

# STRIVING TO BE THE BEST: A CASE STUDY OF CONSTRUCTION BENCHMARKING WORLD CLASS ORGANISATIONS

Steven McCabe<sup>1</sup> and Hamish Robertson<sup>2</sup>

<sup>1</sup> *School of Property and Construction, Faculty of Built Environment, University of Central England in Birmingham, UK*

<sup>2</sup> *Morrison Construction Plc, Edinburgh, UK*

The need for organisations to seek continuous improvement has, over the last decade, become a mantra for those who seek to commentate on construction<sup>1</sup>. As such, commentators suggest organisations in electronics and automotive production industries have accrued benefits that allow both enhanced customer satisfaction and the achievement of greater efficiency. Therefore, it is usually argued, if this can occur elsewhere, why cannot construction do the same? As this paper will explain, the need to engage in improvement is well accepted in the construction industry. Initiatives such as quality assurance, total quality management and supply chain management have been operating for some time. However, and as the case study of Morrison indicates, the desire to achieve radical change resulting in significant improvement is only possible by benchmarking against organisations which are 'excellent'. As we will describe, the accepted test of excellence is demonstrated by the use of the European Foundation for Quality Management (EFQM) Excellence Model Award. As well as describing what this model involves, this paper will explain how it has been successfully used by Morrison as a basis for creating a culture conducive to stimulating organisational change which has allowed improvement to occur.

Keywords: organisational excellence, quality, continuous improvement, benchmarking.

## INTRODUCTION

In our opinion, too many of the accounts of research are what Silverman calls 'reconstructed logic' (1985:4). Reconstructed logic is, according to Silverman, tendency by those who write up the accounts of their research to attempt to suggest that their endeavours were entirely predictable and sequential. As Buchanan *et al* (1988) argue, particularly with respect to research into management, this is far from the case. What is often lacking, we believe, is a recognition of the occurrence of serendipity; the fact that luck plays a great part in the success of research into management in organisations.

The luck that occurred in the case of this paper, was the fact that the two authors met as presenters at a Construction Productivity Network event in London last October. Due to the fact that a book is being written on the subject of benchmarking (McCabe, 2001), a meeting was held in Edinburgh in late January during the course of which, it emerged, there was the basis of a paper which could be submitted to an event such as ARCOM. As we agreed, what we were discussing was the difficulty in translating theory (benchmarking for best practice) into practice. As we believed, writing a case study of how a construction company such as Morrison can use this technique would

---

McCabe, S and Robertson, H (2000) Striving to be the best: a case study of construction benchmarking world class organizations. *In: Akintoye, A (Ed.), 16th Annual ARCOM Conference*, 6-8 September 2000, Glasgow Caledonian University. Association of Researchers in Construction Management, Vol. 1, 355-64.

assist others in understanding how this is done. Moreover, as this paper will suggest, despite the fact that the use of benchmarking models are used in such a way as to assume that excellence can be assumed to have tangible characteristics, when an organisation (or more particularly its managers) attempt to implement continuous improvement, there are many potential obstacles that must be overcome; most especially with regard to the so called 'soft-issues'. It is only by appreciating these difficulties, we argue, that genuine understanding about how effective benchmarking can be in creating the conditions for organisational transformation; something that would not be likely to occur using the traditional quantitative methods such as structured questionnaires.

## **THE FUNDAMENTALS BENCHMARKING IS TO ASSESS EXCELLENCE**

Benchmarking is, we suggest, an expression that has become common parlance in the day-to-day lexicon of management. The reason for this, it would seem, is obvious; the management of any organisation – regardless of size – can, by applying benchmarking, improve its competitive position. As a definition from one of the definitive texts on the subject suggests, benchmarking – 'a tool for obtaining the information needed to support continuous improvement' (McNair and Leibfried, 1992:1) – has become indispensable:

*"[managers] are realising that future success will require more than gutfeel, and more than just doing what they've always done a bit better. Success in the 1990s and beyond requires fact, not fiction, and analysis, not guesstimates, with a clear, ongoing focus on meeting and exceeding customer expectations' ibid:2"*

Another definition that has become well used is world-class. This expression, according to Prescott is one that is applied to organisations that have successfully applied TQ [Total Quality] principles and can seek recognition through national awards such as the European Excellence Model (1995:21). In order to do this, he explains, it is necessary for an organisation to demonstrate the application of continuous improvement using a 'structured approach' that can be scored and assessed by means of a methodology that is accepted as encompassing the essential elements of excellence. Prescott believes that in order to become world-class it is necessary for an organisation to be able to show that the following are occurring:

Commitment by senior managers to TQ and customer satisfaction which creates an organisational ethos in which every person involved in the total process is dedicated to the achievement of continuous quality improvement

A strategy exists which is 'customer-centred' and is 'regularly reviewed, up-dated and widely communicated'

That there exists tools which support 'people to participate in a quest for excellence in all aspects of the business'

Training and development which ensures that employees of the organisation are able to 'meet operational demands and contingencies'

'Utilisation of resources is on a par with the best of the competition and technology is used to improve productivity and flexibility'

The processes that are used by the organisation are under control and ‘innovation and continuous improvement are encouraged’

Customers who buy/consume the product/service<sup>2</sup> rate what they receive ‘highly in relation’ to competitors

That there are mechanisms for assessing the satisfaction of employees with respect to the way that they are ‘managed, developed and their skills used’

That the local community and society in general have been consulted in order to ensure that what the organisation achieves are sympathetic to their needs

‘Investors express satisfaction with the [organisation’s] business results’

Being world-class used to be the preserve of companies that were both Japanese and, usually, manufacturing-orientated; as Dale *et al* point out by citing Williams and Bersch (1989):

*Fewer than ten companies world-wide – all Japanese – had reached this stage (Dale, et al., 1994:125)*

The reason for the pre-eminence of Japanese manufacturers has been well documented. As any cursory study of management in recent years will show, post second world war Japan had the good fortune to be defeated by a country that saw fit to provide its new generation of industrial managers<sup>3</sup> with a statistician (Dr. W. Edwards Deming) who believed that radical methods of management were appropriate. As Dr. Deming explained, it was only by continuously measuring processes using simple statistical tools that it is possible to know how effective any efforts to improve are being. Using Statistical Process Control (SPC) was, Deming argued, essential in order to understand variation; something that can either be within or outside control limits. This, he stressed, was the key to success. Simply using measurement is meaningless unless one understands cause and effect. Variation that is outside the control limits is what is known as having ‘special causes’. It is due to exceptional events that the operatives working with the process can have influence upon. Variation that is within control limits cannot be assigned to those who operate the system, it is caused by the system – something that can only be influenced by management. The most important element of any effort to improve, Deming asserted, is that quality is about products, not people. What is crucial about this observation is that managers should be aware that genuine improvement must be based upon the desire to use attributes of people such as their intelligence, integrity and imagination that are impossible to measure (see Caulkin, 1999:11).

Therefore, we would argue, the desire to utilise benchmarking as a method of improvement should be applied with a clear understanding by managers of the following:

What processes are key to the success of the organisation

How these processes can be compared with the key processes of an excellent organisation

The skills of people involved in carrying out these key processes and how the abilities of such people can be used in order to create opportunities for improvement

## INFLUENCES FOR CHANGE IN CONSTRUCTION

As referred to previously, there have been those who contend that the construction industry under-performs; surely, we suggest, an indication that benchmarking is not a new concept. It is to be noted that the casual observer might conclude that construction is atypical in its inability to compete effectively. Whatever failings construction may have had, the history of post second world war manufacturing in the UK shows that there has been serious concern about its ability to compete internationally, most particularly with respect to the quality being produced in Japan. As McCabe (1998) describes, it was precisely such concerns that led to the introduction of a British standard for quality management BS 5750 (superseded by ISO 9000), the effect of which directly impacted upon the British construction industry. As McCabe believes, having applied QA (Quality Assurance) with variable effect, some construction organisations became interested in considering the use of less procedure-based methods of improvement (*ibid*). In effect, what these organisations have tended to discover is that, as Deming had told the Japanese in the early 1950s, the ability to produce quality is totally reliant upon managers to understand the processes that are used, and more especially, to use their workers in a way that allowed them to achieve their best. As such organisations have found by exploring the way that radical improvement has been produced in other industries, valuable lessons can be learned, and crucially, that construction can similarly benefit from the application of certain principles. This is exactly the message contained in one of the most influential report on construction in recent years (Construction Task Force<sup>4</sup>,1998). As this report asserts:

*We have looked at what has driven manufacturing and service to achieve [radical change]. We have identified a series of fundamentals to the process which we believe are just as applicable to construction as to any other business concern (ibid:16)*

The principles referred to are fivefold:

Committed leadership

A focus on the customer

Integrate the process and the team around the product

A quality driven agenda

Commitment to people

Furthermore, the report written by the Construction Industry Task Force makes a strenuous argument in favour of benchmarking using measurement of progress as a means to produce excellence. In order to reinforce this message, the report sets out a number of targets that construction organisations should aspire to achieve: capital cost (-10%); construction time (-10%); predictability (+20%); defects (-20%); accidents (-20%); productivity (+10%); turnover and profits (+10%). As the empirical section of this paper shows, by using benchmarking – especially against world class organisations – Morrison has been able to make significant progress in attaining these targets.

## **BENCHMARKING: THE KEY TO THE MORRISON APPROACH TO BECOMING WORLD-CLASS**

Morrison, an Edinburgh based company has had a long tradition of being dedicated to improving the quality of its product and service that it provides to clients. For instance, during the mid 1980s the company slogan was devised:

“Quality built in”

This statement, it can be argued, may seem to be a cliché in the contemporary world of business. As staff at Morrison are keen to stress, the ability to achieve ‘quality’<sup>5</sup> has always been dependent upon the dedication of those who are involved in the process. As has already been explained, ‘quality’ became a buzzword of the late 1980s; primarily because of the impetus created by the desire by Government Agencies such as the Property Services Agency that quality assurance using BS 5750 be applied by construction organisations. As a direct consequence, Morrison introduced quality management systems. However, whilst these system operated satisfactorily in terms of ensuring compliance with procedures, there was an increasing groundswell of opinion that a ‘systems approach’ was not sufficient to address the aspect of culture, or more especially, how employees of Morrison could be encouraged to do more than simply comply with procedures. As the objective then became, ‘How would it be possible to motivate people to do whatever they could in order to delight the customer’. In order to do this senior management at Morrison knew that they had two key responsibilities:

To ensure that employees were given training and education that would provide them with, as a minimum, sufficient skills and confidence to do their best

To create systems that would support everyone’s efforts in providing customer delight

The former was supported by the introduction of the *Investors in People* award. The latter required a constant search for improvement in the existing quality systems. However, as became very obvious to those attempting to show how effective these initiatives were, it was essential for some measures of progress to be utilised. As will be described below, the culmination of this was the ‘Balanced Business Scorecard’, the means by which Morrison can ensure that it is making progress towards becoming world-class. An analysis of Morrison’s abilities and competencies revealed the view that people were a resource that could be positively developed. This meant that, in future, Morrison would not simply attempt to do what was regarded as being ‘acceptable’ in terms of training, when compared to the rest of the construction industry, but to consider (benchmark) what so called world-class organisations were doing with their people. For instance, with respect to management, Morrison make the following statement in their literature:

*A world class company develops within its management teams the capability to meet the challenge of growth and diversity (Morrison, 1999:8)*

Whilst this statement suggests the obvious, the difficulty for Morrison was in being able to predict the magnitude of the growth and diversity that would be necessary to become ‘world class’. As senior managers at Morrison accepted, the only way to achieve this was by considering their performance relative to that of those organisations that had been able to demonstrate their ability to be excellent. In the first instance, this involved comparison with other construction organisations; what is known as competitive benchmarking. However, as will frequently be discovered when this form of benchmarking is used, there are two problems:

The fact that the organisation against which comparison is being made are in the same market, they may be unlikely to tell how they have created opportunities for improvement.

Such organisations may be regarded as being very good within the sector in which they operate, but in comparison to what is accepted as being world class, their ability is not believed to be exemplary.

As Morrison found in practice, an excellent organisation is one that has been able to demonstrate its ability by having been able to win an award such as the EFQM (European Foundation for Quality Management) Excellence Award. This award – launched in 1991 – according to Oakland, is a ‘recognized technique of self-assessment for any organisation wishing to monitor and improve its performance’ (1999:98). As Oakland explains, organisations can use the methodology contained within the model that constitutes the award as a means by which to carry out self-assessment which will enable them to ‘promote business excellence through a regular and systematic review of processes and results [to] highlight strengths and drive continuous improvement (*ibid*:101). Thus, as managers in Morrison believed, if they were to demonstrate their commitment to improvement, it had to be on the basis of the application of the EFQM Excellence Award which contains the following sections (the relative value of each of the criterion that constitute the award are shown in parenthesis):

### **Enablers**

**Leadership (10%):** which includes how the mission, vision and values are articulated to all organisational members, and the way in which in leaders are ‘role models of a culture of excellence’

**People management (9%):** which requires the organisation to show how its ‘key resource’ is ‘planned, managed and improved’ and that they are ‘empowered’, and are ‘rewarded, recognised and cared for’

**Policy and strategy (8%):** which includes how the organisation ensures that it can achieve stated objectives and by so doing, ensure continuous improvement

**Partnership and Resources (9%):** which considers the way in which the organisation develops and manages those individuals/organisations which, despite being external, are vital to its ability to improve. There is also a requirement to show how things such as finance, buildings and all equipment used in day-to-day operation are utilised effectively to attain the desired objectives

**Processes (14%):** which are the methods by which the organisation can demonstrate that it has systems to ensure that all activities that are carried out in pursuit of stated goals are controlled and managed to ensure that continuous improvement occurs, and that it is possible to ‘generate increasing value to shareholders’

**Results (each of which has two measures of attainment: perception and performance)**

**People results (9%)**

**Customer results (20%)**

**Society results (6%)**

**Key performance results (15%)**

The distinction between the former is that they are accepted as being vital elements in creating the sort of organisational culture in which the latter will be produced. As advocates of the EFQM Excellence Model argue, an organisation that is able to show it is excellent will also be one that can show a definite improvement in the parts of business which really count; most especially in what is called 'the bottom line'. As the next section describes, this led Morrison to its quest to become world class.

## **THE QUEST TO BECOMING WORLD CLASS: THE IMPORTANCE OF PEOPLE**

Having made the decision to 'become the best' Morrison believed that the most effective way to achieve this would be by benchmarking itself against organisations that are perceived to be world class. Indeed, in Morrison no one can be in doubt about the desire to become, literally, the best. As every employee is informed the objective is to become a world class company. In order to emphasise this message, literature is supplied which provides examples of how world class with companies that have achieved radical improvement in the following areas of business:

Efficiency – the example of Porsche being able to reduce the time taken to produce a high performance car from six weeks in 1991 to three days in 1998. In addition, it is explained, errors have been reduced by 75%. Even more significantly, Toyota housebuilders<sup>6</sup> are cited as being able to carry out 80% of construction in a factory environment in which standards of quality are far higher

Partnering – the example of Motorola which has cut production costs by up to 35%, reduction in cycle time by 99% and, significantly, being able to cut their order lead time from 8.75 days to 15 minutes whilst at the same time increasing market share by 15%

Supply Chain Management – the fact that by being able to deal more effectively with suppliers, it is easier to make improvement. For instance, whereas the average car manufacturer in Europe deals with 4700 suppliers, in Toyota this figure is only 400

Customer Satisfaction and Development – a number of organisations (such as, for instance, Daimler Benz), are used to show the way in which customers become the 'touchstone' of success in becoming excellent

Training and Development – as Morrison states with respect to this area:

*'...many Japanese companies invest between 11 and 15 days per year in training [...] our aim is to up with the best in the world'*

However, a qualitative measure is also essential.

What Morrison has developed in order to assist in its efforts to become the best is what is known as the 'Balanced Business Scorecard'; something which, because 18 key performance measures are used, is analogous to the scorecard used in golf. These 18 measures are as follows:

Safety

Strategy and policy

Efficiency

Supply chain management

IT capability

5-Star sites

Customer satisfaction

Customer value

Impact on society and the environment

Partnering

Employee satisfaction

Training and development

Teamwork and leadership

Innovation

Earnings per share growth

Profitability

Risk management

Shareholder added value

These 18 measures are used as the means by which to benchmark achievement of progress in becoming world class, and as the way in which continuous improvement is demonstrated. Moreover, these measures provide the basis upon which a submission will eventually be made to compete for the EFQM Excellence Award.

As can clearly be seen, ensuring success in all of these measures will not be achieved without considerable effort. As quickly became obvious in making progress towards the goal of becoming world class, the most essential element in attaining success were what EFQM call the 'key resource'; people. However, whilst the theory of ensuring people are actively involved in improvement efforts, actual practice can prove to be somewhat more difficult. Time and effort can be considerable, and there has been the additional problem of convincing people that there is an alternative to the traditional short-term and contractually-orientated way of doing business. In effect, the quest towards becoming world class became one of winning the hearts and minds of those who would be part of the 'cultural revolution'

In order to do this, a number of people within Morrison became Facilitators who could train others to more effectively carry out, among other things, the following:

Measure the effects of improvement efforts on day-to-day activities

Use problem-solving techniques

To communicate to each other in such a way as to exchange vital information

To make presentations

As is continually stressed, whereas in the past these activities might have been seen as being superfluous to working in a contracting organisation, now they are regarded as being key business skills. The objective is therefore, that the desire to engage in improvement becomes 'second nature'. As has been described previously, one of the benchmarks of an excellent organisation is the amount of time dedicated to training. The average benchmark set by Japanese organisations is 15 days. Whilst Morrison has



not beaten this by currently dedicating 9.5, it is more than the four that is reported by DTI (Department of Trade and Industry) as being the average for British industry.

A vital part of the effort to ensure that people are willing to be involved in dedicating time and effort to the quest to become world class is that they are recognised. This does not just involve money (although good rates of payment are believed to be important). The experience of world class performers, and a lesson that Morrison wishes to engender, is that people like to be associated with a successful organisation<sup>7</sup>. In addition, there are initiatives that allow notable ‘performers’ to be recognised for their efforts.

## CONCLUSION

Perhaps one of the most telling benchmarks that Morrison can point to is the fact that over the last ten years it has been able to simultaneously, increase workloads, treble the number of employees, increase its profits and increase the satisfaction levels of customers. As we would argue, this would not have been possible without having adopted the technique of benchmarking against world class performers. Whilst using such a technique is not without potential hurdles, the consequence of so doing will be to create the sort of opportunities for improvement that the authors of *Rethinking Construction* envisaged. Not to do so, we would contend, will not only undermine the ability of construction organisations to compete effectively, but will continue the traditional culture of construction whereby valuable effort is needlessly wasted. Most importantly people, the so called ‘key resource’, will not be allowed to give their best to the task of providing customers with what they want; a strategic objective for any organisation which wants to become world class.

Endnote

<sup>1</sup>See, for instance, the report of the Construction Task Force, *Rethinking Construction* (1998)

<sup>2</sup>This distinction is made deliberately in order to recognise that excellence exist in the public sector; something that the progenitors of quality awards are keen to stress

<sup>3</sup>Senior managers who had been responsible for assisting Japan’s war effort had been dismissed

<sup>4</sup> Commonly called the Egan Report in reference to the Chairman of the Construction Task Force – Sir John Egan

<sup>5</sup>The word quality can be a subject of heated debate. For the purposes here, we will define it as being the ability to give the client what exactly they want, when they want it, and at a price which they believe is acceptable.

<sup>6</sup>There is, we suggest, a paucity of examples of construction providing examples of being world class in terms of improvement

<sup>7</sup>Whilst sporting comparisons can often be trite, we draw attention to the fact that the most successful football team at present – Manchester United – can attract fans throughout the world.

## REFERENCES

- Buchanan, D., D. Boddy and J. McCalman (1988) Getting in, getting on, and getting out. In A. Bryman (ed.), *Doing Research in Organisations*, Routledge, London, 53-67.
- Caulkin, S. (1999) Learning to count what really counts. *In The Observer Business Section*, 16 May, 11.
- Construction Task Force (1998) *Rethinking Construction*. Department of the Environment, Transport and the Regions, London.
- Dale, B.G., D.M. Lascelles and R.J. Boaden (1994) Levels of total quality management adoption. In B.G. Dale (ed.), *Managing Quality* (second edition), Prentice Hall, Hemel Hempstead, Hertfordshire, 117-127.

McCabe, S. (1998) *Quality Improvement Techniques in Construction*. Addison Wesley Longman, Harlow, Essex.

McCabe, S. (2001) *Benchmarking for Construction*. Blackwell Science, Oxford.

McNair, C.J. and K. H.J. Leibfried (1992) *Benchmarking – A tool for continuous improvement*. John Wiley and Sons, Chichester.

Morrison, (1999) *People – training and development supplement*. Morrison, Edinburgh

Prescott, .B.D. (1995) *Creating a world-class quality organisation*. Kogan Page, London.

Siverman, D. (1985) *Qualitative methodology and sociology*. Gower, Aldershot.

Williams, R. and B. Bersch (1989) *Proceedings of the First European Quality Management Forum*. European Foundation for Quality Management,163-72