

**EVALUATION OF BUSINESS MANAGEMENT IN
THE CERAMIC CLUSTER BASED ON THE EFQM
MODEL**

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1. INTRODUCTION

The objective of the present work is to **analyse business management** in the companies of the ceramic cluster in order to identify their strong points and areas for improvement, as well as presenting alternatives that enable improving this management and achieving greater business competitiveness.

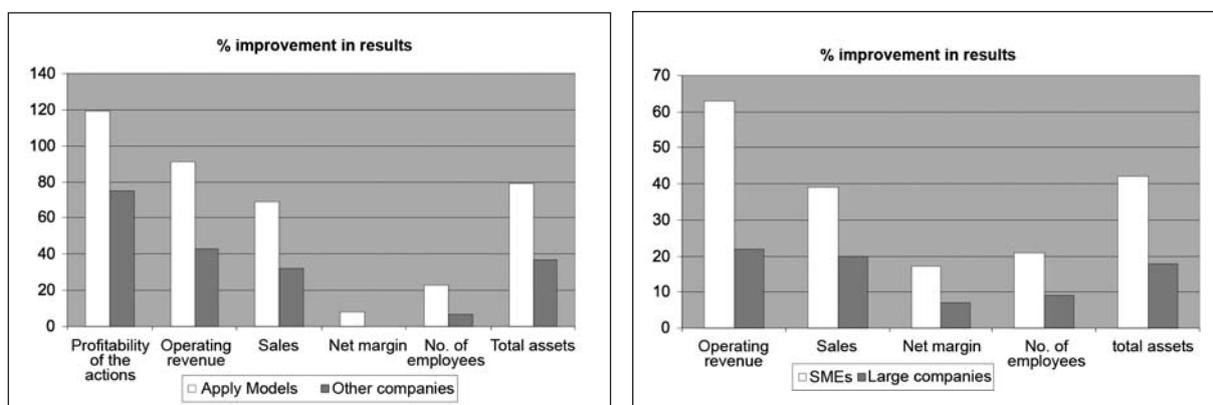
The study of the whole evolution of business management models shows *ongoing improvement* to be one of the basic principles on which the so-called Total Quality Business Management Model (TQM) is grounded. However, independently of the stage of development in which Business management is found in an organisation, it is necessary for the decisions be taken based on objective information and known situations, which makes EVALUATION essential for understanding the starting situation and the evolution of the results.

This evaluation can be carried out for various reasons:

- Performed by the client with a view to acquiring confidence in the compliance of requirements by the supplier (Second party evaluation)
- Performed by an outside organisation to determine the degree of conformity (Third party evaluation)
- Performed internally by express desire of the Management for assessing the situation of the Organisation in relation to the *implemented management model*. Here, with some nuances, is where the **self-assessment** concept makes its appearance.

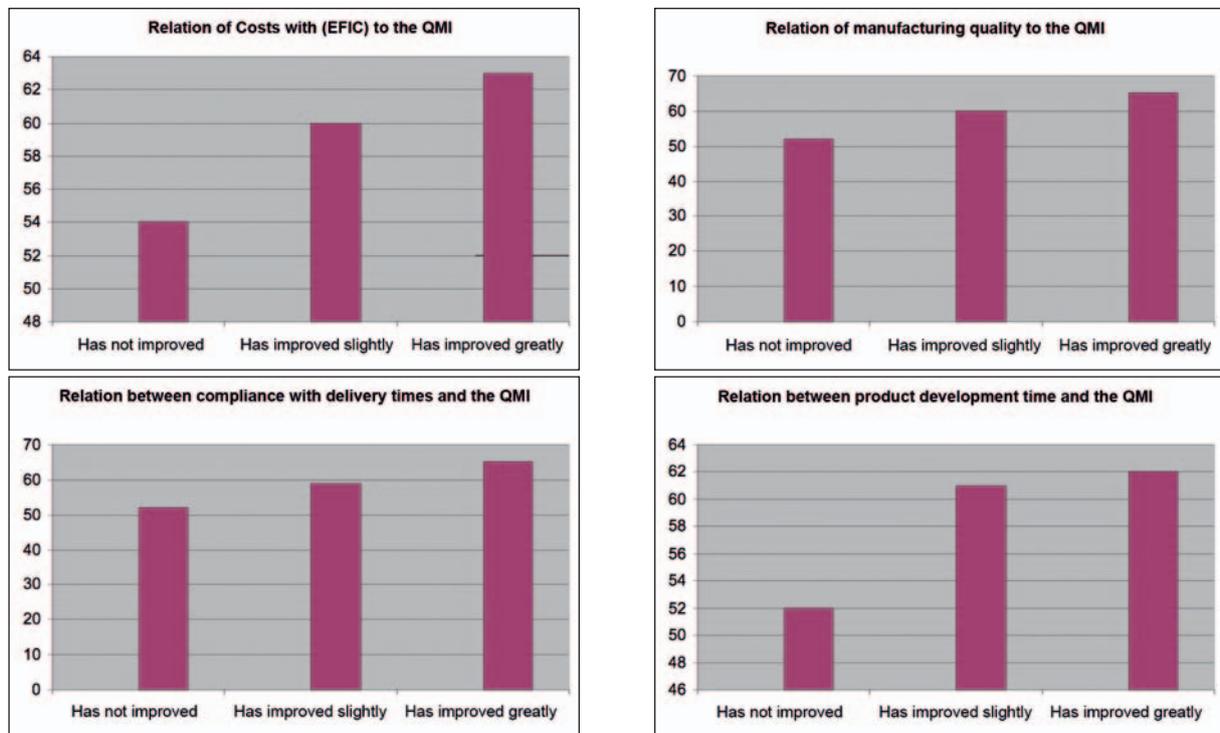
In order to help companies implement the Total Quality Management model, the European Foundation for Quality Management EFQM has established a frame of reference known as the European Model for Total Quality Management. Even though every organisation is unique, this model offers a general structure of criteria, which can be widely applied to any organisation or part of an organisation.

The references^[1] cite the correlation between the application of management models based on business excellence and economic results, for large, but particularly also for small and medium-sized companies (SMEs):



Figures 1 and 2. Relation between the business results of companies that apply excellence models and those that do not, as well as, in these, between large companies and SMEs.^[1]

The relations have also been published^[2] between a Quality Management Index (compendium of good practice in excellence criteria such as: Design and development of new products, production processes, relations with suppliers, relations with clients, management of human resources) and business results in a series of factors related to product quality, service, costs and development times, etc., evidencing the positive correlation for the companies that apply these management models.



Figures 3, 4, 5 and 6. Relation between the Quality Management Index and Cost, manufacturing quality, compliance with delivery time and development time of new products.^[2]

No study evaluating business management based on EFQM criteria has been published in the ceramic cluster.

The present study^[3] presents the results of evaluations performed in organisations from different branches of activity in ceramic cluster:

- Ceramic floor and wall tile companies (20 companies in all)
- Glaze, frit and colour companies (5 companies in all)
- Companies making complementary decorative pieces (4 companies in all)
- Raw materials and spray-dried powder producers (5 companies in all)
- Facilities and machinery maintenance companies (4 companies in all)
- Makers of auxiliary chemical products (2 companies in all)

In all the cases an evaluation process has been conducted, at the companies, following the model proposed by the EFQM:

- Analysis of each criterion, of the total of 9 criteria featured by the model:

- Transverse work groups with people from the Organisation
- Comparison of reality with respect to the assigned Model criterion. For this the line has been followed of analysing the comparison following the subcriteria of each criterion.
- Score using the tables proposed by the Model
- The scores are allocated based on:
 - Strong Points and Areas for Improvement
 - Consensus meeting by the own group
- Data fusion and consensus:
 - Cross of self-assessments between the different groups.
 - Possibility of reviewing the scores:
 - Explanations are requested and given of the scores
 - It is possible to modify the score of the Strong Points and Areas for Improvement
 - Final consensus:
 - Definitive Strong Points (evidence) and definitive Areas for Improvement (evidence)
 - Definitive score

The results obtained provide the following output:

- Total score
- Score for each criterion

The results are presented:

- Of the total cluster
- Segmented
- Comparing 2 periods 2002-2003 and 2004-2005
- Compared with "the best"
- Compared with the EFQM data bank
- Compared with the Quality Management Club data bank
- Compared with the results obtained by companies that have won the European Award for Quality

The data obtained allow drawing a series of conclusions in the form of Strong Points and Areas for Improvement, on each aspect of management, while simultaneously putting forward specific improvement proposals.

The work represents an X-ray of the situation of the cluster as far as business management is concerned.

2. THE EFQM MODEL OF EXCELLENCE

The characteristics of competitive environments in which business organisations move in most industrial sectors have changed substantially in recent years, and SMEs are no exception. The globalisation of industries and organisations, the presence of new trade powers, the greater sophistication of clients, deregularisation, technological advances, etc., are some of the causes that force the business organisations to develop their activities in much more competitive and dynamic environments than in the past. What once assured competitive success is nowadays quite insufficient, not only for competing successfully but even for survival.

In order to adapt to these new realities organisations commonly considered as models of excellence have revised profoundly their management practices. At the present time, it is not enough to have a **Management Model** that responds adequately to the requirements of the environment at a given moment.

To make this adaptation to the environment possible, transforming organisations have traditionally equipped themselves with four complementary high-priority qualities:

- In the first place, putting in place systems that provide them with *point knowledge of their changing environment*.
- After obtaining the information, these companies are able to *understand it and learn from it*, in order thus to be able to respond creatively to their environment, advance to its evolution and influence it.
- Subsequently, with a view to adapting this response to the changing needs of the environment, the transforming organisations are sufficiently agile to modify their products and services, *adapting these constantly* to the new demands of the environment.

Finally, these organisations *continuously evaluate* their performance in order, thus, to discover potential opportunities and know which improvement actions are most advisable to implement. In short, they not only try to learn but also to accelerate the learning process, with a view to improving quickly.

Figure 7 illustrates the eight fundamental concepts of Excellence^[4]:

- Results orientation
- Customer focus
- Leadership and constancy of purpose
- Management by processes and facts
- People development and involvement
- Continuous learning, innovation and improvement
- Partnership development
- Social responsibility

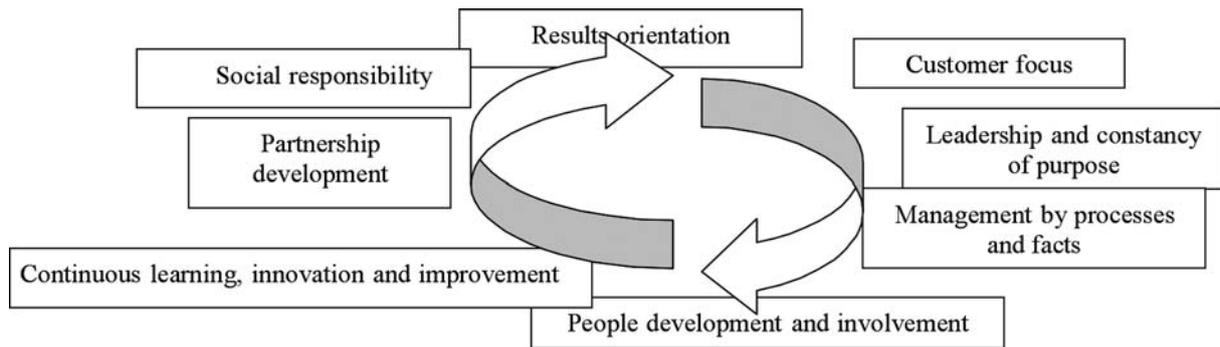


Figure 7. Fundamental concepts of the EFQM Model of Excellence. - Source: Quality Management Club.

These eight concepts are embodied in the nine criteria of the Model:

Actors:	Leadership Policy and Strategy Management of People Resources Processes	Results:	Results in people Results in customers Results in Society Key Business Results
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Let us review, albeit briefly, the eight fundamental concepts of excellence:

- Results orientation:
 - Excellence is achieving results that delight all the organisation's stakeholders (customers, suppliers, employees and shareholders, society), both present and future.
- Customer focus:
 - Within the stakeholders, the Customer will be the focus for value creation.
- Leadership and constancy of purpose:
 - Excellence is visionary leadership that serves as inspiration for the rest of the organisation. Furthermore, this leadership must be consistent with the own organisation and set targets.
- Management by Processes and facts:
 - Excellence is managing the organisation through a set of interdependent and interrelated systems, processes and facts. This is achieved by developing a scheme of processes simultaneously with management by objective facts.
- People development and involvement:
 - The excellent organisation maximises the contribution of the employees by means of their development and involvement.
- Continuous Learning, Innovation and Improvement:
 - Effecting change, overcoming stalemate situations, by learning and innovation will be the basis for the ongoing improvement process that distinguishes excellent companies.

- Partnership development:
 - Excellent companies develop and maintain value-adding partnerships. These partnerships will be with other organisations, clients, society, suppliers and shall be based on clearly identified mutual benefit.
- Social Responsibility:
 - An excellent organisation shall exceed the minimum regulatory framework in which it operates and strive to understand and respond to the expectations of its stakeholders in society. It shall have a public and transparent commitment.

These fundamental concepts of excellence pervade the entire EFQM Model of Excellence (Figure 8).

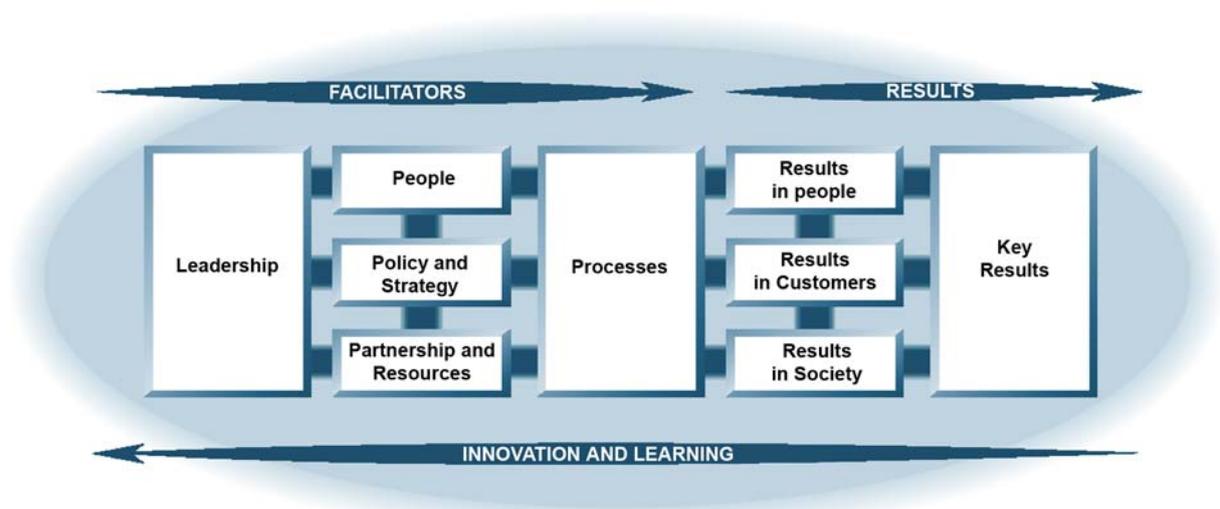


Figure 8. EFQM Model of Excellence^[5]

Each one of these 9 criteria is subdivided in subcriteria in order to go more deeply into the degree of appreciation of the organisation conduct.

The Model, in its self-assessment approach, involves a profound systematic analysis of the organisation with regard to the standards established by the EFQM, i.e. with respect to the ideal of the Excellent company (understood as the one that achieves its targets and keeps improving these continuously in time).

In order to perform this self-assessment the EFQM proposes a scoring system for both Actors (Facilitators and Results):

- FACILITATORS. Scores are allocated according to the following concepts:
 - Approach:
 - This refers to the concept at issue (the subcriterion analysed), to its assumption by the organisation. It refers to what the organisation plans to do and the reasons it has defined for this.
 - This refers to:

- * *How solidly* the concept is *grounded* in the organisation and its relation to the policy and strategy while also having a clear focus regarding the needs of all the stakeholders.
- * *How integrated* the approach or concept is in each and every one of the organisation's activities. Its degree of integration in policy and strategy.
- Unfolding:
 - This refers to the practical application of the approach:
 - * *In the whole organisation*
 - * *in a systematic form*
- Evaluation and Review:
 - This refers to the degree of analysis that the organisation performs of the correlation between the results, the approach and its unfolding.
 - It involves:
 - * *Measuring the results* of the approach in a periodic and systematic way
 - * *Using the results to identify areas for improvement*
 - * *Planning and implementing these improvements*
- RESULTS:
 - They refer to the achievements of the organisation in this subcriterion
 - It refers to:
 - Absolute value
 - Tendencies
 - Degree of attainment of the targets set
 - The field of application within the organisation and the scope of activities
 - Comparison with the results of other organisations, whether they are competing, best in their field, best in any field.

Finally, since the EFQM model weights each of its criteria, as a function of its contribution to excellence, a final score is allocated.

- Leadership: value x 1.0 (weighting)
- Policy and Strategy: value x 0.8 (")
- People: value x 0.9 (")
- Partnership and Resources: value x 0.9 (")
- Processes: value x 1.4 (")
- Results in customers: value x 2.0 (")

- Results in people:	value x 0.9 ("
- Results in Society:	value x 0.6 ("
- Key Results :	value x 1.5 ()
- FINAL SCORE	SUMA

The reference values, i.e. the maximum attainable ones, are:

- Leadership:	100
- Policy and strategy:	80
- People:	90
- Partnerships and Resources:	90
- Processes:	140
- Subtotal Facilitators:	500
- Results in customers:	200
- Results in people:	90
- Results in society:	60
- Key business results:	150
- Subtotal Results:	500
- MAXIMUM TOTAL FOR MODEL	1000

3. EXPERIMENTAL. TECHNICAL FILE

- Ceramic floor and wall tile companies (20 companies in all)
- Glaze, frit and colour companies (5)
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- Makers of auxiliary chemical products (2)

An evaluation process has been conducted in every case, by work at the company, following the model proposed by the EFQM:

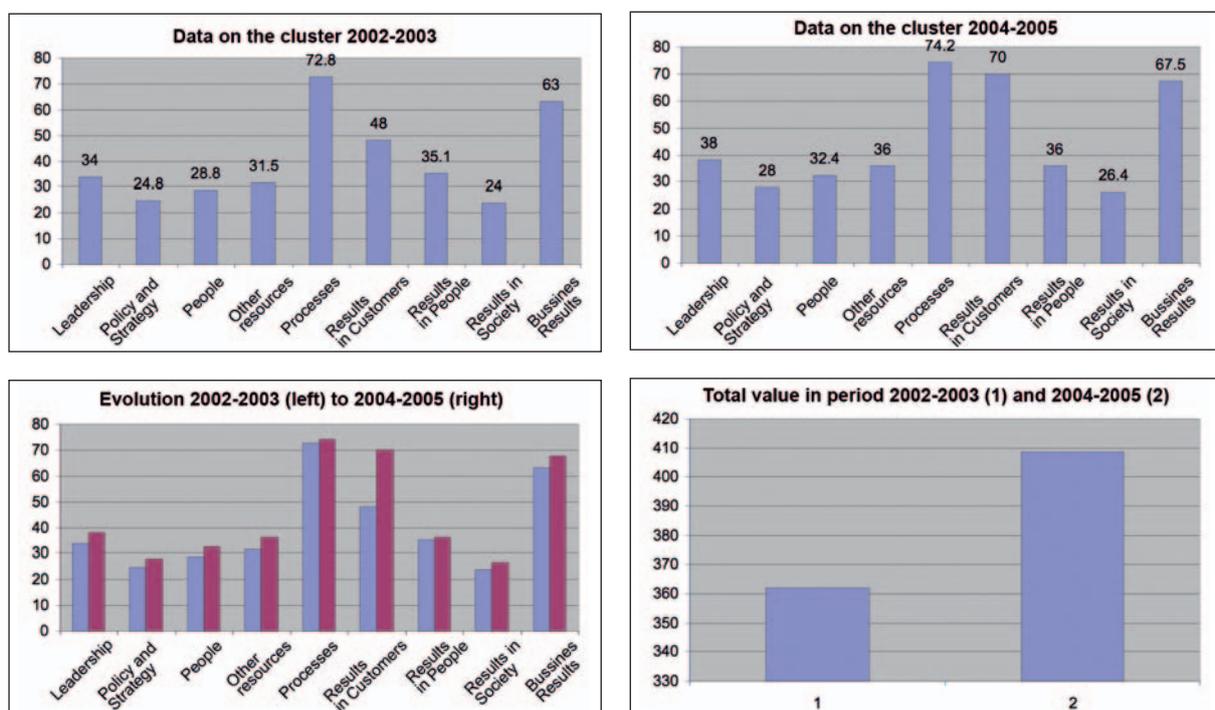
- Analysis of each criterion, of the total of 9 criteria featured by the model:
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 - Final consensus:
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Work performed directly with the companies during two periods: 2002-2003 and 2004-2005, since with this, in addition, the evolution in some of the criteria can be evaluated.

4. RESULTS AND DISCUSSION

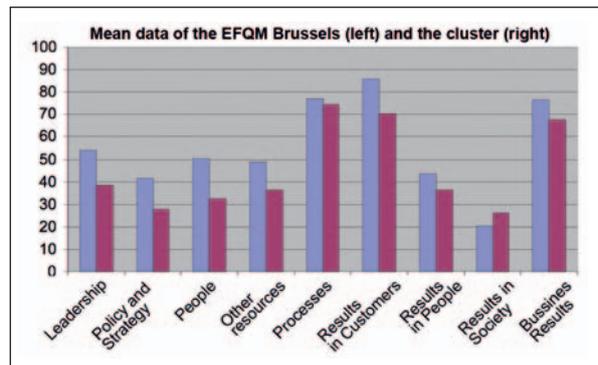
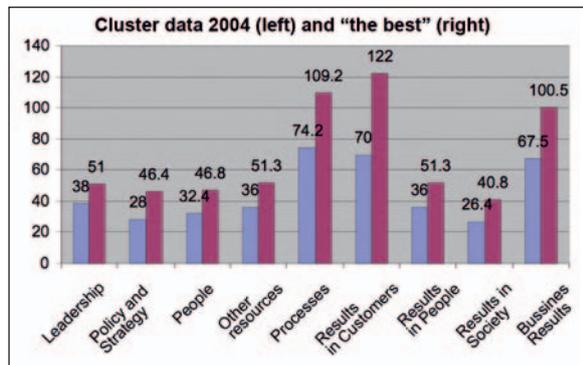
Application of the methodology indicated in the experimental part on the companies detailed in the file yielded the following results (see maximum attainable scores indicated on previous page):



Figures 9, 10, 11 and 12. Values of each criterion in both periods, comparison of criteria and comparison of total score

The foregoing figures show the evolution in the cluster in these years, comparing both the criteria and the total. It goes from a total value of 362 points to one of 409 in the last phase. This improvement has taken place in all the criteria, although the section on Results in Customers (no. 6) displays the greatest increase.

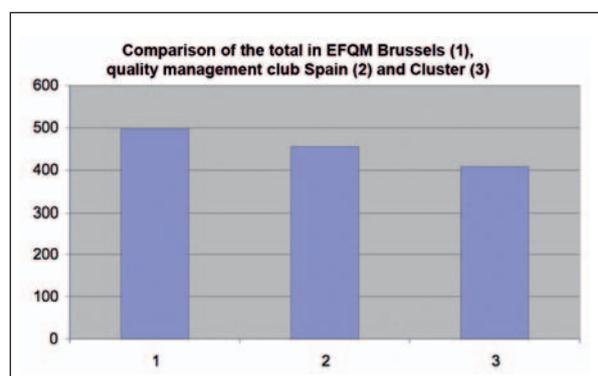
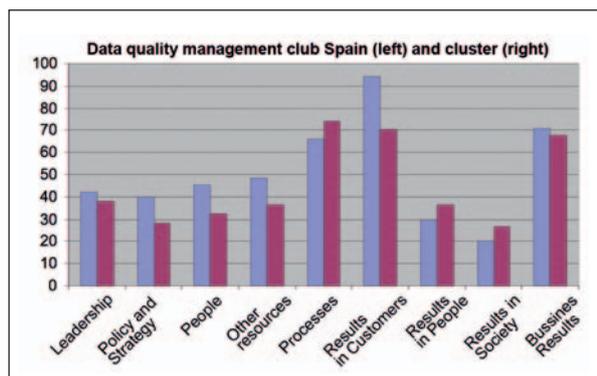
These values, although positive and with a favourable evolution, need to be compared with those of other sectors, other companies, and other data sets (benchmarking) to provide a full view of their relative significance.



Figures 13 and 14. Comparison between the cluster mean scores and "the best" of the cluster, and comparison between the mean scores of the data published by the EFQM Brussels and those of the cluster

It can be observed that "the best" of the cluster display very high values in comparison with the mean scores in all the criteria, although it is especially important in Results in Customers, Processes and Key Results, which, in addition, are the criteria most valued by the Model.

The data from the EFQM Brussels are better than the mean scores of the cluster, except in the case of Results in Society. On the other hand, if we compare the "best of the cluster" with the mean data from the EFQM Brussels, that the latter are observed to perform better.

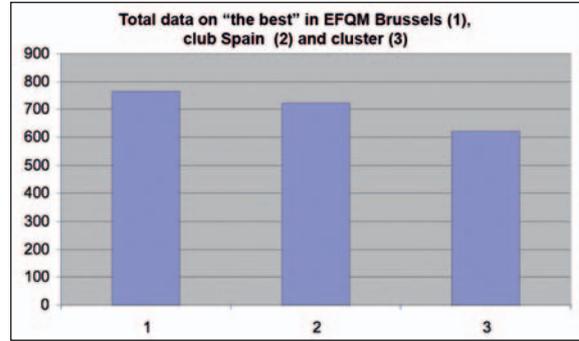
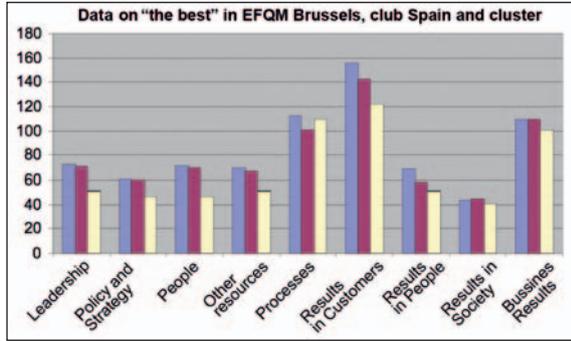


Figures 15 and 16. Comparison of the series of the quality management club Spain and the cluster, and comparison of the three series

In the comparison the quality management club Spain also does better except in the case of Results in Society. The comparison of the total score of the three series involves maximum differences of 90 points with regard to EFQM Brussels and 50 points with regard to the data published by the quality management club Spain. These differences, apparently low, are important since improvements in the whole score

involve various important improvements in all the management criteria. It suffices to observe that the important improvements in the period 2002-2005 in the cluster, have only involved an increase of 40 points.

However, it is important to note that “the cluster best” are on the levels of the mean scores of the other published series. At this point, it becomes necessary to compare “the best”.

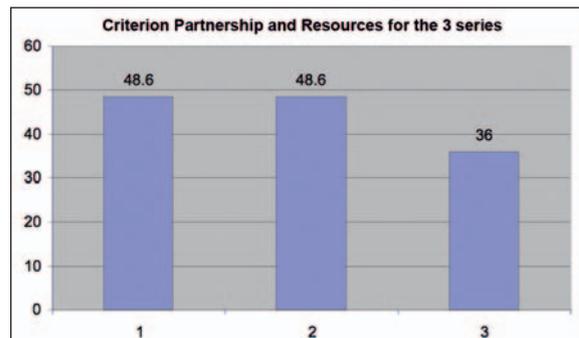
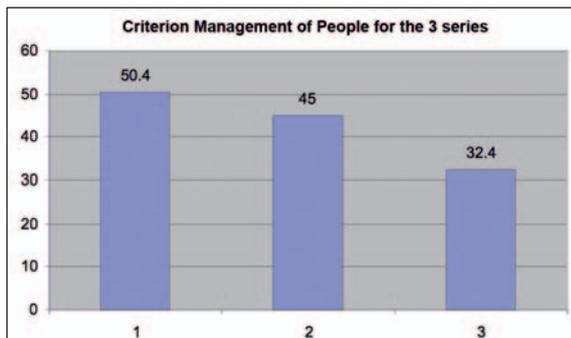
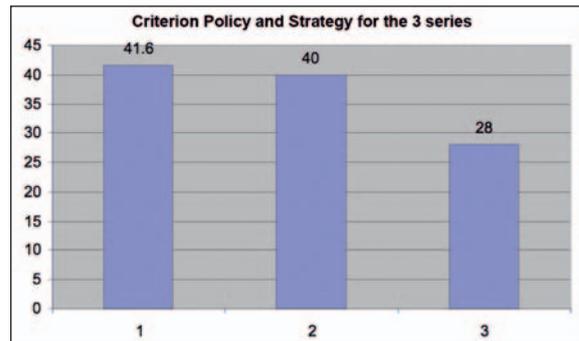
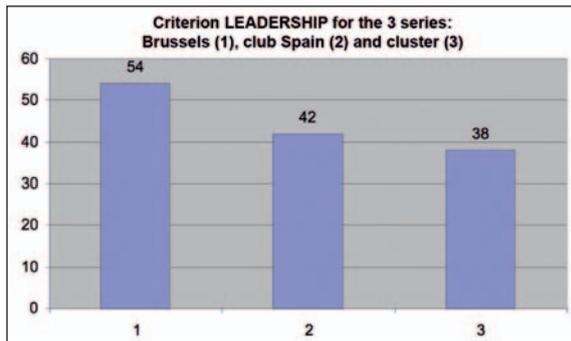


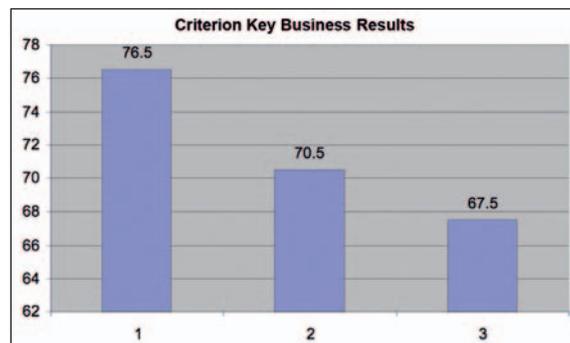
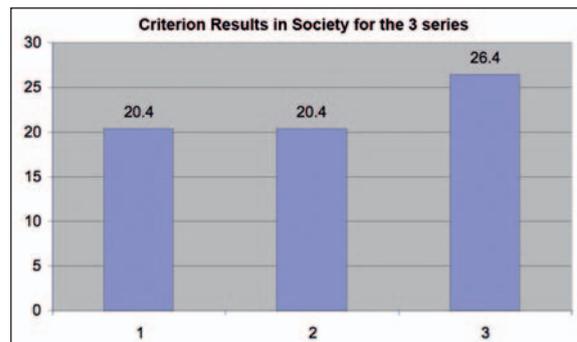
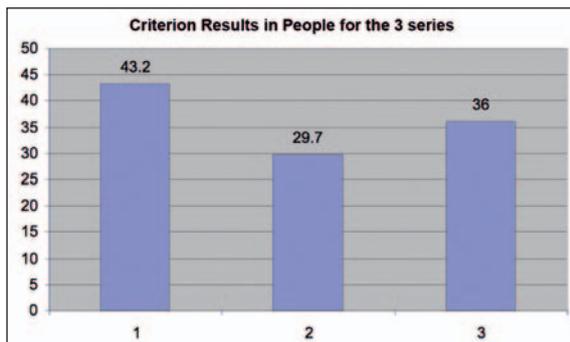
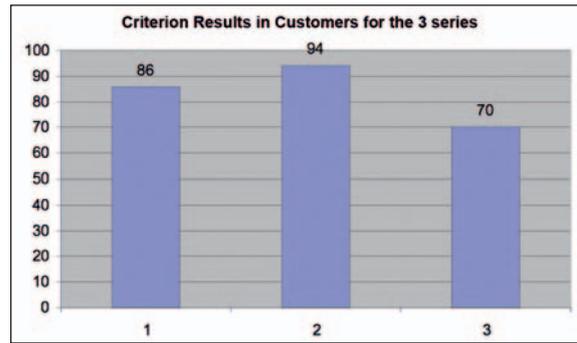
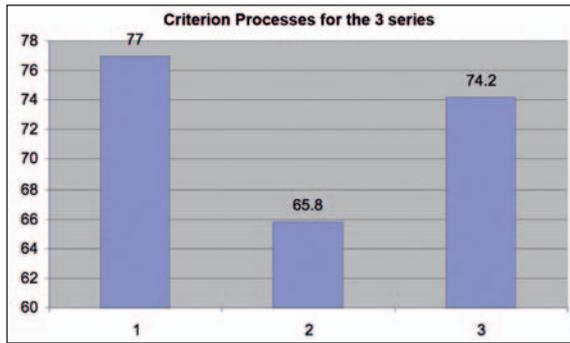
Figures 17 and 18. Comparison of “the best” of the cluster series data with “the best” of the other databases, by individual criteria and all together

In this comparison we can see that the differences have increased to almost 150 points with regard to one series and to 100 with regard to the other. Therefore, while “the best” of the cluster are in line with the mean of the other series, “the best” of the other series distance themselves from the data of the cluster and “the best” of the cluster.

At this point it should be noted that the data from both the EFQM Brussels and club Spain include winners of European Awards and Spanish Awards, which means that companies are involved in the comparison with a very high degree of excellence.

If we now focus on particular criteria we can see the differences between the three series:





Figures 19, 20, 21, 22, 23, 24, 25, 26 and 27. Comparison of the three series (1: Brussels; 2: club Spain; 3 cluster) for each criterion of the model.

These data show that the criteria regarding Management of People, Policy and Strategy, and Leadership (between Facilitators) display a more unfavourable position for the Cluster, with differences of 18, 16 and 12 points which, in the scoring system of the model, are significant differences. In the section on Facilitators, to be noted is the higher score for the cluster in the criterion Processes, which beats that of the club Spain database and is on the same level as that of the EFQM Brussels, which stresses the industrial character of the cluster and the traditionally better management of such processes in these companies.

In relation to the Facilitators Results, the differences are especially unfavourable for the cluster companies in the Key Business Results Criterion. It is important to note that this criterion does not measure the absolute values of business; rather, it measures how information is obtained and managed for the implementation of improvement plans. A criterion is therefore involved that must feed Policy and Strategy, as well as make Leadership effective. Therefore, it is the circle Leadership, Policy and Strategy, Key Business Results and the ensuing implementation of improvement plans, which is the main facet to be improved.

Other Facilitators display better values for the cluster in the comparison, such as the case of Results in Society, taking into account the great involvement of the companies in their surrounding environment, the necessary corrective measures as a result of their concentration, etc.

5. CONCLUSIONS

From the data obtained and the analysis made, the following conclusions can be drawn:

- On the obtained values:
 - Ceramic Cluster:
 - The total value is lower than in the quality management club and EFQM Brussels series
 - The values of the different criteria are generally lower
 - Higher values are found in:
 - * Processes
 - * Results in People
 - It is higher in Results in Society. This is intrinsically related to the own character of the Cluster, the associationism, involvement in Society and corrective actions on environmental impacts
 - It is important to note that the total value of the Facilitators (criteria from 1 to 5) and of Results (criteria from 6 to 9) are very well balanced, i.e. "it does and measures" in comparable form
 - The foregoing is also entirely applicable to "the best", both in absolute value and in comparisons with the previous series
- On the Areas for Improvement to be introduced in business management in the ceramic cluster, those have been identified that would enable improving the score of the Criteria with a greater difference in score in regard to the reference series:
 - In the section on Leadership:
 - Clearly defining the Mission and Vision of the company and its Differential Elements
 - Stimulating participation and the assumption of responsibilities
 - Greater involvement of the leaders in the improvement activities and achieving coordinated involvement
 - Greater capacity for self-criticism
 - The foregoing must all be based on a clearly defined and structured organisation, well understood by all

- Improving the vertical and horizontal communication, while also clearly defining communication and information channels
- In the section on Policy and Strategy:
 - Clearly defining company Policy and Strategy and making these known to the organisation
 - Lack of greater knowledge on internal and external expectations, evolution, indicators, etc. in order to define better and simultaneously review Policy and Strategy
 - Improving the internal management with a view to anticipating the events by reviewing Policy and Strategy
 - Defining operating Targets in all the areas aligned with Policy and Strategy, which involve Plans associated for their attainment and have monitoring indicators
 - Once the foregoing have been fulfilled, the Targets should be made known, with responsibilities, and be managed by the organisation
- In the section on People:
 - Implementing authentic human resources departments
 - Determining and analysing the organisation by competences and defining action plans in consequence
 - Improving teamwork, by clear assumption of responsibilities and improving the leadership of the managers
 - As in the case of leadership, defining the communication and information channels
- In the section on Partnerships and other resources:
 - Better management of the suppliers, abandoning the policy of a relation of constant demands on suppliers
 - Knowing the suppliers and jointly defining the competitive advantages that the collaboration involves
 - Drastically improving the management of facilities maintenance, from the point of view of cost and efficiency
 - Introducing management in R&D+i and Product Development activities. Addressing this as a specific process that requires management by means of projects
 - Introducing information and knowledge management, avoiding their compartmentalisation and departmentalisation
- In the section on Processes:
 - Starting a culture of Process-based management
 - Starting a culture of Project-based management

- Greater emphasis on Foresight
- Managing innovation for Process improvement. More attention to Processes and not exclusively to Products
- Special emphasis on maintenance
- Innovation by knowledge of customer expectations and demands
- In the section of results on Customers:
 - Having real and structured sources of customer expectations and demands
 - Systematically measuring the degree of satisfaction of these expectations and demands
 - Starting up action plans
 - Having Targets and systematic reports of the degree of attainment
- In the section of results in People:
 - Having real and structured sources of the expectations and demands of the people in the organisation
 - Systematically measuring the degree of satisfaction of these expectations and demands
 - Starting up action plans
 - Having Targets and systematic reports of the degree of attainment
- In the section on results in Society:
 - Having real and structured sources of the expectations and demands of Society
 - Systematically measuring the degree of satisfaction of these expectations and demands
 - Better organising the outward transmission of the image
- In the section on Key Business Results:
 - Having Targets
 - Making monitoring reports of the degree of target attainment.
- A series of identified Strong Points forms the basis for all the above:
 - Clear identification of the leaders and leader accessibility
 - Clear example of dedication by the leaders to the business activities
 - The leaders themselves are in a process of change
 - Direct contact with the environment, permanent alerting on changes, associationism and transverse flow of knowledge and information
 - Disposition to continuity of the companies and the leaders

- Disposition to increasing use of indicators for management
- Existence of the advantages proper to the “cluster” character
- Systematic improvement of the qualification of the human resources
- Good “country image” and good “sector image”
- Prestigious and recognised product and service
- Close relation to the social environment
- Etc.

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