not a reliable input to the action planning process.

Company C used a workshop approach in which the senior managers collected the data and then presented their findings. In their development of self-assessment they introduced: a matrix to guide the data-collection process, a status report to describe the position of each element assessed, a site visit to validate the data collected and a feedback report. By using a variety of methods and approaches, they have been able to involve senior management in all stages of self-assessment.

The self-assessment process in Company D was based on the award simulation approach; the company had put in place a number of additional aspects to suit its own requirements. In the first place it developed its own model criteria and then set up teams for each criteria to collect the relevant data. A matrix based on the model criteria was used to assist the data-collection, measurement, rating and verification procedures. In using the matrix, the importance of standardizing the definitions of the requirements and statements was recognized. The main concern was that subjective interpretations would prevent the assessment from revealing the genuine condition of the elements being assessed. They have replaced the 75 page position report used in the award simulation approach with a proforma, which only requires the data-collection team to record the essential information concerning elements such as: current performance, contributing/causal factors, strengths, areas for improvement, improvement actions, person responsible for the improvement and status of the improvement action. The advantage of this approach is to save time in preparing a report and, at the same time, to present the data and results in a summarized form. The verification and certification process is similar to the award simulation approach; however, the company only uses two assessors for this procedure.

Each company has, in one way or another, eliminated some of what it considers to be the unnecessary activities in conducting the self-assessment process. It is clear that when selecting an approach, organizations must consider what is required in terms of resources. This is consistent with what Povey (22) has suggested: ‘A self-assessment approach should aim at avoiding the bureaucratic overhead of full assessments, focusing instead upon the objective of allowing continuous improvement.’

6 MANAGEMENT OF THE SELF-ASSESSMENT PROCESS

Careful planning is required to manage the process of self-assessment. A number of writers [e.g. see references (11) and (13)] claim that the management of self-assessment is considered as the key to successful implementation; however, it is surprising that the literature contains little guidance on this topic. The main activities involved in the management of the self-assessment process for the four companies are similar to those described by Hillman (23): planning, developing awareness, implementation and reviewing. Each company has approached these activities to suit its own requirements rather than following a prescribed step-by-step approach.

6.1 Planning the self-assessment

Prior to planning for self-assessment, it is important that the initiator obtains the support and commitment of senior personnel. A preassessment was conducted at Company C to highlight, to the directors and senior managers, the weaknesses of the organization and the potential benefits from implementing a process of self-assessment. The benefits that can be derived from implementing a self-assessment process were also outlined by the Corporate Quality Director to the senior managers at Company A, when they were looking to self-assessment to indicate the effectiveness of their improvement activities.

In each company the planning process is handled by a team of people. The quality structure of Company B, in particular, the Business Quality Group, and the Quality and Customer Services Department at Company A have played an important part in choosing the model, the approach to self-assessment, the reporting system, the timing of the process and the resources involved. For Companies C and D, the planning process did not involve choosing the model and method used, as this was set by their American parents. However, in each case the management team had to plan for the other activities involved with self-assessment.

6.2 Developing awareness

After obtaining the commitment of senior management and
planning for the self-assessment process, the plan and the concept of self-assessment should be communicated to all the employees involved in the process. Companies B and D developed specific documents (e.g. a workbook for the data-collection team members, indicating the proper way of conducting self-assessment) to communicate the concept, purpose, elements and procedures of self-assessment. Company A did not have such documentation but formed a Business Performance Review Body to encourage all business units and the employees to participate in self-assessment. At Company C their self-assessment training programme was used to create and develop awareness of self-assessment among all employees, from senior managers to improvement team leaders and members.

All four companies consider it essential to ensure that the employees involved in the process understand the questions and statements describing the desired state of the criteria within the Award model, the metrics of measurement and the scoring techniques before attempting an assessment.

6.3 Implementing self-assessment

The sequence, content and the methods used for the self-assessment activities depend greatly upon the approach adopted. In general, the current conditions of the organization must be assessed in terms of strengths and areas for improvement; then each criterion is scored and the findings from the assessment are analysed to decide how to move the organization to the desired state.

In three of the four companies, facilitators were used to clear any ‘road-blocks’ for the teams. At Companies A and B they had the responsibility of helping employees understand the meaning and requirements of the questionnaire. They were also required to collect the completed questionnaire results and pass them to the reviewing teams. At Company D each team was assigned a facilitator and a team leader. The facilitator acted as a counsellor while the team leader was the organizer and motivator of the assessment and improvement activities. At Company C managers and quality champions were responsible for the data collection and compilation of the application report. The parent company selects and trains the award examiners, who then conduct the site visits to the business units.

At Company D the areas for improvement are prioritized, from which an action plan is derived. The quality manager and his or her team have the responsibility of monitoring the progress of the improvement activities. The teams that develop the plan clearly specify the resources involved, the schedule and the parties responsible, to ensure an effective implementation. The company’s high level of TQM maturity and the self-assessment plan, which takes into account the linkage between the existing tools and techniques with the self-assessment results, are a key contributing factor to the company’s effective and efficient use of self-assessment.

The monthly self-assessment meeting and the bimonthly quality operating system (QOS) meeting were the two main mechanisms that drive the activities of developing, implementing and monitoring the business improvement actions plan at Company C. The use of tools and techniques was stressed as an important factor assisting the managers in identifying improvement opportunities, planning the improvement actions and monitoring progress. Company A had only just begun to recognize the relevance of tools and techniques when identifying the strengths and areas for improvement and developing an improvement plan. Company B did not place any great emphasis on the use of tools and techniques. The self-assessment results of all four companies were being incorporated into their strategic business planning process, albeit to a greater or lesser degree.

6.4 Reviewing

Until some two years ago, a number of the business units of Company D only reviewed the progress of their improvement actions plan prior to the next self-assessment cycle. It was subsequently recognized that there was a need to build a ‘closed loop’ structure into the process. Even though reviewing is mentioned in the literature there is insufficient emphasis upon the need to monitor the progress of the improvement activities constantly against the planned actions. Companies B and C had established a central database to store information on the self-assessment results and the status of the improvement actions. This has allowed the self-assessment team to monitor the progress of improvement activities efficiently. Company A plans to use a steering group to monitor the progress of the improvement process.

The study of Company D highlights as critical the handling of the assessment activities, results and the improvement actions, but these types of practical issues are not emphasized in the literature. For example, at every new self-assessment cycle there is the possibility of new team leaders or members for assessing the various elements; also communication between the previous and the subsequent team needs to be well thought out. These issues need to be considered by companies choosing to use different teams to conduct data-collection and other self-assessment activities.

In summary, the importance of practical issues such as gaining the support and commitment of top management, establishing a standard way of measurement, establishing a reporting and communication system and regularly monitoring the reviewing process before the next cycle of self-assessment must be recognized and given due attention by organizations if self-assessment is to be effective.

7 THE EFFECTS OF USING SELF-ASSESSMENT

The benefits and difficulties of self-assessment have been described by a number of writers (1–4, 9, 11, 12, 18, 23, 24). Some of the findings are based on questionnaire surveys, so that the factors contributing to the benefits and difficulties experienced by the individual companies are not
given in any detail. The benefits and difficulties experienced by the four companies in this study will be discussed and, as appropriate, comparisons made with the literature. A summary of the successes and problems of self-assessment within each of the four companies is given in Table 1.

7.1 Increasing quality awareness

Company A claims that the Directorate and senior managers etc. are gradually becoming more aware of quality (e.g. exposure to the concept of continuous improvement and the use of tools and techniques). The three other companies did not mention this specifically, but the evidence collected indicates that there was an increase in quality awareness. For example, in Company C, after the preassessment the management team became aware of their inadequate understanding of the principles and practices of TQM and consequently were motivated to engage in a full self-assessment.

7.2 Facilitating advanced quality planning and incorporating the quality plan with business strategic planning process (Companies C and D)

Company C claimed that its advanced quality planning process had been assisted by using the results of self-assessment to guide the strategic business direction. Company D incorporated the improvement actions plan into the existing policy deployment structure. As a result, it found that not only was the strategic direction of the company based upon ‘quality’ but that the day-to-day business processes were guided by the self-assessment results, hence enhancing the effects of TQM. Company B has only just begun to incorporate the self-assessment results into the business planning cycle and Company A has yet to consider this.

7.3 Focusing on continuous improvement (Company D)

Company D’s self-assessment model was used to focus company efforts, both individuals and functions, upon improving the vital elements requiring continuous improvement in order to achieve their 2000 vision. The company culture is moving in the direction where employees are encouraged to improve their work activities proactively on a continuous basis. The other three companies did not emphasize this as a benefit but did consider it a reason for implementing self-assessment; it is only a question of time before this comes to fruition.

7.4 Laying the foundation for benchmarking

Company B has found that the results from self-assessment have allowed the management team and the quality representatives to understand their organization better and, through the assessment, areas requiring benchmarking were identified. While Company C has just recently begun this practice, Company D is a pioneer in this area. The self-assessment results are used for identifying best practices and candidates (individuals and functions) for their internal quality award. Benchmarking was implemented a number of years before they commenced self-assessment, but the evidence collected from the interviews suggests that self-assessment is helping managers to refocus upon the vital factors that contribute to driving the company to world-class status. It has also helped to identify the areas requiring benchmarking and to assess the progress of these activities.

7.5 Improving business performance

7.5.1 Financial

Company C is the only company that stated positively, supported by quantitative evidence, that the company’s improved financial performance is due to the business units that had achieved their internal quality award. Company B has reported cost savings from the improvement actions that have been implemented, but cannot yet relate any improvements to the financial performance of the business. Company A also felt that it was too early for them to link any improvement in the financial performance to the use of self-assessment. It is also interesting to note that Company D, even though it has used self-assessment for more than 10 years, did not mention this as a benefit.

Company D incorporated the improvement actions plan into the existing policy deployment structure. As a result, it found that not only was the strategic direction of the company based upon ‘quality’ but that the day-to-day business processes were guided by the self-assessment results, hence enhancing the effects of TQM.
7.5.2 Non-financial

Examples of the improvements realized are outlined below, using examples from each of the four companies:

1. Human resource development and management. Employees at Company C have witnessed a strengthening of the human resource training function, after identifying this as a weakness through the use of self-assessment.

2. Operational results. The product testing and computer-aided design (CAD) facilities at Company C were improved, through the improvement actions following self-assessment, thereby enhancing the effectiveness and efficiency of the work performance.

3. Policy and strategy. After obtaining the self-assessment results, managers at Company A realized that there was a lack of strategic direction in guiding both employees and the organization. A new business strategy was then developed focusing the employees and organization upon a common vision.

4. Customer satisfaction. The Information Technology Department at Company B reported that the score for this criterion had increased sixfold after the implementation of self-assessment. This represented improvement in both internal and external customer satisfaction derived from better training of support staff.

5. Improving communication within and across departments. A benefit derived by Company C from using the workshop approach is that the managers have an opportunity to share and learn from other managers. This has facilitated internal benchmarking since managers have become exposed to best practices. Company A has also experienced an improvement in communication across departments when the syndicate groups came together to discuss the data collected from the self-assessment questionnaire. For example, the results from self-assessment motivated a department to improve the relationship with colleagues by communicating through the use of notice-boards and ‘coffee and biscuit’ sessions. Interestingly, on the other hand, some employees at Company D were actually finding difficulties in gathering information across functions and in communicating results and action plans to colleagues. The reason for this difference is unclear, but may be related to the method used for conducting the self-assessment. Both Companies A and C have involved senior and middle managers in data collection and generation of the improvement plan. Company D, due to its size, delegates the job of data collection and assessment scoring to different teams; after receiving feedback, the team leaders present the self-assessment results to managers from the different functions.

8 DIFFICULTIES ENCOUNTERED WHILE USING SELF-ASSESSMENT

Most of the literature reviewed describes more benefits than difficulties. The following are the main difficulties identified by van der Wiele et al. (2, 3), Coulambidou and Dale (4) and Pereira (24):

(a) failure to understand the link between self-assessment and business results,
(b) problems with measurement,
(c) obtaining top management commitment,
(d) focusing on improving scores rather than on the process.

The four companies in this study also encountered difficulties similar to these. What now follows is a summary of the main difficulties encountered.

8.1 Scarcity of time

At Company D the cause of this difficulty is that the business process is designed and perceived as separate from the self-assessment process and TQM. In recent times, the company has been working on integrating improvement initiatives with business objectives and day-to-day activities, using the results from self-assessment. Although improvement in quality planning and integration is cited as a benefit, employees still feel there is insufficient time to identify the causal and contributing factors of strengths and areas for improvement and to implement the resulting actions. This may cast some doubt on the claims made by Walsh (25) who indicates that it is unlikely that companies who have incorporated quality into their business strategy will experience difficulties in relation to the dilemma of making time to attend to both the day-to-day business and improvement activities. Nevertheless, Company D believes that this will be resolved in the longer term, as the assessment process continues to be integrated into the strategic business planning process.

Company A also considers that the lack of integration between quality management and business activities is the cause of employees feeling that they do not have sufficient time to attend to their ‘more important’ business matters. However, it seems more likely that the underlying problem is the lack of commitment from senior management in the implementation of TQM and a lack of understanding of the concept among employees.

Companies B and C did not state ‘scarcity of time’ as one of their difficulties. However, the former were anticipating problems such as having only a small group of people validating the assessments of departments and too many areas for improvement to be prioritized. At Company C there is a growing demand from customers to conduct quality audits, raising concerns about the time and effort required to attend to these quality audits and, at the same time, carry out self-assessment.

8.2 Problems with measurement and focusing on scores

A number of the problems encountered by Companies B and D during the self-assessment process can be included under
this category. Company B, since the start of self-assessment, has encountered problems in which employees have focused on scoring and scores rather than improvement issues. The main causes are the approach used for self-assessment and the fact that the concept was used before they had sufficient knowledge of TQM, the latter being the result of poor advice from a management consultant. The use of the matrix assessment method, the poor understanding of the purpose of self-assessment and the ‘scores’ oriented reward scheme for performance improvement have driven the managers, in particular, to gear towards the scores and to report unrealistic improvements. The use of the questionnaire approach and the modified reward scheme has presented them with another challenge (i.e. examining and maintaining the validity and usefulness of the customized questions and the scoring mechanism).

Company D found that employees spent unnecessary time identifying the contributing and causal factors of strengths and areas for improvement. To overcome this problem, the common contributing and causal factors have been included in their self-assessment matrix. During the implementation process, they also encountered the problem in which employees were focusing upon the company-specific certification to be obtained from self-assessment rather than upon improvements. The company has changed the name and the structure of the assessment process with the aim of refocusing employees on the concept of continuous improvement.

Both of these companies stressed the importance of continuously improving the way of measuring the current business performance against the model criteria. Further research is required to detail the activities involved within the measurement element that greatly affect the assessment of the present business performance and the progress of improvement actions.

8.3 Lack of communication between departments

Companies B and D experienced a lack of communication between departments. It was believed that bridging this gap would generate more useful results. The Quality and Customer Service Department at Company D has arranged meetings for the employees in different departments to join the self-assessment team and encourage self-assessment team leaders to form a cross-departmental team to address the problem of communication. Company B has improved its central database system to facilitate the retrieval of data needed in the self-assessment process.

This difficulty was not mentioned by the other two companies; this is almost certainly due to the different self-assessment approaches used. The workshop approach used by company C and the syndicate group discussion at Company A, which involved managers across departments, have eliminated this difficulty.

8.4 Sustaining the self-assessment process

Each of the four companies have raised different worries and concerns about this issue. At Company A, the senior management team has a keen orientation to the financial performance of the company. The continuation of the self-assessment process is dependent upon the financial stability and company results and the consent of the senior management team. At Company D the attitudes and commitment of employees to the maintenance of self-assessment is considered to be critical. Company C, on the other hand, believes that the increasing demands of its customers is the main challenge in sustaining the self-assessment process. At Company B the major difficulty is related to the considerable effort required to conduct self-assessment effectively within their business units.

These types of concerns relating to sustaining the process of self-assessment have not received a great deal of attention in the literature. It was clear from the interviews that the perceived difficulties depended, to some degree, upon the personal perceptions and TQM experience of the respondents.

9 MAIN LEARNING POINTS FROM THE SELF-ASSESSMENT IMPLEMENTATION

The four companies have not had identical experiences in implementing self-assessment, even though they were using similar models and methods to conduct the process. Each company has learnt different lessons due to their business operating characteristics, size, experiences and requirements (see Table 2). The following are a summary of the key lessons learned which may be used as a guideline for other companies that are planning to use, or are using, self-assessment in order to make it more effective and efficient:

1. Top management commitment and support is essential.
2. The existence of a mature TQM background is helpful.
3. Develop a clear plan before attempting self-assessment.
4. Training is essential for employees who are involved in self-assessment.

Table 2 Self-assessment: key learning points

<table>
<thead>
<tr>
<th>Learning point</th>
<th>Company</th>
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<tbody>
<tr>
<td>Concentrate on the vital few factors</td>
<td>✓</td>
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<tr>
<td>Constant feedback and evaluation</td>
<td>✓</td>
</tr>
<tr>
<td>Communication</td>
<td>✓</td>
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<tr>
<td>Continuously improve the model</td>
<td>✓</td>
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<tr>
<td>Continuously improve the self-assessment process</td>
<td>✓</td>
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<tr>
<td>Human element</td>
<td>✓</td>
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<tr>
<td>Do not be put off by low scores</td>
<td>✓</td>
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<tr>
<td>Learn from best practice</td>
<td>✓</td>
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<tr>
<td>Operating experience of TQM is needed before starting self-assessment</td>
<td>✓</td>
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<tr>
<td>Self-assessment approach should be easy to understand</td>
<td>✓</td>
</tr>
<tr>
<td>Senior management support</td>
<td>✓</td>
</tr>
<tr>
<td>Training for employees involved in self-assessment</td>
<td>✓</td>
</tr>
</tbody>
</table>
5. Establish a management team to guide the self-assessment process.
6. An accurate measurement system is a necessity.
7. Constantly monitor, review and improve the validity of the improvement plan.
8. Examine the usefulness and effects of the methods and approaches used.
9. Preserve the simplicity and practicality of the tools used for the data-collection and results-reporting mechanism.
10. Be sensitive to the attitude and response of the people involved in the self-assessment process.
11. Build appropriate mechanisms to communicate the self-assessment results, the actions plan and progress of the improvement actions.
12. Always learn from best practice, within the company and from other companies.
13. Do not be discouraged by low scores.

10 CONCLUSIONS

The validity of the business excellence model criteria which underpin the quality awards and the suitability of the methods applied are a clear determinant of whether or not the self-assessment results truly reflect the current position of an organization and identify the vital areas for improvement for achieving its objectives. The action plans derived from self-assessment are intended to focus the direction of improvement efforts. Therefore it is important that the validity of the model criteria and the suitability of the approaches used for self-assessment are subject to regular review to take account of changing characteristics.

Top management commitment and support is, perhaps, the most crucial of all the factors relating to the success of self-assessment. This support must be evident both before the commencement of self-assessment and during the process. The absence of this factor creates uncertainties and doubts among employees concerning the continuation of self-assessment and the amount of time and effort to be invested in such activities. Furthermore, if the aim of an organization is to integrate the results of self-assessment with the business strategy, the absence of the top management involvement in the process will render this impossible.

One of the early decisions that the management team needs to make is to choose a self-assessment model. The four companies studied conducted their self-assessment against either the MBNQA or the EFQM model for business excellence. Once they gain experience with self-assessment they did tend to develop the model criteria and change the weighting. This is done to emphasize key areas within their business processes. Such practices by companies tends to support those who argue in the literature for customization of models [e.g. see references (11), (22) and (26)]. It is advisable that companies with little experience in self-assessment use the published model criteria without any alteration, as some of the companies studied did experience difficulties while customizing some of the criteria.

When choosing a self-assessment method, managers must remember that the objective is to encourage continuous improvement. Managers should not confuse this objective with the winning of a quality award, which is the usual main objective of a full assessment. In self-assessment, gaining a quality award may be desirable, but an incidental outcome.

The findings of this research indicate that the most effective use of self-assessment was found in those organizations where TQM is well established. Having said this, the process of self-assessment was found to be capable of creating quality awareness in situations where TQM was less well advanced and also of building a foundation for continuous improvement. This suggests that organizations should not be deterred from attempting self-assessment because they feel unable to implement it in the manner laid down by its protagonists.

The results from the self-assessment should be incorporated into the strategic plan of the business. When this was done it tended to overcome the main difficulties of self-assessment—scarcity of time, overemphasis on scores rather than improvement issues, measuring business performance using only financial criteria, lack of communication between departments and failure to implement the devised improvement actions.

The findings of this study indicate that even when the implementation of self-assessment is not perfect it can still generate benefits, including an increase in quality awareness, facilitating advanced quality planning, providing a platform for benchmarking and the development of improvement plans. The four companies studied were not at the same level of implementation of self-assessment, yet they all experienced some, if not all, of these benefits.

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**APPENDIX**

**Summary of the Malcolm Baldrige National Quality Award and European Quality Award**

(a) *The Malcolm Baldrige National Quality Award (MBNQA)*

The Malcolm Baldrige National Quality Improvement Act of 1987, signed by President Reagan on 20 August 1987, established this annual US quality award. The award is named after a former American Secretary of Commerce in the Reagan Administration, Malcolm Baldrige. The MBNQA programme is the result of the co-operative efforts of government leaders and American business. Its purpose is to promote quality awareness, recognize the quality achievements of American companies and publicize successful quality management and improvement strategies. The US Department of Commerce and the National Institute of Standards and Technology (NIST) are responsible for administering the Award scheme.

Up to two awards can be given each year, out of the average number of 100 applicants in each of three categories: manufacturing companies or subsidiaries, service companies or subsidiaries, and small business (defined as independently owned and with not more than 500 employees). Since its inception in a single year there has never been less than two awards and no more than five awards. The award is made by the President of the United States, with the recipients receiving a specially designed crystal trophy mounted with a gold-plated medallion. They may publicize and advertise their awards provided they agree to share information about their successful quality management and improvement strategies with other American organizations.

Every Baldrige Award application is evaluated in seven major categories, with a maximum total score of 1000 (27). These are leadership, information and analysis, strategic planning, human resource development and management, process management, business results, and customer focus and satisfaction. Each of the seven categories are subdivided into 24 items, and these are further defined by 54 areas to address. The framework on which the MBNQA is based has four basic elements: driver, system, measure of progress and goals. The rationale for this is that the ‘driver’ (i.e. senior management leadership) is the foundation upon which a quality organization is built and quality results are achieved. The ‘system’ (i.e. information and analysis, strategic quality planning, human resource development and management, and management of process results) are company-wide efforts that lead to measurable quality and operational results. These in turn effect customer satisfaction relative to competitors, customer retention and market share gain, which are described as ‘goals’.

The evaluation by the Baldrige examiners is based on a written application and looks for three major indications of success:

1. Approach. The strategy, processes, practices and methodology used by the organization in attempting to achieve world-class quality.
2. Deployment. The resources being applied and how widespread (i.e. broad or narrow) is the quality effort throughout the organization.
3. Results. Evidence of sustained improvement over the last five years.

Following a first stage review of the application by quality management experts, a decision is made as to which organizations should receive a site visit. A panel of judges
reviews all the data both from the written applications and site visits and recommends the award recipients to the NIST. Quantitative results weigh heavily in the judging process, so applicants must be able to prove that their quality efforts have resulted in sustained improvements. The thoroughness of the judging process means that even applicants not selected as finalists get valuable feedback on their strengths and areas for improvement.

(b) The European Quality Award (EQA)

The European Quality Award was launched in October 1991 and first awarded in 1992. While only one European Quality Award in each of three categories is made each year, several European Quality prizes are awarded to those companies who demonstrate excellence in the management of quality through a process of continuous improvement. The EQA is awarded to the best of the prize winners in the categories of companies, public service organizations (i.e. healthcare, education, and local and central government) and small- and medium-sized enterprises. The winner of each of the three awards is able to retain the EQA Trophy for a year and all prize winners receive a framed holographic image of the trophy. The winners are expected to share their experiences of TQM at conferences and seminars organized by the EFQM.

The EFQM model for business excellence is intended to help the management of European organizations to improve their understanding of best practices and to support them in their leadership role. The model provides a generic framework of criteria that can be applied to any organization or its component parts. The EQA is administered by the EFQM with the support of the European Organization for Quality (EOQ) and the European Commission. In developing the model the EFQM drew upon the experience in use and application of the MBNQA.

Applications for the EQA are assessed on nine criteria: customer satisfaction, people, business results, processes, leadership, resources, policy, strategy and impact on society. The criteria are split into two groups: ‘enablers’ and ‘results’. The nine elements of the model are further divided into 34 criteria parts. The EFQM model for business excellence is based on the principle that processes are the means by which the organization harnesses and releases the talents of its people to produce results. In other words, the processes and the people are the enablers that provide the results. The results aspects of the EFQM model are concerned with what the organization has achieved and is achieving and the enablers with how the results are being achieved. The rationale for this is that customer satisfaction, people satisfaction, impact on society and business results are achieved through leadership, driving policy and strategy, people management and the management of resources and processes, leading to excellence in business results. Each of these nine criteria can be used to assess an organization’s progress to business excellence.

The enablers are scored in terms of approach and deployment. The approach is concerned with how the requirements of a particular criterion are approached and met. The deployment is the extent to which the approach has been deployed and implemented vertically and horizontally within the organization. The results criteria are evaluated in terms of the degree of excellence and the scope of the results presented. The scoring framework consists of 1000 points, with 500 points each being allocated to enablers and results.

The EFQM model for business excellence does not stipulate any particular techniques, methods or procedures that should be in place. The organizations that put themselves forward for the Award are expected to have undertaken at least one self-assessment cycle. Once an application has been submitted to the EFQM headquarters, a team of fully trained independent assessors examines the applications and decides whether or not to conduct a site visit. A jury reviews the findings of the assessors to decide who will win the Award.