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# Performance measurement system implementation in a Portuguese IT services SME

*Pedro Alexandre Ferreira da Cunha*

**Dissertação de Mestrado**

Orientador na FEUP: Prof. Doutor Américo Lopes de Azevedo

Orientador na Organização: Dr. Rui P.V. Moura da Silva

Universidade do Porto
Faculdade de Engenharia
FEUP

**Faculdade de Engenharia da Universidade do Porto**

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*To my…*

*Son Rodrigo, wife Augusta, family and friends.*

**Abstract**

Performance measurement systems (PMS) development is complex and several cases of unsuccessful implementations are reported in literature. Failure rate is even higher in the context of a SME contrasting with the available research, which is significantly lower.

This study focused the implementation of a PMS in the context of a services SME.

The purpose was to implement a PMS that considers organization's specific characteristics and requirements in its development. Another aim is contribute to the body of knowledge with one case of implementation in a context that still deserve little attention: services SMEs.

Research methodology used was action-research. Research project had a six month duration time and during this period the researcher held an internship in the organization with the purpose of performing the inquiry.

The development framework, built on the theoretical requirements of adequate PMS for SMEs, allowed to successfully supporting the development of a BSC in the organization.


*Keywords*: performance measurement, performance management, management control, SME, balanced scorecard, implementation, services.

## Implementação de um sistema de medição de desempenho numa PME de serviços Portuguesa


### Resumo

O desenvolvimento de sistemas de medição do desempenho é uma questão complexa e na literatura são relatados vários casos de insucesso. A taxa de insucesso é ainda maior no contexto de uma PME e contrasta com a quantidade significativamente mais baixa de investigação científica disponível.

Este estudo focou-se na implementação de sistema de medição do desempenho que considera os requisitos específicos da organização no seu desenvolvimento. Outro objectivo foi contribuir para o conhecimento científico com um caso de implementação num contexto que tem merecido ainda pouca atenção: PMEs de serviços.

A ferramenta usada no desenvolvimento, construída a partir dos requisitos de sistemas de medição de desempenho adequados para PMEs, permitiu suportar com sucesso o desenvolvimento de um BSC na organização.


*Palavras chave*: sistemas de medição de desempenho, controlo de gestão, PME, balanced scorecard, implementação, serviços.

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# 1 Introduction

## 1.1 Overview

Although a considerable number of large enterprises had successfully adopted performance measurement systems, this has not been the case for small and medium enterprises (SMEs). These organizations, though recognizing the importance of performance measurement and management (PMM), have specific characteristics that hinder their capability to successfully implement and use such systems; furthermore, most of the contemporary frameworks were developed at the heart of large enterprises and, therefore, tend to neglect SMEs' specificities.

Additionally, these issues are not fully addressed in extant literature, and, as such, the development of a performance measurement system (PMS) in a Portuguese SME constitutes a good opportunity to shed additional light on (1) how these systems can be successfully developed by taking in consideration and circumventing SMEs' contingent limitations; (2) what was the outcome; and (3) what were the major issues faced.

In Europe, more than 99% of all enterprises are SMEs; they are responsible for two thirds of private jobs and generate over 50% of the total value-added created[1]. These figures crystallize the vital role they play in EU economy and contributions to a better understanding of how performance can be adequately measured and managed in such enterprises, backing up the improvement of their sustainability, is also a contribution to the European economy as a whole.

Unsuccessful PMS implementation cases are reported in extant literature (Bourne et al. 2002) and the issue is further aggravated in a SME context. Additionally, there's a lack of research examining the development of performance measurement systems in small enterprises (Garengo, Biazzo, and Bititci 2005; Taticchi, Cagnazzo, and Botarelli 2008; Mel Hudson, Smart, and Bourne 2001), and the ones that exist are mainly concerned with manufacturing firms. Hence, contributions to the body of knowledge informing the development of tailored PMS in the context of services SMEs are needed.

## 1.2 Topic and purpose

Business performance measurement and management (PMM) is complex, requires many resources, capabilities and trans-funcional processes. Successful PMS implementation depends on many organizational contextual factors, but, if correctly implemented and used, such systems can result in the sustaining of a competitive advantage leading to a superior performance of the organization.

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[1] Cf. SME definition of the European Commission – Enterprise and Industry (in http://ec.europa.eu/enterprise/policies/sme/index_en.htm)

The purpose of this research is the development of an efficient and effective PMS in a Portuguese IT services SME. The aim is to aid the organization with the need of a better performance measurement solution, by developing a tailored PMS grounded in theory and that considers organization's contextual factors. In order to accomplish this, an action-research enquiry was developed.

### 1.3 Research method

During the inquiry, the researcher will play the role of facilitator of PMS design and implementation, helping the members of the organization in the problem solving process. Thus, the adopted strategy for this enquiry was participatory action research. Action research (AR) is a scientific method well suited when (1) there is the need to solve an important organizational problem in (2) cooperation with members of the organization, (3) while building theoretical knowledge (Coughlan and Coghlan 2002; Eden and Huxham 2005); last, but not least, Baskerville (1999) stresses the fit between AR and new systems development methodologies.

As a qualitative study the generality potential of the findings is limited by the context of the enquiry and by the limitations of the theory used to inform the research.

### 1.4 Literature review

In order to inform the diagnostic and planning stages of the action research cycle, research published with the main characteristics of SMEs, requirements for proper PMS for SMEs, and main PMS models/frameworks on the topics of performance measurement and management control were analysed during the literature review.

### 1.5 Document structure

This document is organized as follows. In section 2, relevant literature on the topics of performance measurement and management control are reviewed, and important concepts and definitions are introduced. Section 3 explains the research methodology and why it was used. Section 4 addresses the empirical investigation and is followed by the discussion of the results in section 5. Finally, in section 6, research conclusions are presented.

# 2 Literature review

Relevant literature on the topics of performance measurement and management control (MC) was reviewed and used to inform the specific characteristics of SMEs, requirements of adequate PMS for such organizations and frameworks. When thought as necessary – with the aim of broaden knowledge on themes related to the topics under study or deepen knowledge on a specific point – additional articles were reviewed. The result of this work is now addressed.

## 2.1 Base concepts and definitions

In the current work the European definition of SME was adopted. According to this definition, SME is an individual firm whose number of employees is under 250 and the turnover or balance sheet does not exceed, respectively, fifty or forty three million euros[2].

Neely, Gregory, and Platts (2005) defined performance measurement as "*the process of quantifying the effectiveness and efficiency of action*" and claimed that performance measurement is "*a topic which is often discussed but rarely defined*", while Franco-Santos et al. (2007) stresses the lack of agreement on a PMS definition, and that definition changes in light of the considered perspective: from an operational point of view is "*the set of measures*" (A. Neely, Gregory, and Platts 2005) and supporting infrastructure[3] (Franco-Santos et al. 2007) "*used to quantify both the efficiency and effectiveness of actions*" (A. Neely, Gregory, and Platts 2005) that enable managers to make well-informed decisions (Garengo and Sharma 2012), or as "*the reporting process that gives feedback to employees on the outcome of actions*" (Franco-Santos et al. 2007). Two additional perspectives are also identified by Franco-Santos et al. (2007):

- From a strategic control perspective, are the procedures needed for cascading down business performance measures and provide the information needed to test strategy content and validity, and;
- From a management accounting perspective is management planning and budgeting.

Although the concept of performance measurement has evolved, incorporating the notions of balanced, integrated and dynamic. Performance measurement should take a holistic approach, so, the set of measures should be logically coordinated and express the relationships between results and determinants of performance; comprehend entire organization; and balance the use of financial and non-financial measures (Garengo, Biazzo, and Bititci 2005). While dynamism is related with the necessity of such systems that systematically monitor and reflect external

[2] Cf. SME definition of the European Commission – Enterprise and Industry (in http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/sme-definition/)

[3] Supporting infrastructure are the methods, information systems and supporting procedures for data acquisition, collation, sorting, analysis, interpretation, and dissemination and the human resources required to support them (Franco-Santos et al. 2007).

and internal contexts, by reviewing measures and objectives or priorities (Garengo, Biazzo, and Bititci 2005) in order to keep their relevance and usefulness (Lääts, Haldma, and Möller 2011), helping the organization to continuously improve; and this takes us to the next important concept: performance management.

Performance management is defined as the control loop of performance measurement, in which performance measurement information is used to improve organizational systems and processes – single loop learning – and culture – double loop learning – (Folan and Browne 2005). Lebas (1995) claims that performance measurement is an inseparable subset of performance management and Ferreira and Otley (2009) highlight the difficulty to establish the concept, and define performance management system as "*the evolving formal and informal mechanisms, processes, systems, and networks used by organizations for conveying the key objectives and goals elicited by management, for assisting the strategic process and ongoing management through analysis, planning, measurement, control, rewarding, and broadly managing performance, and for supporting and facilitating organizational learning and change*".

This work also uses the all-inclusive (Bititci et al. 2011) definition of performance measurement as including performance management.

### 2.2 SMEs main characteristics

Usually SMEs operate in complex fiercely competitive and changing markets over which they have a limited vision and control of their competitive position (M Hudson, Lean, and Smart 2001; Hudson Smith and Smith 2007; Garengo, Biazzo, and Bititci 2005). As result, they lack of market understanding and must quickly react and adapt to demands made by, usually, more powerful customers (Hudson Smith and Smith 2007).

Additionally, they operate in limited markets with few clients (Mel Hudson, Smart, and Bourne 2001; Taticchi, Cagnazzo, and Botarelli 2008). This enables them to be closer to customers and establish personal relationships, but, as downside they lack of the power to demand payment of debts and relationships tend to be deferential (Hudson Smith and Smith 2007). The above mentioned limitations makes that losing a customer is a luxury that they cannot afford and, as such, they need to guarantee that customer satisfaction is high (Mel Hudson, Smart, and Bourne 2001) in order to prosper and survive, driving them to be fundamentally focused in operations and clients (Garengo, Biazzo, and Bititci 2005; Garengo and Biazzo 2012; Laitinen 2002).

The most compelling characteristic found in the literature is their resource poverty (Garengo and Biazzo 2012; Mel Hudson, Smart, and Bourne 2001; Taticchi, Cagnazzo, and Botarelli 2008) which includes, not only, financial, human resources and management limitations, but also, time and skills (Hudson Smith and Smith 2007; Mel Hudson, Smart, and Bourne 2001; M Hudson, Lean, and Smart 2001; Garengo, Biazzo, and Bititci 2005; Taticchi, Cagnazzo, and Botarelli 2008).

This resource paucity has a huge impact, since it limits almost all the actions they intend, or actually, perform. Financial limitations mean limited access to managerial and technical knowledge, lack of capacity to invest in R&D, improvement or growth programs; while human resources limitations usually mean that each employee has to perform several functions leaving less time, or none, to other things than daily operations, which is reinforced by managerial limitations – time, skills and manpower – deepening further their operational focus in sacrifice of planning business development.

Operating in very dynamic markets, over which they have short sight and no control, combined with limitations on resources, customers and markets, requires them to react and adapt quickly to the ever changing clients' needs and wants in order to remain competitive and survive (Mel Hudson, Smart, and Bourne 2001; M Hudson, Lean, and Smart 2001; Hudson Smith and Smith 2007). This drives them to be flexible (Mel Hudson, Smart, and Bourne 2001; M Hudson, Lean, and Smart 2001; Hudson Smith and Smith 2007), operationally focused (Garengo, Biazzo, and Bititci 2005; Garengo and Biazzo 2012; Laitinen 2002) and to adopt a fire-fighting mentality and reactive management style (Taticchi, Cagnazzo, and Botarelli 2008; Mel Hudson, Smart, and Bourne 2001; M Hudson, Lean, and Smart 2001; Hudson Smith and Smith 2007; Garengo, Biazzo, and Bititci 2005) were strategies are dynamic and informal (Taticchi, Cagnazzo, and Botarelli 2008; Mel Hudson, Smart, and Bourne 2001). As such, processes and practices tend to be loosely structured and informal avoiding bureaucracy (Taticchi, Cagnazzo, and Botarelli 2008; Garengo and Biazzo 2012; Hudson Smith and Smith 2007; Garengo, Biazzo, and Bititci 2005).

Structures are flat, with few management layers (Taticchi, Cagnazzo, and Botarelli 2008; Mel Hudson, Smart, and Bourne 2001; M Hudson, Lean, and Smart 2001; Hudson Smith and Smith 2007) and decision power is concentrated in one – usually the entrepreneur-owner – or few persons (Garengo, Biazzo, and Bititci 2005; Hudson Smith and Smith 2007) enabling for fast internal communication and decision making processes.

As a consequence of the emphasis on satisfying actual clients' needs, operational focus, and lack of resources; management is actively engaged in daily operations (Hudson Smith and Smith 2007), and their capabilities are mainly fuelled by context specific and tacit knowledge (Taticchi, Cagnazzo, and Botarelli 2008; Garengo, Biazzo, and Bititci 2005; Garengo and Biazzo 2012) driving them to neglect managerial activities (Garengo, Biazzo, and Bititci 2005) and adopt inadequate and informal strategic planning (Mel Hudson, Smart, and Bourne 2001; Garengo, Biazzo, and Bititci 2005; Garengo and Biazzo 2012; M Hudson, Lean, and Smart 2001; Hudson Smith and Smith 2007). So, they lack of understanding about their critical success factors (Garengo, Biazzo, and Bititci 2005) and, as consequence, they adopt poor organizational configurations (Mel Hudson, Smart, and Bourne 2001; Hudson Smith and Smith 2007) and performance measurement systems (Garengo, Biazzo, and Bititci 2005; Taticchi, Cagnazzo, and Botarelli 2008; Cocca and Alberti 2010) further limiting their market view and understanding and ability to growth, leaving them trapped in a vicious cycle which is, often, difficult to brake.

SME's main characteristics were summarised in (Table 1).

**Table 1. Main characteristics of SMEs**

| Characteristic | Authors |
|---|---|
| Lack of human and financial resources | (Garengo and Biazzo 2012; Mel Hudson, Smart, and Bourne 2001; Taticchi, Cagnazzo, and Botarelli 2008; M Hudson, Lean, and Smart 2001; Hudson Smith and Smith 2007; Cocca and Alberti 2010; Garengo, Biazzo, and Bititci 2005) |
| Informal strategic planning | (Mel Hudson, Smart, and Bourne 2001; Garengo, Biazzo, and Bititci 2005; Garengo and Biazzo 2012; M Hudson, Lean, and Smart 2001; Hudson Smith and Smith 2007; Taticchi, Cagnazzo, and Botarelli 2008) |
| Reactive mentality | (Taticchi, Cagnazzo, and Botarelli 2008; Mel Hudson, Smart, and Bourne 2001; M Hudson, Lean, and Smart 2001; Hudson Smith and Smith 2007; Garengo, Biazzo, and Bititci 2005) |
| Loosely structured and informal processes | (Taticchi, Cagnazzo, and Botarelli 2008; Garengo and Biazzo 2012; Hudson Smith and Smith 2007; Garengo, Biazzo, and Bititci 2005) |
| Flat structures | (Taticchi, Cagnazzo, and Botarelli 2008; Mel Hudson, Smart, and Bourne 2001; M Hudson, Lean, and Smart 2001; Hudson Smith and Smith 2007) |
| Focus on customers and operations | (Garengo, Biazzo, and Bititci 2005; Garengo and Biazzo 2012; Laitinen 2002; Mel Hudson, Smart, and Bourne 2001) |
| Context specific and tacit knowledge | (Taticchi, Cagnazzo, and Botarelli 2008; Garengo, Biazzo, and Bititci 2005; Garengo and Biazzo 2012) |
| Flexible | (Mel Hudson, Smart, and Bourne 2001; M Hudson, Lean, and Smart 2001; Hudson Smith and Smith 2007) |
| Misconception of PMS | (Garengo, Biazzo, and Bititci 2005; Taticchi, Cagnazzo, and Botarelli 2008; Cocca and Alberti 2010) |
| Operate in turbulent markets | (Garengo, Biazzo, and Bititci 2005; Hudson Smith and Smith 2007) |
| poor organizational configurations | (Mel Hudson, Smart, and Bourne 2001; Hudson Smith and Smith 2007) |
| Concentration of decision power | (Garengo, Biazzo, and Bititci 2005; Hudson Smith and Smith 2007) |
| Lack of control over competitive positioning | (M Hudson, Lean, and Smart 2001; Hudson Smith and Smith 2007) |

| | |
|---|---|
| Limited markets and clients | (Mel Hudson, Smart, and Bourne 2001; Taticchi, Cagnazzo, and Botarelli 2008) |
| Limited market vision | (Hudson Smith and Smith 2007) |
| Personal relationships with clients | (Hudson Smith and Smith 2007) |
| Deferential supplier-customer relationships | (Hudson Smith and Smith 2007) |
| Lack of power to leverage payment of debts | (Hudson Smith and Smith 2007) |

As seen, SMEs possess particular characteristics that make them very different from large companies. These characteristics hinder their capacity to successfully develop and use performance measurement and management systems (PMMS) which, in turn, could contribute to improve their competitive positioning and financial performance, therefore, suitable systems for SMEs have to consider these particular characteristics in order to be successfully implemented and used, thus, adequate requirements of such systems were analysed and are addressed in next section.

### 2.3 Performance measurement system requirements for SMEs

Proper PMS for SMEs need to consider the specific characteristics of SMEs in order to increase its likelihood of success; therefore PMS requirements for SMEs from literature were analysed.

#### General requirements

Suitable systems for SMEs should inherit all characteristics of what are considered good performance measurement systems (PMSs) – strategically aligned, holistic and dynamic –, foster regular measurement and provide fast and accurate feedback about organization's performance (Taticchi, Cagnazzo, and Botarelli 2008; Cocca and Alberti 2010; Hudson Smith and Smith 2007; Chalmeta, Palomero, and Matilla 2012; A. Neely, Gregory, and Platts 2005; M Hudson, Lean, and Smart 2001). As such, it should be: tailored for the organization, requiring a specific architecture and measures, in order to reflect its business and strategy (Taticchi, Cagnazzo, and Botarelli 2008; Cocca and Alberti 2010; Hudson Smith and Smith 2007; Chalmeta, Palomero, and Matilla 2012; A. Neely, Gregory, and Platts 2005); dynamically reflect changes in the internal and external environments in order to maintain its relevance and usefulness (Chalmeta, Palomero, and Matilla 2012; Hudson Smith and Smith 2007; A. Neely, Gregory, and Platts 2005); and measure performance in a holistic way balancing between financial and non-financial measures and by taking in consideration the needs and expectations of all relevant stakeholders (Taticchi, Cagnazzo, and Botarelli 2008; Cocca and Alberti 2010; Chalmeta, Palomero, and Matilla 2012).

SMEs resources limitations and operations in turbulent markets call for systems that are: easy to implement, use and run (Cocca and Alberti 2010; Taticchi, Cagnazzo, and Botarelli 2008;

A. Neely, Gregory, and Platts 2005); structured, helping to overcome limitations such as managerial skills, knowledge and time, and allow setting future objectives, plan short and long term business and improvements, and enable deployment of strategic objectives to operations, functions, individuals and groups at all organizational levels (M Hudson, Lean, and Smart 2001; Garengo, Biazzo, and Bititci 2005; Chalmeta, Palomero, and Matilla 2012); resource and cost effective, with measures calculated clear and automatic as possible (Garengo, Biazzo, and Bititci 2005; A. Neely, Gregory, and Platts 2005; Chalmeta, Palomero, and Matilla 2012); flexible, rapidly changeable, maintainable and incrementally improvable to accommodate strategic changes (Cocca and Alberti 2010; M Hudson, Lean, and Smart 2001; Hudson Smith and Smith 2007); and stimulate continuous improvement (Cocca and Alberti 2010; A. Neely, Gregory, and Platts 2005; Chalmeta, Palomero, and Matilla 2012; Mel Hudson, Smart, and Bourne 2001; Taticchi, Cagnazzo, and Botarelli 2008).

The system must facilitate company strategic alignment by linking strategy to goals of functions, groups, individuals and operations, provide clear guidelines to communicate performance throughout the company, and should be linked to a rewarding system (Taticchi, Cagnazzo, and Botarelli 2008; Cocca and Alberti 2010).

Ought be synthetic by using only the necessary measures – reported in a graphically and visually effective way, concentrated on organization’s value adding areas, enabling managers to take informed decisions and be concentrated on what really matters (Cocca and Alberti 2010; Chalmeta, Palomero, and Matilla 2012)

Additionally, should be integrated with management and information systems (IS) of the organization, produce short and long term benefits, and show cause-effect relationships (Garengo, Biazzo, and Bititci 2005; Cocca and Alberti 2010; M Hudson, Lean, and Smart 2001).

#### *Development process*

A successful development process requires an effective point of entry – how is handled introduction and launch of project –, participation – who is involved –, project management and procedure and tools used (Mel Hudson, Smart, and Bourne 2001; Bourne et al. 2002).

Effective point of entry requires top management support fuelled by a perceived need to change (Mel Hudson, Smart, and Bourne 2001; Bourne et al. 2002; Cocca and Alberti 2010) and must include an evaluation or audit of the existing performance measures and measurement practices in order to establish a baseline highlighting improvement opportunities (Mel Hudson, Smart, and Bourne 2001; Taticchi, Cagnazzo, and Botarelli 2008).

Participation requires key users involvement (Mel Hudson, Smart, and Bourne 2001; Bourne et al. 2002; Cocca and Alberti 2010) in all project stages and should count with a facilitator (Cocca and Alberti 2010) helping to overcome scarcity of human resources, time, managerial skills and performance measurement knowledge.

Project should have clear and explicit objectives, effective time framed project management (Mel Hudson, Smart, and Bourne 2001; Bourne et al. 2002; Hudson Smith and Smith 2007), and get general buy-in from organization (Mel Hudson, Smart, and Bourne 2001; Cocca and

Alberti 2010; A. Neely, Gregory, and Platts 2005; Hudson Smith and Smith 2007; Bourne et al. 2002).

Development process should be focused and well-designed (Mel Hudson, Smart, and Bourne 2001; Taticchi, Cagnazzo, and Botarelli 2008) with clearly defined procedures (Mel Hudson, Smart, and Bourne 2001; Cocca and Alberti 2010), fast and resource efficient (M Hudson, Lean, and Smart 2001; Hudson Smith and Smith 2007), and must be able to produce short as well long term benefits in order to sustain development team momentum and enthusiasm, and ensure system viability (M Hudson, Lean, and Smart 2001; Mel Hudson, Smart, and Bourne 2001; Hudson Smith and Smith 2007).

#### *Performance Measurement System Procedures*

A PMS is also a set of clearly defined procedures (Cocca and Alberti 2010), methods and tools that together make up the system.

System must include a method for strategy development and include procedures for identifying strategic objectives (Mel Hudson, Smart, and Bourne 2001; M Hudson, Lean, and Smart 2001; Cocca and Alberti 2010), developing measures (Mel Hudson, Smart, and Bourne 2001), targets setting (Cocca and Alberti 2010), long and short term business planning and improvement (Garengo, Biazzo, and Bititci 2005; Cocca and Alberti 2010) .

Procedures for collecting and calculating measures, information sharing and communication should be clear, efficient and automatic as possible (Cocca and Alberti 2010; Taticchi, Cagnazzo, and Botarelli 2008).

A performance evaluation procedure is also required (Cocca and Alberti 2010).

To get all the benefits of a dynamic system a comprehensive maintenance procedure has to be put in place (Cocca and Alberti 2010; Mel Hudson, Smart, and Bourne 2001). Including the review of strategic objectives, performance measures and targets in order to reflect the changes in external an internal contexts and to evaluate firm’s strategy (Taticchi, Cagnazzo, and Botarelli 2008; M Hudson, Lean, and Smart 2001; Cocca and Alberti 2010). The review system should also verify if the PMM system contributes to an overall improvement in performance (Taticchi, Cagnazzo, and Botarelli 2008).

#### *Performance Measures*

The system should include only the necessary performance measures (Franco and Bourne 2003; Cocca and Alberti 2010) in order to form a manageable and integrated set (A. Neely, Gregory, and Platts 2005; Cocca and Alberti 2010) that provide fast and accurate feedback (Cocca and Alberti 2010; Mel Hudson, Smart, and Bourne 2001; A. Neely, Gregory, and Platts 2005) and enable organization to monitor past, and plan future, performance (Cocca and Alberti 2010; Franco and Bourne 2003); measures should be derived from strategy, link operations to strategic objectives, stimulate right behaviour and continuous improvement (Cocca and Alberti 2010; M Hudson, Lean, and Smart 2001; Mel Hudson, Smart, and Bourne 2001; Chalmeta, Palomero, and Matilla 2012; A. Neely, Gregory, and Platts 2005); they should be clearly defined, including formula and source of data and precise and accurate calculation, to increase credibility (Cocca and Alberti 2010; Mel Hudson, Smart, and Bourne

2001; A. Neely, Gregory, and Platts 2005; Franco and Bourne 2003; Andy Neely et al. 1997); each measure must have an explicit purpose, be relevant, cost-effective (Franco and Bourne 2003), and easy to collect, maintain, understand and use (Cocca and Alberti 2010; Mel Hudson, Smart, and Bourne 2001; A. Neely, Gregory, and Platts 2005; Franco and Bourne 2003). Additionally, individual, relative, real time and objective measures are preferable to team, absolute, annual and subjective measures (A. Neely, Gregory, and Platts 2005; Franco and Bourne 2003); they must be actionable (Franco and Bourne 2003) and under control of the evaluated organizational unit (A. Neely, Gregory, and Platts 2005); consistent throughout the organization (Franco and Bourne 2003); and standard, to make possible comparisons between organizations in the same business (A. Neely, Gregory, and Platts 2005).

The findings about the main requirements of PMS for SMS were summarised in the following table.

**Table 2. Main requirements of Performance Measurement Systems for SMEs**

| PMS General Requirements | Development Process |
|---|---|
| • Strategy aligned;<br>• Holistic;<br>• Dynamic;<br>• Show cause-effect relationships;<br>• Resource and cost effective;<br>• Tailored to the organization;<br>• Easy to implement use and run;<br>• Structured;<br>• Allow setting future objectives and business planning;<br>• Foster continuous incremental organizational improvement;<br>• Facilitate organization strategic alignment;<br>• Integrated with IS. | • Top management support;<br>• Evaluation or audit of current system;<br>• Key users involvement;<br>• Use a facilitator;<br>• Get the general buy-in from organization;<br>• Clearly defined, well-designed and focused;<br>• Fast and resource efficient;<br>• Produce short and long term benefits. |
| **Activities** | **Performance Measures Features** |
| • Strategic objectives identification;<br>• Developing measures;<br>• Targets setting;<br>• Long and short term business planning and improvement;<br>• Measures collection and calculation clear | • Include only the necessary performance measures;<br>• Provide fast and accurate feedback;<br>• Monitor past, and plan future, performance;<br>• Derived from strategy; |

| | |
|---|---|
| and automatic as possible;<br>• Clear and efficient information sharing;<br>• Performance evaluation procedure;<br>• Comprehensive review procedure. | • Link operations to strategic objectives;<br>• Stimulate right behaviour and continuous improvement;<br>• Clearly defined, including formula and source of data;<br>• Measures must have an explicit purpose, be relevant;<br>• Cost-effective and easy to collect, maintain, understand and use. |

### 2.4 Performance measurement systems

Greater difficulties in implementation of performance measurement systems in SMEs are noticed in the extant literature. Part of these difficulties stem from the fact that, although theoretically valid, generic models do not properly addressed the specific characteristics of SMEs. Thus, the current literature review, besides the main PMS frameworks, also covers specific models designed for SMEs.

The following six frameworks were reviewed:

- Tableau de Bord
- Balanced Scorecard
- Performance Prism
- Organizational Performance Measurement
- Continuous Strategic Improvement
- Integrated Performance Measurement System for Small Firms

#### TABLEAU DE BOARD

Tableau de Board (TdB) was born in France in the beginning of the twentieth century while process engineers were trying to improve processes by better understanding cause-effect relationships between actions and process performance (Epstein and Manzoni 1998). Later the same concept was adopted by top management and applied to business management.

TdB is a dashboard and, as such, its main goal is to provide a synthetic image of the key parameters used to support managers in decision making (Epstein and Manzoni 1998). As consequence, due its specific functions and responsibilities, each unit or manager requires its own dashboard, with its own set of operational and financial measures.

As such, dashboards should be defined for each corporate level, and lower level dashboards should be integrated in the next upper level dashboard until the top level dashboard is reached.

TdB implementation starts with the definition of corporate and units strategies and proposes a method for this. Mission and vision are defined and translated into objectives from which the key success factors (ksf) – i.e. performance drivers – are identified and translated to key performance indicators (Epstein and Manzoni 1998).

For the definition of the performance measures – key performance indicators (KPIs) – TdB provides certain guidelines for its definition and selection (Epstein and Manzoni 1998):

- Measures should be in control of the manager;
- Interdependent areas should be identified and reflected in the selection of measures at corporate and unit level;
- Use few measures to avoid information overload.

Similar guidelines are applied to the reporting of performance information (Epstein and Manzoni 1998):

- Report numbers covering the period since last report;
- Present cumulative performance for the current year;
- Actual performance should be compared with past performance and world-class competition;
- Report periodicity varies according to unit responsibility and nature of data.

Despite having been developed in the early twentieth century, TdB integrates performance measures vertically and horizontally across the organization and explores the concept of determinants, or drivers, of performance and provides guidance in measures definition and information reporting, but, as any other system TdB is not exempt of criticisms (Epstein and Manzoni 1998):

- Does not provide orientation on performance dimensions as such financial measures tend to be overemphasized;
- Organization tend to generate a large number of performance measures which is further aggravated by dashboard cascading structure;
- In TdB implementation, organizations tend to collect existing indicators instead of rationalize about what measures should use in the context of the defined strategy;
- Organizations tend to ignore its external environment and define targets, measures and objectives based only in internal factors;
- TdB has been used mainly as a monitoring and problem solving tool instead of being used to focus discussion and management meetings.

#### BALANCED SCORECARD

Balanced scorecard (BSC) is the most recognized and widely used performance measurement framework. Was conceived Kaplan, Norton, and others (1992) in the beginning of nineties of the past century and aimed innovate business performance measurement by using a multidimensional, or balanced, approach. Though, four years after their initial work Kaplan and Norton (1996) realized that it could be successfully used as a strategic management system.

BSC is built around organization's strategy and uses four integrated perspectives – financial, customers, internal and innovation and learning – to provide managers all the necessary information to successfully answer the following questions (Kaplan, Norton, and others 1992):

- How do customers see us? – Companies translate their customers' value proposition into specific objectives and measures that evaluate what matters most to them – usually time, quality, performance and service, and cost;
- What must we excel at? – Then have to decide on – and define proper measures – what processes and competences must excel to meet customers' expectations;
- Can we continue to improve and create value? – Companies grow by innovating and improving its products, services and processes;
- How do we look to shareholders? – Strategy impact will be reflected in its financial measures – commonly profitability, growth and shareholder value.

According to the authors, the limitation of the number of perspectives avoids the problem of managers being overload with too many measures.

The integration of four processes enables BSC to function as strategy management system that provides support for translating strategy into actions (Kaplan and Norton 1996):

- Translating the vision, requires top management to define vision, business strategy, objectives and measures;
- Communicating and linking, is about communicating business strategy and scorecard throughout the enterprise and defining objectives and measures to business units, teams or individuals;
- Business planning predicts the integration of financial and business plan in order to ensure that the most important strategic initiatives receive the required amount of resources and management attention;
- Feedback and learning.

As first step top management defines company vision, strategy. However, vision and strategy statements are hardly transformed into actions. This can be achieved by defining a scorecard with an integrated – i.e. considering all perspectives – set of objectives, measures, targets, and initiatives (Kaplan and Norton 1996).

Scorecard is then used by managers to communicate strategy throughout the organization and cascade down objectives, measures and targets to all organizational levels, fostering the alignment of the organization with strategy, which can be further enhanced by applying a broad participation in scorecard development and by linking rewards to performance measures results.

Building a scorecard helps organizations to integrate strategic planning and budgeting processes. Scorecard is used to prioritize and allocate scarce resources to strategic initiatives – or programs – that move the organization towards its strategic objectives. Process is completed with the definition of short term targets that signal the progress in the direction of long term strategic objectives (Kaplan and Norton 1996).

Finally, organization uses performance results to evaluate strategy against defined goals and, if necessary, correct the course of action or strategy. Kaplan and Norton (1996), calls this strategic learning, which BSC enables in three ways:

- Defines organization targets;
- Provides a feedback system, and;
- Periodic reviews of strategy.

BSC is the most widely used framework and, since the seminal work of Kaplan, Norton, and others (1992), several improvements and add-ons from the authors, researchers and other practitioners were proposed and addressed some of the main criticized issues. One of the main is concerned with the performance perspectives which are considered insufficient Epstein and Manzoni (1998) and limitative, especially in what is concerned with stakeholders (Andy Neely, Adams, and Crowe 2001).

#### PERFORMANCE PRISM

Performance Prism (PP) was conceived at the beginning of the twentieth first century by A. D. Neely, Adams, and Kennerley (2002) and stakeholders were at the heart of its conception. Recognizing that stakeholders – shareholders, customers, employees, suppliers, partners, intermediaries, regulators and local community – have a major impact on organization's performance and success, the framework considers its' needs, wants and contribution.

According to the authors, PP can be deeply – single stakeholder or process – or broadly applied – whole business or single unit – and measures organizational performance according to five integrated dimensions:

- Stakeholder Satisfaction;
- Strategies;
- Processes;
- Capabilities;
- Stakeholder contribution.

These perspectives provide a complete and integrated view of the organization grounded in the following rationale:

- Organization's success depends on knowing who their stakeholders are and on satisfying their needs and wants;
- After this, has to define what strategies wants to adopt in order to deliver its value proposition to stakeholders;
- What processes must be efficiently and effectively executed to achieve this;
- And what are the required capabilities to support them;
- This, in turn, will generate adequate returns from stakeholders.

This last point emphasizes the reciprocal relationship between stakeholders and organization, which is a unique feature of PP (Andy Neely, Adams, and Crowe 2001, 158–181).

In order to support system development and deployment are proposed four processes: design, plan and build, implement and operate and refresh. Design process includes measures selection and metrics definition; plan and build deals with the development of systems and practices for data acquisition and visualization and communication of intentions; implement and operate is about using the developed systems and practices to manage with measures; while the last is concerned with improving the system and assuring its relevance and usefulness (Andy Neely, Adams, and Crowe 2001, 32–78).

System development, starts with the identification of shareholders, their needs, wants and desired contributions for the organization, and is done by answering a question for each perspective followed by the definition of proper measures (A. D. Neely, Adams, and Kennerley 2002). The answers are then used to build organization's success map.

Measures are required to track strategy implementation, communicate strategy, motivate strategy implementation and challenge strategy.

PP uses the Success Map as a blueprint to build the bridge between strategy and operations and facilitate the identification of the critical components required for the alignment between strategies, processes and capabilities needed to satisfy organization's stakeholders needs and wants (Andy Neely, Adams, and Crowe 2001, 158–181).

Measures are derived by designing success maps for each one of the considered stakeholders. This would generate too much measures leading to a useless system. As such, by identifying the questions that really need to be answered during strategy review meetings, organization filters the critical issues; only then measures are defined.

Several guides, templates, performance measures and cases are provided in order to assist system development.

Other unique feature is the adoption of failure maps that helps organization's to identify the critical aspects that can drive them to failure (Andy Neely, Adams, and Crowe 2001, 158–181).

This concludes the revision of generic PMS models; next, specific models for SMEs are reviewed.

#### ORGANIZATIONAL PERFORMANCE MEASUREMENT

The Organizational Performance Measurement (OPM) system is a model developed through empirical case study research which included different enterprise sizes, both large enterprises and SMEs[4], from public, private and non-profit sectors (Chennell et al. 2000).

This approach is grounded in three principles: alignment, process thinking and practicability.

[4] Fewer than 500 people employees, less than $100M in annual revenue, and economically independent of any other enterprise (Barnes et al. 1998).

First principle claims the alignment between employees' actions and enterprise strategy, through the definition of strategically aligned performance measures grounded in the following pillars (Chennell et al. 2000):

- Desired outcomes;
- Individual's functions – authority, accountability and responsibility – and reward system;
- Processes, and;

Proposes four questions to be used in the identification of what to measure (Chennell et al. 2000):

- What products or services are produced and for whom?
- How will 'quality' or 'excellence' of the product or service be assessed and how can this be measured?
- Which processes produce these products and services?
- What has to be measured to forecast whether a satisfactory level of quality will be attained?

Second principle, process thinking, states that the measurement system aims to identify performance drivers of all processes and that should be linked to systems that monitor, control and improve organizational processes (Chennell et al. 2000).

Practicability is the establishment, at all organizational levels, of the processes required to identify, collect and elaborate the required performance data.

OPM model uses two constructs 'zones of management' and the Open Systems theory (Chennell et al. 2000)

First construct differentiates between three levels of management – strategic, tactical and operational, each one with different authority, responsibility and accountability, and different types of measures.

Open systems theory considers that organizations affects and are affected by the internal and external environments in which they operate, and that, ultimately, success is evaluated by different groups of stakeholders: business – owners and shareholders, customers, people – employees, strategic partners and community.

Strategy success is evaluated by benchmarking stakeholders' satisfaction with other organizations through the use of external performance measures.

Organizational performance drivers support the definition of internal measures for the tactical and operational levels. At the tactical level, KPIs are identified to measure critical aspects related with core processes, and are used by top management for process improvement. The second type, are operational indicators that measure the non-core business processes and activities.

#### CONTINUOUS STRATEGIC IMPROVEMENT

M Hudson, Lean, and Smart (2001), propose a four stage approach which enable the continuous improvement through the incremental development of strategically aligned PMs. As such, the method was named as Continuous Strategic Improvement (CSI) process (Hudson Smith and Smith 2007).

Arguing that the existent systems are not suitable for SMEs, M Hudson, Lean, and Smart (2001) suggest an approach which is resource efficient, flexible and that provides adequate guidance to the organization.

The system predicts full development, down to operational level, of performance measures for one strategic objective at a time (M Hudson, Lean, and Smart 2001).

Process begins with the identification and prioritization of strategic objectives and selection of the most important for implementation – Name stage.

In the following stage – Act stage – a project team – integrating people from all organizational levels – is created. They are responsible for identification and selection of the required improvements that will enable the achievement of the selected objective. Next, PMs, to evaluate improvement success and monitor implementation progress are defined (Hudson Smith and Smith 2007) and an implementation plan is agreed.

In the Use stage, implementation plan is operationalized by putting in place the devised measures and improvements. At this stage the necessary procedures and systems for performance measures data collection, collation and performance communication are also put to work.

The loop closes with top management and project team reviewing progress towards the defined objectives, assessing measures relevance and by deploying new actions to correct the course (Learn stage). A new cycle begins with the selection of the new most important strategic objective.

According to Taticchi, Cagnazzo, and Botarelli (2008), this model was designed specifically for organizations in the manufacturing sector.

#### INTEGRATED PERFORMANCE MEASUREMENT SYSTEM FOR SMALL FIRMS

The Integrated Performance Measurement System for Small Firms[5] is proposed by Laitinen (2002) as a generic system built around the chain concept.

Uses the logic of business transformation process – the chain of ‘production factors - revenue - external performance’ – to model any organization. As such, the author stresses that the framework can be applied to different companies in different contexts (Laitinen 2002).

This way of modelling organization, in conjunction with the concept of activity-based costing (ABC), provide the basis used to measure the productive process – internal performance – according to five dimensions (Laitinen 2002):

[5] In the context of this research small firm is defined as a company with fewer than 500 employees.

- Cost of production factors;
- Production factors;
- Activities;
- Products;
- Revenue (and cost) of products.

While external performance is measured based in the dimensions of competitiveness and financial performance (Laitinen 2002), and is the result of the revenue and cost of the products and services.

Assessment of external performance can be used by management to change the production factors in order to continuously improve organizational competitiveness and financial performance. By repeating this cycle, the organization starts to gain understanding about the causal links between performance dimensions (Laitinen 2002).

To assist in performance measures definition and evaluate implementation a series of questions – linked in a causal chain – and measures are proposed.

Interestingly this framework tries to explicitly address performance measurement in service organizations and was implemented in a software services company.

IPMS is very prescriptive in dimensions and measures proposed; performance measures are concerned with organization’s productive process and, as such, do not mirror the strategy nor aim its improvement and also limit system depth and breadth, since not all processes and activities are measured; and does not mention any system review process.

The revision of performance measurement models is now concluded.

Their analysis allows us make some observations:

- All frameworks, except IPMS Small Firms, are strategically aligned;
- All, except TdB and CSI, are balanced;
- All, except TdB and OPM, are dynamic
- OPM and Performance Prism are the only focused on stakeholders;
- Due to its age, TdB suffers from several shortcomings;
- BSC is focused in strategy implementation;
- All have a broad performance measurement scope;
- Performance prism offers comprehensive guidance for its development;
- Performance prism implementation can be hard and complex, due the necessity of develop a success map and measures for each stakeholder;
- IPMS also assists in development but is ABC oriented, which can be problematic – especially in a services organization;
- All seek to establish causal relationships between objectives and measures.

As seen, all of the systems analysed present shortcomings, and those specifically developed for SMEs are the ones who are farther from perfection.

# 3 Research Method

## 3.1 Overall approach and rationale

The aim of the study is to design and implement an adequate PMS that takes in consideration the organizational context in which is to be developed. This requires involvement of the researcher as a facilitator of the process and the participation of firm's staff.

Research outcome will contribute to a better understanding of how such systems can be successfully designed and implemented in the context of a Portuguese IT services SME.

As such, action-research was selected has scientific methodology.

This methodology can be used to study the resolution of important organizational issues in cooperation with members of the system under observation, while contributing to body of knowledge and theory building (Coughlan and Coghlan 2002).

As stressed by (Eden and Huxham 2005), action research (AR) requires a structured approach. In this study the framework proposed by Baskerville (1999) was used. This cycle is composed by five steps: diagnostic of the situation, action planning, action taking, evaluating and learning (Figure 1).


**Figure 1. Action research cycle**

Source: Adapted from Baskerville (1999)

Framed by the selected approach, the first two steps of the AR cycle were then devised (Figure 2).

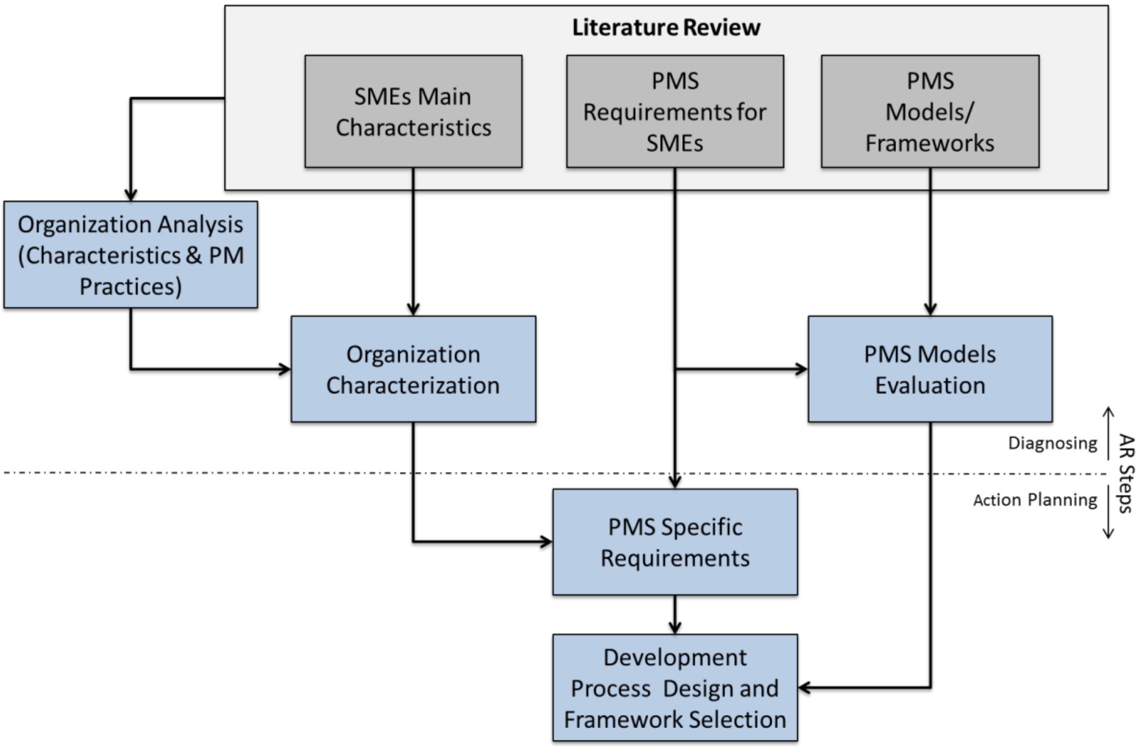


**Figure 2. Detail of the first two steps of AR cycle**

In the diagnosing stage, relevant literature from the topics of performance measurement and management control were reviewed.

This allowed the study of SMEs' main characteristics, requirements of effective PMS for SMEs and PMS frameworks.

The insights were then used to inform about the important points to address during the analysis of the organization: external environment, managerial practices, strategy management process, actual performance management system, information systems and expectations with the project. This analysis and the main characteristics were then used to characterize the organization, signalling the start of the planning stage.

Organization characterization was then used to validate the applicability of the PMS requirements for SMEs to the organization, and to define organization's specific requirements for the PMS.

Specific requirements and PMS models evaluation was used to inform the development process and framework selection.

### 3.2 Organization selection

Organization selection was grounded in the following factors:

- Had the need for a PMS;
- Is a SME, and;

- Sells and provides IT services.

Therefore, provides the perfect context to generate additional knowledge on a less studied area: PMS systems implementation on a services SME.

### 3.3 Data gathering methods

Research data was collected through the use of a research journal and documents (observation and interviews notes, copies of internal documents, and documents generated during the project).

### 3.4 Research validity

Action research validity is grounded in generalization potential of results, and in application of a structured reflection methodology, and is infirmed by the same issues that affect case studies (Eden and Huxham 2005). Therefore, same strategies and methods can be used to ensure scientific rigour (Coughlan and Coghlan 2002), and enhance its generalization potential and validity.

Nature and settings of AR pose major challenges to research validity which have to be fully addressed. One of main threats is the bias towards personal views of researcher rather than the exempt report of facts. Yin (1994, 32–38) states four dimensions to access qualitative research quality: i) construct validity, ii) internal validity, iii) external validity, and iv) reliability.

The use of multiple sources of evidence such as interviews, observation, documents internal to organization and resulting from the intervention were used to ensure construct validity.

Internal validity requires (1) the use of a theoretical framework informing the starting point of the enquiry and results, and (2) a formal process to conduct the research. The former was addressed by grounding SMEs characteristics and PMS requirements in extant theory, and by building the PMS development process in frameworks, models, tools and methods available in theory, and the later by using the afore mentioned structured AR cycle.

As in the case of case studies, results of the enquiry do not aim statistical generalization but, instead, analytical generalization to a broader theory (Yin 1994, 35–37), therefore external validity was dealt by employing triangulation to the findings.

Research database and thesis report provide the basis for ensuring enquiry reliability (Yin 1994, 94–98).

AR is specially challenging for researchers as requires them to be internalized in the organization and actively involved in solving an organizational problems while, concurrently, the research occurs. This requires confident and experienced researchers, and skills in diagnosing and intervention in organizational issues (Coughlan and Coghlan 2002), and in data collection and analysis (Eden and Huxham 2005).

Limited knowledge and experience of researcher in conducting research and PMS development are acknowledged as a potential threat, but were offset with careful research design, literature review and preparation of interventions.

# 4 Empirical Investigation

## 4.1 Context and objective

Company was founded in 2005 by four entrepreneurs with the purpose to provide customized support, maintenance and deployment IT services, mainly focused on the retail area.

Headquarter is located in Arcozelo, Vila Nova de Gaia, and also has offices in Lisboa and Covilhã.

In 2009, IT human resources outsourcing starts as a new business area and, since then, it has been the main driving force of business growth.

Since 2010 is ISO 9001 certified and awarded with "*PME Excelência*" statute from IAPMEI.

By 2012, this IT services SME, has over 4 million euros in sales, employs around 130 people, and works with some of the major Portuguese companies, such as Portugal Telecom or Sonae.

Its organizational structure is composed by an administrator and six departments:

- Sales and Marketing is responsible for services selling. Is also responsible for recruitment and selection of the human resources required to outsourcing projects;
- Technical department delivers the services sold, excluding HR outsourcing services;
- Research & Development has as mission build solutions which require design of information systems;
- Financial;
- Human Resources is responsible for the management of internal and outsourcing employees and for aiding sales and marketing in recruitment and selection processes;
- Quality.

Governance structure is composed by a single administrator and all the shareholders are also managers in the organization.

Recognizing that business growth was not accompanied by the same level of maturity in managerial practices, administration felt the need to have a management tool that, quickly, allows it to get a synthetic view about business performance. Additionally, felt the need to formalize and communicate better its strategy to the increasing workforce. Although this problem also manifest itself internally, the issue is particularly important to the workers in outsourcing projects due their distance to the organization. With this the organization expects to increase the strategic alignment, motivation and identification with the company of its workforce.

This way arises the opportunity for this research, with the purpose to develop a measurement system adapted to the context and reality of the organization; able to provide a clear picture about business performance; and formalize and communicate better its strategy. As such, an action research project was carried with the following goal:

- Develop an efficient and effective PMS that takes into account organization's specific characteristics and requirements, and;
- Extend current knowledge about PMS design and implementation in the context of a Portuguese IT services SME.

### 4.2 Diagnostic

First intervention in client system aimed to acquire a deeper knowledge about organization. This was done by conducting semi-structured interviews with organization's managers covering issues like external environment, managerial practices, strategy management process, actual performance management system, information systems and perceptions and expectations about the project.

All the owners are also managers of the firm, and management structure comprises a director and four managers, distributed along six departments. Managing director is also marketing and sales manager and R&D manager accumulates with quality management; other departments are financial, technical and human resources. Organization is characterized by a strong level of inter and intradepartmental cooperation with workers performing simultaneously several tasks, which is extended to management, suggesting that human resources and managerial time are critical constraints.

Company operates in a highly competitive client's market, in which both small and large enterprises compete side by side by its market share. As result, customer's requirements and expectations relating to low prices and services quality and flexibility are high. Deals are mainly won grounded on intangibles aspects such as personal relations, confidence from past experiences or brand.

Company customer base is limited with the two major client groups weighting around 50% to 60% of annual sales. Meeting the needs of such "heavy weight" clients requires a high degree of customization in services provided and a fast, flexible and customer focused organization. Therefore, management systems such quality or performance management are seen as a bureaucratic barrier and a threat to processes agility which, in turn, is synonym of informal procedures.

This strong operational focus drives the adoption of a reactive management style fuelled by managing director personal strategy being more closely related with the opportunistic profile, where planning is basic and easily left out in face of unexpected new business opportunities (Hudson Smith and Smith 2007) and reinforced by all managers being involved in daily operations and in direct contact with customers.

Annual strategic business planning is mainly done in order to comply with quality system requirements instead of being perceived has cornerstone of sustained business development. Additionally, does not include setting departmental budgets or the definition of departmental, individual or group targets, hindering the ability of passing employees' full potential to organization and fostering concentration of decision power in owners-managers. Additionally, there is no compensation scheme in place and management meetings are not regularly held, leading to a loose followup of strategy implementation and performance management.

Despite this strategy and performance evaluation are communicated throughout entire organization once a year and managers consider having an adequate level of autonomy.

Although not being highly developed, information systems in the organization are the expected level for an organization of this size, and comprise an ERP and two additional applications that provide support to main business areas. One holds a candidates database, used by in HR outsourcing, and the other is a stock management solution.

During interviews a form was used to collect measures used in the organization but not included in the map of indicators of the quality management system (QMS). This was the same form used by Garengo and Biazzo (2012), and allowed identification of seven indicators in addition to the twenty in use in QMS, resulting in a grand total of twenty seven indicators, from which, seven were financial and twenty were non-financial indicators.

This contradicts the tendency for SMEs to measure their performance based on accountancy information and financial figures (M Hudson, Lean, and Smart 2001; Mel Hudson, Smart, and Bourne 2001; Garengo, Biazzo, and Bititci 2005; Cocca and Alberti 2010; Taticchi, Cagnazzo, and Botarelli 2008), but finds explanation in the existence of the quality management system.

However, one of the main drivers of QMS adoption were demands made by main clients and, hence, was more an external imposition than a genuine need of the organization, leading to that full benefits from the system were not being tapped by the organization. This also has implications at performance measurement level, bringing to the existence several unrelated dashboards: QMS dashboard; operational dashboard – measures used to support operations; and a management dashboard – measures that were truly used in managing organization (Table 3).

So, in reality, organizational performance evaluation was based in the use of seven financial measures.

**Table 3. Dashboards in use in the organization**

| Measures | QMS Dashboard | Operational Dashboard | Management Dashboard |
|---|---|---|---|
| Financial | 4 | 0 | 7 |
| Non-financial | 16 | 8 | 0 |
| Total | 20 | 8 | 7 |

SMEs characteristics found were then used to establish a comparison with the organization, allowing understanding the extent to which those can be found in the company under study (Table 4).

**Table 4. Company characterization**

Characteristics Adherence Support found

Low degree of adherence ■; High degree of adherence ■■■■■

| Characteristics | Adherence | Support found |
|---|---|---|
| Lack of human and financial resources | ■■■■ | Staff – managers included – usually perform several tasks. As such, manpower and time are critical constraints.<br>Financially is a sound organization, with business growing two digits yearly, and costs are strictly managed. |
| Informal Strategies | ■■■ | Fuelled by the quality management system, strategy is planned and communicated to the company on an annual basis, although, its development is not regularly followed. |
| Reactive Mentality | ■■■■ | Loose and short termed business planning with performance management based in financial and operational indicators. |
| Loose Processes | ■■■■ | Organizational focus in operations and high degree of services customization contribute to not very structured processes, which is only thwarted by QMS. |
| Flat Structure | ■■■■■ | Structure is composed by three layers: administration, managers and staff and is characterized by involvement of managers in operations and good inter and intra-departmental cooperation. |
| Focus on customers and operations | ■■■■■ | All managers are in contact with customers and involved in daily operations. |
| Context specific and tacit knowledge | ■■ | Initial activity of company was grounded in owners-managers previous professional experience.<br>Nowadays the majority of the managers complement professional experience with formation in their areas of intervention. |
| Flexibility | ■■■■■ | Identified by managers as a critical success factor for the organization. |
| Misconception of PMS | ■■■■■ | Managers consider that PMS introduction may hurt intra and inter-departmental collaboration – seen as a strategic asset – and introduce bureaucracy. |

This analysis permitted confirming the high degree of firm adherence to the most of characteristics commonly exhibited by SMEs, allowing inferring about the applicability of the requirements identified in literature review.

### 4.3 Implementation planning

Departing from the evaluation of the PMS frameworks; from the PMS requirements for SMEs; and from organization characterization, PMS specific requirements are defined, following by the selection of a framework and by the design of the development process.

#### PMS SPECIFIC REQUIREMENTS

As previously mentioned the organization mainly wants to use PMS to monitor overall business performance and communicate business strategy to the organization.

Additionally, from the characteristics identified, three deserved a special attention during system design and implementation due to their high degree of prevalence within organization and high potential impact in system development:

- Operational focus, with all managers being involved in operations and in direct contact with customers;
- Limitations in terms of human resources;
- Misconception about PMS.

As consequence, the system has to be very structured, resource efficient and easy to implement use and run, in order to overcome resources limitations and operational focus.

As the operational focus extends to management; sustain top management support and commitment also deserved special attention, due the risk of management being easily distracted from system development.

Other issue threatening system development was the misconception about PMS. This is a “soft” issue that requires the clarification of PMS concept, its usefulness and potential benefits for the organization.

Lastly, the system should be able to function within the existing information systems infrastructure.

So, as a whole, the system has to integrate the requirements identified in Table 2, plus the following specific requirements:

- Provide a synthetic view of overall business performance;
- Communicate strategy;
- Highly structured;
- Resource efficient;
- Easy to implement use and run;
- Sustain top management commitment;
- Overcome PMS misconception;
- Function within existing IS.

Taking in consideration the specific requirements was decided to implement a BSC; the reasons underpinning this choice are as follows:

- BSC is able to provide a synthetic view of business performance;
- Predicts mechanisms for strategy formalization, facilitating communication of strategy;
- Is flexible enough to be implemented focusing in PM breadth – not depth;
- Some managers already known the framework, helping to overcome PMS misconception and foster management commitment;
- It's simple and all the information available provide the necessary clarity;
- Is balanced and dynamic;
- Shows cause-effect relationships allowing continuous improvement.

All other requirements were embedded in the development process used, which is presented below.

Specific system requirements and adopted responses were summarised in Table 5.

**Table 5. Specific system requirements and responses applied**

| | Requirements | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| System Response | Monitor business performance | Communicate strategy | Highly structured | Resource efficient | Easy to implement use and run | Work within existing information systems | Overcome PMS misconception | Sustain top management commitment and support |
| BSC | √ | √ | √ | | √ | | | |
| Precise processes description | | | √ | | √ | | | |
| Workshops design | | | √ | | | | | |
| Measures easy to implement and use | | | | √ | √ | √ | | |
| Adapt to existing IS | | | | √ | √ | √ | | |
| Measures already in use | | | | √ | √ | √ | | |
| Tailored and prescriptive review process | | | | √ | √ | | | |
| Use of MS office tools | | | | √ | √ | √ | | |
| Clarification of concept, usefulness and benefits | | | | | | | √ | √ |
| Optional deployment of | | | | √ | √ | | | |

targets and measures

#### DEVELOPMENT FRAMEWORK

For the development of PMS a framework grounded in the generic requirements of PMS for SMEs was conceived.

Framework predicts a pre-phase – introduction – and the three phases proposed by Bourne et al. (2000): design, implementation and use (Figure 3).

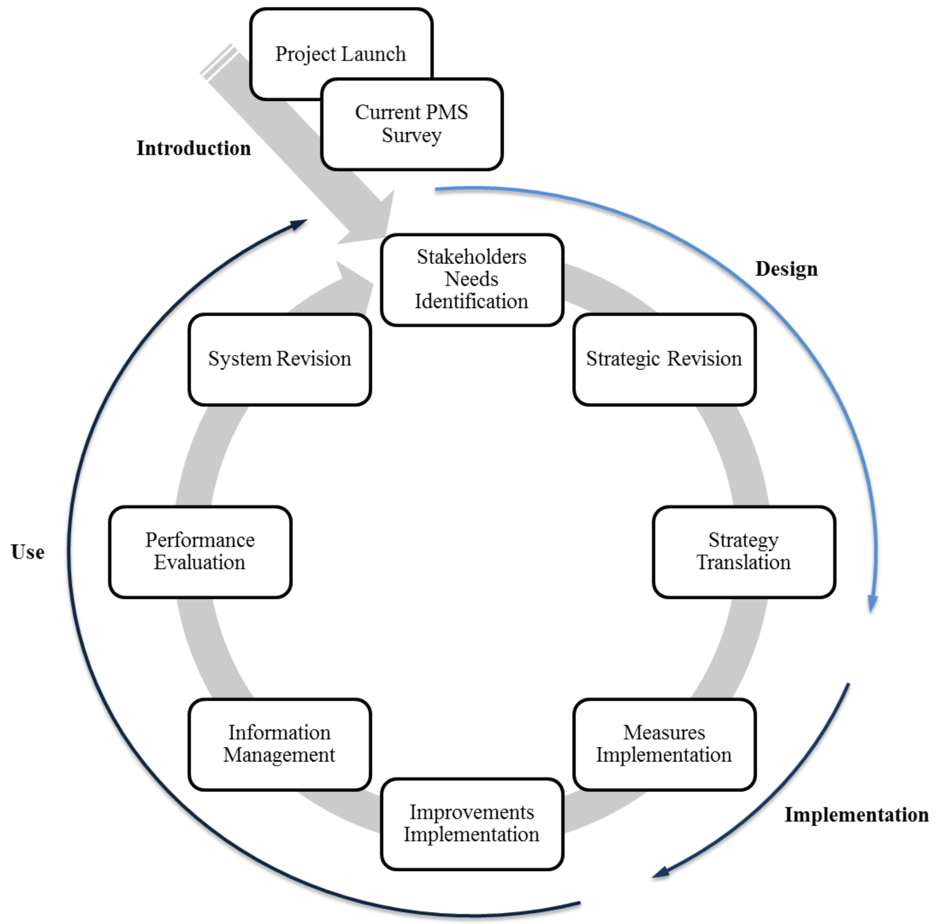


**Figure 3. Development Framework**

Introduction is a pre-phase and aims explain project development process to top management and ensure its commitment, support and required resources. Also serves to gain knowledge about organization, its current performance measurement practices and specific requirements, and to establish a project team, timeframe and objectives.

In order to sustain top management commitment and support, and eliminate misconceptions about PMS, during project launch the concept of PMS is clarified, and its usefulness and potential benefits highlighted.

An effective point of entry requires auditing current performance measurement practices. This is predicted by interviewing managers about managerial practices, strategy management process, actual performance management system, information systems and performance measurement expectations and by using a form for collecting measures in use – see Appendix D: Initial Interviews.

During design phase, stakeholders' and its needs are identified, and are used in strategy revision.

Strategy revision includes the review of vision, mission, values and strategy, and is followed by the translation of strategy into actions. This is accomplished with the design of a strategy map, measures, targets and action plan with organization's strategic improvements and required initiatives for measures implementation.

This is accomplished by completing a series of workshops with top management and project team.

Workshops are prepared and led by the facilitator and before each workshop background information is provided to participants.

Workshop design considers all concepts, tools, methods and frameworks needed for strategy review and translation.

This stage ends with the organization deciding about the depth and breadth that will use, if any, to deploy goals and measures throughout the organization. Maximization of system potential, which is expected to occur when these are deployed to individuals, teams, business units and processes at all organizational levels, could be too taxing, or even unnecessary, to be adopted by SMEs and thus compromise the implementation and use of PMS; Additionally – for these organizations, where commonly management systems are weak – is better for the organization to have an imperfect system than none, so, deployment decision should seek the best balance between the cost of measure and the potential gain of benefits.

Designing phase ends with selection and prioritization of envisaged initiatives. As initiatives consume resources, organization's capacity to execute them should be evaluated, and, if necessary, the most critical ones should be selected and prioritized before its final inclusion in the action plan.

Implementation refers to put in place systems and procedures needed to performance measurement, i.e., regular collection, validation, calculation and record of measurement data. This entails that measure owner assemble the necessary team and resources in order to implement the performance measure.

Following, is the use phase which envisages implementation of improvements identified during strategy translation. Implementation of strategic initiatives is responsibility of initiative owner, identified in the action plan, and, as in measures implementation, he's responsible for amass required team and resources.

Information management refers to make measurement information available to the organization in order to support decision making and performance evaluation processes. This includes data collection, collation and information dissemination.

Performance evaluation is concerned with performance analysis, strategy revision and strategy analysis (Kaplan and Norton 2008). This is done with management holding regular meetings with this purpose, and confers the necessary dynamicity to the system. Strategy review meetings – more frequent and realized according to organization´s business cycle –, aim to (1) evaluate the performance of the organization against the expected targets, (2) followup strategy implementation and (3) plan the necessary corrective actions. Strategy analysis meetings serve to test strategy assumptions and adapt it to changes in external or internal environments. From these meetings can result the review of action plan, targets, measures or strategy, or even the setting of completely new strategy.

Development process finishes with system revision. This deals with the continuous improvement of the system with the regular revision of its processes, procedures, systems, methods and tools.

Although appearing in a sequential way, in a real world implementation, some steps will be developed simultaneously, e.g. it's quite natural that improvements implementation start before all the measures were implemented.

Performance measures selection is done by using a measures database and by answering the following questions:

- There is any performance measure in use which is relevant and adequately measures the objective?
- If not, select a measure from database and answer the same question: the chosen measure is relevant and adequately measures the objective?
- Performance is easy to understand, implement and use?
- Performance measures form a manageable set?
- Performance measures stimulate right behaviours and the continuous improvement of organization?

Additionally, the performance measure has to be clearly defined by including its identification, measuring unit, strategic objective, formula, measurement frequency, owner, who measures and the source of data.

Having a system highly structured, easy to implement and run requires dedicate a considerable amount of effort to comprehensively document system processes (see Appendix B: PMS Processes and Activities). This aims to provide organization with all the information to achieve the degree of autonomy so it can easily use and update the system.

As a system tailored to the organization; it should be able to function within the existing information systems. As such, preference was given to (1) performance measures already in use; (2) measures easy to implement and use – considering the existing IS – and (3) the use of standard tools. The later refers not only to the use of such tools to measure performance but also to support the system in all development phases, e.g. using *Excel* for designing strategic map or to document the necessary procedures.

Concluded the planning stage from AR cycle, it's now appropriate proceed to the implementation step.

### 4.4 System implementation

#### INTRODUCTION

Project introduction was done in a workshop with owners-managers. In order to sustain top management commitment and enthusiasm and eliminate misconceptions about PMS, it was explained what is a PMS, what benefits can be expected, and identified critical success factors for a successful implementation and utilization.

The approach to be used during development process was introduced and established that project team would be composed by the researcher and the four owners-managers. However, it was not possible to establish a regular schedule for project team work together. So, it was established that the whole team, or part of it, would meet as necessary according to the project needs.

By being too busy and highly involved with customers top management decided not to involve the Human Resources manager, neither the responsible for the Information Systems in strategy revision and translation workshops.

Due the lack of time and human resources available the facilitator was nominated as project leader.

In order to save time, the interviews with managers had been previously conducted, so at this point the researcher already had knowledge about the measures in use in the organization, and hence, the workshop continued to the design phase.

#### DESIGN PHASE

Design phase starts with identification and consideration of stakeholders' needs. As in the organization under study all managers were involved in daily operations and in direct contact with clients, management considered to have sufficient knowledge about the needs of what the organization considers to be the relevant stakeholders – shareholders, customers and employees. Nevertheless, as a best practice, and in order to reduce the possibility of departing from wrong assumptions, consideration of stakeholders needs should have taken a broader – by considering other relevant stakeholders – and more direct approach – by questioning them directly.

Strategy revision was carried using a very structured and visual approach. Structure was introduced by following the steps proposed by Kaplan and Norton (2008) in conjunction with all the necessary concepts, tools, and methods needed to adequately review strategy.

Mission, vision and values definition, required its discussion until consensus was built among managers. After this, external environment was analysed by looking to industry economics through Porter's five forces analysis and a context map. Internal environment was evaluated considering managers knowledge about organization's distinctive resources and capabilities. These analyses then were summarised in a SWOT matrix (Figure 4).

Due (1) the reduced number of participants in the workshops, (2) the lack of habit of holding meetings and (3) the negative opinion about them; gamestorming (Gray, Brown, and Macanufo 2010, 84–86) was used in order to foster participants innovative thinking, motivation and involvement.

This allowed swiftly constructing context map and SWOT matrix with the active participation and contribution of all managers.


**Figure 4. Using gamestorming in strategy review**

At this point the workshop was interrupted and its main results – mission, vision, values and SWOT analysis – emailed to participating managers in order to function as background information and as preparation for the next working session.

During strategy revision gamestorming and consensus decision making were heavily used.

Second workshop started with revision of previous work done. Building on this work, organization's strategy for the next three years was then crafted.

Top management defined its strategy along three axes, or themes: (1) growing in sales, (2) diversification of offer and markets and (3) improve operational efficiency. Recognizing that there still is space to grow its market share and seeking to take advantage of the consequences of sovereign debt crisis, which is pressing organizations to cut costs leading to outsource more, organization wants to grow business in large Portuguese enterprises, by establishing personal relationships with clients supported in the flexibility and quality of services provided. Complementarily wants to diversify its offer by developing an innovative product which will be used to expand business to other geographical areas, and improve operational efficiency mainly by providing better technological support to its business processes.

Following Collis and Rukstad (2008) suggestion, strategy was then, clearly and briefly, summarised in a statement able to be internalized and used as a guide by the organization (Appendix A: Strategy). This was, later on, used for communicating the reviewed strategy to all employees.

Hereafter, building of strategy map, measures selection and targets setting has started. This was the most difficult, lengthy and iterative process of whole development, and required three working sessions. This was due, not only, to the nature of the task to be performed – extensive and complex, as also noted by Epstein and Manzoni (1998) – but also due the lack of experience from the project team.

Strategy map building was grounded in the method suggested by Armitage and Scholey (2006).

After strategic objectives identification and relationships established, the three strategic themes identified in strategy were marked in the map in order to facilitate its reading and strategy management (Figure 5).

Measures definition started after the conclusion of strategic map; several measures for each objective were proposed, and the most appropriate selected. This was done first, by analysing if organization already was using a suitable measure and, if not, proposed measures were then evaluated against its relevance and adequacy to measure the objective, and if it was easy to understand, implement and use. Lastly, the set of measures was evaluated to verify if they form a manageable set, stimulate adequate behaviours and allow for continuous organizational improvement. Measures details such as identification, measuring unit, strategic objective, formula, measurement frequency, owner, who measures and source of data were then added to the identity card of measures (Table 7).

In the end, scorecard contained thirty measures evenly distributed over the four perspectives (Table 6). From these, seven were financial measures and twenty three were non-financial. Eight of the adopted measures were already in use by the organization, with one – the *customer satisfaction index* – being included in the action plan for reformulation.

**Table 6. Measures distribution**

| Perspective | # of Measures |
|---|---|
| Financial | 7 |
| Customer | 6 |
| Processes | 10 |
| Culture and Structure | 7 |
| Total | 30 |

With the set of measures selected, targets were defined. This was done relying in historical data and managers' knowledge about the organization.

Following was the definition of an action plan comprising the strategic initiatives needed for strategy implementation and initiatives needed for implementation of measures. The inclusion of both initiatives in same plan has the advantage of enable monitoring the development of all planned initiatives from a single location. For each initiative owner, start date, end date and budget was set (Figure 6).

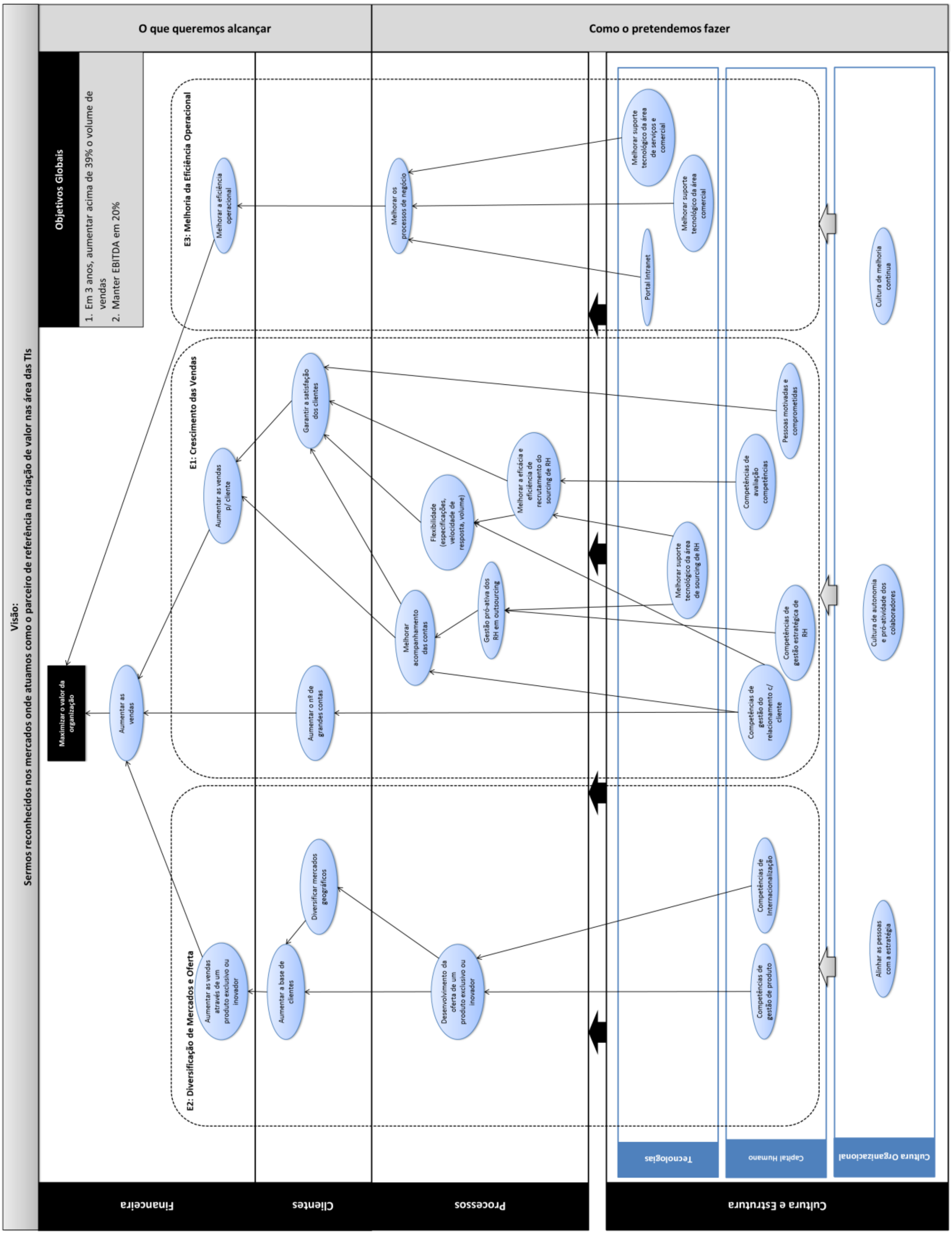


**Figure 5. Strategic Map**

| Plano de Ação | | | | | |
|---|---|---|---|---|---|
| Iniciativas | Dono da Iniciativa | Data Início | Data Fim | Orçamento | Estado |
| | | | | | - - |
| | | | | | - - |
| | | | | | - - |
| | | | | | - - |
| | | | | | - - |
| | | | | | - - |
| | | | | | - - |
| | | | | | - - |
| | | | | | - - |
| Adaptar inquérito de satisfação dos clientes | DQ/DG | Imediato | 31-06-2013 | - € | On time |
| Realização de uma ação de sensibilização anual para o registo e tratamento de reclamações e não conformidades | DQ | Imediato | 31-12-2013 | - € | On time |
| | | | | | - - |
| | | | | | - - |

**Figure 6. Action Plan**

With the aim of getting additional inputs, involvement and commitment, the work developed so far, was shared with the other managers that weren't participating in strategy revision. This led to the inclusion of a suggested measure in substitution of a previously selected.

This led to the conclusion of strategic map, scorecard and action plan design. At the end, the capacity of organization to develop the action plan was accessed and the use of strategic relevance, benefits, cost, independency from other initiatives and impact on other initiatives proposed as criteria for initiatives selection and prioritization, nonetheless, managers considered that organization had enough capacity to develop all the envisaged initiatives, and chose not to use the proposed set of criteria.

The intended use for the system – monitoring performance, the flat structure of the organization and the inclusion of vital operational measures in the scorecard, led to the decision of not to conceive additional strategic maps nor scorecards to other organizational levels.

### IMPLEMENTATION PHASE

Measures implementation follows the action plan. This is done with the owner of the initiative creating small working teams involving the necessary people and resources to develop all activities needed in order to implement a specific measure, for instance, the measure *employee satisfaction index* required development and implementation of an employee survey and the involvement of quality and HR managers.

Implementation of some measures required software developments made by external suppliers. In these cases, organization loses its implementation autonomy, and the inclusion of the initiatives for measures implementation in the action plan enables the organization to followup their implementation status in strategic review meetings.

Measures implementation is only concluded when measurement is tested: data is collected, validated, calculated and reported on the *Indicators Map* – Excel spreadsheet used as organization's dashboard.

Regularly, and at the end of implementation, the owner of the initiative updates its status in the action plan.

#### USE PHASE

This stage predicts strategic initiatives implementation, information management, performance evaluation and system revision.

Supported in the action plan, the owner of the strategic initiative has to develop the necessary activities, and involve the required people and resources, towards its implementation. He's also responsible for the regular update of strategic initiative status in the action plan.

With the frequency predicted in the scorecard, the person responsible for measuring the indicator, reads, validates, calculates and reports measure data into the dashboard – *Indicators Map* – which is always available to management in order to support operational decisions.

Performance of the organization is evaluated at two distinct moments: quarterly, in strategy revision meetings, and annually, with strategy analysis meeting. Meetings frequency was decided taking in consideration organization's business cycle and the effort required, therefore, three months were considered a suitable time interval for performance and strategy implementation review. Thus, quarterly strategic review meetings are predicted with the aim to evaluate organizational performance and strategy development.

Annually, management holds a meeting to test and adapt current strategy. This is achieved by evaluating changes in internal and external environments, and existing strategy – through economic analysis of the organization, products and clients, test measures cause-effect relations and by considering emergent strategies in the organization.

System should be periodically reviewed in order to get the most of him; thus, the use cycle ends with an annual revision of whole system – processes, procedures, methods, information systems and tools.

System development ended with a final workshop with owners-managers. This workshop had as main goals: (1) convey all the information about the system, (2) highlight further PMS usefulness and benefits and (3) gather managers' opinion about the project.

In the next section are discussed the findings from study.

Table 7. Financial Performance Measures BI

| Índice | Identificação | Unidade de Medida | Objetivo Estratégico | Fórmula | Freq. de Medição | Responsável | Quem mede | Fonte dos dados |
|---|---|---|---|---|---|---|---|---|
| F1 | EBITDA | % | Maximizar o valor da organização | Lucros antes de juros, impostos, depreciações e amortizações (resultado das operações) | Mensal | DG | DF | ERP |
| F2 | Autonomia Financeira | % | Maximizar o valor da organização | Cap. Prop./Activo | Semestral | DF | DF | Contabilidade |
| F3 | Grau de liquidez imediata | # | Maximizar o valor da organização | Disponibilidades/Passivo CP | Semestral | DF | DF | Contabilidade |
| F4 | Taxa anual de evolução das vendas | % | Crescer nas vendas | (acumulado das vendas no mês x - acumulado das vendas no mês x-12)/acumulado das vendas no mês x-12 | Mensal | DG | DF | ERP |
| F5 | Taxa de evolução das vendas médias p/ cliente | % | Aumentar as vendas p/ cliente | (vendas no ano z/# de clientes faturados no ano z)-(vendas no ano z-1/# de clientes faturados no ano z-1)/(vendas no ano z-1/# de clientes faturados no ano z-1) | Anual | DG | DF | Contabilidade |
| F6 | % de vendas de produtos em relação ao total das vendas | % | Aumentar as vendas de novos produtos | acumulado das vendas de produtos no mês x/acumulado das vendas no mês x | Mensal | DG | DF | Contabilidade |
| F7 | Taxa de evolução das vendas p/ colaborador | % | Melhoria da eficiência operacional | acumulado das vendas no ano z/média de colaboradores no ano z | Anual | DG | DF | ERP |

## 5 Discussion

The proposed methodology allowed the implementation of a performance measurement and management system, based in BSC, in an IT services SME that exhibits in a high degree the major of SMEs characteristics, with special prevalence for operational focus, lack of human resources and misconception about PMS. This is, in turn, reflected in underdeveloped managerial practices, weak business planning and performance measurement grounded in financial measures.

The use of the development process proposed in conjunction with BSC framework enabled the development of a strategically aligned, holistic, balanced and dynamic PMS, which also responds to main purposes defined by the organization:

- Allow strategy formalization and communication, and;
- Monitor overall organizational performance from a single spot.

System design and implementation brought a series of benefits to the organization.

First, allowed bringing owners-managers together in same room to discuss and reach consensus about organization's strategy with the genuine interest to discuss it and realize a profound revision. This was a major achievement in an organization were strategy formalization and annual business planning were mainly done in order to meet ISO 9001 requirements and were management meetings are not regularly held. As consequence, a deep revision of strategy was carried including mission, vision, values and clarification of value proposition and offer.

Business targets in the organization were usually set according to few financial measures and without establishing a clear liaison between strategy and actions; system development allowed to define targets, measures and initiatives in multiple performance dimensions and linked to strategy, driving performance measurement towards a holistic approach.

Other benefits included:

- The inclusion of critical new dimensions to performance measurement: flexibility, fidelity and employees satisfaction.
- The revision of performance measurement instruments such as the *customer satisfaction survey* – which was about to be abandoned – to improve its efficiency and to include new, and strategically aligned, performance dimensions measurement: flexibility, fidelity and satisfaction with account management.

As highlighted in literature; although theoretically valid (Garengo and Biazzo 2012) many of the current frameworks fail when applied to SMEs, suggesting that the particular characteristics of such organizations undermine their ability to successfully implement PMMS. This, calls for systems that need to consider and address organization's characteristics at all development stages.

These were cornerstone principles that guided the entire research project and justify the design of a development framework grounded in the requirements identified in scientific research and, also, the effort put in building a thorough knowledge about the organization, which was then used to drive implementation.

Knowledge gained during the introductory phase enabled to (1) establish main system use, (2) highlight the main characteristics of the organization, (3) inform strategy revision and (4) adapt development process and outcome system to the specific requirements and characteristics of the organization, making this a critical phase for the remainder of the project.

Development process was then planned in order to address the most prevalent characteristics of the organization that could affect negatively the implementation and usage of the system:

- Operational focus
- Lack of human resources
- Misconception about PMS.

These characteristics led to the design of a system (1) highly structured, (2) resource efficient, (3) easy to implement, use and maintain and paying special attention to sustaining top management commitment and to overcome misconception over PMS.

Structure was embedded in the system through:

- workshops design, which included all the necessary information, methods and tools needed to overcome knowledge and skills limitations and be as efficient as possible;
- by featuring and documenting a simple, detailed and repeatable development framework.

Resource efficiency was achieved through careful measures selection and design of an adequate review system.

Detailed documentation of all system processes aimed to empower organization with the ability to easily use and maintain the whole system.

The “softer” issues of sustaining management commitment and eliminate PMS misconception, were dealt in initial and final workshops with the clarification of concepts and potential gains to the organization.

The time available for the completion of the project does not allow evaluating the success of system, however, managers admitted to continue using the system, but its use is dependent on the resolution of certain issues:

- Lack of regular management meetings;
- Managers operational focus and lack of time;
- Have someone responsible for the system;
- Lack of knowledge and habit of use of such systems.

This further highlights the importance of considering organization’s contextual factors in system development and, as consequence, the importance of the introduction phase; and, perhaps, the need for methods that integrate a go/no go decision, grounded in the evaluation of the readiness of the management system.

Additionally management fear a negative impact in intra and inter departmental cooperation as result from the setting of objectives, and that measurement costs could outweigh its benefits.

Despite the effort put into clarifying the concept and potential benefits of PMS, the fear of inducing misbehaviours and the fear that the system could hurt organization's required velocity and flexibility are still present, suggesting that these issues require further attention.

Many of these firms don't adequately prepare, and followup, its meetings and so, over time, they tend to perceive them as a complete waste of time and resources, as such, meeting participants' motivation is rather low; this was the case, and, perhaps, at least in part, explains why management does not meet regularly.

To overcome this feeling and foster creativity and innovation, during strategy review gamestorming was used and made possible to achieve high standards of motivation, participation and productivity.

Managers also considered the number of performance measures too high. This, and the observation that the quantity of strategic initiatives devised was considered adequate to the organization, suggests that the mechanism predicted for selection and prioritization of the initiatives should, instead, be used for strategic objectives selection and prioritization, as advised by Papalexandris, Ioannou, and Prastacos (2004) and Chalmeta, Palomero, and Matilla (2012).

Development of strategic map, measures and targets is a complex and time consuming task that can easily lead participants to a sensation of frustration, which must be counteracted.

Strategic map construction was done in workshops involving owners-managers with the help of a computer and a projector. While projecting strategic map, participants defined strategic objectives and its relationships.

This turned out to be a very time-consuming and iterative task and the approach used could be clearly improved. The time needed to introduce changes and the impossibility to display the whole map, were the main issues hurting working session dynamism and interactivity.

So, this must deserve special attention from the facilitator and be well prepared in order to be as interactive and efficient as possible; thus, the use of gamestorming, visual thinking and/or brainstorming techniques should be considered as possible solutions. The same issues and solutions may apply to scorecard – measures and targets – design.

Surveys were used to measure some performance dimensions. To some extent this solution was adopted to overcome organizational limitations, e.g. measuring organization flexibility,; this is a critical issue when comes to implement PMSs in SMEs: find the right balance between the cost and benefit of measure, in a system that is required to be resource efficient and easy to implement and use.

Tailoring the system to the organization required a review process designed to be structured and simple, and yet adequate to business. As such, strategic review meetings were planned to happen every quarter while strategy analysis are predicted to happen once a year. Both events are supported by very precise objectives and agenda.

In order to preserve system simplicity and flexibility a decision about the depth and breadth to use for objectives and measures deployment is left open; each organization should choose the most suitable combination based on current business requirements and objectives.

As for the organization the main role for the system was to review strategy and monitor overall performance and also due to its size and structure; deployment of objectives and measures to all, or other, organizational levels was considered unnecessary.

Action plan is composed by strategic initiatives and initiatives required for measures implementation. Since some cannot be readily implemented; this allows the followup of all devised actions from a central place, which is core to strategy review meetings.

Scorecard includes thirty measures well balanced between the four perspectives: financial seven measures, customer six measures; processes ten measures; culture and structure seven measures.

Eight of the thirty measures were already in use by the organization. Priority was given to the adoption of these indicators because, if they were being used it’s because organization considers them as important, and as they are known to the organization facilitates system implementation and utilization.

Some of the measures included in the scorecard have the purpose to extend performance measurement beyond the strategic priorities, providing the system with the capability to, from one place, monitor and synthesize overall organizational performance – which was one of the main goals that drove system design. This had two practical implications:

- The adoption of operational measures, e.g. opportunity response ratio, and;
- The introduction of financial measures without an associated strategic priority, e.g. financial autonomy and liquidity quick ratio, which are intended to measuring overall financial health.

The use of an external facilitator is identified in existing literature as a requirement for successful PMS implementation. He has to provide organization with all knowledge and skills necessary to overcome their own limitations.

This was also the case for the current project; facilitator was responsible, not only, for scheduling, design and conduct workshops – bringing the required knowledge and skills for system implementation, but also, for managing the whole project.

Having the external facilitator managing the project has freed up organization's resources, making implementation less taxing, and enabled the project to follow smoothly and appropriately to the organization, while minimizing the impact of development in operations. Nevertheless, this required the clarification of management and facilitator roles and its empowerment.

Operational focus was the bigger contextual barrier to system design and implementation. Several working sessions had to be conducted without all team members being present or postponed due the involvement of managers in daily operations.

## 6 Conclusions, limitations and future work

The methodology used allowed the successful implementation of a performance measurement system in a Portuguese IT services SME that considers organization's specific requirements and characteristics.

The development framework, built on the theoretical requirements of adequate PMS for SMEs allowed, to successfully support the development of a BSC in the organization.

The knowledge and characterization of the organization were instrumental during the stages of design and implementation of the system, and underline the importance of the introduction phase.

Major barriers found during implementation were related to the characteristics of SMEs identified:

- Lack of human resources;
- Operational focus;
- Misconception about PMS.

The later – PMS misconception, despite having been addressed during initial and final workshops, has not been successfully overcome since the fear that PMS can introduce bureaucracy in the organization and undermine cooperation were still present in the mind of some managers.

PMS design and development allowed the organization to gain immediate benefits and the identification and planning of several strategic improvements.

Additionally, allowed the introduction of vital modern business performance dimensions such as flexibility, customers' fidelity and employees' satisfaction.

In SMEs, PMS implementation should not seek the perfect system, instead, should seek the implementation of the best possible system, since it's better to have an imperfect system than none. Here, the important issue is to move performance measurement habits of SMEs away from the ad-hoc, financial-operational to a more strategically aligned, holistic, balanced and dynamic approach, in order to foster their growth capacity and development. Though, this might entail a changing in organization's culture and management practices, which, as cultural issues, require longer times to change.

Performance measurement at SMEs it's a balancing act that seeks finding the optimal equilibrium between contextual factors, cost and benefits of measuring.

### LIMITATIONS AND FUTURE WORK

Time available for completion of the research project does not allow concluding about system utilization success and impact in the organization.

This was the first application of the proposed development process and as such further implementations are required for its refinement and evaluation of applicability to other contextual settings and facilitators.

With respect to the system, the introduction and test of previously identified improvements constitute good opportunities of future work. These are: (1) the inclusion of a method for strategic objectives selection and prioritization, during the design phase, and (2) improve the method used for designing strategy map, measures and targets, perhaps by applying more dynamic approaches.

Additionally, development process was used for the implementation of BSC; however the design of development process was grounded on generic requirements of PMS for SMEs found in the literature, therefore, should be easily adaptable for the implementation of other frameworks or generic PMS.

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## Appendixes

# Appendix A: Strategy and Scorecard

### *Strategy*

## Missão

A Winprovit existe para criar e desenvolver soluções de *sourcing*, manutenção e suporte nas Tecnologias de Informação (TI) que satisfaçam as necessidades dos nossos clientes e parceiros, bem como para motivar os nossos colaboradores, desenvolvendo e maximizando o seu potencial.

## Visão

Sermos reconhecidos nos mercados onde atuamos como o parceiro de referência na criação de valor na área das TI.

## Valores

Flexibilidade – Adaptamo-nos às necessidades dos clientes.

Ética – Atuamos sempre em respeito pelos princípios fundamentais que governam as sãs relações sociais, profissionais e de negócio.

Lealdade – Apostamos em relações de longo prazo promovendo o respeito, a honra e a honestidade.

Confiança – Investimos em relações de mútua confiança com clientes, parceiros e colaboradores.

Equidade – Promovemos a equidade de raça, género e crença.

## Estratégia

Crescer anualmente acima de 10% até 2016, através do estabelecimento de relações de proximidade com os clientes, pela flexibilidade das soluções apresentadas e pela qualidade dos serviços prestados nas áreas de *sourcing* de RH e no suporte / manutenção de Tecnologias de Informação.

*Crescimento*

Com o intuito de dar continuidade à expansão da sua atividade, a Winprovit estabeleceu o objetivo de crescer anualmente, no mínimo, 10% o volume de negócios até 2016 e manter a sua rentabilidade atual, garantindo assim a sua sustentabilidade futura. Durante este período iremos também procurar diversificar a nossa oferta e alargar os mercados geográficos.

*Relações de proximidade*

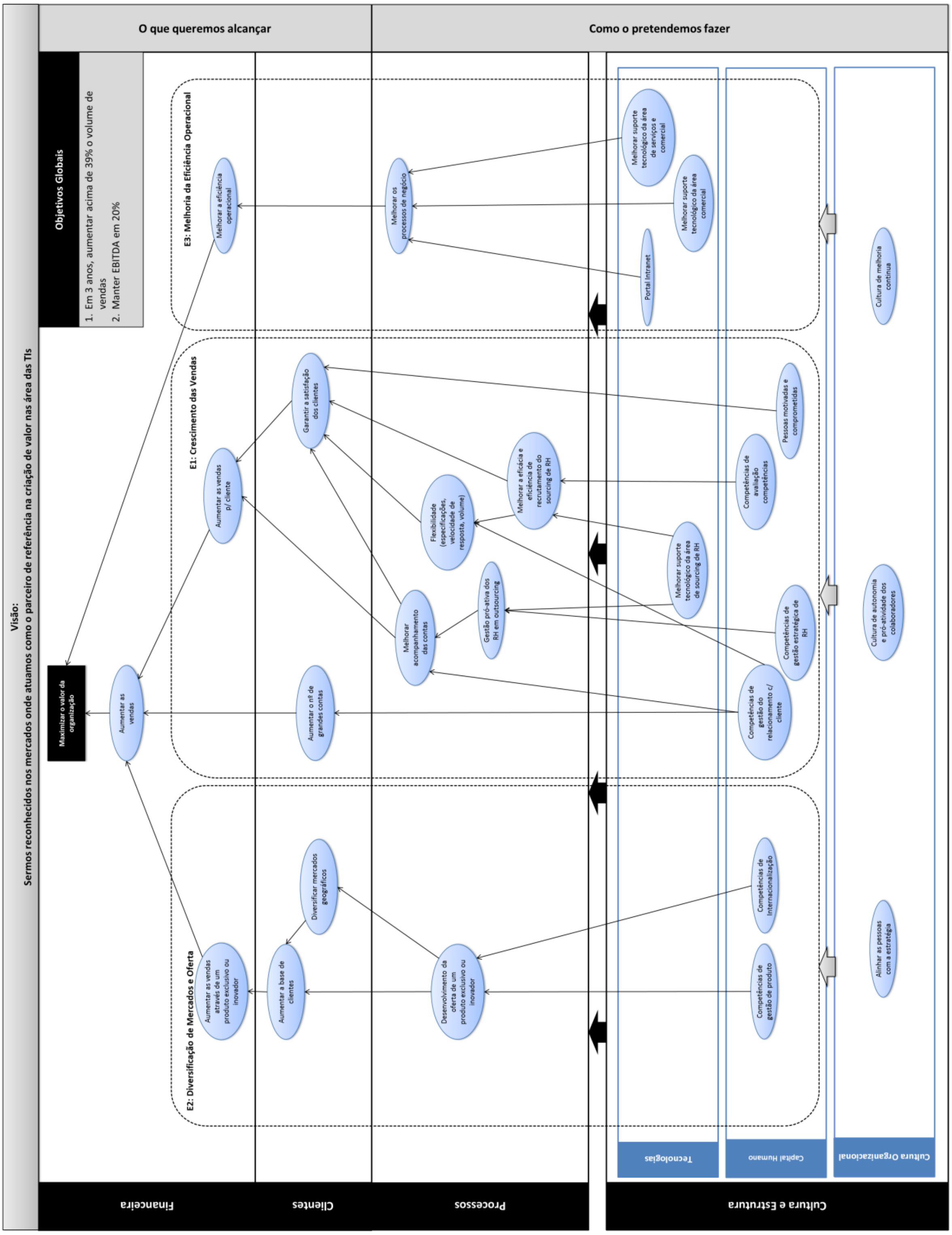
O estabelecimento de relações de proximidade com os clientes requer um acompanhamento constante, aliado a uma grande disponibilidade e rapidez de resposta. Só deste modo poderemos conhecer e antecipar as suas necessidades, sermos merecedores da sua confiança

***Strategic Themes***

## Temas Estratégicos

| | Tema | Descrição |
|---|---|---|
| E1 | **Crescimento das vendas** | Crescer no nº de clientes procurando diretamente ou através de parceiros grandes empresas nacionais através da oferta de serviços de sourcing, suporte e manutenção nas TIs, apostando na flexibilidade, no acompanhamento prestado e pelo aumento do nº de interlocutores |
| E2 | **Diversificação de Mercados e oferta** | Alargar a oferta através da comercialização de um produto (a definir) que permita sustentar a internacionalização da organização |
| E3 | **Melhorar a eficiência operacional** | Melhorar a eficiência de processos operacionais maduros e automatizar tarefas que não acrescentem valor para o cliente |

### *Strategy Map*



***PMS Scorecard***

| | | Scorecard | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Metas | | |
| **Perspectiva** | **Objectivos Estratégicos** | **Indicadores** | **Dono do Indicador** | **Quem Mede** | **Fonte dos Dados** | **Frequência de medição** | **Meta Ano 1** | **Meta Ano 2** | **Meta Ano 3** |
| **Financeira** | Maximizar o valor da organização | EBITDA | DG | DF | ERP | Mensal | = 20% | = 20% | = 20% |
| | | Autonomia Financeira | DF | DF | Contabilidade | Semestral | ≥ 35% | ≥ 35% | ≥ 35% |
| | | Grau de liquidez imediata | DF | DF | Contabilidade | Semestral | ≥ 1 | ≥ 1 | ≥ 1 |
| | Aumentar as vendas | Taxa anual de evolução das vendas | DG | DF | ERP | Mensal | ↑ 10% | ↑ 10% | ↑ 15% |
| | Aumentar as vendas p/ cliente | Taxa de evolução das vendas médias p/ cliente | DG | DF | Contabilidade | Anual | ↑ 5% | ↑ 5% | ↑ 5% |
| | Aumentar as vendas através de um produto exclusivo ou inovador | % de vendas de produtos em relação ao total das vendas | DG | DF | Contabilidade | Mensal | – | – | ≥ 4% |
| | Melhorar a eficiência operacional | Taxa de evolução das vendas p/ colaborador | DG | DF | ERP | Anual | ↑ 1% | ↑ 3% | ↑ 5% |
| **Cliente** | Aumentar o nº de grandes contas | Nº de novas grandes contas | DG | DG | ERP | Trimestral | ↑ 2 | ↑ 2 | ↑ 2 |
| | Garantir a satisfação dos clientes | Índice de satisfação dos clientes | DG | DQ | Inquérito a clientes | Anual | ≥ 6 | ≥ 6 | ≥ 6 |
| | | Índice de fidelidade dos clientes | DG | DQ | Inquérito a clientes | Anual | ≥ 6 | ≥ 6 | ≥ 6 |
| | | % de reclamações de clientes analisadas | DG | DQ | SGQ | Mensal | ≥ 20% | ≥ 50% | ≥ 80% |
| | Aumentar a base de clientes | Taxa de crescimento do # de clientes ativos | DG | DF | ERP | Anual | ↑ 12% | ↑ 12% | ↑ 15% |
| | Diversificar mercados | Nº de países externos onde foram efetuadas vendas | DG | DG | ERP | Semestral | – | – | 1 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | geográficos | | | | | | | | |
| **Processos** | Flexibilidade (especificações, velocidade de resposta, volume) | Índice de Flexibilidade | DG | DQ | Inquérito a clientes | Anual | ≥ 6 | ≥ 6 | ≥ 6 |
| | Melhorar a eficiência de recrutamento do sourcing de RH | Tempo médio de resposta a oportunidades | DC | DC | ERP | Mensal | 3d | 2d | 1d |
| | | Taxa de resposta a oportunidades | DC | DC | ERP | Mensal | 60% | 70% | 80% |
| | | Taxa de colocação de recursos | DC | DC | ERP | Mensal | ≥ 25% | ≥ 35% | ≥ 45% |
| | Melhorar acompanhamento das contas | Índice de satisfação com o acompanhamento da conta | DG | DQ | Inquérito a clientes | Anual | ≥ 6 | ≥ 6 | ≥ 6 |
| | | Taxa de cumprimento do SLA | DT | DT | ERP | Mensal | ≥ 95% | ≥ 95% | ≥ 95% |
| | Gestão pró-ativa dos RH em outsourcing | Índice de satisfação dos recursos em outsourcing com a WP | DRH | DRH | Inquérito aos colaboradores | Anual | ≥ 6 | ≥ 6 | ≥ 6 |
| | | Taxa de rotatividade do pessoal em outsourcing | DRH | DRH | ERP | Trimestral | < 5% | < 5% | < 5% |
| | Desenvolvimento da oferta de um produto exclusivo ou inovador | Time to market | DG | DG | Relatório Anual de Atividade | Trimestral | – | – | 21m (03/2015) |
| | Melhorar os processos de negócio | # de processos melhorados | DG | DQ | Relatório Anual da Qualidade | Semestral | 3 | 3 | 3 |
| **Cultura e Estrutura** | Competências de gestão do relacionamento c/ cliente | | | | | | 100% | 100% | 100% |
| | Competências de gestão estratégica de RH | | | | | | 30% | 50% | 100% |
| | Competências de avaliação competências | Taxa de execução do plano anual de formação nas competências estratégicas | DRH | DRH | DRH | Semestral | 33% | 66% | 100% |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| Competências de Internacionalização | | | | | | – | – | 100% |
| Competências de Desenvolvimento/Gestão de produto | | | | | | – | 100% | 100% |
| Pessoas motivadas e comprometidas | Índice de satisfação do pessoal | DRH | DRH | Inquérito aos Colaboradores | Anual | ≥ 6 | ≥ 6 | ≥ 6 |
| Alinhar as pessoas com a estratégia | # de ações de divulgação da estratégia | DG | DG | DG | Semestral | 1 | 1 | 1 |
| Cultura de autonomia e pró-atividade dos colaboradores | % de colaboradores internos com objetivos definidos | BU Managers | BU Managers | Avaliações de desempenho | Semestral | - | 80% | 100% |
| | % de colaboradores com avaliação de desempenho (Internos/Externos) | DG | DRH | Avaliações de desempenho | Anual | 100%/25% | 100%/50% | 100%/75% |
| Cultura de melhoria continua | # de ações de Formação/Sensibilização no SGQ | DQ | DQ | DQ | Semestral | 2 | 2 | 2 |
| Melhorar suporte tecnológico da área de sourcing de RH | | | | | Trimestral | 4 | 6 | 6 |
| Melhorar suporte tecnológico da área comercial | | | | | Trimestral | – | 4 | 6 |
| Melhorar suporte tecnológico da área de serviços | Índice de prontidão da solução da solução | DSI | DSI | DSI | Trimestral | - | 6 | 6 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Trimestral | - | 6 | 6 |
| | Portal Intranet | | | | | Trimestral | 6 | 6 | 6 |

**Figure 7 Scorecard**

***Action Plan***

| Plano de Ação | | | | | | |
|---|---|---|---|---|---|---|
| **Iniciativas** | **Dono da Iniciativa** | **Data Início** | **Data Fim** | **Orçamento** | **Estado** | |
| | | | | | -<br>-<br>- | -<br>-<br>- |
| | | | | | - | - |
| | | | | | - | - |
| | | | | | - | - |
| | | | | | - | - |
| | | | | | - | - |
| | | | | | - | - |
| Adaptar inquérito de satisfação dos clientes | DQ/DG | Imediato | 31-06-2013 | - € | On time | 2 |
| Realização de uma ação de sensibilização anual para o registo e tratamento de reclamações e não conformidades | DQ | Imediato | 31-12-2013 | - € | On time | 2 |
| | | | | | - | - |
| | | | | | - | - |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | - | - |
| Subscrever contas Recruiter no Linkedin | DC | Imediato | 31-06-2013 | 3.000,00 € | -<br>-<br>On time | -<br>-<br>2 |
| | | | | | -<br>- | -<br>- |
| Visita mensal aos locais com 5 ou mais recursos colocados e contacto telefónico mensal com os restantes | DRH | Imediato | 31-12-2013 | 2.500,00 € | On time | 2 |
| Implementação de avaliação da satisfação dos colaboradores | DRH/DQ | Imediato | 31-09-2013 | | On time | 2 |
| | | | | | - | - |
| Revisão anual do SGQ | DQ | Imediato | 31-12-2013 | - € | On time | 2 |
| | | | | | -<br>-<br>-<br>-<br>-<br>-<br>-<br>- | -<br>-<br>-<br>-<br>-<br>-<br>-<br>- |
| Implementar sistema de recompensa/reconhecimento | DRH/DG | 01-09-2013 | 31-12-2013 | 7.500,00 € | Parada | 0 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Divulgar, c/ periodicidade anual, a avaliação de desempenho da organização | DG | Imediato | 31-12-2013 | - € | On time | 2 |
| Realizar estudo sobre a forma mais efectiva para melhorar a satisfação e compromisso dos recursos em outsourcing | DRH | 01-09-2013 | 31-06-2014 | - € | Parada | 0 |
| Divulgação anual da estratégia da organização | DG | Imediato | 31-12-2013 | - € | On time | 2 |
| Atribuição aos colaboradores de objetivos individuais | BU Managers | 01-09-2013 | 31-12-2013 | - € | Parada | 0 |
| Desenvolvimento com os clientes de programas de avaliação do desempenho dos recursos em outsourcing | DRH | Imediato | 31-12-2013 | - € | On time | 2 |
| Organização de ações de formação no SGQ | DQ | Imediato | 31-12-2013 | - € | On time | 2 |
| Melhorar a solução de gestão CRM de RH | DC/DSI | Imediato | 30-06-2014 | 4.000,00 € | On time | 2 |
| Otimização da gestão de propostas e projetos no ERP | DC/DSI | 01-07-2014 | 31-12-2014 | 1.500,00 € | On time | 2 |
| Solução de mobilidade para gestão de incidentes e despesas | DT/DSI | 01-01-2014 | 01-06-2014 | 2.000,00 € | Parada | 0 |
| Solução de gestão integrada de stocks e logística | DT/DSI | 01-01-2014 | 01-06-2014 | 2.500,00 € | Parada | 0 |
| Desenvolvimento de Portal Intranet | DSI | Imediato | 30-09-2014 | - € | On time | 2 |
| | | | **Orçamento total** | 23.000,00 € | | |

**Figure 8. Action Plan**

***Measures BI***

## Table 8. Performance Measures BI

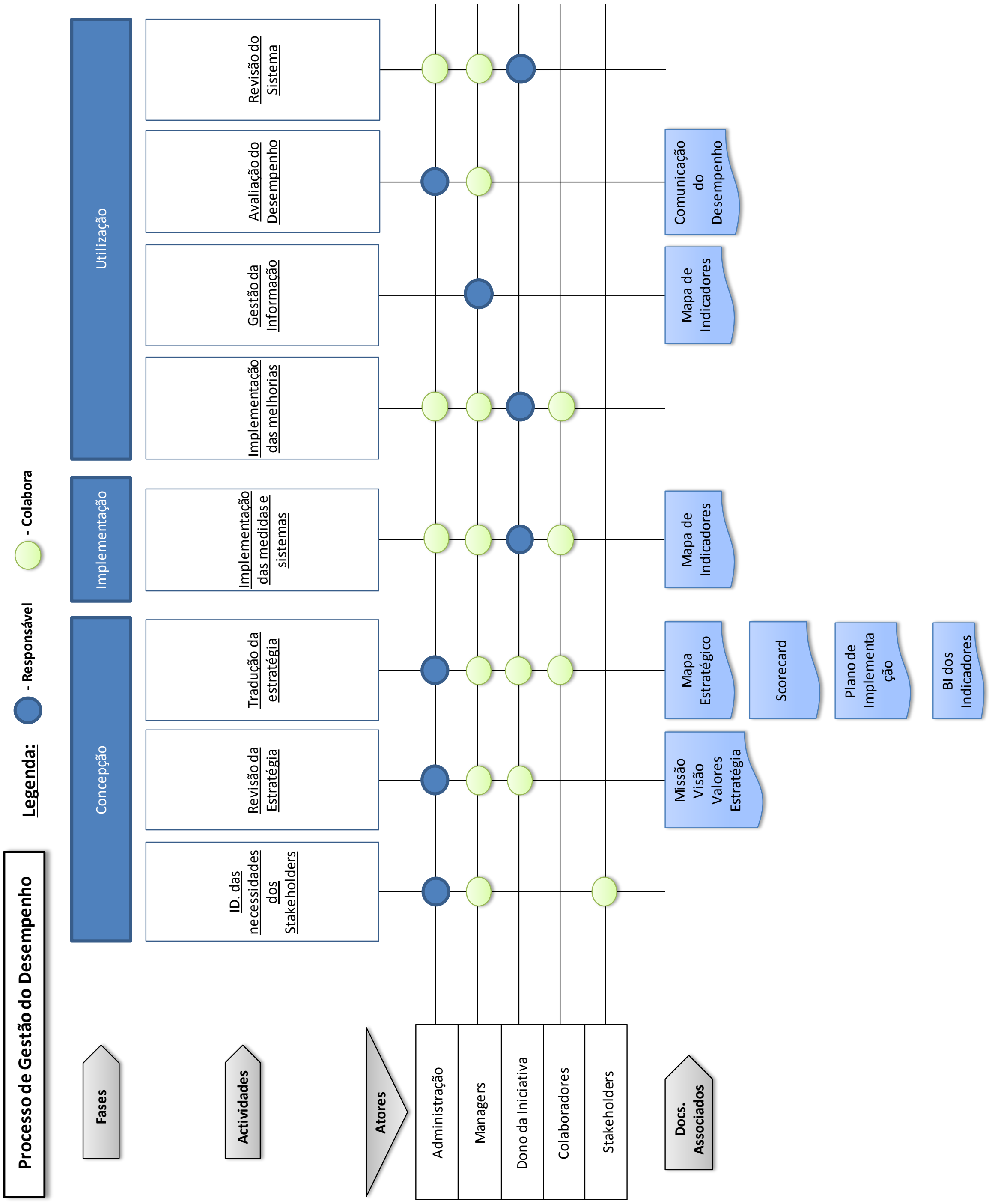
| Índice | Identificação | Unidade de Medida | Objetivo Estratégico | Fórmula | Freq. de Medição | Responsável | Quem mede | Fonte dos dados |
|---|---|---|---|---|---|---|---|---|
| F1 | EBITDA | % | Maximizar o valor da organização | Lucros antes de juros, impostos, depreciações e amortizações (resultado das operações) | Mensal | DG | DF | ERP |
| F2 | Autonomia Financeira | % | Maximizar o valor da organização | Cap. Prop./Activo | Semestral | DF | DF | Contabilidade |
| F3 | Grau de liquidez imediata | # | Maximizar o valor da organização | Disponibilidades/Passivo CP | Semestral | DF | DF | Contabilidade |
| F4 | Taxa anual de evolução das vendas | % | Crescer nas vendas | (acumulado das vendas no mês x - acumulado das vendas no mês x-12)/acumulado das vendas no mês x-12 | Mensal | DG | DF | ERP |
| F5 | Taxa de evolução das vendas médias p/ cliente | % | Aumentar as vendas p/ cliente | (vendas no ano z/# de clientes faturados no ano z)-(vendas no ano z-1/# de clientes faturados no ano z-1)/(vendas no ano z-1/# de clientes faturados no ano z-1) | Anual | DG | DF | Contabilidade |
| F6 | % de vendas de produtos em relação ao total das vendas | % | Aumentar as vendas de novos produtos | acumulado das vendas de produtos no mês x/acumulado das vendas no mês x | Mensal | DG | DF | Contabilidade |
| F7 | Taxa de evolução das vendas p/ colaborador | % | Melhoria da eficiência operacional | acumulado das vendas no ano z/média de colaboradores no ano z | Anual | DG | DF | ERP |
| C1 | Nº de novas grandes contas | # | Crescer o nº de grandes contas | # anual de grandes contas adicionadas | Trimestral | DG | DG | ERP |
| C2 | Índice de satisfação dos clientes | # | Garantir a satisfação dos clientes | Média do índice de satisfação | Anual | DG | DQ | Inquérito a clientes |
| C3 | Índice de fidelidade dos clientes | # | Garantir a satisfação dos clientes | Média do índice de fidelidade | Anual | DG | DQ | Inquérito a clientes |
| C4 | % de reclamações de clientes analisadas | # | Garantir a satisfação dos clientes | %reclamações de clientes analisadas | Mensal | DG | DQ | SGQ |
| C5 | Taxa de crescimento do # de clientes ativos | # | Aumentar a base de clientes | # de clientes com faturas emitidas nos últimos 24m no ano Z/# de clientes com faturas emitidas nos últimos 24m no ano Z-1 | Anual | DG | DF | ERP |
| C6 | Nº de países externos onde foram efetuadas vendas | # | Diversificar mercados geográficos | # de países onde se efetuaram vendas | Semestral | DG | DG | ERP |
| P1 | Índice de Flexibilidade | # | Flexibilidade (especificações, velocidade de resposta, volume) | Média do índice de flexibilidade | Anual | DG | DQ | Inquérito a clientes |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| P2 | Tempo médio de resposta a oportunidades | *d* | Melhorar a eficiência de recrutamento do sourcing | Média dos dias necessários desde a receção da solicitação do cliente até ao envio da cotação ou proposta | Mensal | DC | DC | ERP |
| P3 | Taxa de resposta a oportunidades | *%* | Melhorar a eficiência de recrutamento do sourcing | # de oportunidades respondidas/# de oportunidades recebidas | Mensal | DC | DC | ERP |
| P4 | Taxa de colocação de recursos | *%* | Melhorar a eficiência de recrutamento do sourcing | # de recursos colocados/# de vagas respondidas | Mensal | DC | DC | ERP |
| P5 | Índice de satisfação com o acompanhamento da conta | *#* | Melhorar acompanhamento das contas existentes | Média do índice de satisfação do cliente com o acompanhamento da conta | Anual | DG | DQ | Inquérito a clientes |
| P6 | Taxa de cumprimento do SLA | *#* | Melhorar acompanhamento das contas | # de incidentes mensais em que o SLA foi cumprido/# total mensal de incidentes com SLA realizados | Mensal | DT | DT | ERP |
| P7 | Índice de satisfação dos recursos em outsourcing com a WP | *#* | Gestão pró-ativa dos RH em outsourcing | Média do índice de satisfação dos colaboradores em outsourcing | Anual | DRH | DRH | Inquérito aos colaboradores |
| P8 | Taxa de rotatividade do pessoal em outsourcing | *%* | Gestão pró-ativa dos RH em outsourcing | # de saídas durante os últimos 12 meses/média de empregados em outsourcing nos últimos 12m | Trimestral | DRH | DRH | ERP |
| P9 | Time to market | *m* | Desenvolvimento da oferta de um produto exclusivo ou inovador | Nº de meses necessários até o produto ficar disponível para venda | Trimestral | DG | DG | Relatório Anual de Atividade |
| P10 | # de processos melhorados | *#* | Melhorar os processos de negócio | # de processos melhorados durante o ano corrrente | Semestral | DG | DQ | Relatório Anual da Qualidade |
| CE1 | Taxa de execução do plano anual de formação nas competências estratégicas | *#* | Aquisição de competências estratégicas (relacionamento c/ o cliente; gestão estratégica de RH; avaliação de competências; internacionalização; desenvolvimento e gestão de produto) | # de ações de formação estratégica previstas/# de ações de formação realizadas | Semestral | DRH | DRH | DRH |
| CE2 | Índice de satisfação do pessoal | *#* | Pessoas motivadas e comprometidas | Média do índice de satisfação dos colaboradores | Anual | DRH | DRH | Inquérito aos Colaboradores |
| CE3 | # de ações de divulgação da estratégia | *#* | Alinhar as pessoas com a estratégia | # de ações de divulgação da estratégia realizadas no ano corrente | Semestral | DG | DG | DG |
| CE4 | % de colaboradores internos com objetivos definidos | *%* | Cultura de autonomia e pró-atividade dos colaboradores | # de colaboradores com objetivos definidos no ano corrente/# médio anual de colaboradores | Semestral | BU Managers | BU Managers | Avaliações de desempenho |

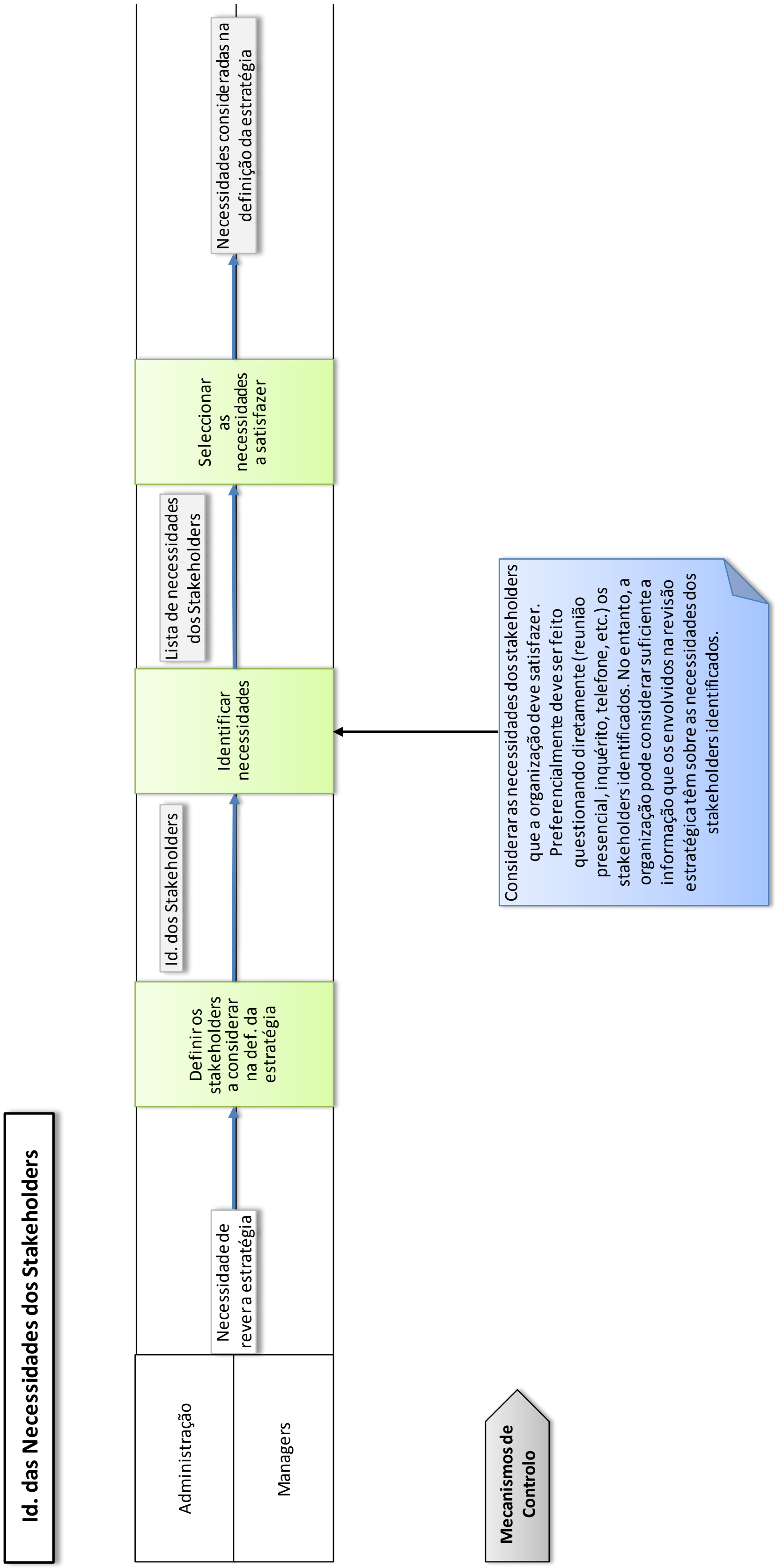
| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | no ano Z | | | | |
| CE5 | % de colaboradores com avaliação de desempenho (Internos/Externos) | % | Cultura de autonomia e pró-atividade dos colaboradores | # de colaboradores com avaliação de desempenho/# médio anual de colaboradores | Anual | DG | DRH | Avaliações de desempenho |
| CE6 | # de ações de Formação/Sensibilização no SGQ | # | Cultura de melhoria continua | # de ações de Formação no SGQ | Semestral | DQ | DQ | DQ |
| CE7 | Índice de prontidão da solução | # | Melhoria do suporte tecnológico (área de sourcing de RH; área comercial; área de serviços; Intranet) | 1-Necessária uma nova solução<br>2-Necessários grandes desenvolvimentos<br>3-Desenvolvimentos em curso atrasados<br>4-Desenvolvimentos em curso dentro do previsto<br>5-Necessário algum desenvolvimento<br>6-OK | Trimestral | DSI | DSI | DSI |

## Appendix B: PMS Processes and Activities

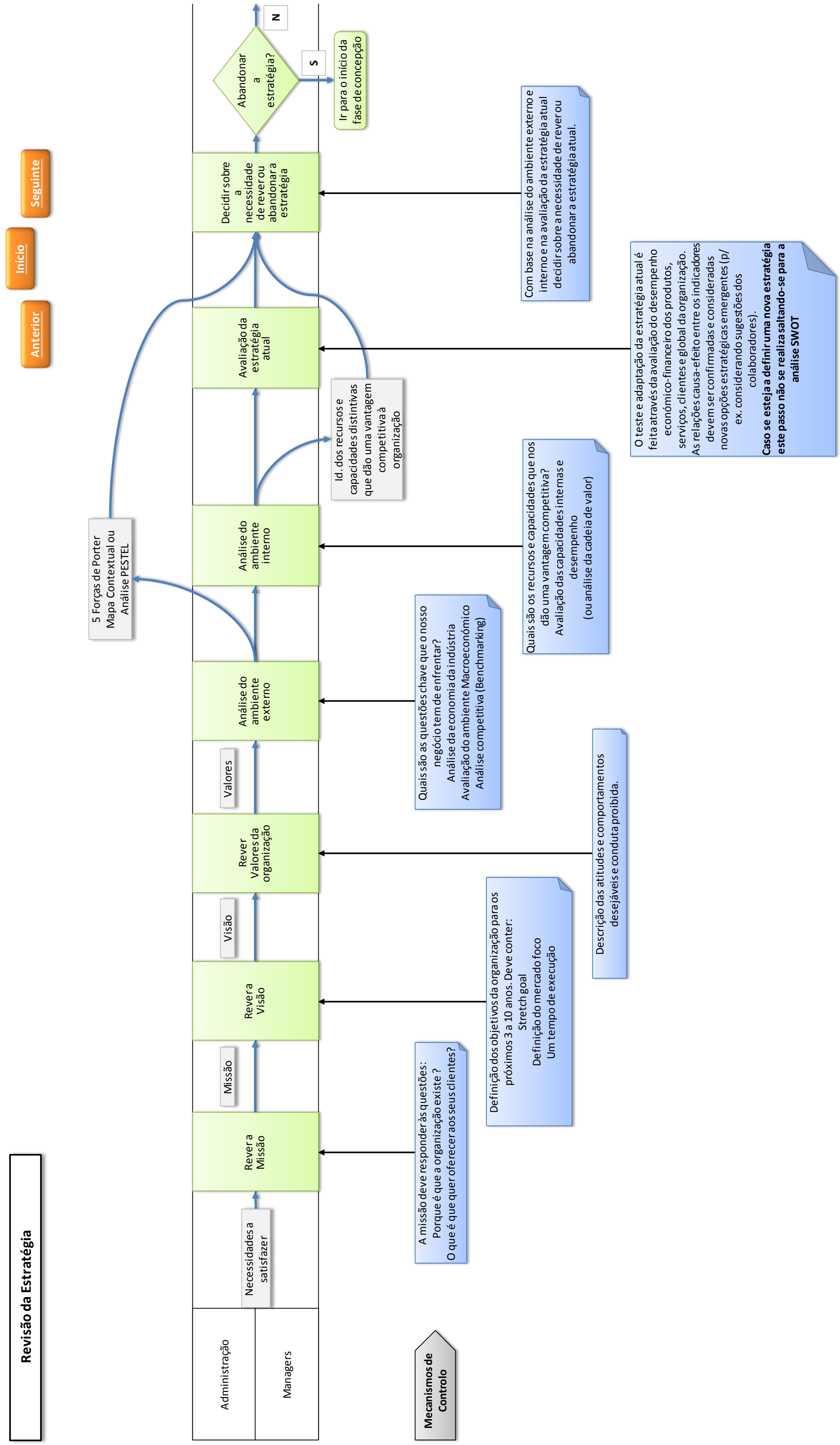
### *Performance Management Process RACI Matrix*



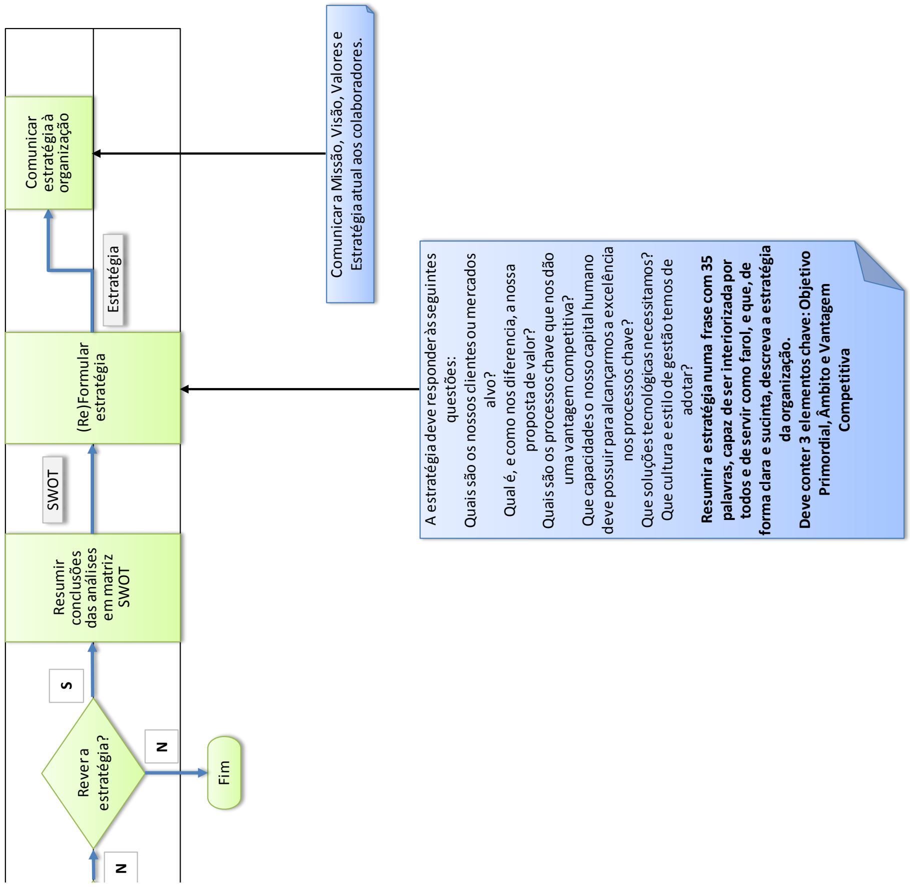
***Stakeholders Needs Identification Activity***



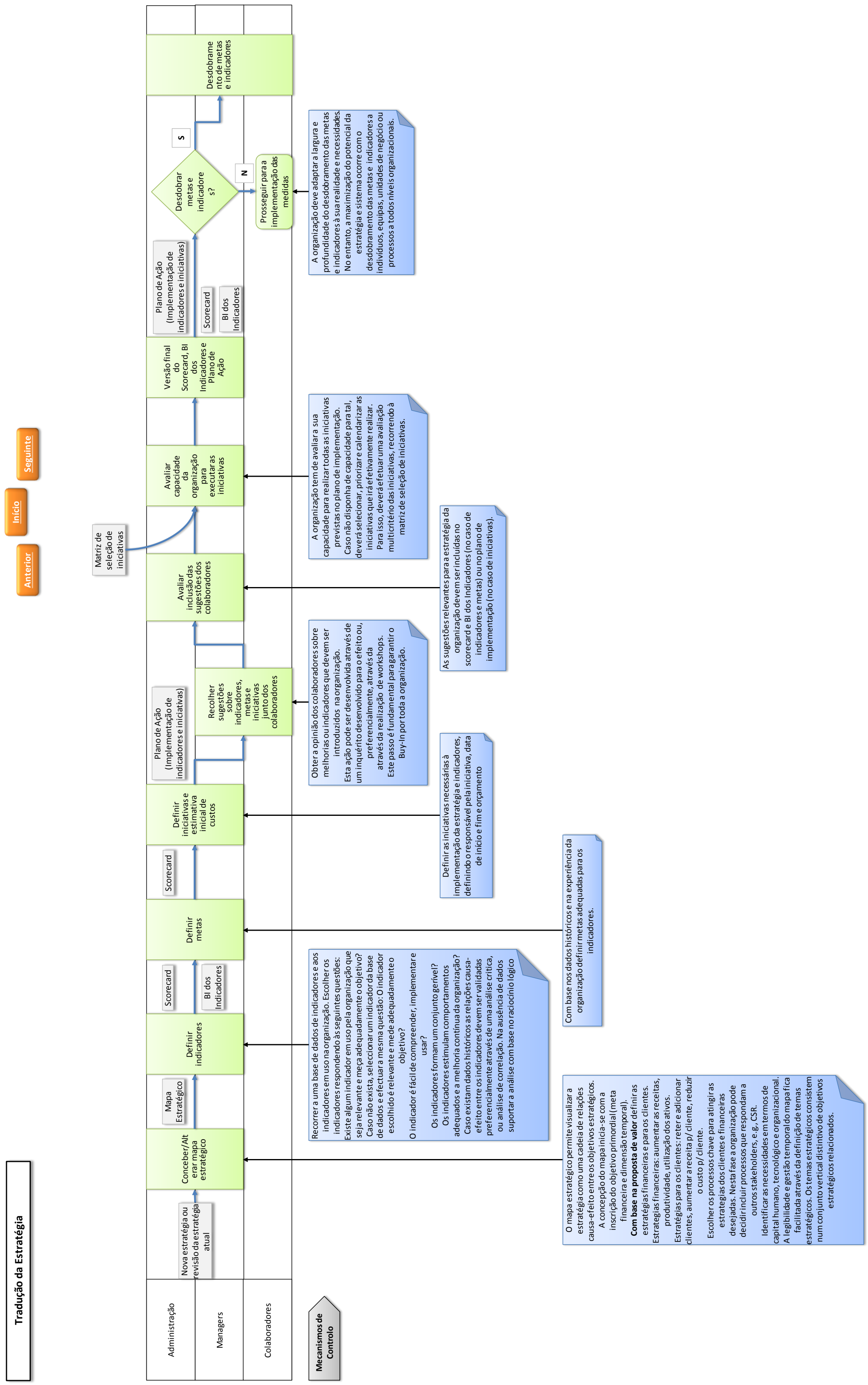
### *Strategy Revision Activity (1/2)*



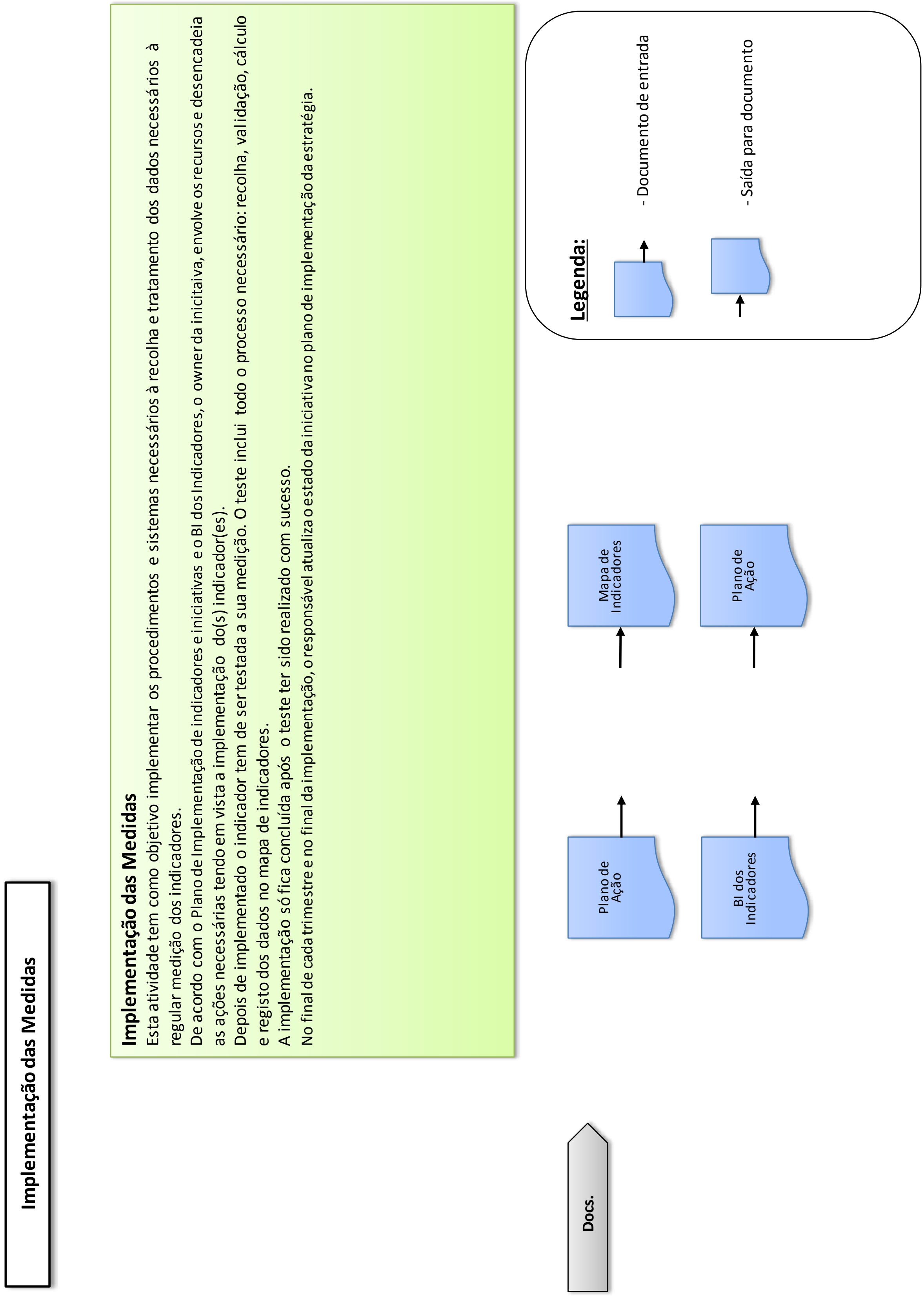
### *Strategy Revision Activity (2/2)*



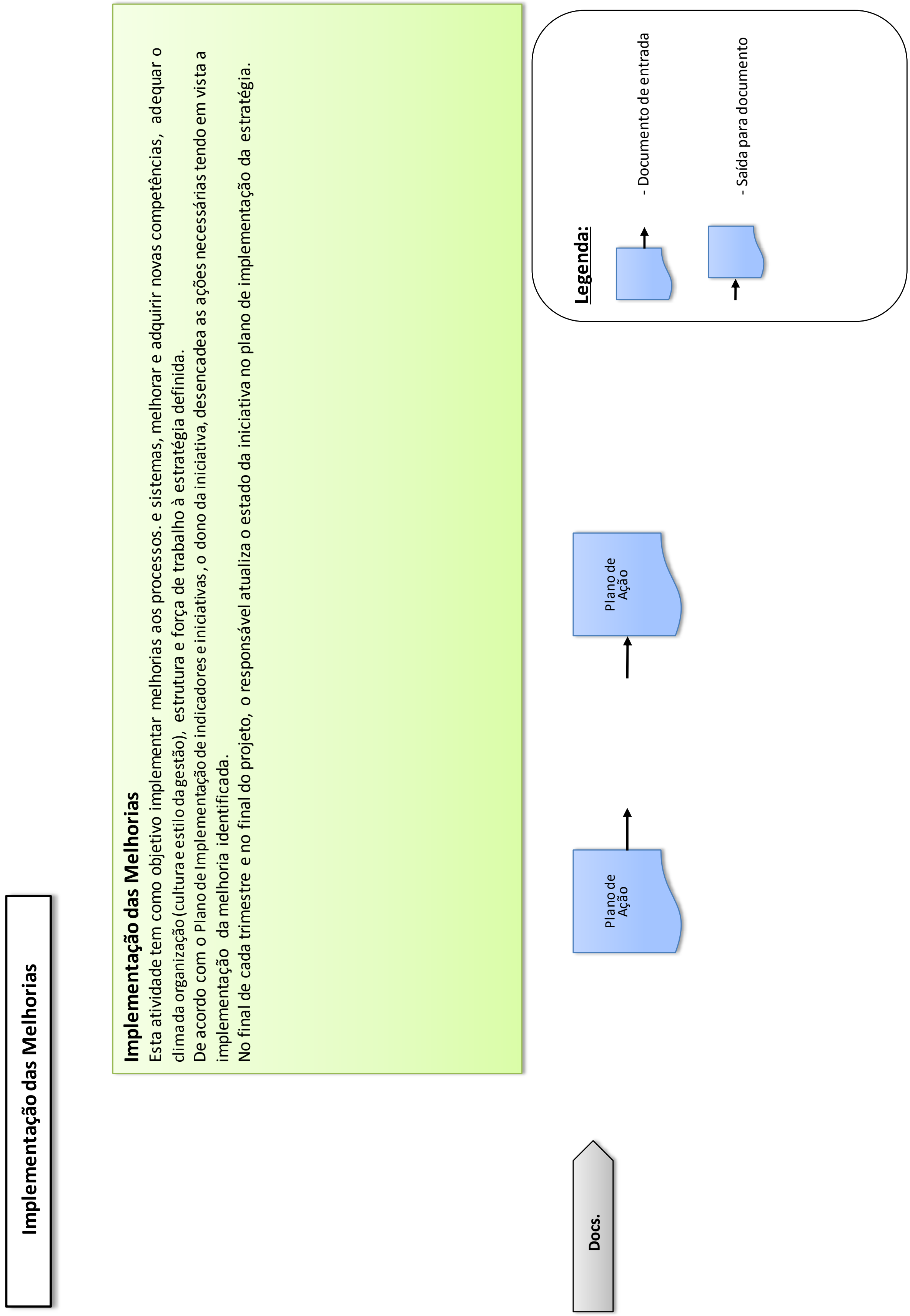
### *Strategy Translation Activity*



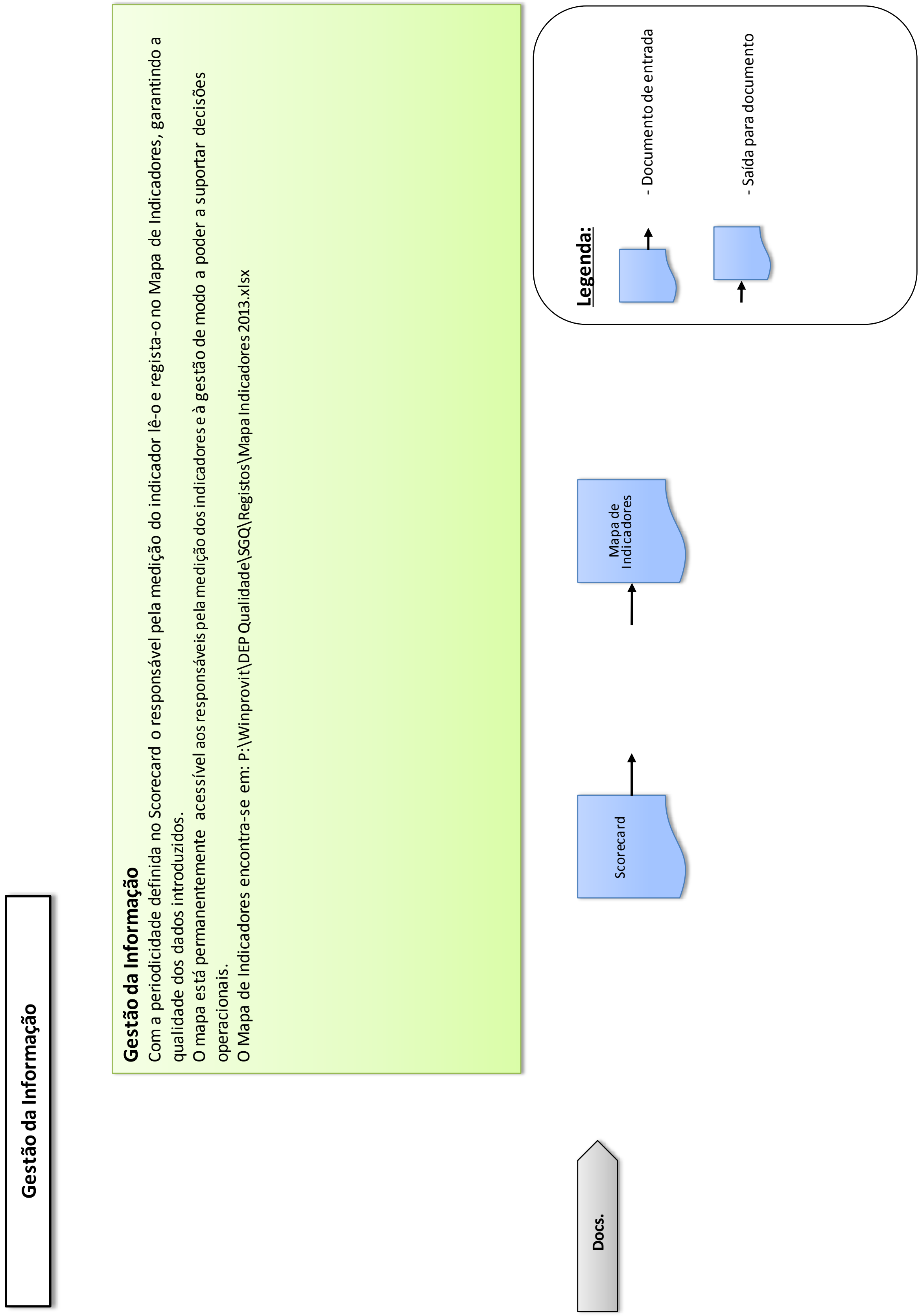
***Measures Implementation Activity***



***Improvements Implementation Activity***



***Information Management Activity***



### *Performance Evaluation Activity (1/2)*

## Avaliação do Desempenho

**Reuniões Trimestrais de Revisão Estratégica**

No final de cada trimestre a gestão reune-se com os objetivos de (1)avaliar o desempenho da organização e a (2)implementação da estratégia. Esta reunião não tem como objetivo resolver questões operacionais; estas são tratadas pelos respetivos gestores ou, se necessário, em reuniões específicas para esse efeito.

Como preparação prévia para a reunião os gestores devem analisar os dados e afastamentos para as metas, pensando em possíveis soluções para estes problemas.

Esta reunião pode conduzir à revisão das metas, indicadores e iniciativas.

A reunião tem início com a revisão geral do desempenho da organização sustentado no Mapa Estratégico e no Mapa de Indicadores fazendo ênfase nos desvios entre as metas definidas e os resultados obtidos que indiciem problemas com a implementação da estratégia. Caso se identifiquem problemas devem procurar -se as causas e desenvolver ações para os corrigir. As causas podem ser identificadas colocando-se questões como: p/ ex.:

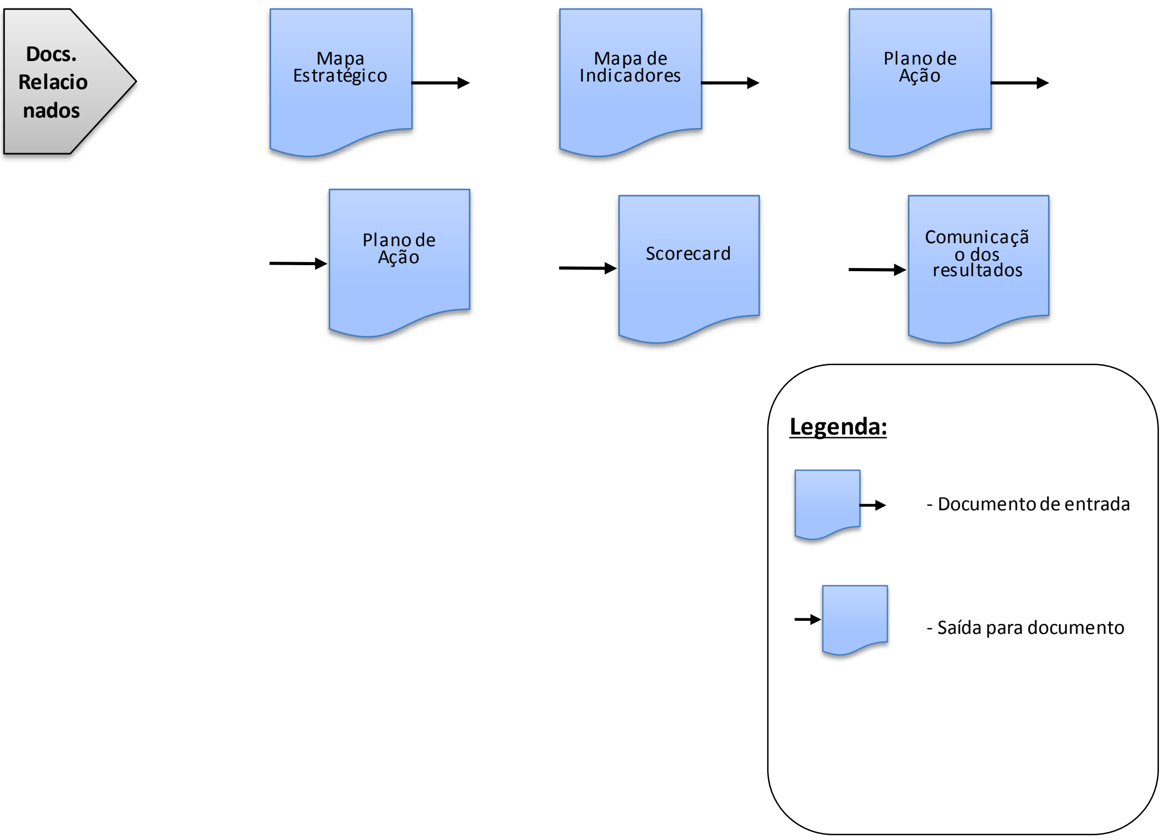
- As iniciativas estão a decorrer dentro do calendário previsto?
- As iniciativas estão a produzir os efeitos desejados?
- As metas definidas são demasiado, ou pouco, ambiciosas sendo necessária a sua revisão?
- São necessárias outras/novas iniciativas?

Os indicadores devem também ser avaliados procurando detetar-se insuficiências revendo as questões utilizadas na sua concepção (ver atividade Tradução da Estratégia).

De acordo com as decisões resultantes da reunião atualizar o Scorecard, BI dos indicadores e/ou Plano de Implementação.

Da reunião do 4º trimestre resulta a comunicação dos resultados à organização.

**Caso se detete que (1) os pressupostos usados na definição da estratégia estavam errados ou que (2) existiram alterações significativas no contexto externo ou interno da organização, a estratégia tem de ser adaptada ou substituída antecipando-se a reunião anual de análise da estratégia (ver quadro ao lado).**

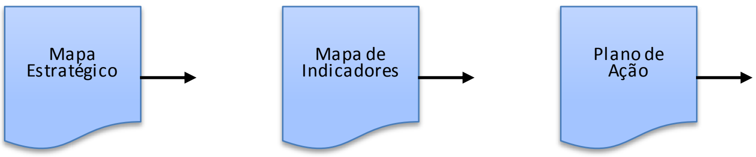


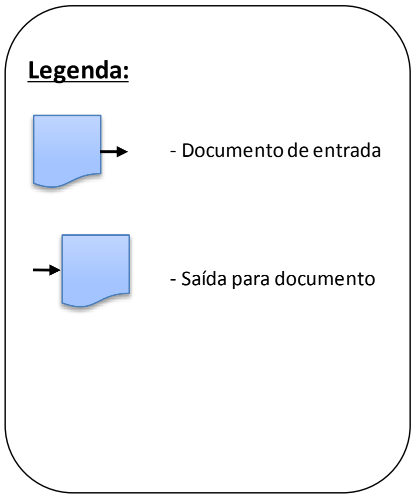
### *Performance Evaluation Activity (2/2)*

**Reunião Anual de Análise da Estratégia**

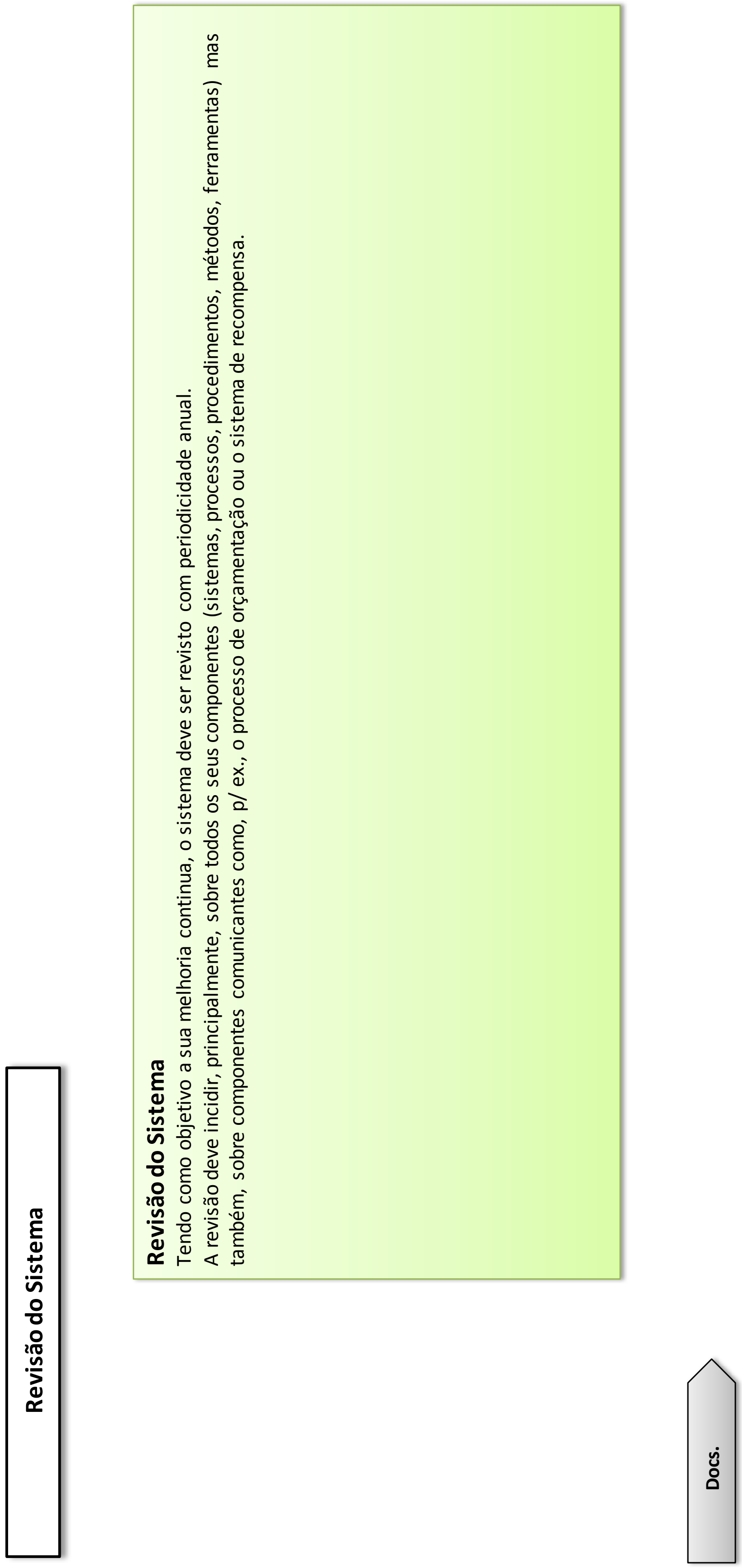
No final de cada ano, a gestão reune-se com o propósito de testar e adaptar a estratégia atual.

O processo é feito com base na avaliação da estratégia atual — (1) análise económico-financeira global da empresa, dos produtos e dos clientes, (2) no teste das relações causa-efeito entre os indicadores (3) e consideração de opções estratégicas emergentes e (4) na avaliação das alterações aos contextos externo e interno da organização. Para isto, o processo volta à análise do ambiente externo, na atividade Revisão da Estratégia.



### *System Review Activity*



# Appendix C: Workshops Documentation

## *Workshop #1 – Strategy revision*

**Performance Measurement and Management System**

Workshop #1

**Objectivos**

- Suster o compromisso da gestão
- Proporcionar bases para a revisão estratégica
- Rever a estratégia

**Agenda**

- O desafio
- Características de uma PME
- Definição de PMMS
- Utilidade e Benefícios
- Processo de Desenvolvimento
- Fatores Críticos de Sucesso
- Definição de Equipa de Trabalho
- Revisão da Estratégia

**O desafio é…**

- Implementar, até 15 de Junho, um sistema de medição e gestão do desempenho concebido à medida da Wp
- O meu papel

**Características das PMEs**

- Mercados e nº de clientes limitados
- Operam em ambientes muito competitivos e em constante mudança
- Falta de controlo sobre o seu posicionamento competitivo
- Flexibilidade e reação rápida
- Foco nas operações
- Gestão reativa
- Falta de recursos
  - Humanos, capital, gestão, tempo, competências
- Informais
  - Processos, Estratégia
- Planeamento escasso e de curto prazo

**O que é um (bom) PMS?**

- É um sistema equilibrado (med. financeiras e não financeiras), dinâmico (reflete a cada momento os contextos interno e externo da organização) e integrado (vertical e horizontalmente) capaz de suportar decisões operacionais e estratégicas através da recolha, tratamento e análise de informação (Neely et al. 2002)

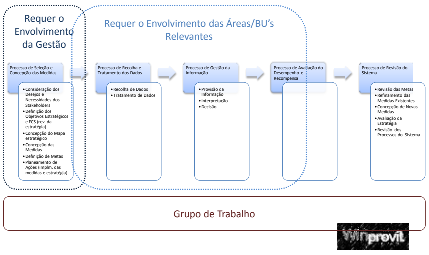
## Para que serve?

- Medir o Desempenho
  - Monitorar o progresso
- Gerir a Estratégia
  - Formulação, planeamento e execução
  - Focar e alinhar
- Comunicar
  - Internamente e externamente
- Influenciar o Comportamento
  - Reconhecer e/ou recompensar comportamentos
  - Gerir relações
  - Controlo
- Aprender e Melhorar
  - Feedback
  - Tornar o conhecimento explícito
  - Identificação de melhorias

## Que benefícios se podem esperar?

- Desenvolvimento da Gestão
- Id. de Fraquezas
- Forçar o Planeamento Estratégico
- Mudança para uma cultura de melhoria contínua
- Decisões Pró-Ativas
- Melhoria da Transparência
- Melhoria da Visibilidade
- Melhoria dos Comportamentos
- Melhoria da Comunicação
- Aumento da Autonomia e Motivação

## Processo de Desenvolvimento




## Envolvimento da Gestão

- Workshop #1
  - Revisão da Estratégia
    - Missão, visão, valores, stakeholders needs, ambiente competitivo, SWOT
- Workshop #2
  - Definição dos Objetivos Estratégicos
    - Fatores Críticos de Sucesso, Processos Chave
  - Concepção do Mapa Estratégico
    - Objetivos, Relações, Medidas de Desempenho, Metas
- Workshop #3
  - Aprovação das Medidas e Metas
  - Aprovação do Plano de Ação
  - Priorização e Calendarização das Ações

## Envolvimento das BUs

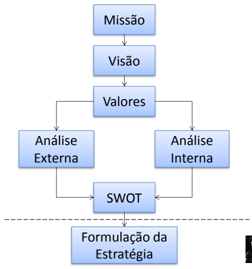
- Sessões de Trabalho
  - Def. ações necessárias à implementação dos Objetivos Estratégicos
    - Id. de Melhorias aos processos
    - Novos processos
  - Planeamento e Implementação das Ações
  - Concepção das Medidas de Desempenho
  - Implementação das Medidas

## Requisitos Fundamentais para o Sucesso

- Compromisso da Gestão na Implementação e Utilização
- Percepção dos Benefícios que podem Resultar
- Envolvimento dos Principais Utilizadores
- Comunicar à organização
- PMS à medida da organização
- Suporte tecnológico adequado

**DEFINIÇÃO DE EQUIPA DE TRABALHO**

## Processo - Definição da Estratégia




## Missão Visão e Valores

- What business are we in and why?
- Before formulating a strategy, managers need to agree on their company's purpose (mission), its aspiration for future results (vision), and the internal compass that will guide its actions (values)

## Missão

- The mission is a brief statement, typically one or two sentences, that defines why the organization exists, especially what it offers to its customers and clients.

"*We want to discover, develop and successfully market innovative products to prevent and cure diseases, to ease suffering and to enhance the quality of life. We also want to provide a shareholder return that reflects outstanding performance and to adequately reward those who invest ideas and work in our company*." (Novartis)

## Visão

- The vision is a concise statement that defines the mid- to long-term (three- to 10-year) goals of the organization. Though short, this vision statement contained three vital components:
  - Stretch goal
  - Definition of market focus
  - A time line for execution

"*to be a top-quartile specialist within 5 years*."

## Valores

- Often called core values of a company prescribe the attitude, behavior, and character of an organization. Value statements, which are often lengthy, describe the desirable attitudes and behavior the company wants to promote as well as the forbidden conduct, such as bribery, harassment, and conflicts of interest, that employees should definitely avoid

*"We respect the individual, and believe that individuals who are treated with respect and given responsibility respond by giving their best."*

*"We are frugal. We guard and conserve the company's resources with at least the same vigilance that we would use to guard and conserve our own personal resources."*

*"We are believers in the Golden Rule. In all our dealings we will strive to be friendly and courteous, as well as fair and compassionate."*

*"We feel a sense of urgency on any matters related to our customers. We own problems and we are always responsive. We are customer-driven."*

## Fatores Críticos de Sucesso da Wp

- Acrescentar valor
- Baixa rotatividade do pessoal
- Capacidade de resposta
- Clarificação e comunicação da oferta
- Credibilidade
- Cuidado com os custos
- Demonstrar competência técnica
- Disponibilidade
- Especialização em áreas
- Flexibilidade
- Foco na operação
- Resposta aos compromissos assumidos
- Pouco burocrática
- Confiança do cliente
- Pessoas
- Proximidade ao cliente
- Qualidade de serviço
- Rapidez de resposta
- Reconhecimento do valor pelos clientes
- Relação pessoal com o cliente
- Relacionamento com o cliente
- Remunerar justamente
- Reparação ao componente
- Respeito pela concorrência
- Responder aos clientes
- Simpatia
- Trabalhar arduamente
- Transparência
- Ultrapassar as expectativas do cliente da venda à prestação do serviço
- Valorização profissional dos RH

## Possíveis Estratégias para a Wp

- Apostar em serviços de valor acrescentado
- Apostar no outsourcing
- Aumentar nº de clientes
- Capacidade de resposta
- Clarificação das áreas de negócio
- cloud computing
- Consolidar relações com os clientes
- Construir um cartão-de-visita forte em determinada área
- Diversificação dos serviços/oferta
- Especialização
- Serviços que possibilitem estar mais perto das áreas de decisão do cliente
- Foco no cliente
- Infraestruturas
- Internacionalização
- Maximização dos resultados
- Melhorar a comunicação da oferta
- Não perder clientes
- Perceber o que faz bem e comunicar
- Reforço das competências internas (diminuindo o recurso ao outsourcing)
- Rentabilização dos custos
- Ter um produto

## Análise Estratégica

- What are the key issues we face in our business?
  - The management team studies the industry's economics using frameworks such as Michael Porter's five forces model (bargaining power of buyers; bargaining power of suppliers; availability of substitutes; threat of new entrants; and industry rivalry)
  - The team assesses the external macroeconomic environment of growth, interest rates, currency movements, input prices, regulations, and general expectations of the corporation's role in society. Often this is described as a PESTEL analysis, encompassing political, economic, social, technological, environmental, and legal factors
  - Managers can then dive into competitiveness data and consider the dynamics of the company's financial, technological, and market performance relative to its industry and competitors

## Análise Estratégica

- What are the key issues we face in our business?
  - After the external analysis, managers should assess the company's internal capabilities and performance. One approach is to use Michael Porter's value chain model, categorizing capabilities used in the processes that create markets; develop, produce, and deliver products and services; and sell to customers.
    - Or the internal analysis could identify the distinctive resources and capabilities that give the firm a competitive advantage
  - unless managers are introducing an entirely new strategy, they will want to assess the performance of the current strategy

## Análise Estratégica

- What are the key issues we face in our business?
  - The next step is to summarize the conclusions from the external and internal analyses in a classic SWOT matrix, assessing the ability of internal attributes and external factors to help or hinder the company's achievement of its vision
  - The aim here is to ensure that the strategy leverages internal strengths to pursue external opportunities, while countering weaknesses and threats (internal and external factors that undermine successful strategy execution)
  - This analysis will reveal a series of issues that the strategy must address: the best role for new products and services; whether new partners need to be acquired; what new market segments the company might enter; and which customer segments are contracting

## Formulação da Estratégia

- Statement describing the strategy and how the company proposes to achieve it. In this step managers decide on a course of action that will create a sustainable competitive advantage by distinguishing the company's offering from competitors' and, ultimately, will lead to superior financial performance
- The strategy must respond to the following questions
  - Which customers or markets will we target?
  - What is the value proposition that distinguishes us?
  - What key processes give us competitive advantage?
  - What are the human capital capabilities required to excel at these key processes?
  - What are the technology enablers of the strategy?
  - What are the organizational enablers required for the strategy?

## Formulação da Estratégia

- Managers can draw upon an abundance of models and frameworks as they formulate the strategy. Michael Porter's original competitive advantage framework, for example, presented the strategy decision as a choice between whether to provide generic low-cost products and services or more differentiated and customized ones for specific market and customer segments. The Blue Ocean approach, popularized by W. Chan Kim and Renée Mauborgne, helps companies search for new market positions by creating new value propositions for a large customer base. Resource-based strategists (including those in the core competencies school) emphasize critical processes—such as innovation or continual cost reduction—that the company does better than competitors and can leverage into multiple markets and segments. Clay Christensen has identified how new entrants can disrupt established markets by offering an initially less capable product or service at a much lower price to attract a large customer base not targeted by the market leaders

## Referências Bibliográficas

Kaplan, Robert S, and David P Norton. 2008. "Mastering the Management System." *Harvard Business Review* 86 (1): 62.

**OBRIGADO!**

## *Workshop #2 – Strategy translation*

### Performance Measurement and Management System

Workshop #2

Winprovit

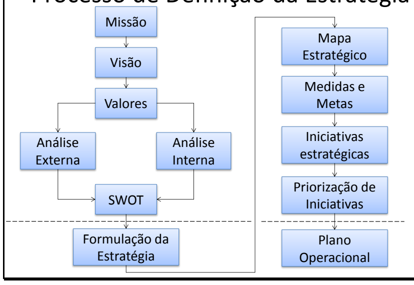
### Objectivos

- Motivar e ganhar o compromisso da gestão
- Proporcionar bases para a revisão estratégica
- Rever a estratégia

### Agenda

- Formulação da Estratégia
- Concepção do Mapa Estratégico
- Definição de Medidas e Métricas
- Definição de iniciativas estratégicas

### Processo de Definição da Estratégia




### Missão e Visão

- Missão
  - A Wp existe para criar e desenvolver soluções de *sourcing*, manutenção e suporte nas TIs que satisfaçam as necessidades dos nossos clientes e parceiros, e para motivar os nossos colaboradores desenvolvendo e maximizando o seu potencial
- Visão
  - Sermos reconhecidos nos mercados onde atuamos como o parceiro de referência na criação de valor nas área das TIs

### Valores

- **Flexibilidade** – Adaptamo-nos às necessidades dos clientes.
- **Ética** – Atuamos sempre em respeito pelos princípios fundamentais que governam as sãs relações sociais, profissionais e de negócio.
- **Lealdade** – Apostamos em relações de longo prazo promovendo o respeito, a honra e a honestidade.
- **Confiança** – Investimos em relações de mútua confiança com clientes, parceiros e colaboradores.
- **Equidade** – Promovemos a equidade de raça, género e crença.

## Fatores Críticos de Sucesso da Wp

- Acrescentar valor
- Baixa rotatividade do pessoal
- Capacidade de resposta
- Clarificação e comunicação da oferta
- Credibilidade
- Cuidado com os custos
- Demonstrar competência técnica
- Disponibilidade
- Especialização em áreas
- Flexibilidade
- Foco na operação
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## Possíveis Estratégias para a Wp

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- Consolidar relações com os clientes
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- Foco no cliente
- Infraestruturas
- Internacionalização
- Maximização dos resultados
- Melhorar a comunicação da oferta
- Não perder clientes
- Perceber o que faz bem e comunicar
- Reforço das competências internas (diminuindo o recurso ao outsourcing)
- Rentabilização dos custos
- Ter um produto

## Análise SWOT

| | | Origem | |
|---|---|---|---|
| | | **Interna** | **Externa** |
| Impacto | **Ajuda** | **Forças**<br>• Ousadia<br>• Disponibilidade<br>• Capacidade para gerar novo networking<br>• Flexibilidade<br>• Baixa Estrutura de Custos<br>• Colaboradores Comprometidos (baixa rotatividade?)<br>• Relações de proximidade com os clientes<br>• Colaboração intra e interdepartamental<br>• Qualidade do serviço | **Oportunidades**<br>• Mobilidade como área de negócio<br>• Baixar custos das organizações<br>• Nearshore de ITO<br>• Internacionalização<br>• Insuficiência (a nível global) de MO qualificada nas TIs<br>• Mercado de ITO em crescimento |
| | **Atrapalha** | **Fraquezas**<br>• Baixo nível académico dos colaboradores internos<br>• Baixa capacidade dos colaboradores para se adaptarem a novos contextos<br>• Escassez de recursos<br>• Poucas preocupações ambientais<br>• Pouca formação profissional | **Ameaças**<br>• Redução dos apoios dados às empresas<br>• Insuficiência de MO qualificada nas TIs em Portugal<br>• Novos Players<br>• Indisponibilidade de financiamento<br>• Instabilidade política, económica e social |

## Formulação da Estratégia

- How can we best compete?
- Statement describing the strategy and how the company proposes to achieve it. In this step managers decide on a course of action that will create a sustainable competitive advantage by distinguishing the company's offering from competitors' and, ultimately, will lead to superior financial performance
- The strategy must respond to the following questions
  - Which customers or markets will we target?
  - What is the value proposition that distinguishes us?
  - What key processes give us competitive advantage?
  - What are the human capital capabilities required to excel at these key processes?
  - What are the technology enablers of the strategy?
  - What are the organizational enablers required for the strategy?

## Estratégias

- How can we best compete?
  - Michael Porter's original competitive advantage framework presented the strategy decision as a choice between whether to provide generic low-cost products and services or more differentiated and customized ones for specific market and customer segments.
  - The Blue Ocean approach helps companies search for new market positions by creating new value propositions for a large customer base.
  - Resource-based strategists emphasize critical processes—such as innovation or continual cost reduction—that the company does better than competitors and can leverage into multiple markets and segments.
  - Clay Christensen has identified how new entrants can disrupt established markets by offering an initially less capable product or service at a much lower price to attract a large customer base not targeted by the market leaders.

## Blue Ocean Strategy

- Value Innovation – 4 Actions Framework
  - Additionally, explore non-customer groups to create blue oceans and tap untouched markets

| Eliminate | Raise |
|---|---|
| Which of the factors that the industry takes for granted should be eliminated? | Which factors should be raised well above the industry standard? |
| **Reduce** | **Create** |
| Which factors should be reduced well below the industry standard? | Which factors should be created that the industry has never offered? |

## Formulação da Estratégia

- Managers can draw upon an abundance of models and frameworks as they formulate the strategy. Michael Porter's original competitive advantage framework, for example, presented the strategy decision as a choice between whether to provide generic low-cost products and services or more differentiated and customized ones for specific market and customer segments. The Blue Ocean approach, popularized by W. Chan Kim and Renée Mauborgne, helps companies search for new market positions by creating new value propositions for a large customer base. Resource-based strategists (including those in the core competencies school) emphasize critical processes—such as innovation or continual cost reduction—that the company does better than competitors and can leverage into multiple markets and segments. Clay Christensen has identified how new entrants can disrupt established markets by offering an initially less capable product or service at a much lower price to attract a large customer base not targeted by the market leaders

## Mapa Estratégico

- Once the strategy has been formulated, managers need to translate it into objectives and measures that can be clearly communicated to all units and employees.
- The strategy map provides a powerful tool for visualizing the strategy as a chain of cause- and-effect relationships among strategic objectives.
- The chain starts with the company's long-term financial objectives and then links down to objectives for customer loyalty and the company's value propositions. From there, it links to goals related to critical processes and, ultimately, to the people, the technology, and the organizational climate and culture required for successful strategy execution.

## Mapa Estratégico

- companies can simplify the structure and use of a strategy map by chunking it into three to five strategic themes. A strategic theme, typically a vertical slice within the map, consists of a distinct set of related strategic objectives.
- Strategic themes offer several advantages. At the business unit level, the theme structure allows unit managers to customize each theme to their local conditions and priorities, creating focus for their competitive situation while still keeping their objectives integrated with the overall strategy. Second, the vertical strategic themes typically deliver their benefits over different time periods, helping companies simultaneously manage short-, intermediate-, and long-term value-creating processes.

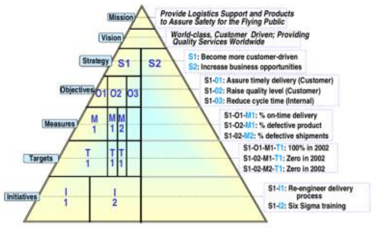
## Temas Estratégicos

1. Increase value added to the group through the pursuit of and investment in technologies with large profit margins.
2. Offer high-quality services to targeted customers. SDC achieved high quality by proper software development and testing. A client segmentation showed that SDC still abided to the 80-20 rule, leading to the conclusion that it should place more attention to highest value customers.
3. Add, retain and develop the intellectual capital. Due to the importance of the intellectual capital and as training was expensive and good programmers were hard to find, SDC was committed to ensure that employees were properly motivated and satisfied. This would result in reduced staff turnover and training costs, while increasing productivity and quality of customer service. In addition, it was important for SDC to increase the competency of its employees through an adequate training programme, if it was to compete in a global and rapidly changing market.

Ou

1. Provider of high value technical services and integrated systems solutions through the offering of advanced environmentally controlled air curtain technology.
2. Diverse team of talented professionals with expertise in selected market segments by recruiting specialist in new and niche market segments.
3. Employer of choice, fostering a culture that values dedication and continuous improvement.

## Putting It All Together – Federal Government Logistics Center




Rohm, H., and L. Halbach. 2005. "Developing and Using Balanced Scorecard Performance Systems." *The Balanced Scorecard Institute*.

## Mapa Estratégico

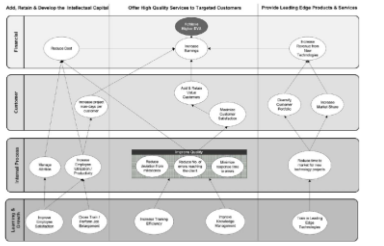
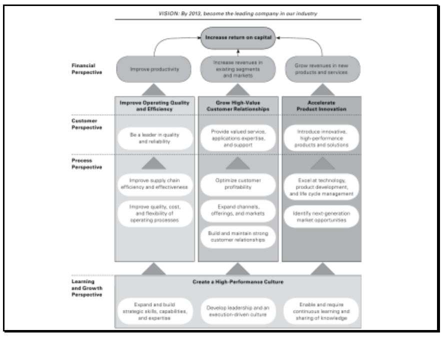
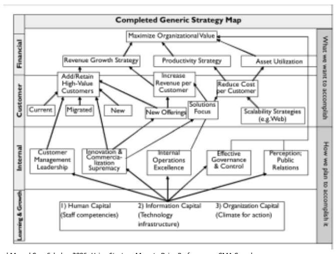



Fig. 2. SDC strategic objective strategy map.

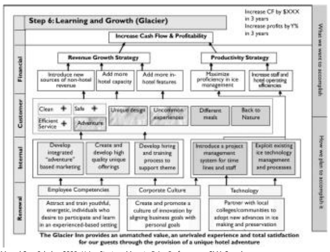


## Generic Strategy Map



Armitage, Howard M, and Cam Scholey. 2006. *Using Strategy Maps to Drive Performance*. CMA Canada.

## Strategy Map



Armitage, Howard M, and Cam Scholey. 2006. *Using Strategy Maps to Drive Performance*. CMA Canada.

What strategy must be achieved and what is critical to its success

How success will be measured and tracked

Performance expectation

Key action programs required to achieve objectives

| | Objective | Measure | Target | Initiatives |
|---|---|---|---|---|
| Financial | Broaden revenue mix | Revenue mix | 10% Product A<br>40% Product B<br>50% Product C | • Sales Promotions<br>• New Channel Marketing |
| Customer | Increase customer satisfaction | Customer retention | 95% | • Frequent Buyers' Club |
| Internal | Develop new products | % Revenue from new products | 1999 -- 15%<br>2000 -- 50%<br>2001 -- 60% | • R & D Program<br>• Customer Mailing |
| Learning & Growth | Develop strategic skills | Cross-train | 90% | • Custom Training<br>• Knowledge Library |

Rohm, H., and L. Halbach. 2005. "Developing and Using Balanced Scorecard Performance Systems." *The Balanced Scorecard Institute*.

## Strategy Development

1. Specify an overriding objective
2. Choose the value proposition
3. Choose the financial strategies
4. Choose the customer strategies
5. Execute through the internal perspective strategies
6. Plan the learning and growth strategies

## Strategy Development

1. Specify an overriding objective
   - In the next few years, what will it take to succeed?
     - Success is achieved by significant revenues and/or cost containment that lead to superior economic returns.
     - The overriding objective should be the first element of the strategy map. It should contain a financial target and a time dimension.
     - Examples:
       - Increase return on capital employed by six percent within three years.
       - Increase profit margin from 8 to 12% and net cash flow from $500,000 to $750,000 within five years.
       - Increase target share price by 20% by next reporting date.
       - Increase total shareholder return relative to benchmark by 10% within two years.

## Strategy Development

2. Choose the value proposition
   - What do (or will) customers really (not traditionally) value?
     - Companies that deliver extraordinary levels of distinctive value to carefully selected customer groups can reap the rewards offered by market leadership.
     - first need to segment the market in new and unconventional ways, based on current and expected customer perceptions of value.
     - Value propositions put forth by Treacy and Wiersema provide an excellent framework:
       1. Operational excellence (also referred to as best total cost)
       2. Product leadership
       3. Customer intimacy (also referred to as customer solutions)

## Strategy Development

2. Choose the value proposition

| *Image Driver* | *Operational Excellence* | *Product Leadership* | *Customer Intimacy* |
|---|---|---|---|
| **Price** | **Primary focus: very low prices Image: "Best deal"** | High end of pricing | High end of pricing |
| **Unique attributes** | Low end of threshold standards | **Primary focus: very unique attributes Image: "Best product/service"** | Meets threshold standards |
| **Relationship level** | Low end of threshold standards | Meets threshold standards | **Primary focus: very high customer intimacy Image: "Best friend"** |

## Strategy Development

3. Choose the financial strategies
   - Financial strategies can be categorized in:
     1. Revenue growth;
     2. Productivity;
     3. Asset utilization.
   - organizations pursuing operational efficiency propositions will focus on reaching their overriding objectives primarily through productivity and asset utilization strategies.
   - Organizations following customer-intimate or product leadership propositions will put less focus on these efficiency strategies, instead attempting to grow revenue through unique product or customer features.

## Strategy Development

3. Choose the financial strategies
   - Revenue growth
     - All organizations want to grow revenue.
     - Companies following operational excellence will try to grow revenue through reducing prices and increasing volume and turnover.
       - Companies that improve productivity and asset utilization can do this profitably.
     - organizations pursuing product leadership, revenue growth tends to come through price premiums for their cutting-edge offerings.
       - Productivity companies focusing on revenue growth through price premiums (product leadership) do not ignore productivity and asset utilization (no "license to spend"). These companies will spend more on areas such as research and development, expecting returns on these investments through higher revenues.
     - customer-intimate organization tends to pursue revenue growth through bundling of products and services that provide solutions for clients.

## Strategy Development

3. Choose the financial strategies
   - Productivity
     - Productivity strategy equates to optimizing the variable cost structure of the organization.
     - organizations pursuing operational excellence, concentrating on 'optimizing' is paramount in reducing cost and offering very competitive prices.
     - Product leaders and Customer-intimate companies need to strike a balance with productivity, without violating their primary value propositions.

## Strategy Development

3. Choose the financial strategies
   - Asset Utilization
     - asset utilization strategy equates to optimizing the fixed cost structure of the organization
     - It is imperative that companies who must invest heavily in large-ticket items such as buildings or machinery get the most return from these investments.
     - This is particularly true for operationally excellent organizations that can only achieve success through impressive inventory and other asset turnovers.
     - product leaders and customer-intimate organizations also need to improve their asset utilization without violating their primary value propositions.

## Strategy Development

3. Choose the financial strategies

| Financial Strategy \ Value Proposition | Operational Excellence | Product Leadership | Customer Intimacy |
|---|---|---|---|
| **Revenue growth** | Competitive prices<br>Volume | Premium pricing<br>New features | Bundling<br>Cross-selling |
| **Productivity** | Tight variable and discretionary cost control | Control but also spend on R&D and marketing | Control but also spend on solution selling |
| **Asset utilization** | Maximize inventory turnover<br>Utilize fixed assets to fullest | Utilize fixed assets as necessary in pursuit of product leadership | Utilize fixed assets as necessary in pursuit of customer intimacy |

## Strategy Development

4. Choose the customer strategies
   - Having established financial strategies, organizations must formalize their plans and strategies to win the marketplace
   - Customer strategies can be categorized in:
     1. Retaining and adding customers;
     2. Increasing revenue per customer;
     3. Reducing cost per customer.

## Strategy Development

4. Choose the customer strategies
   - Those pursuing operational excellence will use competitive prices to retain and add customers, in addition to increasing revenue per customer.
     - Tight process and supply chain management will assist in its ongoing efforts to reduce costs per customer.
   - Product leaders will offer the latest of technologies and features, including "add-on" products and services, to increase customer volume and revenue per customer.
     - strategic planning must try to balance spending and profits.
   - customer-intimate companies will tend to use strategies such as promoting word-of-mouth marketing and loyalty programs. By offering complete solutions and bundling packages, these companies attempt to increase revenue per customer.
     - strategic planning must try to balance spending and profits.

## Strategy Development

4. Choose the customer strategies

| Customer Strategy \ Value Proposition | Operational Excellence | Product Leadership | Customer Intimacy |
|---|---|---|---|
| **Retain and add customers** | Competitive prices | Latest technologies<br>New features | Loyalty programs<br>Word-of-mouth |
| **Increase revenue per customer** | Competitive prices | New features<br>"Add-on" products and services | Solution selling<br>Bundling |
| **Reduce cost per customer** | Tight process and supply chain management | Spending and cost control policies as necessary in pursuit of product leadership | Spending and cost control policies as necessary in pursuit of customer intimacy |

## Strategy Development

5. Execute through the internal perspective strategies
   - The internal perspective is all about choosing and executing the right business processes to achieve the desired customer and financial strategies the organization believes will lead to the accomplishment of the overriding objective.
     - companies following an operational excellence value proposition must make internal operations a very high priority, and "run a tight ship". They work at eliminating non-value-adding activities, reducing cost, and delivering low prices.
       - Organizations competing here pay special attention to outstanding supplier relationships, risk management, and efficient and timely production and distribution.
     - product leaders must mainly focus on processes that motivate, identify, develop and launch commercial innovations.
       - customers are willing to pay a premium for leading-edge products and services, and will tolerate less than stellar customer service and cost.
     - Customer-intimate organizations tend to focus on those processes most closely linked to customer management: selection, acquisition, preservation and growth. The focus here is on developing knowledge of customers and building strong relationships.

## Strategy Development

5. Execute through the internal perspective strategies
   - In addition to the core strategies, organizations may also wish to highlight the importance of developing other core processes for other stakeholders.
     - fiduciary, regulatory, and environmental, corporate social responsibility

## Strategy Development

6. Plan the learning and growth strategies
   – The learning and growth perspective is about identifying and bridging gaps that could limit the organization's ability to execute the key processes identified in the internal perspective.
   – Learning and growth can be classified in:
     1. Human capital;
     2. Information capital;
     3. Organizational capital.

## Strategy Development

6. Plan the learning and growth strategies
   – Human Capital
     • Human capital is the economic value an organization derives from (a) application of knowledge, (b) collaboration, and (c) engaged individuals.
     • value that comes from committed individuals making informed decisions on service, quality, effectiveness, creativity, goal alignment, and productivity.
     • This includes attracting and retaining the right types of skills, and providing appropriate coaching, mentoring and opportunities for developing the know-how necessary to execute specific strategies.

## Strategy Development

6. Plan the learning and growth strategies
   – Information Capital
     • Information capital relates to how organizations utilize their information systems, networks, manuals, databases, files and infrastructure to gain competitive advantage and to execute strategy.
     • The type of information capital chosen depends on the firm's primary value proposition.
       – a CRM will be far more critical to a customer-intimate organization than to an operationally efficient firm. Similarly, systems that report on statistical process control will be far more important to an operational efficient firm.

## Strategy Development

6. Plan the learning and growth strategies
   – Organizational capital
     • Organizational capital is the firm's ability to connect employee goals to corporate goals. Companies with high levels of organizational capital are ones that exhibit complementary team memberships, open communication channels, shared visions, trust in leaders ,and common bonds — usually leading to greater employee retention and superior performance.
     • Leadership, teamwork and communication are important ingredients in organizational capital.

## Características dos Indicadores

• Derivados da estratégia
• Claramente definidos e com um propósito explícito
• Relevantes e fáceis de manter
• Fáceis de compreender e usar
• Proporcionar feedback rápido e preciso
• Ligar as operações aos objetivos estratégicos
• Estimular a melhoria continua

## Medidas de Desempenho

• Once managers have developed the strategy map, they link it to another tool of our design: a balanced scorecard of performance metrics and targets for each strategic objective.
• A third step at Stage 2 involves identifying, and authorizing resources for, a portfolio of strategic initiatives intended to help achieve the strategy's objectives.
  – A strategic initiative is a discretionary project or program, of finite duration, designed to close a performance gap.
• assigning a senior executive to lead each strategic theme.
  – The executive assigned to own each theme assumes the responsibility for devising and executing an entire portfolio of initiatives selected to achieve the theme's performance targets.

## Indicadores

| BSC Perspective | Strategic objective | Measure |
|---|---|---|
| Financial perspective | Add value to the group | EVA® (Economic value added) |
| | Reduce cost | Total cost per employee per division |
| | Increase earnings | EBIT (Earnings before interest and tax) |
| | Increase revenue from new technologies | Revenue from new technologies/total revenue |
| Customer perspective | Increase customer satisfaction | Customer satisfaction index |
| | | Revenue per customer |
| | Add and retain value customers | Customer loyalty index |
| | Diversify customer portfolio | % Projects in new technologies |
| | Increase market share | Market share (%) |

| BSC perspective | Measure | Measure owner | Measurement frequency | Target | Performance after 1 year |
|---|---|---|---|---|---|
| Financial perspective | EVA (economic value added) | Financial Department | 1 year | ↑ 10% | ↑ 2% |
| | Total cost per employee per division | Financial Department | 6 months | ↓ 7% | ↑ 5% |
| | EBIT (earnings before interest and tax) | Financial Department | 1 year | ↑ 10% | ↓ 2% |
| | Revenue from new technologies/ total revenue | Financial Department | 6 months | ↑ 12% | ↑ 9% |

## Indicadores da Wp

| Processo | Procedimento | Objectivo |
|---|---|---|
| PG 01 Visão e Estratégia | | Taxa de Cumprimento |
| PC 01 Relacionamento com o Cliente | 01 GC | Volume de Vendas |
| | | Margem Bruta |
| | 02 SC | Satisfação de Cliente |
| | | Satisfação de Cliente (R.I.T.) |
| | 04 FC | Prazo de Recebimento |
| PC 02 Concepção e Desenvolvimento | | Nível de Aceitação de Projetos |
| PC 03 Prestação de Serviços | 02 GS | Qualidade do Serviço Subcontratado |
| | 03 AT | Cumprimento do SLA * |
| | | Reincidências - * |
| | 04 GL | Indice de cumprimento de 1ª analise dos equipamentos |
| PS 01 Gestão RH | 02 For | Tempo de Formação / Colaborador |
| | | Eficácia da Formação |
| PS 02 Gestão da Qualidade | 03 TR | Controlo de Reclamações * |
| | 04 AC&P | Não conformidades internas |
| | 05 Aud | Prazo de Fecho da Auditoria |
| | 07 GDF | Índice de Classificação de Fornecedores |
| PS 03 Compras | 01 C | Prazo de Entrega |
| | 02 RCA | Qualidade da Entrega |
| | 03 CP | Cumprimento do prazo de Pagamento |

## Indicadores da Wp

- Tempo médio de intervenção p/ tipo de intervenção
- Tempo de viagem
- Nº de pedidos recebidos
- Nº de pedidos respondidos
- Custos
- Proveitos
- Prazo médio de pagamento
- Autonomia financeira
- Resultado antes de impostos
- Intervenções sem SLA c/ tempo de resposta > 3d

## Indicadores da Wp

**Nº de Intervenções**

| Total | Directas | Indirectas |
|---|---|---|
| 1160 | 289 | 871 |

**Análise de SLA**

| | Cumprido | Não Cumprido | Sem SLA | Reincidências | resposta > 3 dias |
|---|---|---|---|---|---|
| Qtd. | 1081 | 21 | 58 | 10 | 11 |
| % | | | | | |

**Análise da Satisfação**

| | Muito Satisfeito | Satisfeito | Insatisfeito | Muito Insatisfeito | Indice Participação |
|---|---|---|---|---|---|
| Qtd. | 100 | 85 | 0 | 0 | 185 |
| % | | | | | |

**Análise de Intervenções**

| | Deslocações | Mão de Obra | Laboratório | Total Horas | PAT´s | Sites |
|---|---|---|---|---|---|---|
| Total | 681,77 | 1180,87 | 245,68 | 2108,32 | 970,00 | 398,00 |
| Média | 0,58 | 1,01 | 1,39 | 1,81 | 1,19 | 2,91 |

## Referência bibliográficas

Armitage, Howard M, and Cam Scholey. 2006. *Using Strategy Maps to Drive Performance*. CMA Canada.

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## *Final Workshop*

Performance Measurement and Management System

Final Workshop

Winprovit

### Objectivos

- Explicar o sistema implementado
- Reforçar benefícios dos PMS
- Obter feedback sobre o projeto

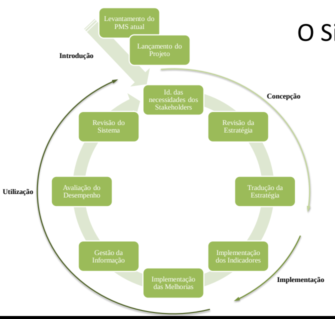
### Agenda

- O Sistema e seu funcionamento
- Porquê um PMS?
- Feedback sobre o projeto

### Pressupostos no Desenvolvimento

- Simples e eficiente
  - implementar, usar e manter
- Muito estruturado
- Adaptado à organização
  - Sistemas de informação, negócio, estrutura e dimensão

### O Sistema

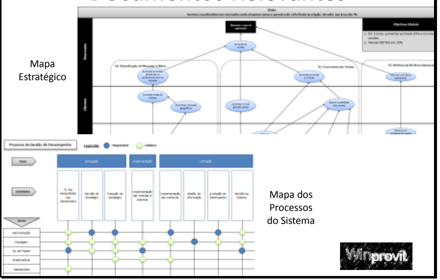



### Alguns Problemas Identificados

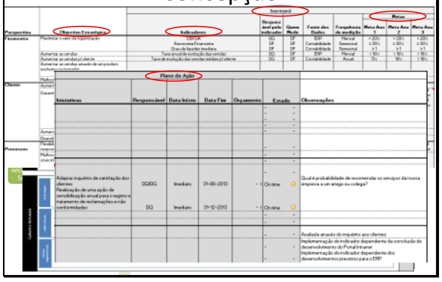
- Gestão com base em indicadores financeiros
- Ausência de ligação à estratégia
- Foco nas operações
- Acompanhamento da implementação da estratégia
- Existência de vários Dashboards "desligados"

| Measures | QMS Dashboard | Operational Dashboard | Management Dashboard |
|---|---|---|---|
| Financial | 4 | 0 | 7 |
| Non-financial | 16 | 8 | 0 |
| Total | 20 | 8 | 7 |

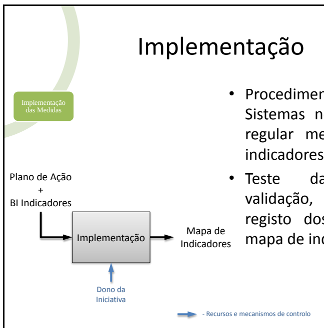
## Documentos Relevantes




## Concepção

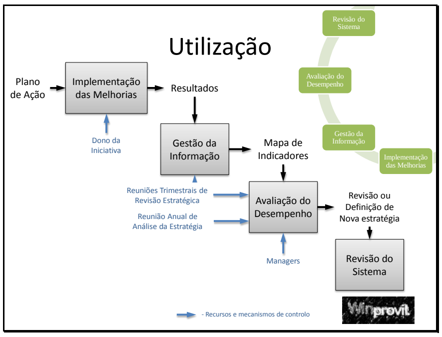



## Implementação




- Procedimentos e Sistemas necessários à regular medição dos indicadores
- Teste da recolha, validação, cálculo e registo dos dados no mapa de indicadores

## Utilização




## Alguns Resultados

- Revisão profunda da estratégia
- Indicadores financeiros (7) e não financeiros (23)
- Derivados da estratégia
- Equilibrados

| Perspective | # of Measures |
|---|---|
| Financial | 7 |
| Customer | 6 |
| Processes | 10 |
| Culture and Structure | 7 |
| **Total** | **30** |

Winprovit

## Para que serve um PMS?

- Medir o Desempenho
  - Monitorar o progresso
- Gerir a Estratégia
  - Formulação, planeamento e execução
  - Focar e alinhar
- Comunicar
  - Internamente e externamente
- Influenciar o Comportamento
  - Reconhecer e/ou recompensar comportamentos
  - Gerir relações
  - Controlo
- Aprender e Melhorar
  - Feedback
  - Tornar o conhecimento explícito
  - Identificação de melhorias

Winprovit

## Benefícios

- Desenvolvimento da Gestão
- Id. de Fraquezas
- Forçar o Planeamento Estratégico
- Mudança para uma cultura de melhoria contínua
- Decisões Pró-Ativas
- Melhoria da Transparência
- Melhoria da Visibilidade
- Melhoria dos Comportamentos
- Melhoria da Comunicação
- Aumento da Autonomia e Motivação

## Fatores Críticos de Sucesso

*TMC* [Top Management Commitment] *is widely taken as a major factor influencing the success and failure of project implementations… this study… identified top management commitment and the benefits from performance measurement as being perceived as the two main factors which drove implementation*.

Bourne, M., A. Neely, K. Platts, and J. Mills. 2002. "The Success and Failure of Performance Measurement Initiatives: Perceptions of Participating Managers." *International Journal of Operations \& Production Management* 22 (11): 1288–1310.

## Feedback

- Opinião sobre o processo de desenvolvimento
- Opinião sobre o resultado (PMS)
- Aspetos mais positivos e negativos
- Opinião sobre a continuidade de utilização

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## Appendix D: Initial Interviews

***Initial Interviews Guide***

**Study Subject**: Evaluate strategic management, performance measurement practices and support, and project expectations

**Study Focus:**
- How is the strategy management process?
- Evaluate the use of the information systems in managers daily activities
- Characterization of the performance measures in use ("implicit PMS")
- Managers perceptions and expectations about the performance measurement project
- Know about the current problems with performance measurement

**Generic Purpose**:

| Dimensions | Specific Purpose | Topics | Questions Guide |
|---|---|---|---|
| I. Introduction to Interview | Legitimate the interview and motivate the interviewees | Inform the interviewee about the project<br><br>Ask for collaboration informing about the work to be developed<br><br>Ask permission to tape the interview | Do you allow me to cite, partially or totally, your speech? |

| | | | |
|---|---|---|---|
| | | Assure data confidentiality<br><br>Ask permission to cite the speech (totally or partially) | |
| II. Environment | Evaluate company offer, positioning and markets | Understand the value offer<br><br>Understand the markets and customer base<br><br>Understand the key success factors | What are the main products and services offered by the company?<br><br>How does this offer differentiate from its competitors?<br><br>How do you describe the market, or markets, in which the company operates?<br><br>What are organization's critical success factors?<br><br>[CEO only] …<br>What are the main clients and which is their weight in revenue? |
| III. Organizational culture and management style | Evaluate organizational culture and management style | Understand organizational culture<br><br>Understand the management style | Do you plan the activities for the unit that you're responsible? How and why or why not? |

| | | | |
|---|---|---|---|
| | | Understand the decision making-process | Has a manager, what are your main priorities and responsibilities?<br><br>Do you perform other activities in addition to management? Which ones?<br><br>On average, in percentage, how much time do you spent in these?<br><br>How do you make strategic decisions?<br><br>Within the scope of responsibilities as a manager, do you have full autonomy to take decisions?<br><br>How is your decision autonomy limited?<br><br>When a decision is out of your liability boundaries, how is the decision process? |
| IV. Strategy formulation and management | Evaluate how strategy is formed, communicated, implemented, monitored and reviewed | Understand if organization formalizes its strategy<br><br>Understand strategy formation | What is the current strategy (vision and key objectives) of the organization?<br><br>How was defined, who is responsible and who is involved in its |

| | | | |
|---|---|---|---|
| | | process<br><br>Understand if it's well communicated among managers<br><br>Understand how is communicated to organization<br><br>Understand how strategy is communicated, implemented and evaluated | definition?<br><br>The strategy is communicated to the organization? If yes, in which ways?<br><br>How it is implemented? The implementation is measured? If yes, how?<br><br>When, how and how often is the strategy reviewed?<br><br>What stakeholders were considered in strategy formulation?<br><br>What do you think about what should be the vision and key objectives for the 3 next years?<br><br>[If the strategy is not formalized]<br><br>Why do you think that strategy is not formalized?<br><br>What is your opinion about this? |
| V. Current performance measurement | Understand how performance is | Understand how the performance | [CEO only]… |

| | | | |
|---|---|---|---|
| | measured | is measured<br><br>Understand why is done this way<br><br>Understand the revision process<br><br>Understand how the managers see the current process | How is business performance measured?<br><br>Why is measured this way?<br><br>How, how often and by whom is the performance reviewed?<br><br>What are the main advantages and disadvantages of the current process? |
| VI. Information Systems | Understand information systems usage and coverage | Understand which information systems exist in the organization<br><br>Understand which information systems and tools are used by which managers<br><br>Identify what activities are performed | What information systems do you use in your work?<br><br>What tasks do you execute in each one? |
| VII. Performance measures | Evaluate the current performance measurement system | Identify the performance measures and infrastructure in use | Use specific form to evaluate what is measured, when and how, and, which information is gathered, how, how often and how is used. |

| | | | |
|---|---|---|---|
| | | Identify the design process | How were these measures designed? |
| | | Identify the use of performance measures | How they are reviewed and its relevance evaluated? |
| | | Identify how the measures were created or adopted | |
| | | Identify if they are reviewed and evaluated | |
| VIII. Attitude towards the project and performance measurement | Identify managerial attitude regarding performance measurement (PM) and over the current project | Understand managers perceptions about the usefulness of PM<br><br>Understand managers expectations about the current project | In your opinion, how should be a PMS to work in this organization? If not referred, what should measure?<br><br>Is should be used to?<br><br>What are your expectations regarding this project?<br><br>What factors will have a major impact in system implementation and use? |

***Initial Interviews Questions***

| | |
|---|---|
| I. Introdução | Cumprimentar o entrevistado, agradecer a participação referindo que o sucesso do projeto depende do seu envolvimento e da sua contribuição, realçando assim a importância da entrevista.<br>Explicar que o projeto tem como objetivo implementar um sistema eficaz e eficiente de medição do desempenho da organização, e que, neste âmbito, o objetivo da entrevista é obter um melhor conhecimento da organização, avaliar as práticas de medição de desempenho atuais, e conhecer as expectativas dos gestores relativamente ao projeto.<br>Garantir a confidencialidade da informação recolhida, solicitar autorização para gravar a entrevista e para citar parcialmente ou totalmente o discurso. |
| | Q1. Permite-me que cite, totalmente ou parcialmente, o seu discurso? |
| II. Ambiente e caracterização da organização | Q2. Quais são os principais produtos e serviços comercializados pela organização?<br>Q3. Como é que esta oferta se diferencia da concorrência?<br>Q4. Como descreveria a concorrência da organização?<br>Q5. Na sua opinião, quais são os fatores críticos de sucesso da organização?<br>[Apenas CEO] ….<br>Q6. Quem são os principais clientes da organização e qual é o seu peso na faturação? |
| III. Cultura organizacional e estilo de gestão | Q7. Planeia as atividades da direção(ões) pela qual(is) é responsável? Como e porquê, ou porque não?<br>Q8. Quais são as suas principais prioridades e responsabilidades enquanto gestor?<br>Q9. Enquanto gestor, quais são os limites às suas responsabilidades?<br>Q10. Quando necessita de tomar uma decisão que ultrapasse estes limites, qual é o processo utilizado?<br>Q11. Além da gestão, desempenha outras tarefas na organização? Quais? |

| | |
|---|---|
| | Q12. Em termos percentuais, em média quanto tempo gasta com estas atividades?<br>Q13. Quais os principais problemas que identifica nos processos em que intervém?<br>Q14. Como é o processo que utiliza para tomar decisões importantes para a organização? |
| IV. Processo de gestão da estratégia | Q15. A organização possui uma estratégia, ou visão e objetivos chave, formal? Se sim, qual é?<br>[Apenas CEO] …<br>Q16. Como é que foi definida? Quem foi envolvido e quem é responsável pela sua definição?<br>Q17. A estratégia é comunicada à organização? Se sim, que formas são utilizadas?<br>Q18. Como é que a estratégia é implementada? O progresso de implementação é medido? Se sim, Como?<br>Q19. Quando, como e com que frequência é revista?<br>Q20. Que *stakeholders* foram considerados na formulação da estratégia?<br>[Todos] …<br>Q21. Qual deveria ser a visão e objetivos da organização para os próximos 3 anos?<br>[Se a estratégia não é formalizada] …<br>Q22. Na sua opinião, quais os motivos que estão na base da ausência de formalização?<br>Q23. Qual é a sua opinião sobre isso? |
| V. Medição de desempenho atual | [Todos excepto CEO] …<br>Q24. Como é medido o desempenho da unidade de negócio pela qual é responsável?<br>[Apenas para o CEO] …<br>Q25. Como é medido o desempenho da organização?<br>Q26. Quais são os motivos para ser medido desta forma?<br>Q27. Como e com que frequência é revisto o desempenho? Quem participa<br>[Todos] … |

| | |
|---|---|
| | Q28. Quais são as vantagens e desvantagens do processo atual? |
| VI. Sistemas de Informação | Q29. Quais os sistemas de informação, ou programas, que utiliza para realizar o seu trabalho?<br>Q30. Quais as ações realizadas em cada um deles? |
| VII. Medidas de desempenho | [Usar o formulário para auditar as medidas de desempenho em utilização]<br>Q31. Como foram concebidas/adoptadas as medidas que utiliza?<br>Q32. Como são revistas e avaliada a sua relevância? |
| VIII. Percepções sobre a medição do desempenho e o projeto | Q33. Na sua opinião, que características deve ter um sistema de medição do desempenho adequado à organização? O que deve ser medido?<br>Q34. Qual deverá ser a sua utilidade?<br>Q35. Que benefícios para a organização devem resultar deste projeto?<br>Q36. Que fatores terão maior impacto durante a implementação e utilização do sistema? |

## Appendix D: Performance Measures

***Performance Measures Audit Form***

| Definição da medida | Período de referência | Documento ou base de dados de registo | Razão da utilização (Quem e porquê) | Origem dos dados (onde e como) | Frequência de atualização dos dados | Frequência de utilização |
|---|---|---|---|---|---|---|
| Tempo médio de intervenção p/ tipo de intervenção | 6 Meses | Folha cálculo de suporte à elaboração da proposta | Direção técnica utiliza como suporte à elaboração de propostas para clientes | ERP | Diária | Pontual |
| Tempo médio de mão-de-obra | 6 Meses | Folha cálculo de suporte à elaboração da proposta | Direção técnica utiliza como suporte à elaboração de propostas para clientes | ERP | Diária | Pontual |
| Tempo de viagem | 6 Meses | Folha cálculo de suporte à elaboração da proposta | Direção técnica utiliza como suporte à elaboração de propostas para clientes | ERP | Diária | Pontual |
| Taxa de resposta a pedidos dos clientes | 1 Mês | Excel de registo dos pedidos | Direção comercial para avaliar capacidade de resposta e confrontar c/ as avaliações feitas pelo cliente | Pedidos dos clientes | Diária | Anual |
| Custos | 1 Mês | Apenas Visualização | Avaliação do desempenho financeiro | ERP | Diária | Mensal |
| Saldo das contas | Diário | Apenas Visualização | Garantir fundo de maneio | Online banking | Diária | Semanal |
| Autonomia financeira | 12 Meses | Apenas Visualização | Avaliação do desempenho financeiro | ERP | Diária | Mensal |

***Performance Measures in Use***

| | Dashboard | | | |
|---|---|---|---|---|
| | QMS | Operational | Management | Consolidated |
| Financial | • Cumprimento do prazo de Pagamento<br>• Margem Bruta<br>• Prazo de Recebimento<br>• Volume de Vendas | | • Autonomia financeira<br>• Cumprimento do prazo de Pagamento<br>• Custos<br>• Margem Bruta<br>• Prazo de Recebimento<br>• Saldo das contas<br>• Volume de Vendas | • Autonomia financeira<br>• Cumprimento do prazo de Pagamento<br>• Custos<br>• Margem Bruta<br>• Prazo de Recebimento<br>• Saldo das contas<br>• Volume de Vendas |
| Total | 4 | 0 | 7 | 7 |

| | | | | |
|---|---|---|---|---|
| Non-financial | • Eficácia da Formação<br>• Índice de Classificação de Fornecedores<br>• Indice de cumprimento de 1ª análise dos equipamentos<br>• Não conformidades internas<br>• Nível de Aceitação de Projetos<br>• Prazo de Entrega<br>• Prazo de Fecho da Auditoria<br>• Qualidade da Entrega<br>• Qualidade do Serviço Subcontratado<br>• Satisfação de Cliente<br>• Satisfação de Cliente (R.I.T.)<br>• Taxa de Cumprimento<br>• Tempo de Formação / Colaborador<br>• Cumprimento do SLA<br>• Reincidências<br>• Controlo de Reclamações | • Indice de cumprimento de 1ª análise dos equipamentos<br>• Taxa de resposta a pedidos dos clientes<br>• Cumprimento do SLA<br>• Reincidências<br>• Taxa de resposta a pedidos dos clientes<br>• Tempo de viagem<br>• Tempo médio de intervenção p/ tipo de intervenção<br>• Tempo médio de mão-de-obra | | • Eficácia da Formação<br>• Índice de Classificação de Fornecedores<br>• Indice de cumprimento de 1ª análise dos equipamentos<br>• Não conformidades internas<br>• Nível de Aceitação de Projetos<br>• Prazo de Entrega<br>• Prazo de Fecho da Auditoria<br>• Qualidade da Entrega<br>• Qualidade do Serviço Subcontratado<br>• Satisfação de Cliente<br>• Satisfação de Cliente (R.I.T.)<br>• Taxa de Cumprimento<br>• Tempo de Formação / Colaborador<br>• Cumprimento do SLA<br>• Reincidências<br>• Controlo de Reclamações<br>• Taxa de resposta a pedidos dos clientes<br>• Tempo de viagem |

| | | | | |
|---|---|---|---|---|
| Total | 16 | 8 | 0 | 20 |
| Grand Total | 20 | 8 | 7 | 27 |