

# KEY SUCCESS FACTORS FOR QUALITY MANAGEMENT IMPLEMENTATION

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## **Abstract**

*Purpose:* This paper aims to identify the crucial factors that induce successfully a quality management process implementation. Particularly, it intends to examine how total quality management (TQM) can be fully achieved by implementing in organisations specific items, frameworks or factors, duly integrated into a procedural sequence.

*Methodology/Approach:* The paper adopts an explanatory longitudinal case study, using a multiple-case research design (Yin, 2009) to support the investigation. The study deals with the implementation of a quality management programme (QMP), linked to organizational change and delivering excellence, in several Government agencies supervised by a specific Ministry in Portugal. The case study comprises three different field sites where the results and outcomes of the QMP implementation were differently observed. The QMP was basically translated into TQM (encompassing the common assessment framework - CAF, ISOs, or quality manuals). Collection of evidence comprised the conduct of 64 interviews (in three phases, between January 2010 and May 2014), and data and written documentation analysis. The study was built on quality management literature, highlighting the contributions of Oakland (2004, 2011) and Oakland and Marosszeky (2006).

*Findings:* The QMP implementation in the field sites showed different levels in outcomes and results. It was also found that the main items to deliver excellence, identified in the 'Oakland TQM model' (the 4 Ps and the 4 Cs), explain mostly the different perceptions of results and outcomes. Other items/factors were identified that can explain those differences, concretely power and collective involvement.

*Research implications:* Borrowing from the 'Oakland TQM model', the paper enriches the literature on quality management by confirming the Oakland items as key factors to explain the achievement of quality management and TQM, particularly in organisations. The investigation also identified other factors that can help to explain the successful quality management implementation, namely power and collective involvement. Consequently, a refined 'Oakland TQM model' (Keating, 1995; Vaivio, 2007) is proposed, and a visualization of the interaction of the items/factors in an input-output perspective. These implications are important for academics and practitioners.

*Originality/Value of the paper:* This study helps to synthesize the key factors to successful implementation of quality management in organisations and to frame and link those factors to existing literature. Particularly, the success factors identified in the case study imply the proposal of a refined 'Oakland TQM model'. Furthermore, the model is translated into an input-output interaction of those factors, representing the practical implementation process that was found in the study. Moreover, the paper analyses the implementation of quality management in three government agencies, constituting three field sites subject to the same environmental pressures. These field sites support a longitudinal comparative and explanatory case study, which has received so far little attention from literature on quality management.

**Key-words:** Quality management; Total quality management; Quality management models; Explanatory case study

**Paper type:** Case study

## 1. Introduction

Total Quality Management (TQM) has been, since the 1970s, a subject that has received great attention from researchers. The academic and scientific community produced hundreds of studies and papers highlighting the advantages and the critical successful factors for TQM implementation, but also the disadvantages and the failures sometimes found in practice. Moreover, TQM has been linked to business excellence and positive outcomes in organisations. Indeed, only when TQM has a favourable impact on outcomes (encompassing financial and non-financial performance), it is possible to state that the implementation is successful. Concretely, there is empirical evidence that financial performance increases when companies have implemented TQM in a more successful process than competitors (Erikson & Hansson, 2003; see also Dahlgaard *et al.*, 2013; Duh *et al.*, 2012, who show evidence of positive relationship between TQM implementation and organisations' performance, financial or non-financial).

Research on TQM and business excellence has followed three different streams: i) contributions from quality leaders; ii) formal evaluation models; iii) empirical research (Tari, 2005). Regarding this research, the ultimate goal is the visualization of TQM as a contributory managerial system to improve efficiency and better results in organisations. The measurement of these outcomes and results is crucial to identify successful systems and frameworks implementation in practice. The way performance can be measured by organisations and the study of the improvement of the management systems to assure a reliable measurement is a permanent challenge for academics and practitioners (Fitzgerald, 2007). It is clear, today, that financial performance does not capture all the outcomes and results of organisations (e.g. customer, quality, or innovation demands marked by technological and organizational changes in the environment) (Johnson and Kaplan, 1991).

The 1970s and 1980s in Japan, and the 1990s in Western countries reveal the 'golden eras' of TQM. However, since the 2000s, strong criticism based on failures and unsuccessful TQM implementation processes has been highlighted (Dahlgaard-Park, 2008, 2011; Dayton, 2003). But some researchers believe that the quality movement can still remain as a useful and beneficial framework in many organisations and countries (Dahlgaard-Park, 1999, 2011), and "realize that it is too early to declare the death of TQM" (Dahlgaard-Park, 2011, p. 511).

Consequently, some innovative managerial systems have been developed in the last two or three decades highlighting, beyond financial performance, image, quality management and/or clients/customers (internal and external) satisfaction. Examples of these new managerial systems are strategic management accounting, management control, management by objectives, activity-based costing, tableau de bord, TQM and balanced scorecard (Hopper *et al.*, 2007; see also Dahlgaard *et al.*, 2013, who mention other 'new approaches', such as BEM, business process reengineering, enterprise resource planning or organisational change management). These systems have been adopted in private and public sectors.

This paper regards an investigation on the implementation of a quality management programme (QMP) launched, as a challenge, by the Ministry of Social Security and Labour (MSSL), in 2004, in seventeen government agencies supervised by this ministry. This QMP followed the guidelines of the common assessment framework (CAF), a specific framework developed in the European Union (EU) in 2000 aiming at improving the management of public services in the European countries, where it was widely

implemented (EIPA). CAF is a framework that translated into the public sector the principles of the European Foundation for Quality Management (EFQM) model, whose concepts are closely linked to business excellence and to TQM. The investigation is based on a case study as a research method. A longitudinal explanatory study (encompassing the period 2004-2012) was developed in three of the government agencies where the QMP was implemented. These three field sites received EFQM awards, but comprising different categories. The research purpose is to clearly identify the key success factors that are the basis of a successful TQM implementation process. The Oakland 4Ps and 4Cs model (Oakland, 2004, 2011; Oakland and Marosszeky, 2006) is the main framework supporting the investigation.

The paper is structured as follows. Following introduction, a literature review section on quality management is presented. The third section describes the methodology adopted in the research, including a brief description of the case field. In section four, the empirical study is developed and analysed. Finally, in section five, discussion of the findings and the main conclusions are presented.

## 2. Literature review

The quality definition is, today, clearly consistent with an approach which visualizes quality as a global ‘ultimate outcome’ associated with the overall functioning of the organization (Cameron and Sine, 1999). Rad (2006, p. 607) describes TQM, in his turn, “as the development of an organisational culture, which is defined by, and supports the constant attainment of customer satisfaction through an integrated system of techniques and tools”; see also York and Miree, 2004, who add the need to focus resources on increasing the quality of products/services, and improving the efficiency of processes). TQM translates the culture of an organization committed to total customer satisfaction through continuous improvement, which must be duly aligned with a strategic plan (Rad, 2006; see also Dahlgaard and Dahlgaard-Park, 2006). The cultural aspects of an organization are crucial and could influence and have impact on a TQM initiative (Green, 2012; see also Kanji and Yui, 1997, who introduce the concept of ‘total quality culture’ - concerning quality, culture can be influenced by the environment, by strategy, by the management system and by people; Kujala and Lilirank, 2004). Concluding, “it is impossible to attain business excellence without the right organisational culture” (Dahlgaard *et al.*, 2013, p. 527).

Consequently, key success themes for TQM implementation are found to be service quality measurement and customer satisfaction (Lo and Chai, 2012; Modell, 2009). Moreover, to achieve business excellence, organizations must show leadership and top management sponsorship, and follow four governing TQM principles: i) delighting the customer: ii) people-based management; iii) continuous improvement; iv) management by fact (Kanji, 1998a).

The EFQM business excellence model (BEM) has also been used as a supporting framework, being guided to learning, creativity and innovation and is based on nine criteria, formed by two groups<sup>1</sup>. The first group corresponds to enablers and includes leadership, people, strategy, partnership & resources, and processes, products & services. Enablers cover what an organisation does and how it does it. They represent

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<sup>1</sup> The 2012 version is presented

resources. The second group refers to results and includes people results, customer results, society results, and business results. Results criteria cover what an organisation achieves. They represent outcomes. If the right enablers are effectively and duly implemented, then organisations will achieve the expected results (EFQM; see also Dahlgaard-Park, 2008; Doeleman *et al.*, 2014). Indeed, BEM and quality management “are used by organisations to assess and improve their work practices and performance” (Mohammad *et al.*, 2011, p. 1213).

The EFQM BEM also implies recognition/awards to obtain (the Committed to excellence – C2E; the Recognized for excellence – R4E; and the Excellence award) (EIPA). However, organisations want to achieve this prize/recognition in the medium/long term, preferring, “in first place, internal impact with the implementation of good management practices and continuous improvement in the whole organisation” (Araújo and Sampaio, 2014, p. 431). However, the award winning organisations outperform the non-award winning; this financial competitive advantage that the award winning organisations have comparing with the others, is sustained, as an average, for a period of three years after having won a first award (Boulter *et al.*, 2013). The EFQM model implementation also found some difficulties and failures, including the cases when self-assessment is conducted for the first time or when the level achieved is the C2E (Araújo and Sampaio, 2014).

To assume the effectiveness and reliability of the tool, Dahlgaard *et al.* (2013) proposed the business excellence framework (BEF) if companies face difficulties on implementing BEM, when intervening practical problems occur (too-sophisticated assessment criteria, cumbersome procedures or lack of focus).

CAF was based on TQM and adapted these criteria to the public sector<sup>2</sup>. Particularly, in the enablers group, ‘strategy and planning’ substitute ‘strategy’, and ‘processes’ substitute ‘processes, products & services’. In the results group, ‘citizen/customer oriented results’ substitute ‘customer results’, ‘social responsibility results’ substitute ‘society results’, and ‘key performance results’ substitute ‘business results’ (EIPA).

The Oakland model (Oakland, 2004, 2011; Oakland and Marosszeky, 2006) synthesizes the critical factors for a successful TQM implementation process, previously identified in this literature review. Broadly encompassing the model “the effectiveness of an organization depends on the extent to which people perform their roles and move towards the common goals and objectives” (Oakland, 2011, p. 517). To achieve excellence, TQM is the vehicle and the model characterized by the four Ps (Planning, Performance, Processes, People) and by the four Cs (Customers, Commitment, Culture and Communication) makes available a suitable framework (Oakland, 2004, 2011). Figure 1 presents a diagram of the model.

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<sup>2</sup> The 2013 version is presented.



Figure 1 – Oakland TQM model (Oakland, 2011, p. 529)

Analysing the model, “quality management, to be successful, has to impact on the organisation’s performance, which should be measured on a ‘balanced scorecard’, including the results from the customer. This can be achieved through good planning and improvements in processes through involvement of the people. These 4Ps combine with the 4Cs – customer, culture, communication and commitment to provide a new model for quality management” (Oakland, 2004, cover). In spite of mentioning the 4Cs (Oakland, 2004, 2011), the diagram of the model only includes 3Cs (customer is missing), even in the paper published in 2011, where the 4Cs are clearly analysed and developed. Indeed, Oakland (2011) states that the “fourth C (customer) resides in ‘performance’” (Oakland, 2011, p. 529).

Consequently, “*planning, people and processes* are the keys to delivering quality products and services to customers and generally improving overall *performance*. These four Ps form a structure of ‘hard management necessities’ for a new simple TQM model; however, we must not underestimate the importance of the three Cs – *culture, communication* and *commitment*, providing the glue or ‘soft outcomes’ of the model, which will take organisations successfully” (Oakland and Marosszeky, 2006, pp. 29, 31). The relevance of people and their motivation led to the concept of human capital (Zink, 2011), which is an intangible asset of organizations.

Oakland (2011) also states the importance of collective involvement: “the content of the policy on quality should be made known to all employees; in order to involve everyone in the organisation of quality improvement, management will enable all employees to participate in the preparation, implementation and evaluation of improvement activities” (Oakland, 2011, p. 520). Quality management became the framework for all people involved in an organisation, both vertically (top-down and bottom-up) and horizontally (involving all related departments and also external organisations (Dahlgaard-Park, 1999; see also Dahlgaard-Park, 2008, 2011; Dayton, 2003). “In the TQM era quality became, for the first time, everybody’s job and everybody’s responsibility” (Dahlgaard-

Park, 1999, p. S477). Tari (2005) highlights the importance of human resource management as a way to assure; i) involvement of all members in the organisation; ii) training; iii) work teams; iv) communication systems.

Highlighting the importance of customer's satisfaction and a clear customer focus on a TQM approach, which must be designed into the whole system, Kanji (1990, p. 5; see also Kanji, 2001) explicitly mentions that "quality is to satisfy customer's requirements continually; total quality is to achieve quality at low cost; and total quality management is to obtain total quality by involving everyone's daily commitment". Kujala and Lilirank (2004, p.51) concretely state that "the customer is the most important stakeholder of the organisation, and the customer defines quality" (see also Lau and Anderson, 1998, who mention that the ultimate goal of TQM is customer satisfaction).

Furthermore, beyond these critical success factors, "political, psychological, and other behaviour resistances which cause high failure rates in relationship with implementation of quality systems may partly be connected to the inconsistencies between leadership intention and the practices (processes)" (Dahlgaard-Park, 2008, p. 114). Consequently, power and political factors have to be recognised and be treated within the frameworks of quality management (Dahlgaard-Park, 2008; see also Steingard and Fitzgibbons, 1993, p. 31, who mention that "individuals internalise the network of TQM power relationships").

Partially in line with Oakland, Dahlgaard-Park and Dahlgaard (2007) propose the '4Pmodel' for building organisational excellence, based on; i) people; ii) partnership; iii) processes; and iv) products (see also Dahlgaard *et al.*, 2011, who propose the '4P Excellence Model', where leadership encompasses the 4Ps). Confirming the previous statements, Dahlgaard and Dahlgaard-Park (2006) mention that the human factor and the right company culture are the key factors to successfully design a quality strategy, enhancing the importance of everybody's participation.

To achieve business excellence when applying a TQM system or quality awards, the measurement of the outcomes and results obtained is very important to assess the performance of organisations. Thus, the main key indicators must be clearly identified. Kanji (1998b; 2001) suggests a 'business excellence index', based on three main indicators - customers', employees' and shareholders' satisfaction. These three main indicators follow the so-called stakeholder perspective, where non-financial performance measures are added to supplement traditional financial measures. Concretely, in the TQM era, the two crucial measurements are customer satisfaction ('delighting the customer') and employee satisfaction (Dahlgaard-Park, 2009). Some researchers mention that the link between TQM implementation and financial performance is indirect, after direct relationship with non-financial measures (e.g. generation and retention of customers implies increase of market share and of sales, and higher revenues; product design and process efficiency imply costs reducing) (York and Miree, 2004). Indeed, in a public sector environment, "increasing citizens' and customers' demands for higher quality services, the need to cut public expenditures and, above all, the importance of bringing Public Administration and citizens closer, call for innovative systems of measuring (and reporting) performance" (Sá and Kanji, 2003, p. 503).

This approach means monitoring the continuous improvement demanded by today's competitive environment and considering the impact of customer satisfaction and good employee relations, beyond the shareholder perspective (Fitzgerald, 2007). Confirming

this approach, Kumar *et al.* (2009, p. 613) mention that “performance measures and performance measurement systems are less financially and more process-oriented in a TQM environment, and that the mechanisms used to design new performance measures and systems by TQM adopters are based on employee training and employee involvement”.

Today, in the public sector, performance measures already include non-financial measures, such as employee satisfaction or customer service measures, highlighting effectiveness (meeting customer requirements) and efficiency (economical use of resources) (McAdam and Saulters, 2000). Therefore, are usually found quality measurement tools that combine with financial performance measures.

The application of TQM principles to public administrations was investigated by some researchers. These principles followed basically EFQM and CAF guidelines in order to improve efficiency and effectiveness in public organizations. In Sweden, a specific model inspired by TQM practices was implemented in a government agency. This model may be characterized as a customer and process oriented model, where a citizen perspective was emphasized, as an alternative to performance management based on ‘managing for results’ (Modell *et al.*, 2007).

In Portugal, a similar quality model programme was launched by the Ministry of Social Security and Labour (MSSL). Its source was the CAF. Beyond highlighting TQM, this programme has as main objectives: i) the continuous improvement of public services; ii) the focus on the client; iii) strong leadership and collaborators involvement; iv) process orientation; and v) performance evaluation and measurement (Ministry of Social Security and Labour, 2004).

### **3. Methodology**

#### **3.1. The field site**

The MSSL is one of the ministries in Portugal where CAF was launched as a challenge. Other ministries and government organisations also developed programmes to implement the framework, particularly the Ministry of Finance, the Ministry of Education, the Ministry of Internal Affairs, the Ministry of Public Administration Reform, the Autonomous Regions of Azores and Madeira, and some municipalities. However, the MSSL was the one that went further on sponsoring and implementing the tool. Seventeen government agencies supervised by the ministry implemented a quality management programme, based on CAF, and three of them won EFQM awards. To undertake the research, an in-depth longitudinal explanatory case study was conducted between January 2010 and May 2014, encompassing those three field sites. To analyse TQM implementation, considering that it is a long process, longitudinal research designs in a comparative setting inside the same group are more suitable (Chaudary *et al.*, 2014; Doeleman *et al.*, 2014).

The mission of Social Security is linked to the assurance of the citizens’ basic human rights, including equal opportunities, and also to promote welfare and social cohesion. The MSSL has, as core activities associated with its vision, to promote the sustainability of social security, to support families and birth rate, and to prevent poverty and strengthen social inclusion. At the time the events began to take place (implementation of the QMP, based on CAF, in 2004), there were twenty-two government agencies



under the supervision of the ministry. However, the QMP launched by the ministry was only applied to seventeen public institutes.

Some key objectives on the social security system have been identified to support the mission and the policies of the ministry: i) to assure the realization of the human right to social security; ii) to promote the sustained improvement of the levels of social protection; iii) to promote the effectiveness of the system and the efficiency of its management. This system manages an annual budget of around 36,300 million euro (2012), and the institutes supervised by the ministry intend to be leaders in the quality of public service (external or internal customers/citizens). They also collect debts from debtors to the social security system, sometimes in a coercive way.

The seventeen government agencies that implemented the QMP in 2004 were the most representatives of the mission and of the policies of the ministry at the time, and presented similarities of structure and management; the main difference regards dimension (number of collaborators). All these government agencies implemented the first phase of the programme – the self-assessment equivalent to CAF self-assessment. But generally these institutes have not gone further, with the exception of half a dozen. Indeed, the change that occurred in the government in 2005 and the appointment of a new minister were considered the main reasons for the disruption of the programme. Three of those institutes (let us call them government agencies A, B and C<sup>3</sup>) continued later the development of the programme, including the CAF implementation process. These three government agencies constitute the field sites that will be analyzed in this investigation, in a longitudinal comparative and explanatory study.

### **3.2. Research methods and methodology**

Qualitative research was used to support this research. Concretely, a longitudinal and explanatory case study (Ryan *et al.* 2002; Yin, 2009) was carried out in three field sites under the supervision of the MSSL to fully understand the way the QMP was implemented, and why the results and outcomes were different. The investigation comprised the period 2004-2012. These three sites received different categories of EFQM and presented also different performance outcomes. Thus, the research questions of this investigation are: i) which are the key success factors that influence and have impact on a successful TQM process implementation? ii) can the Oakland TQM model explain the different outcomes and results found in field sites subject to the same trends and challenges?

Beyond being classified mainly as an explanatory study (strongly supported in existing theory), the study hereby presented follows also an illustrative research strategy (illustrating a specific theory) (Keating, 1995; Vaivio, 2007). Indeed, considering the opportunity to refine theories, existing theories must be deeply analysed and validated to assure their quality of explanation. By studying illustrative case studies, beyond the explanation of phenomena, the adopted theory should be developed based on empirical evidence (Vaivio, 2007).

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<sup>3</sup> The names are disguised because one of the organisations did not allow the real identification.

Research has followed the main research steps/stages to conduct a case study (Ryan *et al.*, 2002; Yin, 2009). First, a research design was developed. Research design is “the logic that links the data to be collected (and the conclusion to be drawn) to the initial questions of the study” (Yin, 2009, p. 24). The collection of evidence (second stage) comprised interviews to collaborators of the organization and also to collaborators of the environmental organizations (basically, EU and MSSSL), and also analysis of data and written documentation (among others, annual financial reports, annual activity plans and budgets, quality manuals, intranet newsletters, strategic plans and performance measurement systems, mission and vision - all from the three field sites -, the site of MSSSL, CAF documentation, EFQM documentation). The research was carried out between January 2010 and May 2014, and comprised three phases. The first phase, which related to the pilot case study, spanned from January to May 2010 and comprised twenty-four interviews, with a length of 34 hours. This first phase took place basically in organisation A, where a specific case study was meanwhile conducted, regarding a process of organisational change based on a new management model and on the successful integration between TQM and a balanced scorecard (Pimentel and Major, 2014). Interviewees were mostly managers and technicians from organisation A.

The second phase, started in October 2010 and concluded in February 2012, sought to obtain confirmatory evidence from organization A and from key people outside the organization. Particularly, the evidence associated with the role of EFQM and CAF in the development of the QMP in the ministry was analysed. Top managers, former and existing members of the board of directors of organization A, the former minister of MSSSL and collaborators of EU were interviewed. Specific questions concerning the environmental pressures and the characteristics of the change process were posed. Twenty-three interviews were conducted - 29 hours and 20 minutes.

In the third phase, interviews comprised basically organisations B and C. Some representatives of the MSSSL were also interviewed. One more interview was conducted with a manager of organisation A. Seventeen interviews were conducted between December 2013 and May 2014, lasting 17 hours and 20 minutes.

At the end of the investigation, 64 interviews were conducted, lasting 80 hours and 40 minutes. Some interviewees were interviewed more than once, when necessary to remove doubts, to make triangulation, or to explore new approaches and/or perspectives. In each one of the three field sites, the key managers who participated in the QMP (and CAF) process implementation were selected to fill a questionnaire aiming at classifying (in a scale from 0 to 100) the impact of each one of the factors included in the Oakland TQM model (the four Ps and four Cs) in the CAF/TQM process implementation – see Table IV.

81% of interviews were tape-recorded and transcribed. Interviews were triangulated with notes taken during and after the interviews. The interviews were semi-structured, and open-ended discussion was usually carried out. Beyond direct questions (identified in a guide), non-direct questions were usually posed to explore specific reasoning. Evidence was assessed before analyzed, following Yin’s (2009) recommendation. Informal calls were also made to remove additional doubts.

#### **4. The empirical study**

The QMP conceived in the MSSSL had, as main objective, the implementation of CAF principles and the improvement of public management in the government agencies

supervised by the Ministry. In 2004, the agencies applied, generally, the CAF self-assessment tool, corresponding to the first stage of the process. Later, in 2005, after the resignation of the minister, the process slowed down and stopped in many organisations. The ministry itself did not feel motivated to move to the second stage, what should imply the presentation of the diagnosis and of a plan of improvement corrective actions, encompassed in a global cultural change (Ministry of Social Security and Labour, 2004).

However, organisations A, B and C continued the programme, implementing CAF/TQM and obtaining EFQM quality awards. The implementation of the tool and the development of other management frameworks were different over time in these organisations. In spite of the fact that these tools implied the capacity to respond to regulatory demands, the results and outcomes at the end of the period under analysis (2012) were clearly different. For example, government agency A implemented CAF in 2004/2005, fully answering the regulatory demands and proceeded with a new management model and a balanced scorecard in 2007/2008 (including full monitoring of actions and objectives), and with a three year strategic plan in 2010. Moreover, C2E was awarded in 2006 and R4E was awarded twice (in 2010 with a grade of 550 points and in 2012 with a grade of 580 points). The institute was also certified with ISO 9001, in 2007. Significant behavioural, organisational and cultural changes occurred in this government agency (Pimentel and Major, 2014). The key performance indicators, following the statements of literature, are presented in Table I. The main indicators are EFQM awards, customers'/citizens' satisfaction, employees' satisfaction, costs cut (visualized in reduction of personnel) (Boulter *et al.*, 2013; Dahlgaard-Park, 2009; Kanji, 1998b, 2001; Sá and Kanji, 2003; York and Miree, 2004), and response of CAF to regulatory demands. The last column presents a grade from 1 to 5 (Likert scale), which takes into account the perception of the interviewees facing the objectives, and the perception of the researchers facing a comparison between the three field sites.

Key indicators for organisation A				
	2006	2008	2012	Grade (1 to 5)
EFQM awards	-	C2E	R4E five star (550 points) (2010) R4E five star (580 points)	4
Customers'/citizens' satisfaction	64%	75%	82%	4
Employees' satisfaction	69%	74%	77%	4
Global reduction in personnel	- 15.6%			3
CAF responds to regulatory demands?	Yes	Yes	Yes	5
Average	-	-	-	4

Table I – Key indicators for Organisation A

Regarding organisation B, CAF began its implementation in 2004 and was fully implemented in 2006, responding partially to regulatory demands. Concerning EFQM awards, this organisation obtained the C2E in 2007 and, later, the R4E in 2009 (417 points) and in 2012 (418 points). A new management model and a balanced scorecard were implemented, but the balanced scorecard only included operational indicators, and monitoring was not fully implemented. The key performance indicators, following the same statements of literature (as mentioned in Table I), are presented in Table II.

Key indicators for organisation B				
	2006	2008	2012	Grade (1 to 5)
EFQM awards	-	C2E (2007)	R4E four star (417 points) (2009) R4E four star (418 points)	3
Customers'/citizens' satisfaction	-	72%	70%	3
Employees' satisfaction	-	68%	83%	4
Global reduction in personnel	- 7.8%			2
CAF responds to regulatory demands?	-	No	Yes	4
<b>Average</b>	-	-	-	3.2

Table II – Key indicators for Organisation B

Government agency C tried to implement CAF in 2004, but the process failed. CAF was accurately implemented in 2012. At the same time, in 2010, a process of management by objectives was launched and objectives and plans were established, in a way that the organisation began to respond partially to regulatory demands in 2012. Monitoring of objectives and actions also began to be slowly applied in the organization. C2E was an EFQM award received in 2012 (288 points), as can be seen in Table III, where the key indicators of organisation C are presented.

Key indicators for organisation C				
	2006	2008	2012	Grade (1 to 5)
EFQM awards	-	-	C2E (288 points)	2
Customers'/citizens' satisfaction	-	68% (2009)	70%	3
Employees' satisfaction	-	45.2%	-	1
Global reduction in personnel	- 17.8%			4
CAF responds to regulatory demands?	-	No	Yes (partially)	2
<b>Average</b>	-	-	-	2.4

Table III – Key indicators for Organisation C

Moreover, as previously mentioned, in each one of the three field sites, the key managers who participated in the QMP (and CAF/TQM) process implementation filled a questionnaire identifying the impact of each one of the factors included in the Oakland TQM model in the CAF/TQM process implementation. Those results are presented in Table IV, and correspond to the average of the answers collected.

Impact of Oakland factors on TQM implementation			
Factors (0-100)	A (4 answers)	B (5 answers)	C (4 answers)
Planning	87	72	67
Performance	83	63	73
Processes	96	76	67
People	89	75	67
Customers	90	72	70
Commitment	95	77	70
Culture	91	78	67
Communication	88	72	70
<b>Average</b>	90	73	69

Table IV – Impact of Oakland factors on TQM implementation

As can be seen, organisation A presents an average of 90 points, which means that the 4 Ps and the 4 Cs of Oakland TQM model were applied at a very high level in the CAF/TQM process implementation. Organisations B and C present lower results (73 and 69 points respectively), but all the Oakland model factors are also clearly identified by the respondents, which means they were also crucial to explain the CAF/TQM process implementation.

## 5. Discussion and conclusions

The case study and the study of the three field sites, analysed in section four, show enough evidence to answer accurately the research questions previously posed. Research question number two regards the Oakland TQM model as a suitable model to explain the different outcomes visualized in the three field sites. To answer the question, Table V presents a synthetic classification of the impact factors (as an average) of Oakland model in organisations A, B and C and connects that classification using a numerical order with the classification of the grades of each organisation regarding outcomes and performance (as an average).

Impact factors vs. Key indicators			
	A	B	C
1. Oakland impact factors	90	73	69
2. Key indicators (1-5)	4	3.2	2.4
Numerical order (1/2)	1st/1st	2nd/2nd	3rd/3rd

Table V – Impact factors vs. Key indicators

Analysing Table V, it is possible to conclude that the organisations which use in a more intensive way the Oakland model impact factors are the ones that present higher key performance indicators. The first classified on using the Oakland impact factors is the one which presents better performance indicators; the second is the second classified regarding key performance indicators, the third is the third classified regarding the same performance indicators. Thus, research question number two can be answered: the Oakland TQM model is an adequate model to explain the different outcomes and results

found in different field sites subject to the same trends and challenges. This is a very important contribution to this investigation, for academics and practitioners.

To answer research question number one (which are the key success factors that influence and have impact on a successful TQM process implementation?), a more detailed analysis must be conducted to interpret the results found in organisation A. Indeed, the Oakland impact factors obtained a very high classification, and the key indicators also show a very high performance. Looking at the transcription of the interviews, very important statements were identified. For example, some managers of organisation A have stated:

‘All collaborators are involved in the quality management process and know their contribution to the global objectives of the organisation; the management model involves all collaborators’ (debt management head, March 2010).

‘An objective was clearly settled: the involvement of all collaborators with an ideal of public service; all collaborators accede online to results and outcomes, which contributes to their involvement, motivation and satisfaction; At a certain point, the process evolved to a collective process of change’ (board support head, March 2011).

‘When the main actor of the CAF/TQM process implementation and of the change process appears in meetings involving all managers, they know that she represents the board of directors and has enough power to influence actions and decisions; she was also decisive to overcome resistance’ (board support middle manager, November 2012).

‘I recognize that the accomplishment of the mission to implement a CAF/TQM approach and a new management model implied that I had significant power in the organisation’ (board support head, July 2012).

Concluding, in organisation A there is evidence that two additional important critical success factors were identified (collective involvement, as a ‘soft outcome’, and power, as a ‘hard management necessity’) which contribute to explain the high performance indicators (Dahlgaard-Park, 1999; Oakland, 2011; Tari, 2005, for collective involvement; Dahlgaard-Park, 2008; Steingard and Fitzgibbons, 1993, for power). Figure 2 presents a refined Oakland TQM model (Keating, 1995; Vaivio, 2007), which clearly links Customer (the most important performance outcome) to Performance, and clearly points the action of the other factors to Performance and Customer (using arrows, as can be seen in EFQM model). Moreover, the model includes now Collective involvement and Power, and it can also be called the 5Ps and 5Cs model. This conclusion answers research question number one and is also a crucial contribution to this research, for academics and practitioners.

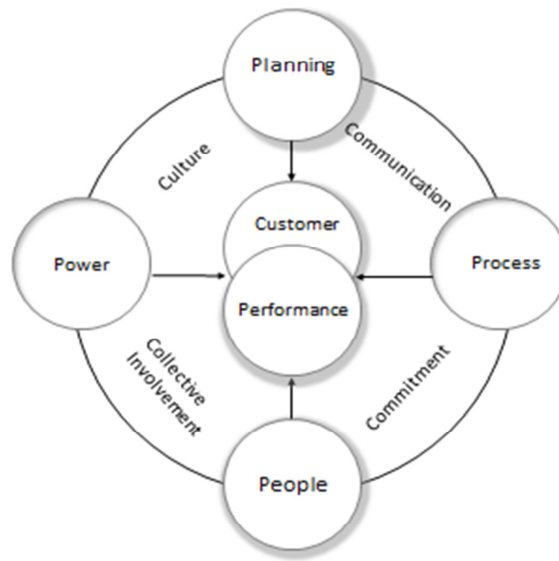


Figure 2 – Oakland TQM refined model

But this refined model must be translated into a framework that can establish distinct categories of factors for effective implementation (see Figure 3). First, the outputs are clearly Performance and Customers (Dahlgaard-Park, 2009; Kujala and Lilirank, 2004), and these outputs correspond to the outcomes and results. Second, People, Culture and Processes are intangible assets of an organization:

‘In our process of developing a new quality management policy and implementing a new management model, we must not ignore the importance of our “assets”, the people, the processes and the organisational culture; these factors are the success key of the organisation’ (top manager of organisation A, November 2011).

Finally, Planning, Power, Commitment, Collective involvement and Communication are conversion factors, the ones that convert (transform) the assets into results/outcomes through the action of managers. This diagram helps to look at quality management as an input/output sequence, clearly visualizing the assets and the actions of managers as a way to achieve better outcomes and results. In line with Dahlgaard-Park (2011), this approach can help to understand how TQM can be more active in a global management model, contributing to state that “it is too early to declare the death of TQM” (Dahlgaard-Park, 2011, p. 511).



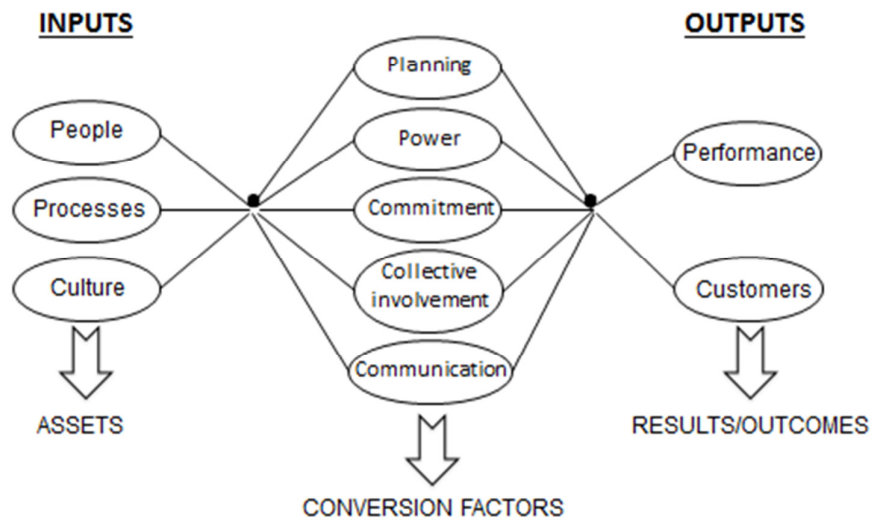


Figure 3 – Oakland impact factors in an input/output perspective

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EFQM, EFQM model, [www.efqm.org/efqm-model](http://www.efqm.org/efqm-model) (consulted in 2014.02.13).

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