

Implementing the European Foundation for Quality Management Excellence Model

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ABSTRACT

The European Foundation for Quality Management (EFQM) was founded in 1988 and is committed to promoting quality as the fundamental process for continuous improvement within a business. It is dedicated to stimulating and assisting management in applying innovative principles of Total Quality Management suited to the European environment. Its aim is to improve the competitiveness of European private and public sector organisations. Over 10,000 firms in the private and public sector all over Europe now incorporate the EFQM Excellence Model in their overall corporate management process. In 1999, 60% of the top 25 companies in Europe (and 30% of the top 100) were members of the EFQM. This paper focuses on establishing the rationale for implementing the EFQM model.

The advocated advantages are established. The scoring process is demonstrated using the EFQM RADAR (Results, Approach, Deployment, Assessment and Review). Further original work is presented by the author on the scoring model to include the 'RADAR' Pentagonal Scoring Profile. This provides a simplistic, yet effective, method of communicating the self-evaluation data to senior management for benchmarking purposes. The RADAR Pentagonal Profile has been endorsed by the EFQM. A generic implementational model for EFQM within surveying organisations is incorporated.

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1. INTRODUCTION

This paper is aimed at establishing how the European Foundation for Quality Management model (EFQM) can provide a means of implementing Total Quality Management.

Major companies are increasingly having to face competition from overseas. They also have to accept that more choices are available to construction clients and that they are assiduous in seeking goods and services with better quality and at a more competitive price in their search for value for money. As Bounds et al. (1994:5) has remarked '*traditional approaches to management are inadequate for keeping up with change.*' Increased global competition and improved communications have lead to greater customer expectation.

Total Quality Management (TQM) is a powerful tool supporting sustainable competitive advantage through meeting client expectations.

'Total quality management is a way of managing an organisation to ensure the satisfaction at every stage of the needs and expectation of both internal and external customers, that is shareholders, consumers of its goods and services, employees and the community in which it operates, by means of every job, every process being carried out right, first time and every time'

(Henderson Committee, 1992. Cited by Latham Report, 1994:79)

Wiele et al. (1997:237) noted that '*TQM is dynamic in nature, based on continuous improvement and change and aims to achieve complete customer satisfaction by identifying and building on best practice in processes, products and services.*'

The EFQM Excellence Model has been used extensively and beneficially in manufacturing, banking and finance, education, management and consultancy. Companies apply the EFQM Excellence Model since the pursuit of business excellence through TQM is a decisive factor in allowing them to compete in today's global market. This paper examines the problems associated with applying the Model and offers some practical solutions.

2. THE HISTORICAL DEVELOPMENT OF EFQM

EFQM, a non-profit making organisation, provides various networking, benchmarking and training events to help members keep up with the latest trends in business management and research in TQM. It launched the European Quality Award in 1991 to stimulate interest and it is awarded to those who have given 'exceptional attention' to TQM.

EFQM's mission is:

- to stimulate and assist organisations throughout Europe to participate in improvement activities leading ultimately to excellence in customer satisfaction, employee satisfaction, knowledge management, impact on society and business results;
- to support the managers of European organisations in accelerating the process of making TQM a decisive factor for achieving global competitive advantage.

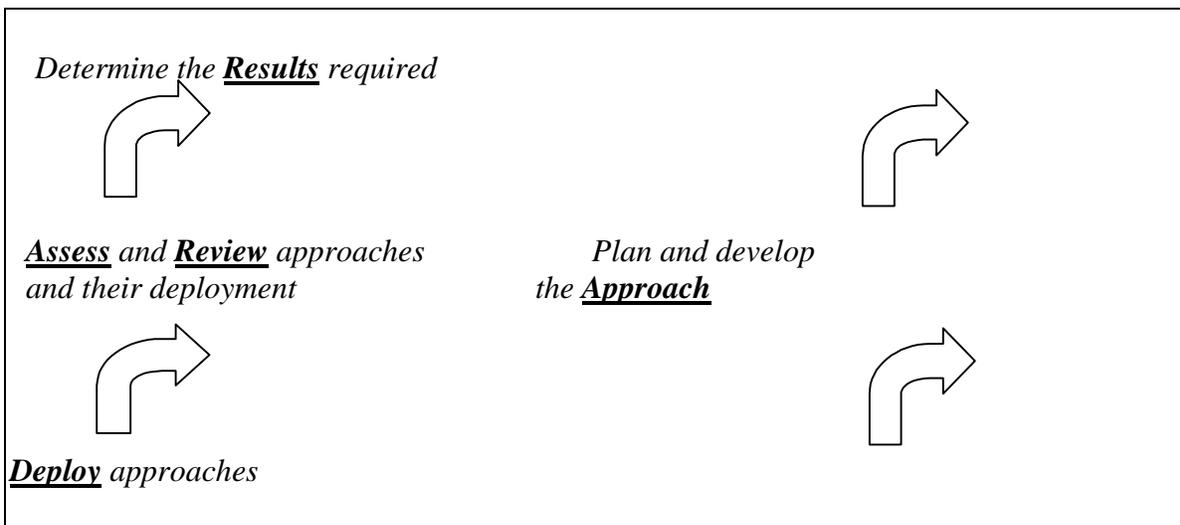
(European Foundation for Quality Management, 2000a)

According to EFQM, the main reason for companies to apply the EFQM Excellence Model is to pursue business excellence through TQM, thereby allowing them to compete successfully in European and global markets.

3. EFQM EXCELLENCE MODEL CRITERIA

3.1 RADAR

A new key concept for the Excellence Model is RADAR, which is the essential business logic underlying the model and determining the success of the search for performance improvements. The fundamental elements of the concept are Results, Approach, Deployment, Assessment and Review.



(European Foundation for Quality Management, 1999)

Figure 1 : The criteria underpinning the RADAR concept

3.2 RADAR logic

The RADAR logic states that an organisation needs to:

- determine the **R**esults the organisation is aiming for as part of its policy and strategy making processes. These include the performance of the organisation, both financially and operationally, and the perception of its stakeholders;
- plan and develop an integrated set of sound **A**pproaches to deliver the required results;
- **D**eploy the approaches in a systematic way to ensure full implementation;
- **A**ssess and **R**eview the approaches followed based on monitoring and analysis of the results achieved and on ongoing learning activities. Based on this assessment, companies should identify, prioritise, plan and implement improvements where needed.

(European Foundation for Quality Management, 1999)

4. THE EFQM EXCELLENCE MODEL

Having recognised that corporate excellence is measured by an organisation's ability to both achieve and sustain outstanding results for its stakeholders, the enhanced version of the EFQM Excellence Model was developed. The fundamental advantages of the new Excellence Model included:

increased cost effectiveness; results orientation; customer focus;. partnership; knowledge management; performance, and learning.

(European Foundation for Quality Management, 1999)

The new Excellence Model was designed to be:

simple (easy to understand and use); holistic (in covering all aspects of an organisation's activities and results, yet not being unduly prescriptive); dynamic (in providing a live management tool which supports improvement and looks to the future); flexible (being readily applicable to different types of organisation and to units within those organisations); innovative.

(European Foundation for Quality Management, 1999)

In a study on self-assessment, Hillman has elaborated further on the benefits of the EFQM Model, stating

- It is not a standard but allowing interpretation for all aspects of the business and all forms of organisation.
- Its widening use facilitates comparison between organisations. This provides the potential to learn from others in specific areas by using a common language.
- The inclusion of tangible results ensures that the focus remains on real improvement, rather than preoccupation with the improvement process, ie it focuses on achievement not just activity.
- Training is readily available in the use and scoring for the model.
- It provides a repeatable basis that can be used for comparison over several years.

- The comprehensive nature and results focus, broken down into discrete elements, helps develop a total improvement process specific for each organisation – it is a model for successful business.

(Hillman, 1994:29)

5. BENEFITS DERIVED FROM THE IMPLEMENTATION OF THE EXCELLENCE MODEL

The following provide the underpinning rationale for companies pursuing a competitive strategy through the application of the EFQM Model. The model is recognised as:

- providing a marketing focus;
- being a means of achieving a top quality performance in all areas of the organisation;
- providing operating procedures for all staff;
- allowing for the review of organisational self-assessment performance through:

providing a competitive weapon via a quality approach.

The basic premise of both BSEN ISO 9001:2000 and the European Foundation for Quality Excellence Model is the concept of control as depicted in Figure 2. However, to attain both efficient and effective control requires that valid data circulates around the control loop frequently (short cycle times). Thus it is necessary to have high quality data circulating frequently. Remember it is not possible to have retrospective effective corrective actions. Therefore, timelessness is a key component of the control function.

The importance of Figure 1 cannot be overstated. However, it fails to demonstrate the continued drive for improvement in business activities. This is due to its two dimensional approach. The control cycle suggests that an organisation only monitors its original plan and instigates corrective actions based upon collected data and a reflective comparative analysis. But where is the drive for improvement of organisational performance?

This author feels that the control function and its inter-relatedness with continuous improvement is better represented in Figure 3. The Deming Control Cycle has a failing in that it does not indicate that the reset authorised plan is not in the same plane as the action (re-set goals) plane. There is no activity that implements a new plan after authorisation and yet implementation takes time. This suggests that the model is purely a sequential winding up of plan, do, check and act. By incorporating a vertical axis, this would indicate that a more realistic model would be a plan, do, check, act, cycle with the re-set authorised plan out of the original planning plane. This re-set authorised plan then becomes the plan for the second cycle and so on in an ever improving control cycle.

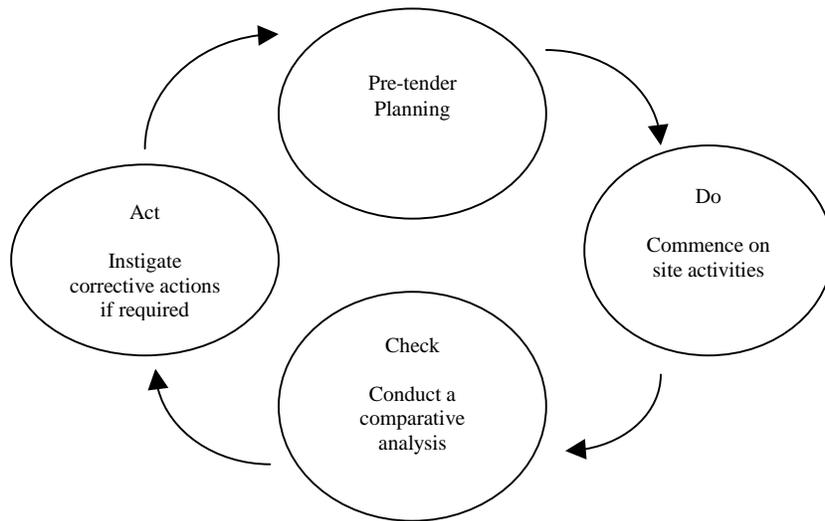


Figure 2: Deming Dynamic Control Loop Cycle

- Plan: Identify customer needs and expectations, set strategic objectives.
- Do: Implement and operate processes.
- Check: Collect business results. Monitor and measure the processes, review and analyse.
- Act: Continually improve process performance.

The strategic planning process should be built into the 'Quality System'.

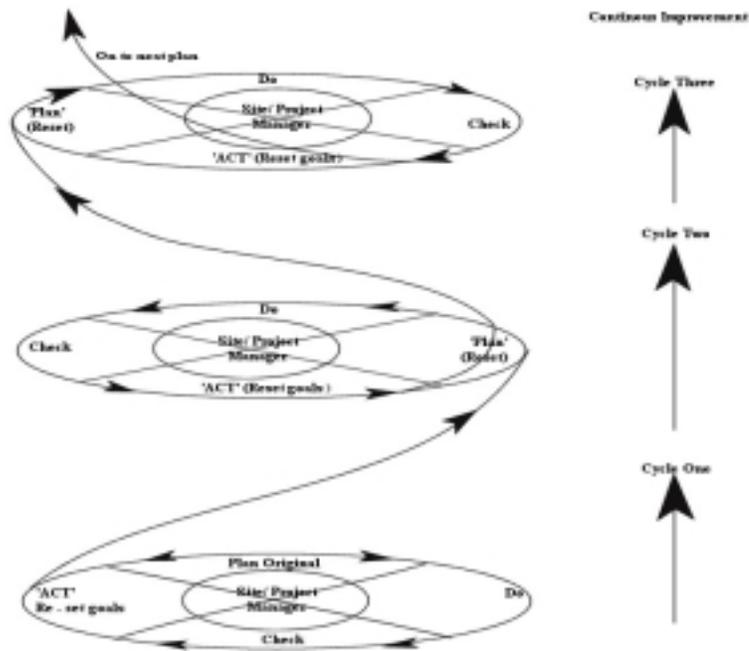
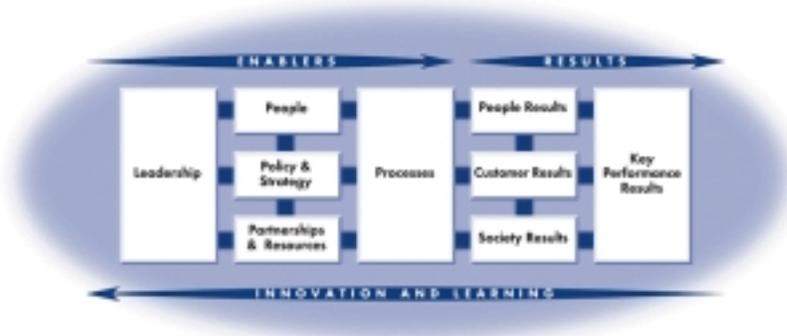


Figure 3 Control Loop

Figure 3 shows clearly how the control loop operates in cycles and that at the end of cycle one the 'Act' leads to the next cycles 'Plan'.

The model can operate at site level for an individual project or just as easily it can be utilised for corporate planning purposes.



(European Foundation for Quality Management, 1999)

Fig. 4: Enhanced EFQM Excellence Model

The EFQM Excellence Model consists of 9 criteria and 32 sub-criteria. The five criteria on the left-hand side of Fig 4 are called “Enablers” and are concerned with how the organisation performs various activities. According to Hillman (1994:29) *‘The enablers are those processes and systems that need to be in place and managed to deliver total quality’*. The four criteria on the right of Fig 4 are concerned with the “Results” the organisation is achieving with respect to different stakeholders. Hillman (1994:29) added that *‘result provide the measure of actual achievement of improvement.’*

Watson (2000:18) stated that *“the EFQM Model provided a truly service focused quality system which had an inbuilt mechanism for the attainment of continued organisational improvement”*. Weile et al. (1997:248) identified that *‘the criteria of the model helped managers to understand what TQM means in relation to managing a company.’*

6. FIELD RESEARCH

Research was conducted upon fifty companies via a structured questionnaire, this was done to test the theoretical advocated advantages of EFQM Excellence Model application. The results of the research show that the majority of sampled companies found that the Model was simple, holistic, dynamic, and flexible. They also agreed that the model could enhance the understanding of TQM among senior management and enable the identification of a company’s strengths and weaknesses. The main reason offered by the sampled companies for applying the EFQM approach to quality was self-assessment. This empowered organisations

to achieve a top quality performance in all areas, in other words, to achieve TQM within their organisation. The research results established that most of the theoretical advantages relating to the benefits derived from the application of the Model could be achieved in practice. The research also established some problems that construction firms could face during implementation and these are addressed below.

7. THE IMPLEMENTATION OF THE EFQM EXCELLENCE MODEL WITHIN THE CONSTRUCTION INDUSTRY

A sample of fifty companies were asked to identify any problems related to the application of the Excellence Model. Information was also gathered from the six structured interviews and a case study carried out with Morrison Plc. The results of this consultation process have been utilised in the production of a generic model designed to assist construction-related organisations in their implementation of the EFQM Model. The model is depicted in Figure 5.

8. SUMMARY

The EFQM Excellence Model is a non-prescriptive framework based on nine criteria – 5 ‘Enablers’ and 4 ‘Results’. It can be used to assess an organisation’s progress towards excellence. The Model provides a non-prescriptive framework to guide a construction company to achieve a top quality performance via the attainment of a sustainable competitive advantage. Within the non-prescriptive framework, certain fundamental concepts underly the Model.

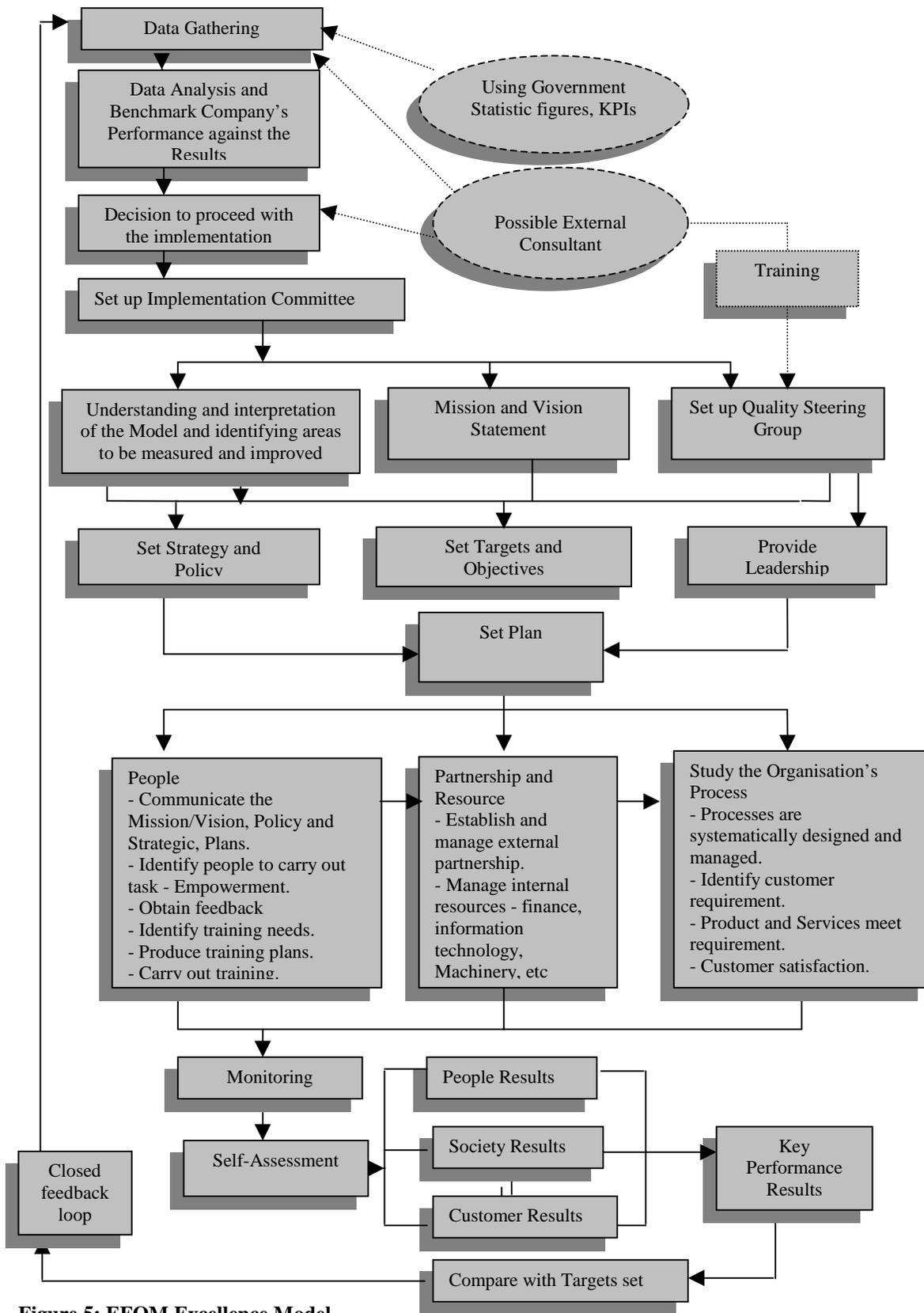


Figure 5: EFQM Excellence Model

9. APPLYING THE MODEL

The following example is based upon a fictitious organisation and is only applied to the 'Leadership' enabler and 'Performance' results criteria (to engage in the whole process would require approximately 60 pages - well beyond the requirements for this publication. Readers are advised to obtain a copy of the full scoring document from EFQM, Brussels, or visit the website address noted in the reference at the end of this paper.

10. LEADERSHIP

How leaders develop and facilitate the achievement of the mission, vision, develop values required for long-term success and implement these via appropriate actions and behaviours, and are personally involved in ensuring that the organisation's management system is developed and implemented.

The above have been used to evaluate the host organisation and a score allocated by (trained) Senior Management. The sub-areas are graded and a final score awarded for example approach in this case is 55% as depicted in Table 1.

In the example, Leadership is awarded a score of 55% for approach, 45% for Deployment, 45% for Assessment and Review and an overall score of 45%. It is the overall score of 45% that is carried forward to the scoring summary sheet. However, before we engage in this process let us apply the scoring system to performance results.

11. PERFORMANCE

11.1 Key Performance Results

What the organisation is achieving in relation to its planned performance.

11.2 Key Performance Indicators

These measures are the operational ones used in order to monitor, understand, predict and improve the organisation's likely key performance outcomes, depending on the purpose and objectives of the organisation and its processes as shown in Table 2.

Elements	Attributes	Scores																						
		0%				25%					50%					75%					100%			
Approach	Sound: - approach has a clear rationale - there are well defined and developed processes - approach focuses on stakeholder needs	No evidence or anecdotal				Same evidence					Evidence					X Clear Evidence					Comprehensive evidence			
	Integrated: - approach supports policy and strategy - approach is linked to other approaches as appropriate	No evidence or anecdotal				Same evidence					X Evidence					Clear evidence					Comprehensive evidence			
			0%	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%	100%	

~~X~~

Elements	Attributes	Scores																						
		0%				25%					50%					75%					100%			
Deployment	Implemented: - approach is implemented	No evidence or anecdotal				X Implemented in about 1/4 of relevant areas										Implemented in about 3/4 of relevant areas					Implemented in all relevant areas			
	Systematic: - approach is deployed in a structured way	No evidence or anecdotal				Same evidence					X Evidence					Clear evidence					Comprehensive evidence			
			0%	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%	100%	

Elements	Attributes	Scores																							
		0%				25%				50%				75%				100%							
Assessment and Review	Measurement - regular measurement of the effectiveness of the approach, deployment is carried out	no evidence or anecdotal				X Same evidence				Evidence				Clear evidence				Comprehensive evidence							
	Learning: - learning activities are used to identify and share best practice and improvement opportunities	no evidence or anecdotal				Same evidence				Evidence				Clear evidence				Comprehensive evidence							
	Improvement: - output from measurement and learning is analysed and used to identify, prioritise, plan and implement improvements	no evidence or anecdotal				Same evidence				Evidence				Clear evidence				Comprehensive evidence							
			0%	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%	100%		
Overall Total			0%	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%	100%		

(Adapted from EFQM Scoring Matrix)

Table 1

Again the above have been used to evaluate the host organisation in order to allocate a score.

Elements	Attributes	Scores																						
		0%				25%					50%					75%					100%			
Results	Trends: <ul style="list-style-type: none"> trends are positive and/or there is sustained good performance Targets: <ul style="list-style-type: none"> targets are achieved targets are appropriate Comparisons: <ul style="list-style-type: none"> comparisons with external organisations takes place and results compare well with industry averages or acknowledged 'best in class' Causes: <ul style="list-style-type: none"> results are caused by approach 	No results or anecdotal information	Positive trends and/or satisfactory performance on some results				Positive trends and/or sustained good performance on many results over the last 3 years					Strongly positive trends and/or sustained excellent performance on most results over at least 3 years					Strongly positive trends and/or sustained excellent performance in all areas over at least 5 years							
		No results or anecdotal information	Favourable and appropriate in some areas				Favourable and appropriate in many areas					Favourable and appropriate in most areas					Excellent and appropriate in most areas							
		No results or anecdotal information	Comparisons in some areas				Favourable in some areas					Favourable in many areas					Excellent in most areas and 'Best in Class' in many areas							
		No results or anecdotal information	Some results				Many results					Most results					All results. Leading position will be maintained							
TOTAL			0%	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%	100%	

Elements	Attributes	Scores																						
		0%				25%					50%					75%					100%			
Results	Scope: <ul style="list-style-type: none"> results address relevant areas 	No results or anecdotal information				Some areas addressed					Many areas address					Most areas addressed					All areas addressed			
		TOTAL			0%	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%

OVERALL TOTAL			0%	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%	100%	
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Applying the same rationale as before we have obtained an overall score of 60% for performance.

It should be noted that when scoring against the criteria, management will find it most useful to consider areas of:

- Strengths: areas of good/best practice that could be disseminated throughout the organisation.
- Areas for improvement so that corrective actions can be employed.
- Evidence which supports the awarded percentage points.

Upon completion of the scoring related to the five enablers and four results (with sub-criteria) the scores are carried forward to the scoring summary sheet.

In the example used the scores for Leadership and Performance along with a completed analysis have been inserted so a final score can be obtained. This is shown in Table 3.

EXAMPLE

Scoring Summary Sheet

1. Enablers Criteria

Criterion Number	1	%	2	%	3	%	4	%	5	%
Sub-criterion	1a	45	2a	50	3a	60	4a	50	5a	45
Sub-criterion	1b	40	2b	50	3b	35	4b	50	5b	60
Sub-criterion	1c	45	2c	40	3c	40	4c	55	5c	60
Sub-criterion	1d	50	2d	30	3d	40	4d	40	5d	50
Sub-criterion			2e	45	3e	50	4e	35	5e	50
Sum		180		215		225		230		265
		÷ 4		÷ 5		÷ 5		÷ 5		÷ 5
Score Awarded		45		43.2		45.2		46		53

Note: The score awarded is the arithmetic average of the % scores for the sub-criterion. If applicants present convincing reasons why one or more parts are not relevant to their organisation it is valid to calculate the average on the number of criterion addressed. To avoid confusion (with a zero score) parts of the criteria accepted as not relevant should be entered 'NR' in the table above.

2. Results Criteria

Criterion Number	6	%	7	%	8	%	9	%				
Sub-criterion	6a	50 x 0.75=	37.5	7a	60 x 0.75=	45	8a	50 x 0.75=	12.5	9a	65 x 0.50=	32.5
Sub-criterion	6b	50 x 0.25=	12.5	7b	50 x 0.25=	12.5	8b	60 x 0.25=	45	9b	55 x 0.50=	27.5
Score awarded			50			57.5			57.5			60

3. Calculation of Total Points

Criterion	Score Awarded	Factor	Points Awarded
1. Leadership	45	x 1.0	45
2. Policy & Strategy	43.2	x 0.8	34.6
3. People	45.2	x 0.9	40.7
4. Partnerships and Resources	46	x 0.9	41.4
5. Processes	53	x 1.4	74.2
6. Customer Results	50	x 2.0	100.0
7. People Results	57.5	x 0.9	51.8
8. Society Results	57.5	x 0.6	34.5
9. Key Performance Results	60	x 1.5*	90.0
Total Points Awarded			512.2

*** Note these are the factors from the model**

- Enter the score awarded to each criterion (of both sections 1 and 2 above)
- Multiply each score by the appropriate factor to give points awarded
- Add points awarded to each criterion to give total points awarded for applications

In order to put the score of 512.2 points in the context of best practice it should be noted that the EFQM will conduct a site visit on an organisation obtaining over 500 points. Also the EFQM award for excellence is usually awarded to organisations obtaining a score between 750 and 850 points. Therefore, a score of 512.2 points is a very respectable score.

The scoring summary sheet provides a useful overall picture of the organisation. However, the author has developed the data further to provide more detailed information for the host company. It would be very useful for a company to know the profile related to: approach; deployment; assessment and review; criteria; results.

This would allow the organisation to focus its efforts for improvement.

An example of the above approach follows. Note, average scores have been calculated for the noted areas and 'Results' have been divided into 'Results' and 'Scope', thus providing more detail enabling more effective corrective actions.

For ease of presentation, this data can be represented on a RADAR Pentagonal Profile developed by the author. See Figure 6.

Again this is presented in the example.

The pictorial representation of the RADAR Pentagonal Profile enables instantaneous understanding of the current state of the company. It is also a very quick and accurate method of benchmarking the host organisation. Senior Managers must remember that the self evaluation process is designed to develop continuous improvement. Therefore, the benchmarking activity must be conducted on a regular basis so that corrective actions can be evaluated.

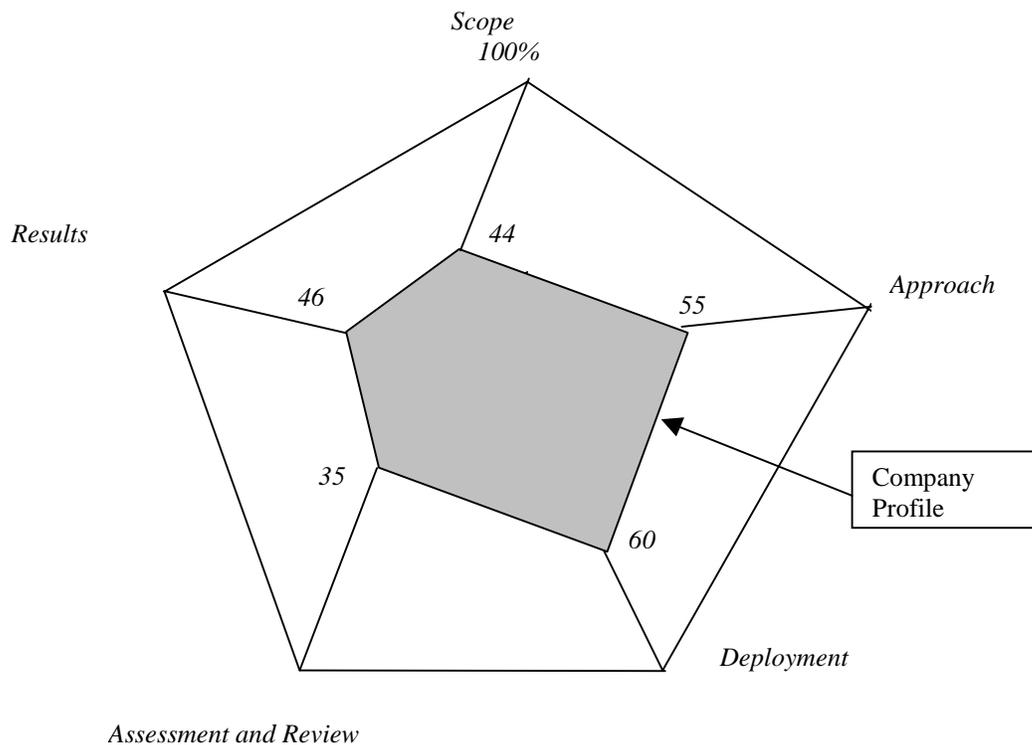


Figure 6 RADAR Pentagonal Profile

Readers are asked to see EFQM's RADAR Model incorporated in their Assessment Scoring Handbook

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12. CONCLUSIONS

The EFQM Excellence Model provides a valuable framework for addressing the key operational activities of construction organisations. It is useful because it enables a link to be made between people, organisational objectives and improvement processes, all encompassed under the umbrella of continued improvement.

The scoring methodology is simple to apply but senior managers are advised to obtain some formal training before applying the model.

The model when implemented does provide detailed information for employing constant and consistent benchmarking activities.

Only a limited amount of detail can be provided within a paper such as this, therefore, managers are requested to make specific reference to the EFQM Assessors Scorebook. This document provides further information explaining details about the sub-assessment criteria such as 'Trends'. This material can be obtained from the reference noted at the end of this paper. The RADAR Pentagonal Profile has been endorsed by EFQM.

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