The Evolution of Performance Measurement Systems: A Case Study

by

Sara Caruana

A dissertation submitted in partial fulfilment of the requirements for the award of the Master in Accountancy degree in the Department of Accountancy at the Faculty of Economics, Management and Accountancy at the University of Malta

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Abstract

Title: The Evolution of Performance Measurement Systems: A Case Study

Purpose: The main purpose of this research is to analyse the evolution of the Performance Measurement System (PMS) of the case company over the past, present and future. Specifically, it aims to understand how the features of its PMS evolved over the years with company growth and other triggers, to evaluate the current PMS and, based on this evaluation, to enhance the future of performance measurement by suggesting and designing the Balanced Scorecard (BSC).

Design: To achieve the research objectives, a qualitative case study method was selected. Primary data was obtained by conducting in-depth semi-structured interviews with members from top management and other appropriate employees from different departments. Additionally, secondary data was obtained through the reports provided by the case company. Thereafter, a validation interview with the Chief Financial Officer (CFO) supported this research study.

Findings: The findings indicate that due to particular limitations which the case company endured as a Small and Medium Enterprise (SME), the PMS during the initial phases of the growth stage of the business lifecycle tended to be more traditional and had certain shortcomings. However, the introduction of the Enterprise Resource Planning (ERP) system revolutionised its PMS, becoming more contemporary. The current system is broad, strategic and detailed but lacks formal linkages between objectives and with the strategy. Moreover, although this system might satisfy current business needs, anticipated growth implies that its PMS would need to advance even further. Therefore, based on tried and tested metrics, the study designed a BSC and strategy map.

Conclusions: The study concluded that while SMEs face limitations in measuring performance, PMSs adapt and become more sophisticated with company growth and other triggers. The case study also concluded that companies with an advanced PMS, such as those utilising an ERP system, could build on their existing PMS to evolve, rather than revolutionise, into the BSC without requiring a significant outflow of resources. The BSC is an ideal tool for the case company as it enhances integration and advances the PMS to a performance management system as required for future growth.

Value: The study is valuable to the case company as it proposes and designs a PMS model which proactively addresses future needs and is believed to be feasible. This study is also valuable to other companies on a similar path of growth by suggesting simple improvements which could be made to the PMS and highlighting the need to evolve their PMS in preparation for growth. It also fills a research gap identified in the local literature on the design of the BSC for a fire and security company.

Keywords: Performance Measurement, Company Growth, ERP System, Balanced Scorecard.

Dedication

I dedicate this dissertation to my late grandfather Emmanuel Montebello.

He not only supported me in every step of my academic journey but also instilled in me the greatest of values.

Thank you.

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I would like to take this opportunity to express my sincere appreciation and gratitude to all those who have supported and encouraged me throughout the course of this study.

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Furthermore, I would like to express my profound gratitude to my parents, Paul and Dorianne, and my brother Darren for their endless support and sacrifices. My heartfelt appreciation is also reserved to my grandparents who have always taken interest in my academic journey and encouraged me to further my studies. My gratitude extends to my closest friends for their unconditional support.

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List of Abbreviations

ARM	Assistant Resource Manager
BoD	Board of Directors
BSC	Balanced Scorecard
CFO	Chief Financial Officer
CIMA	Chartered Institute of Management Accountants
CRM	Customer Relationship Management
CSF	Critical Success Factor
EAD	Executive Assistant to Directors
ERP	Enterprise Resource Planning
ESG	Environmental, Social and Governance
HR	Human Resources
ISO	International Organisation for Standardisation
IT	Information Technology
KPI	Key Performance Indicator
MAS	Management Accounting System
MCS	Management Control System
PDM	Projects Department Manager
PMS	Performance Measurement System
SME	Small and Medium Enterprise
SWOT	Strengths, Weaknesses, Opportunities and Threats
TRM	Technical Resource Manager

Chapter 1

Introduction

1.1 Introduction

This preliminary chapter introduces the research study by establishing its foundations. Section 1.2 provides background information, spelling out the fundamental definitions. Subsequently, Section 1.3 briefly introduces the case company. Section 1.4 then establishes the need for this dissertation. While Section 1.5 clarifies the research objectives, Section 1.6 recognises the scope and limitations. Finally, Section 1.7 provides an overview of the dissertation.

1.2 Background Information

1.2.1 Performance Measurement Systems

With the current economic environment, performance measurement has become a crucial topic for researchers and corporate managers (Taouab, Issor 2019). The Chartered Institute of Management Accountants (CIMA) (2005, p.20) formally defines performance measurement as:

> *"The process of assessing the proficiency with which a reporting entity succeeds, by the economic acquisition of resources and their efficient and effective deployment, in achieving its objectives. Performance measures may be based on non-financial as well as on financial information"*.

Performance Measurement Systems (PMSs) are designed to reflect the external and internal environments and organisational strategies (Kennerley, Neely 2003) by translating stakeholders' needs into objectives and measures (Bourne, Mills et al. 2000).

As captured by CIMA's (2005) definition, measurement variables may be financial and non-financial. Traditional PMSs mainly focus on financial measures (Ghalayini, Noble 1996). These monitor historic performance and therefore, cannot be employed alone for the strategic running of the business (Kaplan, Norton 1992). Consequently, contemporary PMSs have developed that balance

financial and non-financial performance metrics (Burgess, Ong et al. 2007). Many organisations firmly advocate the latter approach over the traditional approach (Martinez, Kennerley 2006).

1.2.2 Small and Medium Enterprises

While there is no consensus on a uniformly, globally accepted and uncontentious definition of Small and Medium Enterprises (SMEs), most definitions "*tend to use the same metrics of employment, turnover and asset base"* (Blackburn, Jarvis 2010, p.10). Table 1.1 illustrates the criteria as set by the European Commission (2003) which must not be exceeded for a firm to be categorised as an SME.

Firm Category	**Number of Employees**	**Annual Turnover**	**or**	**Annual Balance Sheet Total**
Medium-Sized	<250	≤ € 50 million		≤ €43 million
Small	<50	≤ €10 million		≤ €10 million
Micro	<10	≤ €2 million		≤ €2 million

Table 1.1: Definition of an SME as per the European Commission (2003) adopted from the European Commission (2020)

1.2.3 Impact of Growth on SMEs

Business lifecycle models are often associated with corporate growth (Garengo, Bernardi 2007). Miller and Friesen (1984) define the phases of a corporate's life cycle as "*birth, to growth, to maturity, and then on to revival or perhaps decline*" (p.1174). Growth of a new venture may be defined as:

> *"a process of continuously accumulating key resources to overcome the liabilities of newness and smallness"* (Shelton 2005, p.352).

Growth has several implications on SMEs including less limited resources (Cantele, Vernizzi et al. 2020), more opportunities for developing new technologies or effecting necessary modifications to those already existing (Farsi, Toghraee 2014) and more complex organisational structure (Torres, Jasso 2017). Furthermore, in a study by Moores and Yuen (2001), as firms entered growth stages, the level of administrative tasks far exceeded the capacity of the existing Management Accounting System (MAS). Consequently, firms formalised their MAS to deal with the more diverse and complex structures prevailing at the growth stage (Moores, Yuen 2001).

1.2.4 Evolution of PMS Over Business Lifecycle

Ferreira and Otley (2009) developed a framework to illustrate the design and functioning of PMSs, an essential aspect of which focuses on how PMSs evolve upon changes to the organisation's internal and external environment. A common understanding among researchers is that the features which differentiate SMEs from large enterprises impact the adoption and use of a PMS (Garegno, Biazzo et al. 2005). As enterprises grow, they are more probable to adopt a supportive information system infrastructure which assists performance measurement (Taylor, Taylor 2014) and their PMSs become more advanced and strategic (Laitinen, Kadak 2018), making greater use of contemporary performance measures (Amir 2014). Several PMSs address these key aspects such as the Performance Pyramid (McNair, Lynch et al. 1990) and the Performance Prism (Neely, Adams et al. 2001), the most popular being the Balanced Scorecard (BSC) (Kaplan, Norton 1992).

1.2.5 Balanced Scorecard

The BSC is a popular tool among scholars and practitioners (Gawankar, Kamble et al. 2015). It may be defined as a framework introduced by Kaplan and Norton (1992) integrating *"financial measures that tell the results of actions already*

taken" (Kaplan, Norton 1992, p.72) with *"operational measures that are the drivers of future financial performance"* (Kaplan, Norton 1992, p.72). The prime motivation behind its creation was the deficiencies of the traditional PMSs (Cooper, Ezzamel et al. 2017). It affords management sufficient information to understand and measure company performance while integrating:

> *"the financial, customer, internal process and innovation, and organizational learning perspectives"* (Kaplan, Norton 1992, p.79).

1.3 The Case Company

1.3.1 Background to the Case Company

Having been in operation in Malta since 1983, the case company has several years of trading experience. Over the years it has not only diversified its products and services but was also able to participate in the international market. Its Group has expanded into a number of subsidiaries. The case company is the largest of four subsidiaries and the first formed within the Group. Its central business lies in the field of fire and security.

For most of its lifetime, the case company held the status of an SME. However, it underwent a process of growth and development recently, resulting in the case company being classified as Large in 2021.

1.3.2 Operational Lines

The case company offers a portfolio of products and services categorised into four main lines of business. These are illustrated in Figure 1.1.

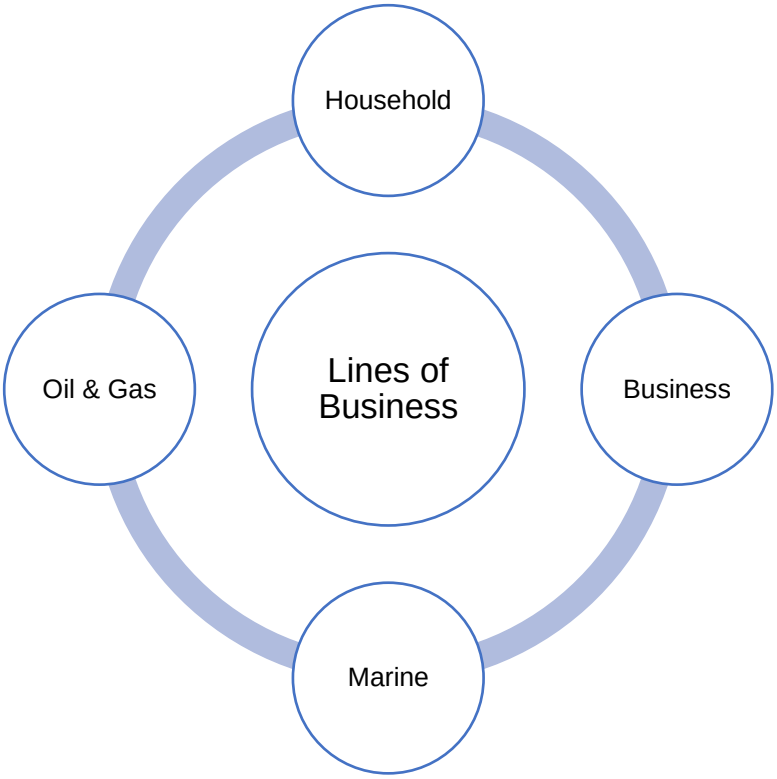

Figure 1.1: The Lines of Business of the Case Company

1.3.3 Organisational Structure

The case company adopts a hybrid approach for its organisational structure. It is split into two: a hierarchical structure for the employees working from the office and a matrix structure for the employees working on-site at the clients' premises. Given the significant number of employees, Figure 1.2 summarises the hierarchical structure, while Figure 1.3 summarises the matrix structure. As demonstrated in the latter figure, the matrix structure assigns installers and technicians to the 'Operations' departments in Figure 1.2.

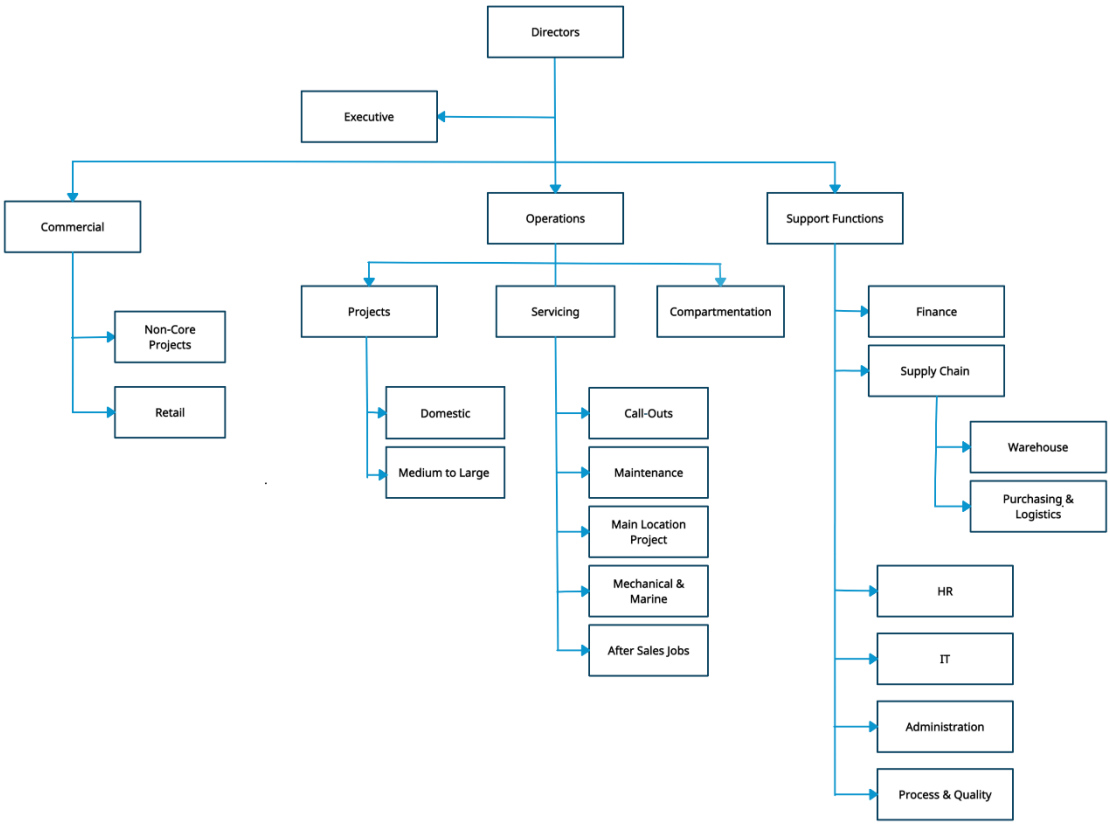

Figure 1.2: The Hierarchical Structure of the Case Company

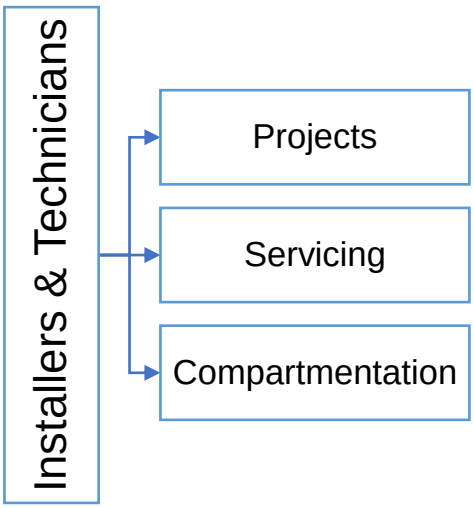

Figure 1.3: The Matrix Structure of the Case Company

1.4 Need for the Study

This study is unique in that it proposes to evaluate how the case company's PMS has evolved over the years. This includes an analysis of its past and current PMS, leading to suggestions for future developments to its PMS as it continues on its growth path which could culminate in a BSC. It will therefore delve into the PMS's past, present and future at the case company. This concept of evolution makes it distinctive from other dissertations which took a static approach (Bonnici 2021a, Bonnici 2021b, Farrugia 2022, Fenech 2022). Given that the case company's PMS has developed in line with business growth, it provides a good setting for this research study. Thus, it can potentially add value to the research area of performance measurement. Furthermore, no similar local dissertations conducted in the past based their study on a company having an Enterprise Resource Planning (ERP) system. Also, no local studies have attempted to design a BSC for a fire and security company. This study aims to fill such literature gaps.

1.5 Research Objectives

This research study aims to understand the triggers for the evolution of the PMS, how its features developed over the years and to design a BSC for potential adoption within the case company. Specifically, the research objectives which this study aims to achieve are:

1. To trace the evolution of the PMS over the history of the case company;
2. To evaluate the current PMS; and
3. Design a BSC and strategy map that formalises linkages with the strategy.

As illustrated in Figure 1.4, these objectives reflect the past, present and future of the PMS.

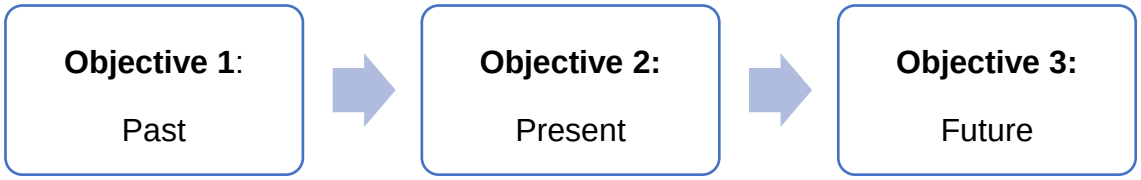

Figure 1.2: Flow of the Research Objectives

1.6 Scope and Limitations

In view of predominant time pressures and word restrictions, the researcher will focus on only the largest of the subsidiaries despite that the Group is composed of several subsidiaries. Moreover, as illustrated in Figure 1.2, the case company has several departments. However, the design of the BSC will focus on three of its central departments, namely Projects, Servicing and Retail.

Primarily due to the abovementioned constraints, although the third research objective of this study is to design a BSC, it is beyond its scope to formally implement this within the case company. Additionally, the time frame constraint implies that any circumstances arising after the date of this dissertation will not be reflected in this study.

1.7 Dissertation Overview

Figure 1.5 provides an outline of the structure that this study will follow.

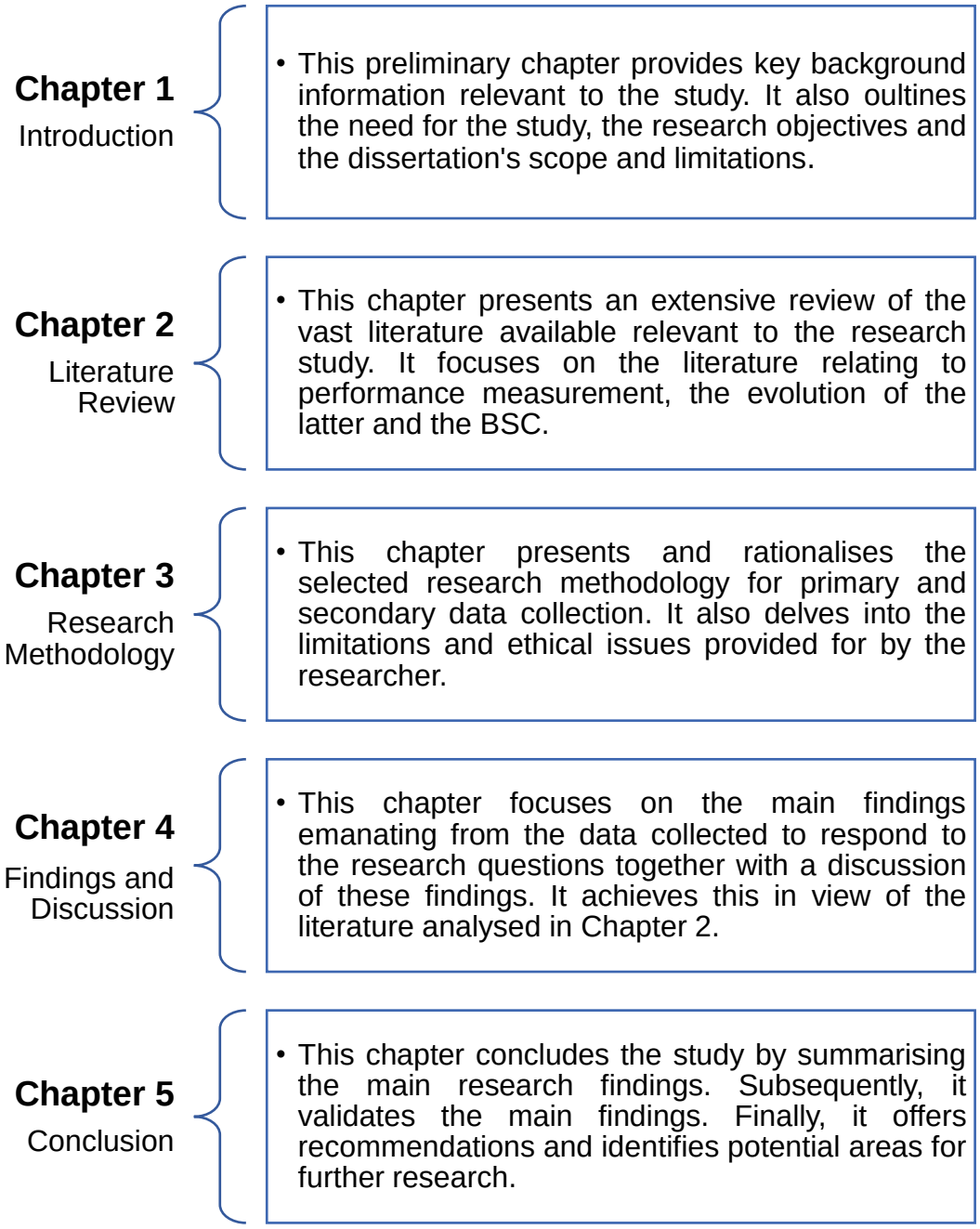

Figure 1.3: Dissertation Overview

Chapter 2

Literature Review

2.1 Introduction

This chapter will provide a rigorous analysis of existing literature relevant to the research area. This will enable the achievement of objectives by understanding performance measurement, how it evolves and the BSC which is being considered as a suggested PMS model. Specifically, Sections 2.2 and 2.3 delve into the concepts of performance measurement and Key Performance Indicators (KPIs) respectively. Subsequently, Section 2.4 provides a critique of traditional PMSs leading to a description of the contemporary PMSs. While Section 2.5 tackles the dynamic PMS, Section 2.6 focuses on how PMSs evolve with company growth. This is followed by Section 2.7 which offers a broad evaluation of the BSC. Finally, Section 2.8 provides a concluding note on this chapter.

2.2 PMSs

Motivated by the escalating volatility in the business macro-environment, performance measurement has become more than ever the focus of discussion (McAdam, Bailie 2002). PMSs have been acknowledged as being vital to an organisation's ability to operate effectively and efficiently (Kennerley, Neely 2002). Apart from measuring performance (Franco-Santos, Kennerley et al. 2007), an effective PMS connects with the broader internal and external environment (Neely, Gregory et al. 1995) so that measures reflect the organisation's strategic direction (Melnyk, Bititci et al. 2014, Micheli, Manzoni 2010). Serving as a communication tool (Nudurupati, Garengo et al. 2021), employees can understand better what is required of them and what is critical to the organisation's success, aligning their behaviour with such requirements (Melnyk, Stewart et al. 2004). PMSs also assess the validity of the strategy's underlying assumptions (Bourne, Mills et al. 2000).

Management practices which gather information to hold individuals accountable for poor performance rather than for promoting organisational performance are

described by Ates, Garengo et al. (2013, p.47) as *"distorted performance management practices".* Conversely, an effective PMS is one which evaluates and controls organisational performance within the framework of the strategy (Tung, Baird et al. 2011). Moreover, monitoring should be frequent to allow management to react to divergences from the plan (Drury 2020).

2.3 KPIs

2.3.1 Purpose of KPIs

KPIs differ from performance indicators in that they mirror the organisation's Critical Success Factors (CSFs) (Parmenter 2019) i.e., those key areas in which it must excel at to certify organisational success (Boynton, Zmud 1984). Indeed, the framework developed by Ferreira and Otley (2009) to assist in the design and functioning of PMSs refers to KPIs only after the vision, mission, CSFs, organisation structure, strategies and plans have been pondered. This framework subsequently requires the designation of targets to KPIs alluding to the level of performance required for attaining the corporate goals (Ferreira, Otley 2009). This is expected to instil motivation and achieve better performance due to clearly stated goals (Drury 2020) while also developing a just and unbiased mechanism for establishing expectations and assessing performance (Sahai, Srivastava 2012). If targets are too high, they would be perceived as unattainable, resulting in inferior performance while if too low would not encourage the best outcome possible (Drury 2020).

KPIs instil a sense of control, empowerment, and satisfaction in all employees (Parmenter 2019). Additionally, for KPIs to keep directing behaviour adequately, these need to be revisited (Eckerson 2011) at least annually (Parmenter 2019).

2.3.2 Categories of KPIs

Measures tend to be financial or non-financial (Gjerde, Hughes 2007). Financial measures include *"sales turnover, profit, debt and return on investment"* (Kanji 2002, p.716). These ascribe a value to an action that has already occurred (Parmenter 2019). Financial measures provide little guidance on the corporate's progress towards long-term strategic goals (Kaplan, Norton 1996c). On the other hand, typical non-financial measures often relate to customer satisfaction and personnel attitudes (Kaplan, Norton 1996a). Non-financial parameters respond to emerging market trends, are correlated with corporate objectives and strategies and generate more timely and accurate performance information (Medori, Steeple 2000), providing insights into prospective financial performance (Kaplan, Norton 1996c). Hence, non-financial measures are becoming more prominent (Gjerde, Hughes 2007). Nonetheless, Eckerson (2009) recommends a balance of financial and non-financial KPIs.

Interlinked with such classification, KPIs are commonly categorised as lagging and leading indicators (Tjandra, Shimko 2016). The former metrics represent the financial consequences of previous actions (Gjerde, Hughes 2007), thereby being too historical to be helpful for operational performance evaluation (Ghalayini, Noble 1996). Leading measures are then non-financial measures stimulating future financial success (Malagueño, Lopez-Valeiras et al. 2018). Contrary to lagging measures (Tjandra, Shimko 2016), leading measures highlight the level of progress towards achieving strategic objectives (Gjerde, Hughes 2007).

2.4 Traditional Approach vs Contemporary Approach to Performance Measurement

In the late 1980s, as a natural repercussion of higher global competition (Ghalayini, Noble 1996), companies were forced to be more responsive and make external considerations (Kennerley, Neely 2002). To reacquire a competitive edge, firms re-adapted their strategic priorities and effected changes which uncovered the inappropriateness of traditional accounting-based PMSs (Ghalayini, Noble 1996) which were biased towards financial measures (Burgess, Ong et al. 2007). Multiple authors appear to agree that traditional PMSs lost their ability to provide management with sufficient information (Barker 1995, Eccles 1991, Ghalayini, Noble 1996). They failed to align performance measurement with business strategy (Atkinson, Waterhouse et al. 1997, Kaplan, Norton 1992, McAdam, Bailie 2002) leading to a short-term vision (Kanji 2002). Moreover, although this approach provides information on whether the strategy is generating bottom-line success (Kaplan, Norton 1992), it is internally driven (Eccles, Pyburn 1992), backward-looking (Gawankar, Kamble et al. 2015, Kaplan, Norton 1992) and overlooks the determinants of future financial success (Nørreklit 2000). Possibilities to advance the company's competitive position are disregarded (Wisner, Fawcett 1991) but with the new competitive market, the non-financial aspects, which create value for the firm, need to be measured (Ittner, Larker et al. 1998).

The realisation of such deficiencies instigated a revolution in this field which introduced more balanced and flexible frameworks (Garengo, Bititci 2007). Contemporary PMSs incorporate a broad-spectrum of performance measures and corporate objectives (Cheng, Luckett et al. 2007), which include non-financial measures to supplement the traditional financial indicators (Eccles, Pyburn 1992). This ensures coherence with organisational objectives and strategies (Medori, Steeple 2000). Some of these frameworks are illustrated in Figure 2.1, including the BSC (Kaplan, Norton 1992) to be discussed later in this chapter.

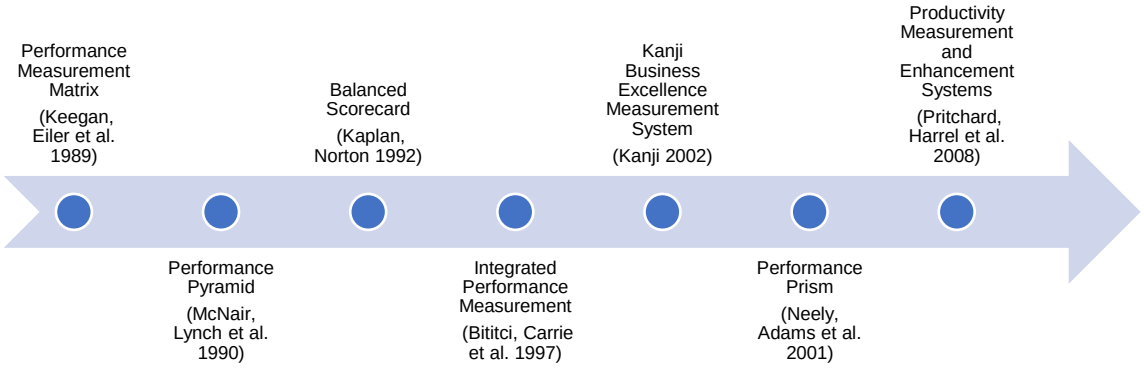

Figure 2.1: Balanced PMSs

2.5 Dynamic PMSs

2.5.1 Lifecycle of PMSs

Several authors acknowledge the need for a flexible and dynamic PMS (Bititci, Turner et al. 2000, Paranjape, Rossiter et al. 2006, Srimai, Radford et al. 2011, Wisner, Fawcett 1991) which realigns with the internal and external environment as it changes (Salloum 2013). Indeed, the lifecycle of a PMS may be split into four phases: design, implementation, use and review (Bourne, Mils et al. 2000). The latter phase refers to the evolution of a PMS which Kennerley and Neely (2002) describe as a constant process of assessing whether the PMS maintains appropriateness in view of the evolving organisational settings and effecting the necessary adjustments.

Upon external and internal assessments (Bititci, Turner et al. 2000), it may be vital for businesses to modify their objectives and strategy (Alexander, Kumar et al. 2018), depending on the nature of the trigger. Effects would spill over to the PMS since the strategy profoundly effects performance measures (Ferreira, Otley 2009). Hence, as a trigger is identified, the PMS is re-evaluated to verify that measures remain suitable and reflect changing organisational needs (Kennerley, Neely 2002). Measures may be introduced, altered or removed (Kennerley, Neely 2002) or their meanings changed (Bourne, Mils et al. 2000). Also, previously set

target levels may be changed (Bourne, Mils et al. 2000, Reid 2002) after comparing targets with actuals (Reid 2002). This responsive approach sustains coherence with the strategy (Braz, Scavarda et al. 2011, Kennerley, Neely et al. 2003). Failure to update performance measures as organisational environments and strategy change will render the PMS unsuitable, similar to how traditional PMSs are currently perceived (Kennerley, Neely et al. 2003).

2.5.2 Triggers of Change

Literature has recognised the following external factors as potential drivers of change in a PMS:

i. Changing consumer needs (Di Luozzo, Del Beato et al. 2021);
ii. Rapidly changing markets (Di Luozzo, Del Beato et al. 2021, Waggoner, Neely et al. 1999);
iii. Information Technology (IT) developments (Burgess, Ong et al. 2007, Kennerley, Neely et al. 2003, Waggoner, Neely et al. 1999).
iv. Regulatory or legislative changes (Kennerley, Neely et al. 2003, Waggoner, Neely et al. 1999) such as deregulation (Burgess, Ong et al. 2007);

An example of the last point listed above is when the International Organisation for Standardisation (ISO) requires modifications to the PMSs of firms seeking an ISO certificate (Srimai, Radford et al. 2011).

Literature has also denoted the following internal factors as potential catalysts for change in PMS:

i. Ownership change (Kennerley, Neely et al. 2003);
ii. Management personnel restructuring (Kennerley, Neely et al. 2003, Salloum 2013);
iii. Firm size (Burgees, Ong et al. 2007);

iv. Decision to enhance the precision and usefulness of the measures and measurement process (Salloum 2013);
v. Decision to boost performance by setting higher targets or modifying measures (Salloum 2013);
vi. Decision to adjust targets and measures owing to prior results such as unachievable targets or targets motivating action less than desired (Salloum 2013).

The firm size proposed by Burgees, Ong et al. (2007) will be discussed in more detail below.

2.6 Evolution of PMSs in Line with Company Growth

2.6.1 Factors Influencing PMSs in SMEs

Odar, Kavčič et al. (2012) concluded that the PMS varies between different-sized entities. SMEs embrace distinct attributes from large enterprises due to cultural and structural differences (Hudson Smith, Smith 2007). The PMS in an SME environment should be customised to their needs and attributes. The same authors asserted that for SMEs, the aim for improving performance is survival and attaining their goals (Jamil, Mohamed 2011). Performance measurement enables an SME to sustain alignment with the changing business landscape (Gruenbichler, Klucka et al. 2021). Garengo, Biazzo et al. (2005) assert that although literature suggests that SMEs benefit from using PMSs, many SMEs, do not implement a PMS or apply it incorrectly. Although a strategically aligned PMS promotes the competitiveness of SMEs, SMEs face considerable obstacles in adopting such tool (Hudson, Smart et al. 2001) which are discussed below.

2.6.1.1 Limited Financial Resources

One typical feature of SMEs which explains why this tool is not at the top of SME management's agenda pertains to their scarce financial resources (Gruenbichler, Klucka et al. 2021). It also influences their PMS in that the financial dimension is prioritised due to the absence of a financial safety net to counteract the effects of short-term fluctuations (Hudson, Smart et al. 2001).

2.6.1.2 Limited Human Capital Resources

SMEs are constrained in technical and managerial expertise, manpower and time (Yusof, Aspinwall 2000). Fewer personnel vis-a-vis large enterprises (Wong, Aspinwall 2004) implies that time devoted to diverse management activities, including performance measurement, is strictly restricted (Hvolby, Thorstenson, 2001). Rather, management focuses on overseeing a vast range of functions and directing day-to-day operating activities (Ghobadian, Gallear 1997).

2.6.1.3 Limited Strategic Planning

Perhaps unsurprisingly, SMEs are characterised by informal structures, including procedures and strategic planning (Brem, Kreusel et al. 2008). Most small enterprises prioritise short-term survival over long-term strategy (Fuller-Love 2006). Although Blackburn, Hart et al. (2013) reveal the importance of devising a written business plan for growth in terms of the number of personnel, a study by GruenbIchler, Klucka et al. (2021) exposed that up to 42.01% of Slovak SMEs do not formulate strategic plans. Thus, SMEs are flexible and adopt a reactive approach to market changes (Aloulou, Fayolle 2005, Ghobadian, Gallear et al. 1997, Yusof, Aspinwall 2000). This fire-fighting mentality, which Spence (1999) describes as focusing on urgent matters for the sake of short-term survival, allows little space for future-oriented developmental tasks (Hudson, Smart et al. 2001). SMEs are also prone to neglecting the external environment (Ates, Garengo et al. 2013).

2.6.1.4 Limited Use of Non-Financial Measures

While the research findings of Jarvis, Curran et al. (2000) provide evidence that the PMS in an SME context amalgamates financial with non-financial performance measures, according to Burgess, Ong et al. (2007), SMEs are less likely to implement the more sophisticated contemporary PMS than their larger counterparts. This may be firstly because owner-managers of SMEs regard cash flow information as a critical indicator for controlling the firm (Jarvis, Curran et al. 2000, Jarvis, Kitching et al. 1996) as these are indicators of firm survival (Jarvis, Curran et al. 2000). Secondly, their limited resources do not permit it to manage ample measures (Hvolby, Thorstenson 2001).

2.6.1.5 Limited Advanced Technology

Advanced IT infrastructure in place implies a higher likelihood of adopting a PMS (Papulová, Gažová et al. 2021). The adoption of IT for performance measurement refers to the hardware, software and practices which can be assisted by IT (Kueng, Meier et al. 2001). An information system performs a vital function in a PMS by collecting, storing and processing performance-related data and cascade performance-related information (Salleh, Jusoh et al. 2010). Also, the implementation of systems and mechanisms which collect, refine and evaluate information support decision-making (Garengo, Bernardi 2007).

However, small businesses encounter multiple difficulties adopting IT (Nguyen 2009). Small business entrepreneurs tend to be unacquainted with instilling new technologies. Moreover, limited financial resources restrict the number of technologies feasible for the business, resulting in unsuitable technology (Farsi, Toghraee 2014).

2.6.1.6 Limited Appreciation of Benefits

An internal barrier found by Garengo, Biazzo et al. (2005) to obstruct the employment of a PMS within SMEs is the impression of PMSs as being bureaucratic and limiting their flexibility. This seems to contradict the research of Hudson, Smart et al. (2001) where the participating SME managers appreciated the merits of a strategic PMS. Nonetheless, such managers still failed to redesign or upgrade their PMS (Hudson, Smart et al. 2001).

2.6.1.7 Limited Customers

SMEs tend to have a smaller customer base than their larger counterparts, implying a greater motivation for establishing long-term client relationships (Chittithaworn, Islam et al. 2011). To ensure survival, small corporates must employ client retention strategies which prioritise client relationship management, client satisfaction and brand loyalty (Hawkins, Hoon 2020). Consequently, the performance dimension concerned with ensuring client satisfaction and that the firm is dynamic enough to react promptly to turbulences in the market becomes critical (Hudson, Smart et al. 2001).

2.6.2 Company Growth

Although through their five-stage organisation lifecycle model Miller and Friesen (1984) imply that growth is a natural phase of an organisation’s existence, Durmaz, Ilhan et al. (2015) amplified that the competitive nature of the current market has forced growth to become a requisite. The case studies conducted by Bititci, Mendibil et al. (2006) indicate that employing PMSs to steer continuous improvement can remarkedly drive SME performance. PMSs should assist SMEs in controlling uncertainty, innovating their products and constantly developing (Garengo, Biazzo et al. 2005).

Company growth impacts the organisational structure (Tran, Tian 2013). A case study by Torres and Jasso (2017) revealed that as a company grows, the complexity of the organisational structure ascends. During the initial stages of growth, the organisational structure evolves from a flat, unsophisticated and centralised structure to a hierarchical, sophisticated and decentralised structure (Kotey, Sheridan 2004). Another complex organisational structure model is the matrix structure (Dunn 2001) which groups personnel according to function and then distributes them according to projects (Vaughan 2022). This leads to there being at least two supervising managers, the department manager and the project manager (Dunn 2001, He 2022, Thomas 2022, Westland 2022), with possible conflicts between them (Dunn 2001). Other drawbacks include ambiguous or misinterpretation by the employees in different levels of their roles and duties, lack of accountability and lack of communication and cooperation between personnel (Sy, Côté 2004). Nonetheless, this model offers flexibility in utilising employees across departments (Freedman 2023, Schnetler, Steyn et al. 2015, Sy, Côté 2004) and efficiency improvement (Usmani 2022, Rivera 2022).

2.6.3 Development of PMSs in Line with Company Growth

One of the factors which enhances the degree of sophistication of management accounting is organisational size (Abdel-Kader, Luther et al. 2008). An organisation's internal features and external business environment varies across the lifecycle stages (Silvola 2008). PMSs must provide adequate information and be timely and dynamic to address the different management needs at the different lifecycle phases; implying that the PMS characteristics differ across the various phases (Ismail, Auzair et al. 2019). Therefore, taking Sections 2.6.2 and 2.6.3 together, firm growth and the employment of management control systems (MCSs) supplement each other (Davila, Foster 2007).

Management accounting information in the initial stages of a company's existence takes the form of informal correspondence, which then evolves into a more formal form that requires supporting information infrastructure (Davila,

Foster 2005). This supports the finding of Taylor and Taylor (2014) that larger companies are more probable than SMEs to adopt a supportive information system infrastructure which assists performance measurement. In fact, Moores and Yuen (2001) found that the need for MAS design to be formal is highest at the growth stage. They further found that the participating firms formalised their MAS when they upgraded their strategies to acquire or safeguard their competitive advantages or when their systems failed to support the more complex tasks and structures (Moores, Yuen 2001).

MASs may be formalised by shifting procedures from a manual to a computerised environment (Moores, Yuen 2001). Where the IT system for PMS is sophisticated, most processes would be IT-based, including the gathering of relevant data, data analysis and information communication (Kueng, Meier et al. 2001). In fact, Marchand and Raymond (2008) postulate that the evolution of PMSs from measurement to management was possible through progression in IT. These IT-based information systems which can be used for performance measurement include ERP systems (Sharif 2002). Systems older than ERP systems require data to be inputted by each department separately, implying minimal integration between departments and less timely data retrieval which is important for appropriate decision-making. According to the same authors, ERP systems only require one-time inputting of data into the system, which is expected to enhance the accuracy of information (Beheshti, Beheshti 2010).

Firms at the growth stage depend on a greater volume of information (Moores, Yuen 2001). Thus, the requirement for advanced information processing becomes more prominent as corporate size and complexity increase (Lester, Parnell et al. 2003). PMSs can offer coordination, management, and reporting facilities required for this larger volume of data (Amir 2014).

According to the abovementioned framework of Ferreira and Otley (2009), organisational structure is one factor which shapes the features and purpose of the PMS. Referring to the complex matrix structure described in Section 2.6.2,

employees under this model report to two managers and attend to two sets of KPIs (Crowley 2017).

Hanson, Melnyk et al. (2011) define disaggregation of metrics as disassembling a metric into smaller parts yet withholding its nature. A case study performed by Gutierrez, Scavarda et al. (2015) investigated the PMS evolution of a department of a large company with a hierarchical structure which disaggregated performance measures for each individual warehouse under this department. This enables deeper data analysis (Gutierrez, Scavarda et al. 2015) where the roots of an operational problem are identified faster (Braz, Scavarda et al. 2011).

Furthermore, Hanson, Melnyk et al. (2011) define decomposition as disassembling a metric into measures for the required tasks to accomplish it. Internal alignment cannot be achieved by using the traditional approach of merely setting high-level performance indicators aligned with the strategy. Rather, high-level performance measures should be contextualised and linked with shop-floor action to translate strategic objectives into operational efforts (Bellisario, Pavlov et al. 2021). Gosselin (2005) observes that decentralised corporates utilise a better mixture of non-financial and financial measures. Therefore, as SMEs grow, the need for a comprehensive PMS increases (Perera, Baker 2007). Within this context, there is, therefore, greater utilisation of contemporary performance measures which implies the inclusion of external, non-financial metrics and improved timeliness (Amir 2014). This coincides with the requirement for timeliness of information at the growth stage, given the environmental uncertainty growing organisations experience (Moores, Yuen 2001).

The above arguments confirm the conclusion of Laitinen and Kadak (2018) that the PMSs of large companies are more advanced and give more prominence to the strategic dimension of measuring performance than those of their smaller counterparts.

2.7 BSC

2.7.1 Evolution of the BSC

Although Figure 2.1 illustrates numerous balanced PMSs, the BSC is one of the most popular frameworks (Tennant, Tanoren 2005). Its evolution is often perceived as the foundation of the movement from performance measurement towards management (Srimai, Radford et al. 2011). While initially, the BSC was devised to defeat the limitations of the traditional PMSs by combining financial with non-financial measures (Kaplan, Norton 1992), today it serves two purposes: measuring organisational performance and a strategic planning technique (Srimai, Radford et al. 2011) so the strategy is successfully executed (Gawankar, Kamble et al. 2015). Thus, this model *"provides a framework for a strategic measurement and management system"* (Kaplan, Norton 1996, p.2).

2.7.2 Scorecard Perspectives

The distinction between the KPIs of the traditional PMSs and of the BSC lies in the latter's requirement to fuse financial with non-financial KPIs (Lueg, E'Silva 2013). Consequently, as illustrated in Figure 2.2, it assesses performance from three further perspectives: *"customers, internal business processes, and learning and growth"* (Kaplan, Norton 1996c, p.75).

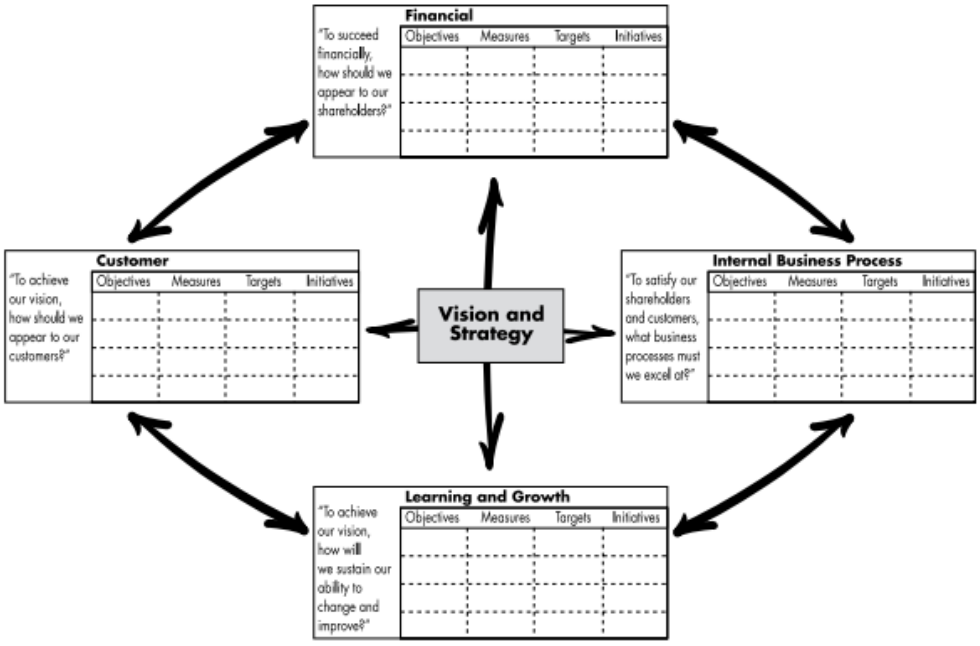

Figure 2.2: The BSC Perspectives (Kaplan, Norton 1996c, p.76).

2.7.2.1 Financial Perspective

The first perspective represents the investment of shareholders who expect company worth to appreciate (Benková, Gallo et al. 2020). As the three other perspectives drive financial results (Fatima, Elbanna 2020), this perspective signifies whether the corporate strategy and its implementation are triggering bottom-line improvement (Kaplan, Norton 1992). Typical financial objectives are revenue growth and profitability (Kaplan, Norton 1996b).

2.7.2.2 Customer Perspective

Customer satisfaction has gained more prominence over the years as firms recognise that unsatisfied clients revert to alternative suppliers (CIMA 2008). This perspective impacts at first hand the previous perspective (Bento, Bento et al. 2013, Nørreklit, Jacobsen et al. 2008). Typical outcome objectives include

increasing customer satisfaction, retention and market share (Kaplan, Norton 1996a).

2.7.2.3 Internal Business Process Perspective

The third perspective requires recognition of the "*critical internal processes"* (Kaplan, Norton 1996a, p.57) which the firm must optimally perform in executing its strategy and required for attaining its financial and customer-related goals (Drury 2020, Kaplan, Norton 1996a). Hence, it signals to firms the path which must be followed to achieve performance expectations (Al-Najjar, Kalaf 2012). In this respect, the proponents identified three core processes: "*innovation"*, *"operations"* and "*post-sale service*" (Kaplan, Norton 1996b, p.96).

2.7.2.4 Learning and Growth Perspective

The competitive business context requires continuous improvement in a firm's competency to supply value to its owners and clients (Kaplan, Norton 1996a). The learning and growth perspective is the base of the hierarchy as it influences the future outcomes of the abovementioned perspectives (Bryant, Jones et al. 2004). The three other perspectives will uncover gaps between the level of capabilities available and that required to attain targets (Kaplan, Norton 1996a). This perspective then crystallises the skills and competencies that need to be acquired (Betto, Sardi et al. 2022) for sustained growth and advancement (Kaplan, Norton 1996a) and hence, closes such gaps (Ahmed, Ahmed et al. 2011). Typical objectives are *"employee satisfaction and information system availability"* (Kaplan, Norton 1996b, p.44).

2.7.3 Adopting the BSC

Any firm planning to employ the BSC must have a *"clear mission, values, vision, and strategy"* (Assiri, Zairi et al. 2006, p.942) where the strategy is based on the vision (Kefe 2019). Organisational environment examination may guide strategy formulation (Rohm 2008). This includes a review of the *"strengths, weaknesses and opportunities, and threats",* namely the Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis (Nair 2004, p.5). Subsequently, the vision and strategy are converted into objectives and measures for each dimension described above (Paranjape, Rossiter et al. 2006). The other two components are targets and strategic initiatives (Niven 2014).

2.7.4 Strategy Map

The same creators of the BSC devised the complementary strategy map (Capelo, Dias 2009). As can be noted from Figure 2.3, strategy maps are based on the BSC perspectives (Kaplan, Norton 2004). Strategy maps visually portray the BSC strategic objectives and their related cause-and-effect relationships (Jassbi, Mohamadnejad et al. 2011), showcasing how particular improvements lead to desired results (Kaplan, Norton 2000). This framework thoroughly explains the strategy (Kaplan, Norton 2001, Moraga, Quezada et al. 2020) by communicating to the staff the vital aspects of implementing it (Niven 2006).

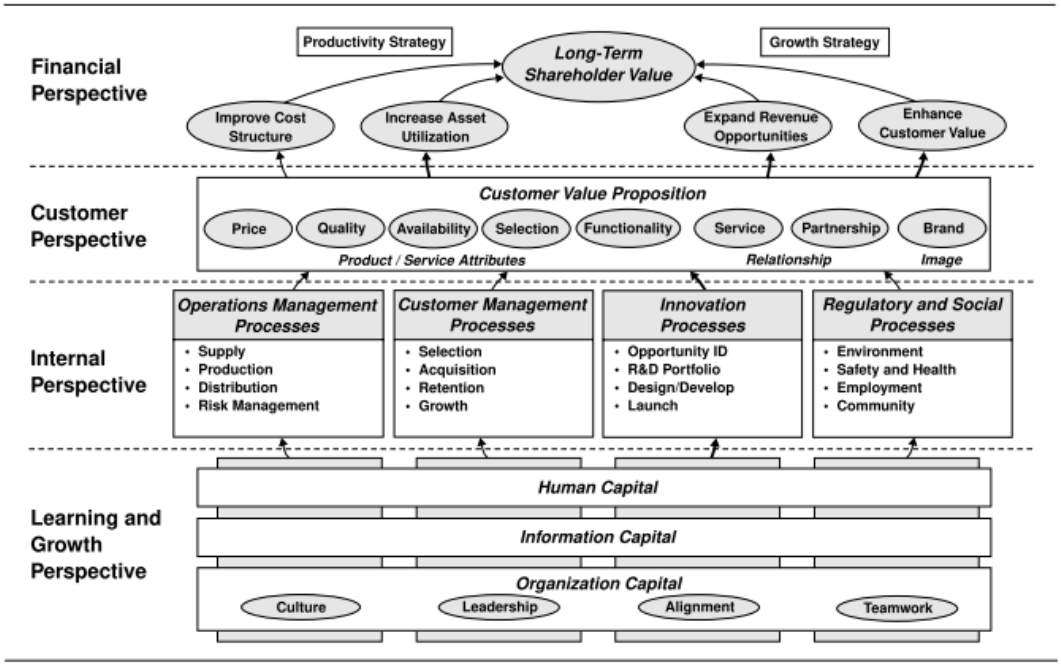

Figure 2.3: A Strategy Map (Kaplan, Norton 2004, p.11)

2.7.5 Advantages of the BSC

The BSC prioritises *"drivers of long-term success"* (Nørreklit, Jacobsen et al. 2008, p.65). The model translates the company's strategy into measurable objectives (Kaplan, Norton 1992). These strategic goals are disclosed to the workforce (Gawankar, Kamble et al. 2015) for better awareness of their role in achieving organisational success (Rompho 2011). Therefore, it presents a coherent model integrating performance measurement within the strategic management process (Drury 2020). Moreover, by positioning measures in a chain of cause-and-effect relationships, it enhances the firm's understanding of how to acquire its prospective competitive advantage (Malgwi, Dahiru 2014).

Notwithstanding that management receives information on four perspectives, the BSC does not overburden management with information as it restricts the number of measures utilised (Kaplan, Norton 1992). Furthermore, the BSC fuses lag indicators with lead indicators and external indicators relating to clients and shareholders with internal measures tackling organisational processes and learning and growth (Atrill, McLaney 2021). Possibly due to such features, the

strategy map provides top management with a prompt yet holistic view of the firm (Kaplan, Norton 1992, Rompho 2011). Finally, senior management might adopt it to explore attractive features and practices which may address the gaps within their PMS (Srimai, Radford et al. 2011).

2.7.6 Disadvantages of the BSC

Although this model assists companies in implementing their strategy, it fails to manage those changes which potentially impact the strategy (Othman 2008). It pre-dominantly considers the interests of shareholders and customers (Rillo 2004), ignoring matters such as technological developments and competition (Nørreklit 2000).

Furthermore, the BSC makes pre-conceptions about the impact of lead indicators as it ignores time lags between cause and effects which is unwise given that these impacts take varying amounts of time (Nørreklit, Jacobsen et al. 2008). Moreover, it makes invalid assumptions regarding causal relationships between performance measures (Nørreklit 2000) which, if inappropriate, renders the predictive ability of the BSC insignificant (Nørreklit, Jacobsen et al. 2008).

2.7.7 Fifth Perspective

Kaplan and Norton (1996b) acknowledge that the four perspectives must not be considered mandatory or necessarily sufficient. As firms operate in a highly volatile environment, where the traditional BSC dimensions do not capture the unprecedented needs, these may be reconfigured to ensure coherence with the strategy (Betto, Sardi et al. 2022). For instance, where sustainability is a central organisational value or strategic imperative, a fifth perspective incorporating social and environmental measures may be added (Epstein, Wisner 2001). Adding perspectives would, however, result in additional measures and higher complexity, pushing up the cost of adoption (Paranjape, Rossiter et al. 2006).

2.8 Conclusion

This chapter deeply delved into PMSs and how they evolve with company growth. An overview of the BSC was also provided, highlighting several advantages and disadvantages.

The following chapter will outline the research methodology adopted to address the research objectives set out in Section 1.5.

Chapter 3

Research Methodology

3.1 Introduction

This chapter thoroughly explains the research methodology adopted to address the research objectives. After a brief commentary in Section 3.2 on the preliminary research conducted, Section 3.3 describes the research methodology chosen, rationalising such decision by explicitly referring to the nature of the research objectives. Meanwhile, Section 3.4 sets out the research strategy adopted. Section 3.5 then describes the data collection process implemented. Subsequently, Section 3.6 explains the data analysis process followed. Finally, Section 3.7 provides a concluding overview of this chapter.

3.2 Preliminary Research

Preliminary research on the subject matter at the initial stages of this study allowed for an in-depth understanding of performance measurement, its evolution and the BSC. It was noted that locally, no case study has designed and proposed a BSC within the context of an analysis of the evolution of a PMS.

Additionally, two preliminary meetings with the case company were organised, one with a director and another with the Chief Financial Officer (CFO), to gauge the feasibility of this study and their willingness to participate. It was noted that although the case company's PMS has evolved over the years such that a sophisticated and broad PMS is currently in place, certain key elements of the BSC model still need to be included.

The above factors motivated the selection of this research topic and the case company as the setting for this research since it was deemed to provide an ideal and interesting context for this study.

3.3 Methodological Choice: Quantitative, Qualitative and Mixed-Method

The research methodology refers to how the researcher systemically addresses the research problem (Kothari 2004). The researcher must choose between employing either of three research methodologies: quantitative, qualitative or mixed method approach (Johnson, Christensen 2020, Saunders, Lewis et al. 2019). Quantitative research utilises any data collection technique or data analysis procedure which generates or relies on numerical data (Saunders, Lewis et al. 2019), allowing generalisation of drawn conclusions to be made (Kumar 2019). Conversely, qualitative research relies on qualitative data for data collection and analysis (Bell, Bryman et al. 2019). This methodology follows an exploratory approach (Johnson, Christensen 2020), enabling the researcher to obtain in-depth knowledge of the cases and situations under investigation (Patton 2002). The mixed methodology combines elements of both quantitative and qualitative methods to overcome the inherent limitations of both methods (Mackey, Bryfonski 2018). The research methodology choice should consider the purpose of the research and how the results will be utilised (Kumar 2019).

3.3.1 The Methodological Approach Choice: Qualitative

While quantitative research findings developed on random samples from a population could be generalised, qualitative research findings frequently cannot be extended beyond the local research participants. This is due to the small and non-random samples generally utilised and its purpose to explore rather than test hypotheses and validate (Johnson, Christensen 2020). Notwithstanding this limitation, the qualitative approach was deemed the most suitable research methodology approach as it is coherent with the nature of the research objectives set out in Section 1.5. Its features allowed for in-depth analysis and exploration of the evolution of the case company’s PMS and for designing the BSC based on the feedback received from the case company.

3.4 Research Strategy: The Case Study

The research strategy refers to the plan a researcher develops to answer the research question (Saunders, Lewis et al. 2019). Therefore, such a choice depends on the research question and objectives. A highly adopted qualitative research methodologies is the case study (Yazan 2015). This refers to research narrowed to a single unit of analysis such as a department, corporation, sector or country (Smith 2003), enabling a focus on the uniqueness and complexity of that case (Stake 1995). It analyses the phenomenon in-depth and within its real-world environment (Yin 2018) to achieve a holistic understanding of it (Kumar 2019). Thus, case study research considers how the surrounding setting impacts the phenomenon (Baxter, Jack 2008). Given the nature of the research, i.e., to investigate the evolution of its PMS and to design a BSC and strategy map tailored to the needs of the case company, the researcher regarded this as the best approach.

3.4.1 Limitations of Case Study

Nonetheless, this approach is subject to certain shortcomings such as the limited generalisation of results from a single case (Johnson, Christensen 2020, Woodside 2010). Generalisation applies to theoretical propositions rather than populations (Yin 2018). However, the research objectives indicated that the evaluation of the evolution of the PMS over the years and the design of the BSC and strategy map are limited to the particularities of the case company. Nonetheless, the knowledge generated by this study will be helpful to any business enduring a similar process of growth and development and serves as a guiding tool for similar-sized companies operating in a similar sector considering the implementation of the BSC.

Due to the case study approach adopted, specific sensitive data pertaining to the case company was obtained. For the purposes of safeguarding its privacy, figures

disclosed in Chapter 4 have been modified whilst withholding the relevant proportions.

3.5 Data Collection

Primary data refers to the data a researcher collects for specific research through techniques such as questionnaires, interviews and direct observations. In contrast, secondary data refers to data already available which had been collected for reason of another research (Calantone, Vickery 2010).

Guided by the research objectives, the researcher gathered and evaluated secondary data from various sources, including peer-reviewed articles, journals, books and past dissertations, to be presented in Chapter 2. The aim of this data collection was for the researcher to acquire in-depth and broad insights into the field of study.

Primary data was collected by conducting in-depth, semi-structured interviews with employees occupying distinct roles within the case company. In semi-structured interviews, interviewees may reply to open-ended questions as they wish, and the interviewer may probe their answers (McIntosh, Morse 2015). Probes are used to obtain additional information to acquire a true understanding of the interview (Johnson, Christensen 2020). Thus, while semi-structured interviews allow for interviews to be concentrated on a subject matter, simultaneously, they accentuate the researcher's autonomy to explore relevant themes arising during the interview (Adeoye-Olatunde, Olenik 2021). Accordingly, sets of open-ended questions were prepared, which granted the researcher flexibility for probing further questions to ensure all necessary research data is captured.

The case company also provided secondary data through reports for a visual understanding of how performance measurement evolved and to facilitate the construction of the BSC.

3.5.1 Design of Interview Schedules

As presented in Appendix 1, eight interview schedules were prepared consistent with the role and experience of the interviewee. Interview questions were also based on the literature reviewed in Chapter 2 and ensured that the required data to address the research objectives is collected. In fact, the structure of the interview schedules follows the flow of the research objectives.

3.5.2 Conducting the Interviews: The Participants

Participants were selected based on whether their experience had exposed them to in-depth knowledge which fits with the interview agenda. As shown in Table 3.1, participants were chosen from different departments to obtain broad insights into the evolution of the PMS and to gather sufficient data to facilitate the design of the BSC, a tool with broad measures. Interviews were conducted between November 2022 to February 2023 lasting between thirty to sixty minutes.

Interviewee Number	Occupation
1	Chief Financial Officer (CFO)
2	Projects Department Manager (PDM)
3	Accounts Manager
4	Marketing Executive
5	Technical Resources Manager (TRM)
6	Assistant Resource Manager (ARM)
7	Human Resources (HR) Manager
8	Executive Assistant to the Directors (EAD)

Table 3.1: List of Participants

3.6 Data Analysis

Merriam and Tisdell (2016, p.202) describe data analysis as *"the process of making sense out of the data".* Following the suggestions of Johnson and Christensen (2020*),* the primary data collected was first transcribed. Subsequently, data was analysed through a process referred to as 'Thematic Analysis'. This is described by Clarke and Braun (2017, p.297) as:

> *"a method for identifying, analyzing, and interpreting patterns of meaning ('themes') within qualitative data".*

The same authors further contend that such technique:

> *"provides accessible and systematic procedures for generating codes and themes from qualitative data"* (Clarke, Braun 2017, p.297).

Therefore, through coding, the transcribed data was labelled and aggregated accordingly to collate and compare the responses received from the different participants. This helped the researcher in instilling and analysing the main findings in correlation with the objectives. The final BSC design was then presented to the CFO for validation.

3.7 Conclusion

This chapter was dedicated to discussing and justifying the research methodology chosen for this research study.

The subsequent chapter shall outline and discuss the findings from the qualitative case study.

Chapter 4

Findings and Discussion

4.1 Introduction

As reflected in its structure, Chapter 4 addresses the concept of the evolution of the PMS within the case company. Sections 4.2 and 4.3 analyse the former PMS to address the first objective. Corresponding with the second objective, Section 4.4 evaluates the current PMS. Subsequently, Section 4.5 presents the planned developments to the PMS. Section 4.6 achieves the final objective by designing the BSC and strategy map. A discussion of the findings and reference to the literature reviewed in Chapter 2 will be interwoven within each section.

4.2 Relationship Between Company Growth and PMS

4.2.1 Company Growth and the Evolution of PMS

The case company underwent significant growth over the years in terms of sales and number of employees. Consequently, in line with Torres and Jasso (2017), the organisational structure became more complex. As Kotey and Sheridan (2004) asserted, the organisational structure developed from being unsophisticated, flat and decentralised to sophisticated, hierarchical and centralised. In 2021, it became even more complex since, whilst maintaining the hierarchical structure for office employees, a matrix structure was introduced on-site employees. The way in which this was adopted is in line with the definition of Vaughan (2022) since employees are grouped into pools and allocated to projects according to their needs and skills. As stated in Section 2.6.2, it grants flexibility of movement from one department to another. Thus, it can assign idle resources towards larger or more challenging projects and obtain the best out of employees' skills, achieving the increased efficiency asserted by Usmani (2022) and Rivera (2022).

Accompanying this growth, the PMS became more sophisticated over the years. In fact, Figure 4.1 illustrates the business growth and the significant milestones

in the evolution of its PMS. This supports the finding of Odar, Kavčič et al. (2015) that the PMS varies between different-sized entities.

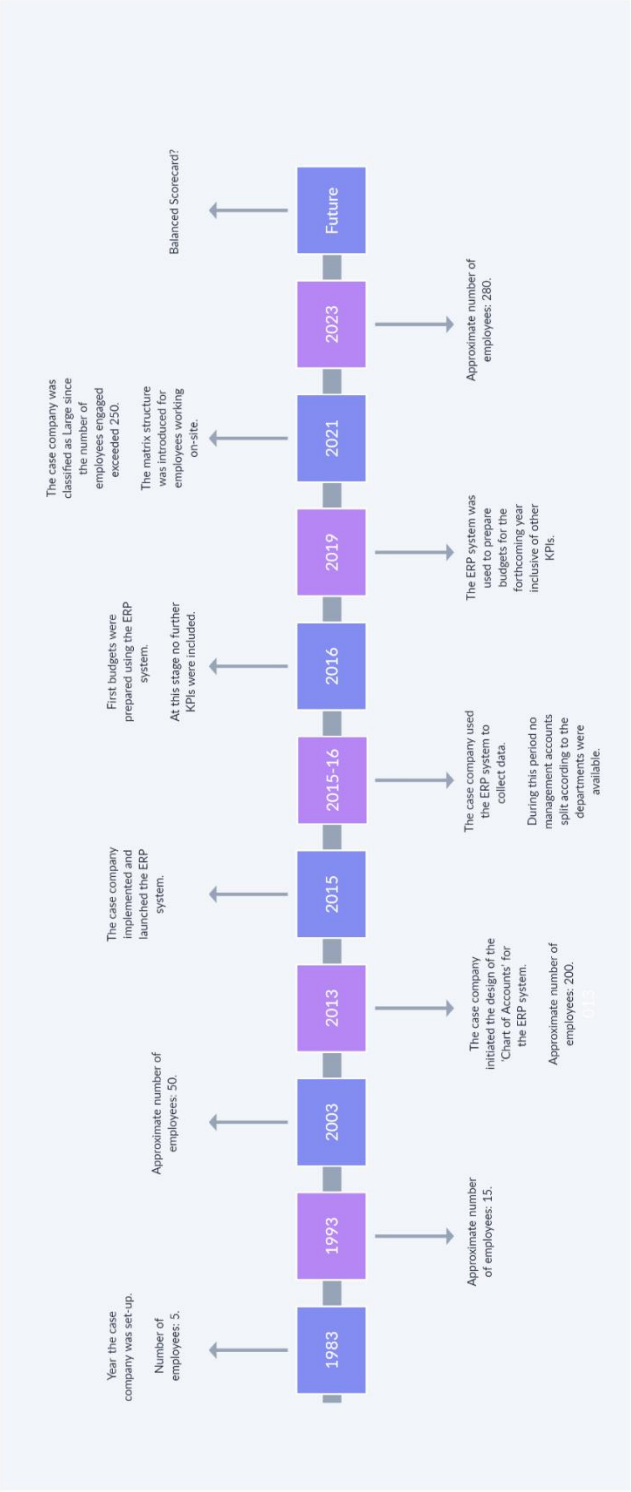

Figure 4.1: Timeline of the Case Company's Growth and PMS Evolution

Corresponding with Kueng, Meier et al. (2001), the installation of the ERP system revolutionised its PMS into the system still operating to date. As described in Figure 4.1, budgeting was not introduced immediately after in order to allow time to certify that the data the system is collecting to be used as the basis for setting budget levels is valid. Other KPIs were set even later as their target levels are influenced by the factors causing variances between budgets and actuals.

This approach is evidence of the reliability of the evolved PMS. In line with Marchand and Raymond (2008), the shift towards a sophisticated PMS took one significant development, the ERP system. Hence, it tested the system before using its data for performance measurement because, ultimately, without reliable data, reliable performance evaluation is not possible.

4.2.2 Growth as the Trigger for the Evolution of PMS

The Assistant Resource Manager (ARM), who used to participate as a technician before being promoted to manager, recounted how "*we were few, so if there were something wrong, you would realise immediately".* Therefore, with fewer resources, individual performance was more controllable because management could immediately become aware of any inferior performance. As he explained, if a technician completes seven call-outs a day while another completes three call-outs a day, it promptly raises an alarm that the latter may be underperforming. However, as Figure 4.1 illustrates, notwithstanding that it was still classified as an SME when it decided to upgrade its PMS, the case company had approximately two hundred employees at the beginning of 2013. Thus, this exercise no longer remained appropriate, even more so given that several employees work on-site without direct supervision.

Analysing this, the case company confirmed the study of Burgess, Ong et al. (2007), which identified firm size as a possible trigger for a PMS evolution since it appears that it upgraded the PMS while in the growth stage of the business lifecycle model of Miller and Friesen (1984).

4.2.3 Triggers for the Evolution of PMS Other than Growth

Participants were asked whether there were factors, external or internal, other than growth which encouraged the decision to sophisticate the PMS. From the findings discussed below, it is evident that the case company evolved its PMS not only due to growth, but also due to other factors stemming from both the external and internal environment.

4.2.3.1 IT Developments and Changing Market

Section 2.5.2 suggested that technological advancements are a trigger for change. Participants highlighted IT developments' influence on the decision to advance the PMS. Technology advances rapidly. The ERP system was not as advanced fifteen years ago as it was in 2013. Upon these advancements, management exploited such opportunities as it deemed appropriate. These have facilitated and improved performance monitoring.

As also listed in Section 2.5.2, another external factor was the rapidly changing market. Beyond the reason provided in the previous paragraph, the case company was also encouraged to utilise advanced technologies since, as the ARM commented, in 2012/ 2013, technicians of other local companies were utilising tablets. The case company decided to embark on this trend by introducing tablets which, as discussed further below, connect with the PMS.

These findings indicate that a major external influence was the advancements in IT which rendered the PMS outdated. Evidently, the case company is aware of technological innovations and perceives these as opportunities for improving internal business processes. Furthermore, the case company reacted to the competitive market by responding to new practices to sustain its position. In conjunction, these outcomes confirm the results of Moores and Yuen (2001) that firms formalise their MAS either because they modified their strategies to acquire or safeguard their competitive advantages or because their systems failed to

support the more complex tasks and structures. In the case of this business, both apply.

4.2.3.2 ISO Requirements

Srimai, Radford et al. (2011) consider the requirements to obtain an ISO certificate as a possible trigger for improving the PMS. However, the CFO commented that ISO does not require detailed KPIs. Rather, only high-level KPIs. Even more, the case company was already ISO-certified prior to the decision to install the ERP system.

The component of the ISO audit assessing KPI monitoring not only confirms that the ISO requirements are being met, but it also provides recommendations. While the case company had not previously implemented these recommendations, it later started taking them on board. The decision was, therefore, more driven by a desire to improve the PMS than a regulatory requirement.

Although the above findings may offer mixed interpretations for asserting whether ISO requirements were a trigger for this case company, one may conclude that these requirements did not force the improvement in the PMS. This is particularly because not only were the ISO certificates already acquired, but also the suggestions for improvements were non-binding. This showcases the proactiveness of the case company in improving its PMS.

4.2.3.3 Ownership or Management Personnel Restructuring

Contrary to assertions by Kennerley, Neely et al. (2003) and Salloum (2013), change in ownership or management personnel was not a motivating factor. The owners remained the same and the resolution to implement the ERP system was taken before the current CFO joining the case company and adopting a such role. Other internal factors were present.

4.2.3.4 Better Decision-Making

Since its inception, the case company has always aspired to be better. In 2013, it aimed to strengthen the precision of monitoring. The ERP system collects highly detailed data. The Accounts Manager commented that the more information a system collects, the more it can generate detailed reports which improves monitoring and increase the probability of taking correct managerial decisions. Indeed, better monitoring permitted by the multiple reports the system generates could assist the business in highlighting and analysing the strong and weak areas and the high and low performers. This corroborates with a finding of Garengo and Bernardi (2007) that the systems which collect, refine and evaluate information support decision-making.

Considering that the case company was already of material size, the expected improvement in the accuracy of forecasts due to greater volume of data which the ERP system collects also motivated such decision. ERP systems reduce the guesstimates in the budgets especially when external factors are hard to predict.

The expected improved timeliness of decisions and flexibility to adapt to changes also motivated the introduction of the ERP system. To explain how these were in fact achieved, the CFO referred to the COVID-19 situation. During such period, household clients services essentially halted. The new system enabled more effective resource allocation by forecasting the expected revenue if resources were assigned to other departments and to estimate the potential losses if the service were to be stopped. Whilst new budgets would not normally be re-issued during the year, as the CFO described, "*extreme circumstances call for extreme measures*", and within three days, with this new system, a new budget was issued since, for the most part, it only had to alter the inputted number of resources.

Taking the above findings jointly, in line with Salloum (2013), superior precision, enhanced usefulness of the PMS for timely decision-making and flexibility encouraged the installation of the ERP system. These are ingredients for company growth. Therefore, the growth experienced since the PMS became sophisticated and indicated in Figure 4.1 is evidence that the foreseen benefits

were realised. This confirms the argument of Garengo, Biazzo et al. (2005) that PMSs can assist SMEs to grow. However, the Accounts Manager stated that the intention might not have been to grow. As the Executive Assistant to the Directors (EAD) stated, the case company changes practices according to present needs more than future needs. Nonetheless, it was unconsciously being proactive as through measuring performance in a more sophisticated manner, it could learn how to be better which encourages growth. Therefore, in conclusion, both the findings of Burgess, Ong. Et al. (2007) discussed in Section 4.2.2 and Garengo, Biazzo et al. (2005) are confirmed since the PMS improvement was driven by growth and triggered growth.

4.3 PMS Before the Implementation of the ERP System

Participants were asked about the characteristics of the PMS preceding the installation of the ERP system, representing the first attempt at performance evaluation. This section will discuss these features, summarised in Figure 4.2, in view of the limitations typical of SMEs which impacted the PMS of the case company. Additionally, this section rationalises the Projects Department Manager's (PDM) comment that "*it was not correct because we were not structured enough".*

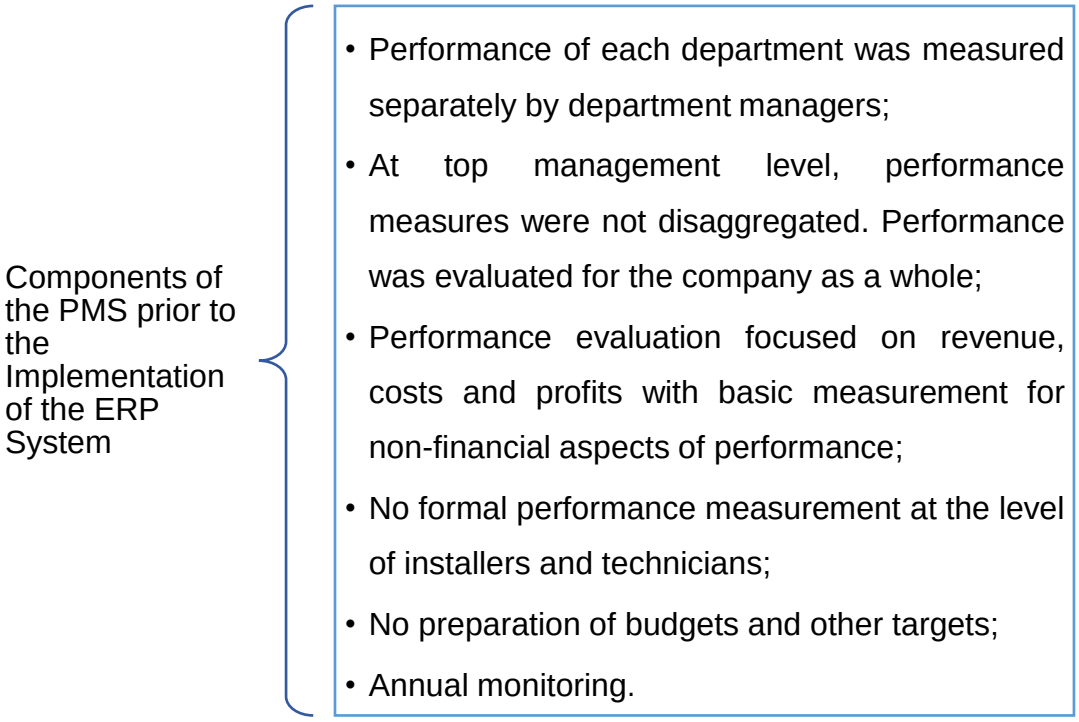

Figure 4.2: Components of the PMS of the Case Company before the Implementation of the ERP System

4.3.1 Features of the PMS prior to the Implementation of the ERP System

4.3.1.1 Absence of Disaggregation

Although the organisational structure was departmental at the time in question, no PMS was in place for the various departments. The CFO commented that each department manager would measure performance independently as deemed necessary. This corroborates the comment of the Technical Resource Manager (TRM) that *"each department looked at its own and that was it"*. Each department would create separate Excel sheets where measurements and the recording of measurements were designed to suit its requirements and preferences, which vary across the departments, with no attempt at creating an integrated reporting framework. Moreover, the PDM described that at the department level, high-level 'unofficial' KPIs were utilised to delineate between good and bad performance yet these were not reported to top management. With

KPIs set at high-level, there was no formal system for measuring individual performance in specific roles.

It seems that this centralised PMS where data was inputted by each department separately, resulted in the shortcomings identified by Beheshti and Beheshti (2010) since it was more challenging to retrieve data and there was no integration between departments as the systems used were not identical. However, despite that the business did not have a sophisticated system such as the ERP system, if a standard format for Excel sheets was set and each department adapted it to their specific needs, these coordinated spreadsheets would have created a sound structure and comparisons across departments could have been made.

Moreover, performance measurement at the top management level essentially consisted of annual management accounts prepared for the company holistically with no structure in the financial reports detailing the financial performance of each department separately. This is illustrated in Figure 4.3.

The absence of monitoring of the departments separately by top management is coherent with the absence of disaggregation of performance measures reported by Gutierrez, Scavarda et al. (2015) before the PMS evolution. This highlights a missed opportunity because if the abovementioned Excel sheets were scrutinised by top management, albeit not in detail and disaggregated to the lower levels, this would have already at least initiated some form of PMS by providing a simple structure to measure the performance of the departments separately. Moreover, as individuals' performance was not analysed at the micro-level, an individual's superior performance may offset any poor performance by another individual.

This approach presents several disadvantages. Given that each department was not evaluated individually, it was highly challenging to identify from where the problem arose if total annual profits were lower than general board expectations since the discrepancy would be aggregated across the departments. Consequently, a department could have been blamed for not contributing enough to profits when it might have contributed more than expected of it. Similar to the previous argument for individual performance monitoring, a further disadvantage

is that there may still be problems which remain uncovered if there is no overall discrepancy. This is because, as the TRM described:

> *"a department which is doing well may kill a problem of a department which is not going well".*

Income Statement for the period ended 31/12/2014

	Cumulative Dec-14 €
Revenue	11,657,418
Direct Costs	(9,189,412)
Gross Profit	2,468,005
Indirect Costs	(1,308,950)
Commercial Costs	(526,099)
Earnings, before Dep'n, Int. & Tax	632,956
Finance Costs	(32,102)
Finance Income	138,664
Other Income	1,200
Earnings before Dep'n & Tax	740,718
Depreciation	(112,666)
Profit before Tax	628,051
Tax @ 35%	(167,942)
Profit After Tax	460,109

Figure 4.3: Pro-Forma Income Statement for the period ended 31st December 2014 provided by the Case Company

Furthermore, according to the TRM, there was a lack of co-operation between the departments as each department disregarded the ambitions of the other departments for their own interests. Since each department was managed as a standalone, there was no intra-transfer of resources between departments. Thus, if a department required more human capital to meet customer demands, it could not utilise idle resources from other departments but other resources under its

department not specialised in that role. Not only was revenue lost, according to the Accounts Manager, everyone used to blame another person for not achieving the ‘unofficial’ KPIs, which reaffirms the lack of integration.

4.3.1.2 Focus on Financial Measures

Figure 4.3 also reveals that the case company formally reported and evaluated performance mainly from a financial perspective. This adheres to the traditional approach described by Bellisario, Pavlov et al. (2021), which lacks decomposition of performance measures. Non-financial aspects were considered only informally, while the bottom-line figure was highly prioritised.

This signifies a fire-fighting mentality as described by Spencer (1999) since, in line with the findings of Jamil and Mohamed (2011) for SMEs, the PMS focused on survival. As determined by Burgess, Ong et al. (2007), this financial orientation reaffirms that the PMS tended to be more traditional. In line with Section 2.4, this PMS was therefore internally driven, backward-looking and provides poor indication of future performance as it overlooked the determinants of future financial success. The usefulness of these lagging measures was minimal since performance evaluation is limited to past decisions. With this PMS, it could only obtain short-term financial benefits. All this reflect the short-termism and insufficient external consideration found in SMEs by Ates, Garengo et al. (2013).

However, the CFO pinpointed that non-financial KPIs did exist, yet only the basic KPIs necessary to satisfy the ISO requirements. For instance, quality performance, a non-financial aspect, was also monitored before the ERP system. This was firstly because the case company always valued its importance and secondly because it was measured in the audits. However, the PDM stated that quality performance was not formally assessed at the individual levels by setting operational targets for installers and technicians.

This seems to contradict the discussion in Section 4.2.3.2. Here, it appears that even though the company, for internal purposes, had a basic PMS, the business

started enduring the impact of an external influence driven by ISO requirements as asserted by Srimai, Radford et al. (2011). However, although the business was obliged to create basic performance metrics to comply with ISO standards, it appears that these were not given much importance. Rather, they were being undertaken because they were forced. In fact, they were not integrated with the PMS.

4.3.1.3 Absence of Budgets and Frequent Monitoring

It may also be observed from Figure 4.3 that all figures are actuals since no budgets were prepared at the time, only the abovementioned general expectations at the board level. This neglects the benefits of target-setting identified by Drury (2020) and Sahai and Srivastava (2012). Thus, comparisons between actuals and budgets could not be made. The PDM also added that this monitoring was only conducted at year-end with no monitoring throughout the months.

Comparisons with budgeted targets should be at the heart of a PMS. However, this finding suggests that comparisons were limited. Comparisons with the figures of the previous year could be made, yet this confirms that performance measurement was not strategic since this is backward-looking rather than forward-looking. Additionally, coherent with the advice of Drury (2020), lack of monitoring implies the lost opportunity for timely, corrective actions to be taken.

4.3.1.4 Shortcomings of the Accounting Software

The accounting software utilised before the ERP system had been in operation for over twenty years. It had lost its ability to satisfy the case company's needs as these do not remain static over time. The system required significant manual data inputting and involved repetitive work, signalling inefficiency. For instance, communication with on-site technicians took the form of phone calls. The ATM

recounted how *"in the office we had like an orchestra everyone calling".* Any data that needed to be recorded following such calls had to be inputted manually.

Therefore, it seems that even if top management wanted to formalise and improve its PMS, these basic systems would have acted as a barrier since they could not support an improvement in the PMS. Indeed, the barriers are the theme of the next section.

4.3.2 Factors which Influenced the PMS Before the Implementation of the ERP System

4.3.2.1 Limited Human and Financial Resources

Contradicting Section 2.6.1.2, although the case company had fewer human capital resources at the time, this was not recognised by participants as a limiting factor. Additionally, contrary to the argument set forth by Gruenbichler, Klucka et al. (2021), the PDM does not perceive limited financial resources as a factor which restricted PMS sophistication since the budget allocated to performance measurement has increased only by little since then.

Together, these findings indicate that the availability of resources was not the issue. So, what other factors within this business halted improvement in the PMS? These will be discussed in the remaining part of this section.

4.3.2.2 Limited Use of Advanced Technology

When asked to pinpoint the factors which significantly impacted the PMS before the implementation of the ERP system, most responses gravitated towards the absence of the ERP system.

This coincides with Section 2.6.1.5 and the closing argument of Section 4.3.1, which established that one of the factors which influenced the PMS was the shortcomings of the previous system. As the ERP system significantly facilitated

the PMS, Sharif's (2002) assertion that IT-based information systems, including ERP systems, may be exploited for performance measurement is highly relevant for the case company.

4.3.2.3 Limited Strategic Planning

Section 2.6.1.3 discussed the limited strategic planning in SMEs. This is relevant since the HR Manager stated that there was not a clear strategy preceding the advancement of the PMS.

In the absence of a clear long-term strategy, there could be no relationship between performance monitoring and strategic objectives. This lack of strategic focus is another characteristic of the traditional PMSs (Atkinson, Waterhouse et al. 1997, Kaplan, Norton 1992, McAdam, Bailie 2002) and creates a short-term orientation (Kanji 2002) which was heightened by the focus on financial measures. Also, it appears that there was insufficient consideration of matters such as external environment, sustainable competitive advantage, and strategic market positioning with any changes in the business environment not reflected in the performance measures. These are important defence mechanisms against the competitive environment, rendering the PMS meaningless.

4.3.2.4 Smaller Size and Simpler Organisational Structure

Another limiting factor was its smaller size. This refers to the manageable controllability of resources discussed in Section 4.2.2. In fact, the ARM interviewed commented:

> *"I remember the first meeting I had with management. At the time we were only thirteen technicians and six assistants"*.

Consequential to its size was a simpler organisational structure. Although the organisational structure was departmental, there was no matrix structure. With the latter, in line with Crowley (2017), a component of the KPIs would be under the responsibility of the TRM and the other component under the responsibility of

the appropriate department manager. Notwithstanding that the PMS advanced before this model was introduced, detailed KPIs are necessary under the matrix structure to determine accountability between two managers and thereby overcoming the model drawbacks identified by Dunn (2001) and Sy and Côté (2004). This confirms the framework of Ferreira and Otley (2009) in which the organisational structure is a factor which shapes the features and purpose of the PMS.

These findings showcase the impact the contingency factors of size and organisational structure had on the nature of the PMS as they led to a perception of an immaterial need for a sophisticated PMS. The PMS, therefore, corresponded with the advice of Jamil and Mohamed (2011) who stated that the PMS of SMEs should be tailored to their requirements and qualities.

4.3.2.5 Limited Appreciation of the Benefits of PMS

Although Gruenbichler, Klucka et al. (2021) highlight how SMEs may benefit from a PMS, management at the time insufficiently appreciated this.

This limited appreciation corresponds with the conclusions of Garengo, Biazzo et al. (2005) for SMEs, possibly influencing the lack of need discussed in Section 4.3.2.4. The outcome was that, as the PDM admitted, there was no awareness of how the company was utilising its financial resources.

4.4 Current PMS

As discussed in Section 4.2, a necessity for a formal structure to monitor performance had developed due to growth and other factors. The case company therefore overcame these limitations and advanced its PMS. The case company is still considered to be in the growth stage today. Thus, the sophistication of the PMS since the implementation of the ERP system has been sustained and heightened even further. Figure 4.4 summarises the main features of the current PMS discussed in this section.

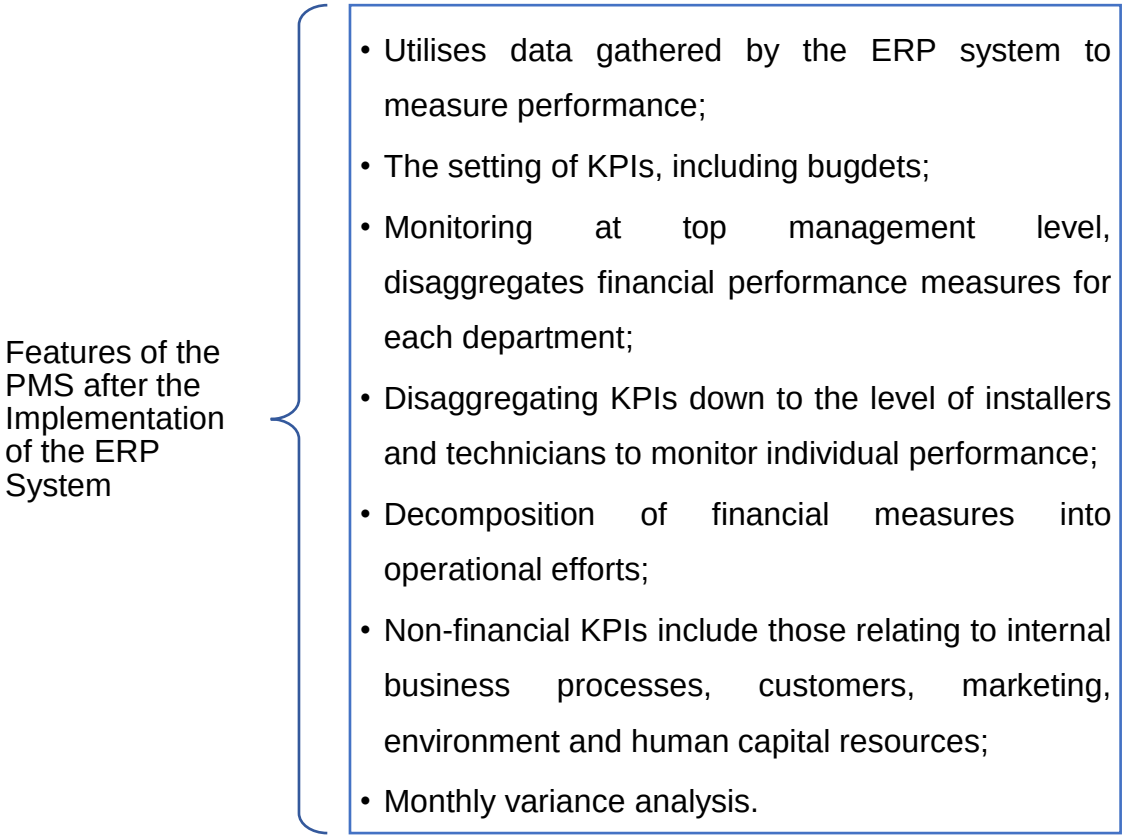

Figure 4.4: Components of the PMS after the Implementation of the ERP System

4.4.1 PMS Aligned with Strategy

According to the HR Manager, the case company overcame the limited strategic planning barrier identified in Section 4.3.2.3. The BoD devises the strategy at board level by carefully assessing the events and problems emerging during the year. Then, the BoD communicates this strategy and its financial expectations to the CFO to serve as a basis for setting performance metrics for employee wellbeing and customers, followed by the budget.

Clearly, the PMS has become strategic and therefore adheres to the framework of Ferreira and Otley (2009), which encourages KPIs to reflect the corporate strategy. In line with Medori and Steeple (2000), this alignment implies that the current PMS leans more towards the contemporary PMSs. This confirms the findings of Laitinen and Kadak (2018) that larger firms give more prominence to the strategic dimension of performance measurement than smaller firms. This enhances the usefulness of the PMS since it assesses whether the firm is performing in line with the strategy or otherwise and is, therefore, long-term oriented.

Moreover, contrary to the previous PMS, given that the strategy is devised with external considerations and the PMS is strategic, the PMS is also externally-oriented. This is important considering that the environmental uncertainty associated with the growth stage (Moores, Yuen 2001) seems to be present as there is significant competition in the local market from small companies. Therefore, the case company followed the advice of Ismail, Auzair et al. (2019) as the PMS addresses the management needs at the different life cycle phases.

4.4.2 Purpose of the Current PMS

4.4.2.1 Control or Ensuring Alignment with Strategy

Participants were asked whether they perceive the PMS as a management control device or mechanism for ensuring actions and behaviours are aligned with the strategy. The responses indicate that an element of both is present. Controlling revenue-generating employees by providing them a precise indication of what they should achieve and ensuring they are fulfilling their roles rather than abusing the system helps the business achieve its strategy. Moreover, the case company utilises its PMS to verify that the overall strategy makes sense, as it is typically based on assumptions. Combining these two points together, the PDM commented:

> *"If you do not control them, you will never follow the strategy. Or if you do not control and measure, I would never know why the strategy did not work"*.

As determined by Drury (2020), participants added that KPIs serve as a source of motivation.

Since it serves multiple purposes, the case company appears to appreciate more the benefits of measuring performance and makes best use out of this. These findings portray the PMS as effective since Tung, Baird et al. (2011) contended that an effective PMS evaluates and controls organisational performance according to the strategy.

4.4.2.2 Participation

Upon setting targets, a number of technicians are invited to the board room to disclose any concerns that they may foresee in attaining the targets. In fact, the CFO stated:

> *"Before I issue the KPIs, they would be discussed with the respective department. So these are not imposed but discussed. If*

> *they see that there might be a problem, we analyse it to see whether or not it will actually be a problem".*

Furthermore, if a project deviates from the expected performance, individuals are invited for discussions, and if their feedback is justified, future quotes and targets are modified. Moreover, on-site inspections by project leaders not only assess quality performance but also strengthen communication and relations with employees.

These findings demonstrate that the case company values employee participation in all stages of the performance measurement process and protect their interests. This participatory approach to performance measurement achieves the employee empowerment discussed by Parmenter (2019). Moreover, their feedback improves the PMS which in turn helps a business to grow further.

4.4.3 Budgeting Process

Multiple participants emphasised that highly detailed budgets and other accompanying KPIs are prepared for all departments, both those that generate revenue and those that do not. The Accounts Manager claimed that they are so detailed that "*staff welfare incorporates even the orange juice*". Figures 4.5 and 4.6 showcase the detailed budget of a revenue-generating department together with the actuals and the variances. The budget has been split over two figures for ease of reading. The figures in the budget serve as monthly targets. As stated by the Accounts Manager, because targets are set, it could analyse the resulting favourable and adverse variances. The Finance Department prepares and sends to the CFO the accounts for each department and the causes for any variances by the 12th of the following month for monthly monitoring. Projects are also individually reviewed monthly. Following the advice of Drury (2020), where practicable, the critical KPIs are also monitored weekly or fortnightly so as not to wait for the monthly management reports to identify any issues and act accordingly.

The above findings demonstrate that the case company addressed the shortcomings of the previous PMS. It started to appreciate the benefits of target-setting and resulting variance analysis, including a more precise and faster understanding of what is causing the deviation from the strategy. This is facilitated even more by the monthly variance analysis, implying that any variances from budgets are immediately brought to the forefront. The reference to the increased precision is a testament to the extent of sophistication the PMS has reached Moreover, evaluation of the financial standing of each department has strengthened as performance measures are also set for each department separately. As determined by the study of Braz, Scavarda et al. (2011), this disaggregation has allowed for the cause of problems to be identified earlier. Additionally, it has introduced a new dimension for the non-revenue-generating departments. As the PDM described, for the revenue-generating-department, profit has always been a main goal, yet this is not so for the non-revenue-generating departments. Financial targets serve as a capping, allowing the case company to achieve its strategy within its financial constraints. Also, because the budgeting process applies in the same way across departments, the PMS is co-ordinated, and it has achieved integration of departments which promotes co-operation towards achieving the strategy. Moreover, this evolution supports the assertion of Davila and Foster (2005) that correspondence on management accounting becomes more formal as the company grows.

Projects Department Budget vs Actual 2021		as at Dec 2021		
		Actual	Budget	Variance
REVENUE		**6,357,175**	**7,070,570**	(713,395)
Inventory Classifications				
COST OF GOODS SOLD - MATERIAL		**(2,611,582)**	**(3,535,285)**	**923,703**
$\frac{COGS - Material}{Revenue}$		**-41%**	**-50%**	**9%**
COST OF GOODS SOLD - LABOUR		**(990,883)**	**(1,251,102)**	**260,220**
$\frac{COGS - Labour}{Revenue}$		**-16%**	**-18%**	**2%**
Actual Labour Cost		**(937,602)**	(1,098,971)	161,370
Overtime		**(53,281)**	(152,131)	98,850
Number of Employees (Mech)	*28*	*42*	*14*	
Number of Employees (ELV)	*29*	*33*	*4*	
Number of Employees (Domestic)	*6*	*6*	*0*	
COST OF GOODS SOLD - OTHERS		**(483,611)**	**(315,393)**	(168,218)
$\frac{COGS - Others}{Revenue}$		**-8%**	**-4%**	**-3%**
Motor Vehicles Expenses - Technicians				
Repairs and maintenance		**332**	(3,840)	4,172
Leasing Expenses		**(51,968)**	(50,904)	(1,064)
Number of Vehicle Leasing	*18*	*18*	*0*	
Fuel		**(12,710)**	(20,502)	7,792
Number of Fuel Allowances	*15*	*18*	*3*	
FINES		**0**	0	0
Licence		**(25)**	0	(25)
FINES		**0**	0	0
MOBILE EXPENSES - TECHNICIANS		**(9,531)**	(9,907)	376
Number of Mobile Allowances	*26*	*24*	*(2)*	
Outsourcing (Day to Day)		**(372,029)**	(192,000)	(180,029)
Loose Tools		**(36,098)**	(32,000)	(4,098)
Repairs & Maintenance - Products		**0**	(960)	960
Hire Equipment		**0**	(960)	960
Carriage Out		**(1,582)**	(2,400)	818
Other COGS		**0**	(1,920)	1,920
GROSS PROFIT		**2,271,099**	**1,968,790**	**302,309**
$\frac{Gross\ Profit}{Revenue}$		**36%**	**28%**	**8%**

Figure 4.5: Pro-Forma Budget for a Revenue Generating Department: Part A

INDIRECT OPERATING EXPENSES		**(1,013,919)**	**(1,080,710)**	**66,791**
		-16%	**-15%**	**-1%**
Wages and salaries - Managerial and administration		**(888,261)**	(953,082)	64,821
Number of Employees (Mech)	*13*	*13*	*0*	
Number of Employees (ELV)	*16*	*17*	*1*	
Number of Employees (Domestic)	*2*	*2*	*0*	
Employees Related Expenses				
Staff Welfare		**5,643**	(2,880)	8,523
Staff training		**(33,225)**	(9,600)	(23,625)
Staff Uniforms		**(16,324)**	(11,760)	(4,564)
Staff recruiting		**0**	0	
Health Insurance		**(6,315)**	(13,138)	6,823
Motor Vehicles Expenses - Administration				
Repairs and maintenance		**(2,402)**	(2,400)	(2)
Leasing Expenses		**(46,793)**	(43,912)	(2,881)
Number of Vehicle Leasing	*18*	*17*	*(1)*	
Fuel		**(13,494)**	(19,078)	5,584
Number of Fuel Allowance	*18*	*17*	*(1)*	
Printing, postage and stationary		**(13)**	0	(13)
Subscriptions & Memberships		**0**	0	0
Accreditation		**0**	0	0
General Insurances		**0**	0	0
Professional Fees		**0**	0	
Consultancy fees		**0**	(2,880)	2,880
Legal fees		**0**	0	0
Management Fees		**0**	0	0
Audit fees		**0**	0	0
Accounting		**0**	0	0
Telecommunication expenses		**(8,442)**	(9,500)	1,058
Number of Mobile Allowance	*25*	*24*	*(1)*	
Travelling		**0**	(960)	960
Computer Repairs and Maintenanace		**0**	0	0
Computer Purchases		**(4,293)**	(9,600)	5,307
Hire Office Equipment		**0**	0	0
Office supplies		**0**	0	0
Licences		**0**	0	0
Sundry expenses		**0**	(1,920)	1,920
Penalties				
Office Repairs & Maintenance				
Fairs & Exhibitions				
GROSS CONTRIBUTION		**1,257,180**	**888,079**	**369,100**
$\frac{\textit{Gross Contribution}}{\textit{Revenue}}$		**20%**	**13%**	**7%**

Figure 4.6: Pro-Forma Budget for a Revenue Generating Department: Part B

As represented in Figures 4.7, 4.8 and 4.9, a holistic budget aggregating all department budgets is then prepared. The budget has been split over three diagrams for readability purposes. This budget is compared to the overall targets of the company. Where these do not agree, budgets are adjusted. As the case company is widespread, it is impossible to monitor everything, yet the variances highlight the areas on which management should focus.

YEAR 2021	as at Dec 2021		
	Actual	Budget	Variance
Projects Dept.			
Revenue	6,357,175	7,070,570	(713,395)
Gross Contribution	1,257,180	888,079	369,100
$\frac{Gross\ Contribution}{Revenue}$	20%	13%	7%
Servicing Call Outs Dept. (Reactive Maintenance)			
Revenue	587,167	683,138	(95,971)
Gross Contribution	54,354	44,156	10,198
$\frac{Gross\ Contribution}{Revenue}$	9%	6%	3%
Servicing Maintenance Dept.			
Revenue	1,080,440	1,023,724	56,716
Gross Contribution	590,726	521,709	69,017
$\frac{Gross\ Contribution}{Revenue}$	55%	51%	4%
Servicing Main Location Dept.			
Revenue	915,614	974,895	(59,282)
Gross Contribution	535,470	569,070	(33,599)
$\frac{Gross\ Contribution}{Revenue}$	58%	58%	0%
Servicing Mechanical Dept.			
Revenue	1,010,268	841,251	169,017
Gross Contribution	431,133	288,751	142,382
$\frac{Gross\ Contribution}{Revenue}$	43%	34%	8%

Figure 4.7: Pro-Forma Holistic Budget: Part A

Servicing After Sales Jobs Dept.			
Revenue	782,084	846,400	(64,316)
Gross Contribution	291,318	320,013	(28,695)
$\frac{Gross\ Contribution}{Revenue}$	37%	38%	-1%
Compartmentation Dept.			
Revenue	920,983	1,048,000	(127,017)
Gross Contribution	158,408	261,288	(102,880)
$\frac{Gross\ Contribution}{Revenue}$	17%	25%	-8%
Retail			
Revenue	273,094	288,000	(14,906)
Gross Contribution	101,034	100,800	234
$\frac{Gross\ Contribution}{Revenue}$	37%	35%	2%
Non-Core Projects			
Revenue	5,202,628	5,335,095	(132,467)
Gross Contribution	813,610	728,540	85,070
$\frac{Gross\ Contribution}{Revenue}$	16%	14%	2%

Figure 4.8: Pro-Forma Holistic Budget: Part B

Totals			
Revenue	**17,129,452**	**18,111,073**	**(981,621)**
Gross Contribution	**4,233,234**	**3,722,405**	**510,829**
$\frac{Gross\ Contribution}{Revenue}$	**25%**	**21%**	4%
Other Operation Costs			
General Operation Costs	(164,615)	(212,800)	48,185
Warehouse Costs	(233,518)	(233,760)	242
Procurement Costs	(89,881)	(122,000)	32,119
Process & Quality	(30,271)	(33,789)	3,517
Total Other Operation Costs	**(518,285)**	**(602,349)**	**84,064**
	-3%	-3%	0%
Gross Profit	**3,714,949**	**3,120,057**	**594,892**
	22%	17%	4%
Indirect Costs			
Administration	(780,142)	(762,400)	(17,742)
Finance	(262,327)	(237,040)	(25,287)
HR	(222,917)	(219,552)	(3,365)
IT	(175,425)	(201,428)	26,003
Sales & Marketing Costs	(432,882)	(398,146)	(34,736)
Total Indirect Costs	**(1,873,693)**	**(1,818,566)**	**(55,127)**
$\frac{Total\ Indirect\ Costs}{Revenue}$			
Earnings Before Depn. Int. & Tax	**1,841,256**	**1,301,491**	**539,765**
$\frac{Earnings\ Before\ Depn.\ Int.\ \&\ Tax}{Revenue}$	11%	7%	4%
Finance Costs	8,828	(28,800)	37,628
Depreciation	(126,915)	(120,000)	(6,915)
Net Profit	**1,723,170**	**1,152,691**	**570,479**
$\frac{Net\ Profit}{Revenue}$	10%	6%	4%

Figure 4.7: Pro-Forma Holistic Budget: Part C

4.4.4 KPIs

Corresponding with the description of KPIs adopted by Parmenter (2019), the case company sets KPIs for the CSFs to achieve the overall targets. KPIs include both financial and non-financial. Because targets are set at all levels, the CFO presents targets to managers to create subsidiary targets which achieve the former targets. These subsidiary targets are cascaded to the subsequent level where the same procedure re-applies.

4.4.4.1 Financial KPIs

Apart from those contained within the budgets, financial KPIs include decentralised revenue targets being ‘Revenue per Installer’ and ‘Revenue per Technician’ set at a level to ensure the overall strategy is achieved.

Taking these findings together with the findings from the previous section, monitoring of financial performance seems to have improved as financial KPIs are now being set at the department and individual levels. Reinforcing the sophistication of the PMS, this allows the case company to monitor the performance of on-site employees even though this tends to be more challenging as there is less physical supervision. An added benefit is that given that it also sets KPIs for the quality of resources, it can attribute a variance in overall revenue to either inefficiency or lack of resources which is important given that the former is more alarming. Hence, disaggregation has achieved the deeper data analysis contended by Gutierrez, Scavarda et al. (2015). Also, the CFO commented that *“the PMS always evolves so that we do not waste time analysing something*”.

From Figures 4.5, 4.6, 4.7, 4.8 and 4.9, one can observe that several relative financial measures are set such as $\frac{\text{Cost of Goods Sold} - \text{Material}}{\text{Revenue}}$ and $\frac{\text{Net Profit}}{\text{Revenue}}$. These relative measures ensure fairness since lower than budgeted costs cannot be commended if matched with lower revenue.

4.4.4.2 Non-Financial KPIs

The CFO commented that it was in 2019/ 2020 that the case company formally started measuring non-financial aspects of performance. Thus, it appears that while the aim behind the PMS previously was survival, this became less important as the business became more stable and the focus on growth took precedence. As advised by Eckerson (2009), the case company now appreciates and adopts a mixture of financial and non-financial KPIs. This verifies the findings of Perera and Baker (2007) that as SMEs grow, the requirement for a comprehensive PMS increases. As asserted by Eccles and Pyburn (1992), it also demonstrates that the current PMS seems to have evolved towards the contemporary PMS.

Through decomposition, the 'Revenue per Installer' KPI is delivered to installers in terms of the tasks they should complete such as the 'Number of cables to be passed in a day' where the target levels vary according to the nature of the site. Employees are then required to mark as green, orange or red for the tasks which had to be completed within a certain timeframe. The manager analyses this data to determine whether the employee is being efficient and thereby attaining the financial KPIs at the individual and department level. If there is a pattern of red for a specific team member transcending over different sites, it signals a problem because as the TRM asserted, "*a person having a bad day is one thing, but a bad phase is another thing*". Furthermore, the case company is setting up a 'Skills & Competency Matrix' detailing the capabilities of each employee and the technical requirements for each role. Monthly variance analyses will therefore consider if a person carrying out a task outside his normal role is being less efficient due to not possessing the skills normally required to perform such task.

Analysing this approach, the PMS supports Bellisario, Pavlov et al. (2021) as through decomposition, revenue KPIs are converted into tangible aspects of operational efforts which attain the strategic objectives as desired by the BoD. The case company understands why non-financial KPIs are leading indicators since it recognises that their achievement has implications on financial performance. In line with Medori and Steeple (2000), this attaches a strategic

dimension to performance measurement discussed in Section 4.4.1. Moreover, the case company recognises the importance of decomposing and communicating KPIs to the revenue-generating employees. This simplifies performance measures for lower-level employees to understand better the level of performance expected from them and will do their utmost to attain that. This implies that the control which KPIs instil within employees asserted by Parmenter (2019) has been achieved. Furthermore, the varying target levels and 'Skills & Competency Matrix' reinforce the level of detail, fairness and flexibility of the PMS.

The Accounts Manager commented that KPIs are set more for the revenue-generating departments. However, deadlines are also considered to be KPIs. For instance, the Accounts Manager highlighted that the biggest KPI for the Finance Department is to reach its deadlines such as that of delivering the monthly accounts to the CFO by the 12th of the following month. Another example applies to projects where the end date quoted to the client serves as a KPI. Furthermore, the Marketing Executive disagrees with Chittithaworn, Islam et al. (2011), that SMEs prioritise customer loyalty more than large companies. Rather, he perceives it to be equally important for all companies. Hence, customer-related KPIs are also set. The case company also has marketing KPIs such as increase in social media followers, website reads and billboards. It has also recently introduced environmental KPIs. In conclusion, the non-financial performance measures are vast and wide-ranging.

4.4.5 Advanced Technology for the PMS

According to the HR Manager, in the face of growth, the case company could have either increased manpower to cater for the higher volume of administrative manual work or exploited alternative technology. It chose the latter.

The introduction of the ERP system achieved the MAS formality contended by Moores and Yuen (2001) during growth. For the case company, this included

eliminating the aforementioned repetitive work in measuring performance. Additionally, after the number of resources is inputted, this system would nearly create the budget by itself without having to forecast the monthly figures.

This finding reveals that the ERP system overcame the limited use of advanced technologies identified in Section 4.3.2.2. The Accounts Manager commented that "*although it requires you to spend a lot of money on it, it is an investment*". It allows individuals to focus on more important agendas which the system cannot perform as they require human capital input.

Whereas previously each department held its own database, the ERP system integrated the company by amalgamating data from different departments. Information to monitor performance can be obtained from the same database and data previously inputted by another person, even if from a different department, is easier to derive and more comprehendible. According to Beheshti and Beheshti (2010), retrieving data promptly is important for appropriate decisions to be taken.

The ERP system facilitates the gathering, processing and communication of data and information. It has allowed for greater detail, thereby creating a greater volume of data. This ties well with the dependency on a higher volume of data present in the growth stage as identified by Moores and Yuen (2001). In fact, the TRM commented that:

> *"The ERP system is logging every minute that the resource is doing on each task. Obviously, those hours and the materials that are being assigned to each task could help to analyse the figures".*

This is possible because the tablets of technicians are integrated with PMS such that the system automatically records data.

The new structure has improved monitoring by leveraging more data to set the KPIs discussed above and automatically identify top revenue performers during callouts. This demonstrates that one of the factors which motivated the implementation of the ERP system, being to identify the good from the bad performers, was in fact realised. Notwithstanding that the ERP system can collect a higher volume of data, reports can be issued more quickly.

4.4.6 Lifecycle of PMS

The case company follows all four stages of the PMS lifecycle as described by Bourne, Mils et al. (2000) since it has not only designed, implemented and utilised the PMS but also conducted reviews. Apart from the significant redesigning of the PMS owing to the introduction of the ERP system, other changes following PMS reviews also occur. While according to Kennerley and Neely (2002) new measures may be introduced, the PDM believes that for operational reasons, performance measures should remain consistent from year to year and that any additions would indicate serious deficiencies in the PMS. However, new measures are occasionally added if necessary for adequate performance monitoring. Initially, the introduction of new measures was motivated by internal factors. As discussed above, new measures enabled deeper data analysis by disaggregating measures to further lower levels until ultimately reaching the level of installers and technicians. From an internal perspective, measures are now considered exhausted yet, if a new role is created, new KPIs would need to be devised. This is in line with Kennerley and Neely (2002) who explain that the aim of a re-evaluation could be to re-align with the changing internal environment. However, the need for new measures is now more created to reflect external factors such as longer lead time for stock arrival following the COVID-19 pandemic and the Ukraine-Russia war. This is also in line with Kennerley and Neely (2002) who asserted that changes might be made so that the PMS remains suitable with the changing external environment. Furthermore, according to Kennerley and Neely (2002), measures may also be removed. However, the case company never removes KPIs as they must have been introduced for a justified reason. As promoted in Section 2.5.1, these findings signify a flexible and dynamic PMS which realigns with the strategy.

Apart from the annual re-setting of budgets, target levels are subject to adjustment in case of a strategy revision, the undertaking of projects beyond those confirmed during the budget period and changes in the available quantity of resources. The latter is revised every fortnight, resulting in adjustments to

holistic figures such as revenue. On the other hand, efficiency does not seem to trigger changes in target levels. It is so high already that it would be unfair to expect efficiency KPIs to improve further. Rather, in recent years, efficiency was expected to fall as the recent growth in personnel implies new employees with a lack of experience and understanding of the company. Nevertheless, targets were not revised downwards and are still being reached.

According to Salloum (2013), targets may be revised upwards to motivate better performance. Two participants commented that targets are slightly higher than what the business is capable of. However, given that this is considered in the analysis of variances and KPIs are often achieved, they are still fair, realistic and attainable. Furthermore, Salloum (2013) asserted that target levels may be adjusted downwards if they have previously proven to be unachievable. However, the Accounts Manager highlighted how often, the revenue per employee targets are achieved. Yet even if not achieved, the PDM believes target levels should not be adjusted because given that these are fair, they should be achieved. Rather, responsive action should be taken to prevent this from re-occurring. Nonetheless, as suggested by Reid (2002), KPIs are reviewed and may be changed from time to time after comparing budgets with actuals and determining whether KPIs not achieved consecutively for a certain period were due to controllable or uncontrollable factors including extraordinary events, or omission of items from the budgets or actuals. However, these are not changed drastically.

These findings show that the case company is achieving the right balance when it sets the target levels. Similar to Drury (2020), it acknowledges that targets that are too easy act as a deterrent for continuous improvement while targets that are too high discourage hard work.

4.5 Future of PMS

According to the PDM, "*there is always room for improvement but only fine details*". The PMS is so detailed and precise that several participants highlighted that no further detail is required especially considering that the ultimate objective of the case company is not to have a perfect MAS but one that assists it in delivering its work in accordance with the strategy. Nonetheless, developments to the ERP system currently underway are expected to improve the PMS, including Customer Relationship Management (CRM) which will widen measurement and therefore introduce new customer KPIs. Discussions are also currently underway to improve the accuracy of environmental measures.

The case company seems satisfied with its current PMS. Nonetheless, there are still aspects that may be improved and the case company may not presently recognise. The first argument is that although the case company is not after perfection, performance measurement may be strengthened not necessarily by adding more measures but by re-designing how measures are used. The second argument is that the case company may only consider the business's present state. As the case company aspires to grow even further, it will remain in the growth stage of the lifecycle of Miller and Frieser (1984) for the foreseeable future. This growth will cause further complexity, strategic choices and communication problems. Therefore, it is reasonable to expect that the PMS will need to adapt to suit these new needs to ensure alignment with the internal and external environment as discussed in Section 4.4.6. Possible improvements to the current PMS to address these two arguments include formal linkages between KPIs, higher frequency of monitoring, deeper analysis of causes of variances, better precision and analysing bottlenecks. All of these suggest that the BSC may be the natural next step for the business under review, transitioning the PMS to a performance management system since, in line with Drury (2020), the BSC is a model which integrates performance measurement within the strategic management process.

4.6 BSC

4.6.1 Rationale for the BSC

Section 4.4 extensively demonstrated that the case company has a highly detailed PMS. The CFO acknowledged that in creating this PMS, features from different models were adopted to create a PMS that suits the business needs.

The case company's PMS appears to employ certain features of the BSC, mainly by combining financial with non-financial measures (Kaplan, Norton 1992) and not only serving the purpose of measuring performance (Srimai, Radford et al. 2011) but also integrating performance measures within the strategic management process (Drury 2020). However, as advised by Srimai, Radford et al. (2011), adopting the BSC could resolve certain shortcomings.

Although the case company is aware of linkages between objectives and with the strategy when setting the performance measures, there is no formal recognition of the cause-and-effect relationships across the various company areas and how the strategy attains the ultimate corporate goal as is emphasised in the BSC model. Thus, contrary to the BSC, the PMS is not integrated in a way that aligns with the strategy. Moreover, although there is communication of the strategy and the relevant performance measures, the BSC may enhance this and hence, strengths integration between the different departments towards implementing the strategy, which is particularly important considering the significant number of employees.

In view of the limitations identified in Section 1.6 and for the proposed design to be cost-effective, the suggested BSC will take into consideration three revenue-generating departments: Projects as it contributes the greatest revenue at 53%, Servicing as it is interrelated with the former department and Retail as this is also an area which the case company may control.

4.6.2 Vision and Mission

According to Assiri, Zairi et al. (2006), the BSC cannot be adopted without a clear vision and mission. Clarifying these was therefore the first step in formulating the BSC. This was unchallenging given that the business formally writes both. The EAD emphasised that the vision of the case company is to be its customers' preferred solution for fire protection and security in the local market whilst its mission is to safeguard the clients' wellbeing.

4.6.3 SWOT Analysis

Nair (2004) suggests that a SWOT analysis is conducted before formulating the corporate strategy. The case company is required to prepare a SWOT analysis by ISO, further easing the transition to the BSC. Access to documents provided by the business enabled a selection of the most relevant SWOT, presented in Figure 4.10, using the vision and mission as basis.

Figure 4.8: SWOT Analysis

4.6.4 Strategy

Referring again to Assiri, Zairi et al. (2006), another pre-requisite of the BSC is a clear corporate strategy. The case company plans to continue expanding whilst preserving its high-quality performance in safeguarding its clients. Furthermore, considering that the BoD recognises their team as their strongest asset, safeguarding their wellbeing and resilience remains a priority.

4.6.5 Financial Perspective

As Kaplan and Norton (1992) determined, the financial objectives represent the ultimate company goals which other subsidiary goals will guide the business to achieving since according to the CFO, "*the financial always comes at the end***"**. The interviewee also stated that:

> *"financial KPIs are monitored more regularly because obviously it is an object which can be measured more regularly"*.

Tying well with the strategy stated in Section 4.6.4, the first objective is **revenue growth.** This is a key objective given that it is the main item that the business can control. Measures and initiatives in this respect are linked with efficiency. Moreover, absolute targets have been selected given that as discussed in Section 4.4.6, efficiency is high. Therefore, it is unfair to expect it to increase even further from the prior year.

As previously discussed, revenue targets for installers and technicians individually are set. Efficiency may be achieved through technical training or employee retention, since the more experienced employees work more efficiently than the newly recruited. The initiatives for the latter are discussed further below.

To achieve the overall revenue growth target, the case company should aim to increase the number of resources since there would be more employees generating revenue.

Previous findings illustrated that a revenue target for each revenue-generating department is also set. These vary monthly as sales tend to be seasonal. Taking the Retail Department, initiatives include increasing and improving the quality of social media exposure, campaigns and radio adverts.

The second objective relates to **cost reduction.** Relative targets have been selected for the reason presented in Section 4.4.4.1. For purchasing consumable materials, the case company obtains up to three quotes and the most cost-efficient supplier is selected whilst also ensuring that quality is upheld as dictated by the strategy. This complements the opportunity to engage with high-quality

suppliers identified in the SWOT analysis. For materials other than consumables, this is not a sensible option since there are long-standing relationships with the suppliers who the CFO considers more as "*partners*" and who are sure to supply reliable products. Another initiative the case company is taking is to purchase materials in bulk to benefit from discounts with mindful consideration of factors such as warehouse storage and shelf life. The case company also enters into forward contracts for foreign exchange since certain supplies are purchased offshore. This should be continued particularly due to current economic fluctuations.

The third objective relates to **increasing profits**. Each year, net profits should be 10% of revenue to ensure that the transfer of costs to clients is limited. As an initiative, the case company should attempt to upsell work to clients for more profitable products or services.

4.6.5.1 Summary of the Financial Perspective

Table 4.1 summarises the objectives, measures, targets and initiatives under the financial perspective.

Objectives	Measures	Targets	Initiatives
Revenue Growth	Revenue per Installer	€7,200	Training
	Revenue per Technician	€3,530	
	Total Revenue	€1,009,345	Recruit more installers and technicians
	Increase Retail Revenue	€70,252	Increasing and improving the quality of social media exposure, campaigns and radio adverts
Reduce Costs	$\frac{\text{Cost of Material}}{\text{Revenue}}$	41%	For consumables, find cheaper material by obtaining different quotes Forward contracts for foreign exchange Bulk purchases where cash viable
Increase in Profits	Net Profit	10% of Revenue	Upselling

Table 4.1: Summary of the Financial Perspective

4.6.6 Customer Perspective

As previously stated, the Marketing Executive believes that *"every company has to have a good relationship with the customer".* Even more, this business forms

long-term relationships with its customers. This is therefore the overarching customer objective. Such acknowledgement might have led to the strong customer loyalty identified in the SWOT analysis.

In line with Kaplan and Norton (1996a), one objective relates to a **higher level of customer satisfaction.** This ensures customer retention**.** It is currently measured through customer feedback, utilising statistics and conducting qualitative analysis on the feedback received to understand how the company is performing and improve the services provided. This is performed by senior management to prevent any conflict of interest.

Another objective is a **higher level of service quality.** This should assist the case company in achieving the preceding objective. Given that the introduction of CRM discussed in Section 4.5 is expected to measure the number of days taken to book client appointments, this is being suggested as a KPI where an initiative could be to increase human capital resources to serve clients on time. This development further validates the appropriateness of the BSC within the case company.

Interlinked with this, another objective is **higher level of feedback collected** as greater volume strengthens its assessment and supports comparisons across different years. Precisely, it plans to increase the number of random call outs to customers, distribute ‘Thank You Cards’ to prompt feedback and monitor online social media groups and the company’s social media pages for any comments. For large projects, the relevant department manager should continue requesting feedback via email given the higher technicalities involved in their responses.

4.6.6.1 Summary of the Customer Perspective

Table 4.2 summarises the objectives, measures, targets and initiatives under the customer perspective.

Objectives	Measures	Targets	Initiatives
Higher Level of Customer Satisfaction	% of positive feedback	95%	Senior management assesses feedback obtained by call, email or any other method
Higher Level of Service Quality	Number of days taken to book client appointments	≤4 days	Increase human capital resources to serve clients on time
Higher Level of Feedback Collected	% increase in feedback collected from previous year	10% increase	Increase random callouts and emails Encourage feedback by disseminating 'Thank You Cards' to clients once service is completed Ongoing social media listening For large projects, send emails requesting feedback

Table 4.2: Summary of the Customer Perspective

4.6.7 Internal Business Process Perspective

The TRM commented that "*one advantage that we may have over other companies is quality*". As indicated in Section 4.6.4, maintaining this high-quality is a core segment of the strategy and may have partly caused the sound reputation identified in the SWOT analysis. According to the Marketing Executive, "*if we provide a better service, we have more satisfied customers*".

An objective of the case company to **improve the quality of installations**. This is measured through non-billable hours which represent the hours of repairs for faults arising during the warranty period due to prior bad workmanship. As an initiative, the case company plans to emphasise the issuing of warranty certificates without undue delay. This reduces the probability of repairs being covered by warranty provisions increasing non-billable hours. Another initiative include increasing technical training so that the outcome fulfils customer demands. Moreover, project leaders should conduct random site visits for spot checks more regularly.

Another quality objective is to **ensure quality products.** This is measured as the % of total repairs because of product failure. This supports co-operation between departments as the Projects Department is being encouraged to perform well so that the Servicing Department can reach its repair KPI. As an initiative, the case company should continue to understand the cause for repairs and determine if there are any trends indicating problems with a certain product.

A further objective is to **reduce commute time.** In line with Kaplan and Norton (1996a) and Drury (2020), this is a critical internal business process. These hours are not charged to customers and have increased due to higher traffic. Moreover, these are classed as ‘Traced Hours’. As an initiative, an individual performing a task in a certain geographical area will be assigned another task in the vicinity. The matrix structure has facilitated this since resources could be shared across departments. Also, the purpose of the data tracker has been extended to a real-time booking system for assigning the closest person for a client job.

The PDM highlighted another objective: to **maximise office space.** This stems from the current limited physical space brought by the increase in staff number. Notwithstanding that several employees work on-site, there is a remarkable number of office employees. A suggestion is to introduce hot-desking as this allows vacant desks to be used. Also, remote working should be encouraged to circumvent investment in physical space and equipment. Moreover, rostering should be improved to ensure the current office spaces are sufficient to cater for the planned mix of employees working from the office and remotely. This may

even incorporate how vacation leave is spread. Lastly, the planned removal of cabinets by going paperless creates space.

4.6.7.1 Summary of the Internal Business Process Perspective

Table 4.3 summarises the objectives, measures, targets and initiatives under the internal business process perspective.

Objectives	Measures	Targets	Initiatives
Improve Quality of Installations	Monthly non-billable hours	≤16% of total callouts relating to bad workmanship	Issue certificates of completion on time Increase training for individuals working on-site More frequent site visits for spot checks
Ensure Quality Products	% of total repairs because of product failure	Reduced by 5%	Understand the cause for repairs by determining if there are any trends relating to a product
Reduce Commute Time in-between Clients	Monthly traced hours	Reduced by 5%	Improved scheduling of appointments by geographical regions
Maximise Office Space	Reduce need for new office space	By 25%	Hot-desking Remote working Better rostering Remove cabinets by going paperless

Table 4.3: Summary of the Internal Business Process Perspective

4.6.8 Learning and Growth Perspective

Referring to the BoD, the EAD commented how "*the most important thing for them is the team".* Consequently, the measurement of employee wellbeing is being taken more seriously.

In order to increase efficiency and revenue, an objective is to **build an optimal level of the workforce.** This should be practised both in the recruitment process and for existing employees. Firstly, with the aid of the mandatory training checklist, the case company assesses that all required training is being completed. Where these are not completed, it follows up. Moreover, a suggestion is to introduce a formal interview performance appraisal where candidates must score a minimum of 80% to be recruited. The case company already recognises the importance of recruiting competent individuals. In fact, the first interview is not conducted by HR representatives, but the responsibility for selecting resources rests with technical personnel so as to grasp candidates' level of technical knowledge immediately and to start building a relationship with the technical managers. Another measure is the number of installers developed into technicians annually. Thus, positions are taken by internal employees already acquainted with the internal process while satisfying their career ambitions.

The second objective is to **increase employee satisfaction** as this often translates into an improved quality performance. This is measured through the anonymous 'Employee Engagement Survey' distributed annually which grants employees the opportunity to express themselves and achieves two-way communication. A separate initiative being taken is to improve negotiations with different businesses to provide discounts to its employees. This is especially relevant in the current increasing cost of living.

Interlinked with this objective is the goal of **reducing staff turnover.** According to the TRM, *"each resignation is a red light".* Employee retention is particularly critical for long-tenured employees since a person who has experience is more efficient than a new person. This objective has become more critical with the current difficulties in obtaining human capital resources. Following the pressures

of the pandemic and the increasing cost of living, one of the initiatives being taken is increased mental health awareness. Moreover, exit interviews are conducted for identifying any repetitive reasons forcing individuals to resign. Indirectly, initiatives for increasing employee satisfaction also apply to this objective.

4.6.8.1 Summary of the Learning and Growth Perspective

Table 4.4 summarises the objectives, measures, targets and initiatives under the learning and growth perspective.

Objectives	Measures	Targets	Initiatives
Build an Optimal Workforce	Mandatory Training Checklist	All mandatory training is performed	Checking that mandatory training is fulfilled and following up
	Interview Performance Appraisal	Candidate Score ≥80%	First interview with line manager
	Number of installers developed into technicians	3 installers to be developed in technicians annually	Upskilling personnel
Higher Level of Employee Satisfaction	Employee Engagement Survey	90% satisfactory feedback	Analysing and implementing where appropriate the responses to Employee Engagement Survey Improve employee discounts
Reduce Staff Turnover	Annual Staff Turnover Rate	<15%	Increase mental health awareness Exit Interviews

Table 4.4: Summary of the Learning and Growth Perspective

4.6.9 Environmental Perspective

Referring to corporates' enhanced environmental awareness in recent years, the Accounts Manager declared that *"the world is moving in a direction and you cannot stay behind*". Hence, the case company does its utmost to adopt environmental innovations. This has elevated its brand image in the market as clients are increasingly taking notice of corporates' behaviour vis-a-vis the environment.

The first objective is to **reduce electricity consumption per employee**. The Accounts Manager admitted that there are limitations in attaining this objective. For instance, charging laptops cannot be eliminated. Nonetheless, devices are monitored on an ongoing basis to replace those not performing within the norm such as laptops which are inefficient due to their charge falling quickly. Another initiative being taken requires employees to ascertain that all devices are switched off before leaving the office.

The second objective is to **reduce paper consumption per employee** with the eventual aim of going paperless. The abovementioned tablets have replaced substantial amount of paperwork. For instance, tablets have eliminated the service report book on-site employees were previously using for the client to sign on. Digital signatures have also replaced substantial amount of internal paperwork.

Another objective is to **reduce fuel emissions.** Currently, there is a limit on fuel consumption per month per employee. The Accounts Manager commented that one initiative towards sustainability is the preparation of monthly reports disclosing fuel consumed by vehicle registration, later monitored to ensure limits are not exceeded. If no significant operational changes have occurred, yet an employee is suddenly asking for more monthly cash to be spent on fuel, the case company investigates the van in question. If it is found to be generating significant waste, discussions are initiated with the leasing company to request a replacement van as the current van is not operating efficiently. The case company

is also shifting its fleet from diesel or petrol to hybrid or electrical vehicles. Although this may be more costly, it is more environmentally friendly.

4.6.9.1 Summary of the Environmental Perspective

Table 4.5 summarises the objectives, measures, targets and initiatives under the environmental perspective.

Objectives	Measures	Targets	Initiatives
Reduce Electricity Consumption per Employee	Electricity meter readings	3.30 kWh per employee	Monitor devices for efficiency and replace accordingly Switching off all electronic devices before leaving the office
Reduce Paper Consumption per Employee	Records of orders	3.15 reams per employee	Use of tablets by technicians Digital signatures
Reduce Emissions from Fleet to Atmosphere	Monthly fuel consumption reports per employee	2% from previous year	Checking receipts of fuel to ensure limits are not exceeded Where limits are exceeded, discuss with leasing company for more efficient vehicles Hybrid/ electrical vehicles

Table 4.5: Summary of the Environmental Perspective

4.6.10 The Proposed BSC

Figure 4.11 presents the final BSC design being proposed, incorporating all the five perspectives as summarised above together with the linkages between them.

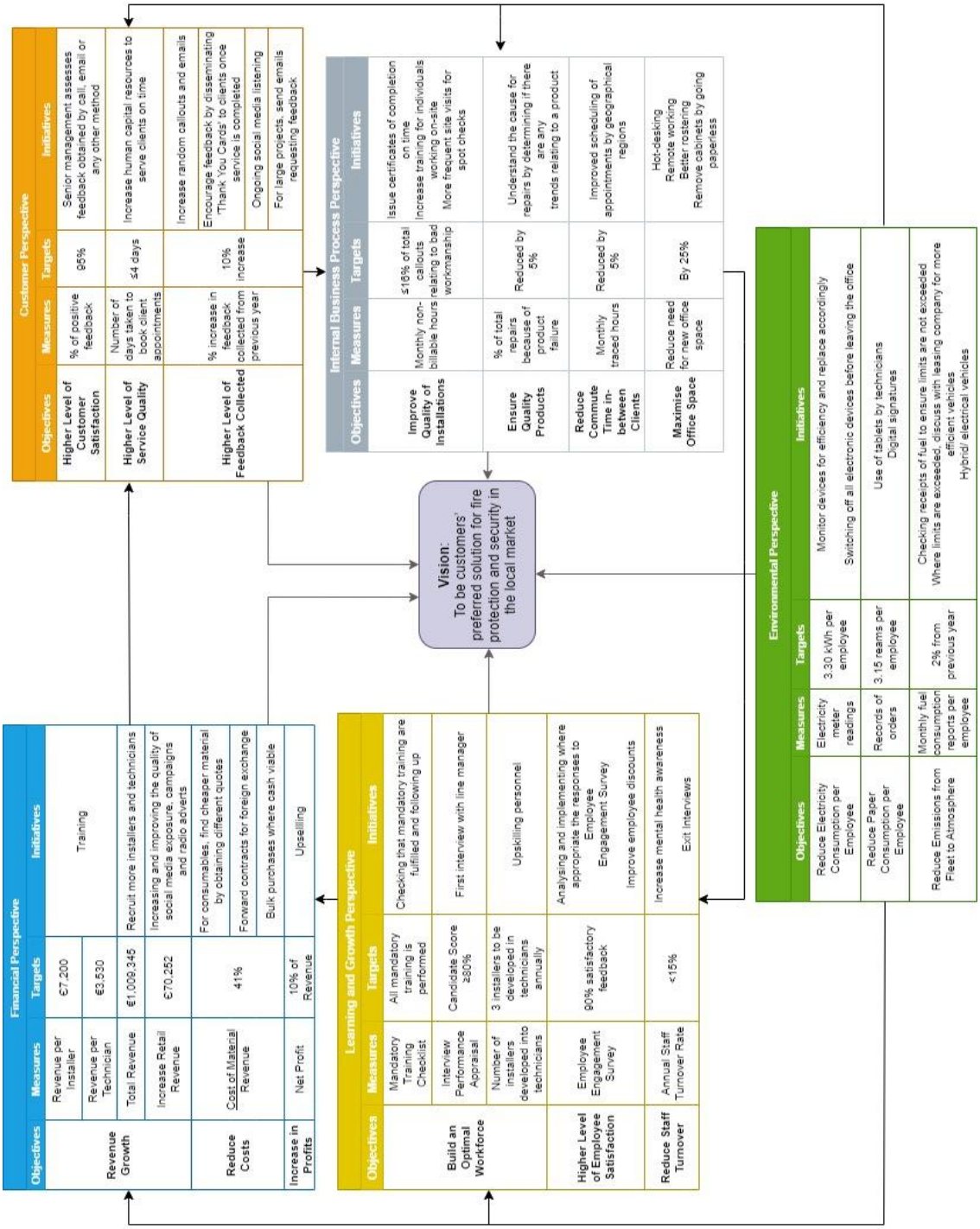

Figure 4.9: The Final BSC

4.7 Strategy Map

In support of Jassbi, Mohamadnejad et al. (2011), Figure 4.12 illustrates the strategy map being proposed for this case company, encompassing the BSC strategic objectives and illustrating the cause-and-effect relationships.

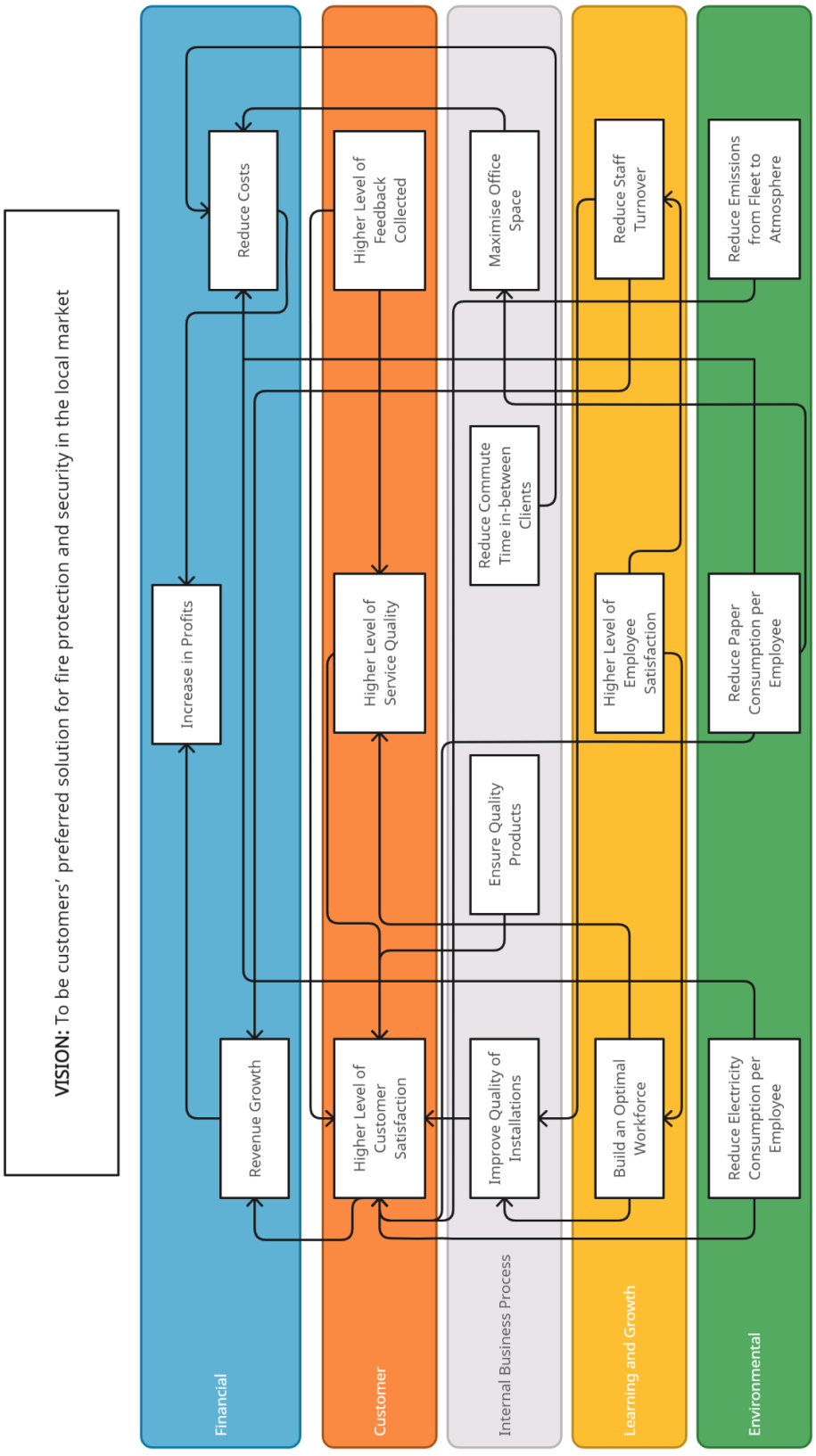

Figure 4.10: The Strategy Map

4.8 Feasibility of Implementing the BSC

Whilst the suggested BSC model potentially delivers the abovementioned advantages, a cost-benefit analysis would need to be carried out since, as the PDM stated:

> "*Sometimes you need to see, is it useful to have or nice to have? And that is a fine line*".

However, its implementation is not foreseen to require significant administration and outflow of financial resources, time, training and a mentality shift. This is because the proposed model is built on the current PMS utilising tried and tested metrics. Hence, refining to the BSC does not require the introduction of a new system but merely a re-structuring of a PMS already working while maintaining metrics which are already available. Also, the fact that the vision and mission, SWOT analysis and strategy are formally set out re-enforces the perception that its PMS is close to the BSC and therefore will not further incur significant additional costs.

4.9 Conclusion

This chapter thoroughly discussed the findings obtained from the semi-structured interviews.

The subsequent chapter shall conclude this research study by summarising these findings, presenting the main conclusions and providing recommendations.

Chapter 5

Conclusion

5.1 Introduction

This chapter concludes the research study. Section 5.1 summarises the main findings while Section 5.2 provides the validation. Subsequently, Section 5.3 and Section 5.4 propose recommendations and areas for further research respectively. Finally, Section 5.6 presents concluding remarks.

5.2 Summary of Main Findings

The research study adopted a qualitative case study approach to analyse the evolution of the PMS within the case company. Corresponding with the research objectives established in Chapter 1, it has analysed the PMS of the past, the present and the potential adoption of the BSC as its PMS in the future. The findings relating to each objective have been summarised in Figure 5.1.

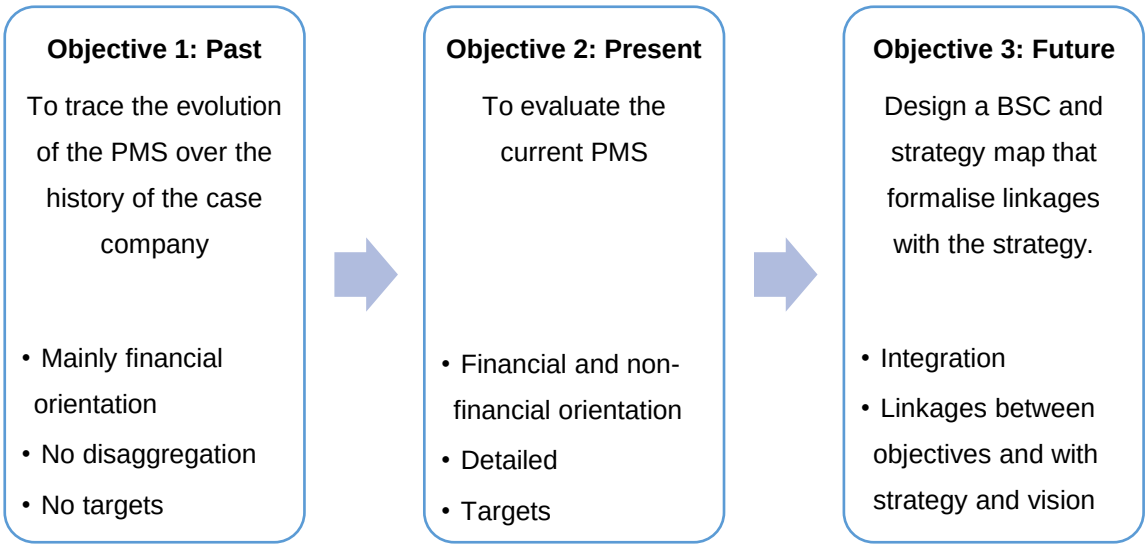

Figure 5.1: Summary of the Findings in line with the Research Objectives

The first research objective was to trace the evolution of the PMS over the case company's history. The data sources suggest that the presence of particular limitations typical of SMEs, the PMS before the implementation of the ERP system was unsophisticated, had several shortcomings and resembled the

traditional approach. Both external and internal factors triggered the development of the PMS, mainly growth and the availability of advanced technology. In turn, this sophisticated PMS encouraged further company growth.

The second research objective was to evaluate the current PMS. The case company required a major development to address the identified shortcomings of its previous PMS. This was provided by the ERP system which revolutionised how it measures performance. Shifting more towards the contemporary approach, this sophisticated PMS formally measures both financial and non-financial aspects of performance, is highly detailed and sets targets for consequent variance analysis. The PMS is used both for control and for assessing performance in line with the strategy. Nonetheless, this evaluation concluded that a rationale for the potential adoption of the BSC exists since linkages between objectives and with strategy and vision are presently not formally recognised and future company growth is expected.

The third research objective was to design a BSC and strategy map that formalises linkages with the strategy and vision. Figure 5.2 simplifies and summarises the BSC illustrating the linkages between them. The suggested BSC should be a relatively inexpensive exercise since the move from the current PMS towards the proposed model requires an evolution rather than a revolution of its current PMS, leading to expected benefits summarised in Figure 5.1.

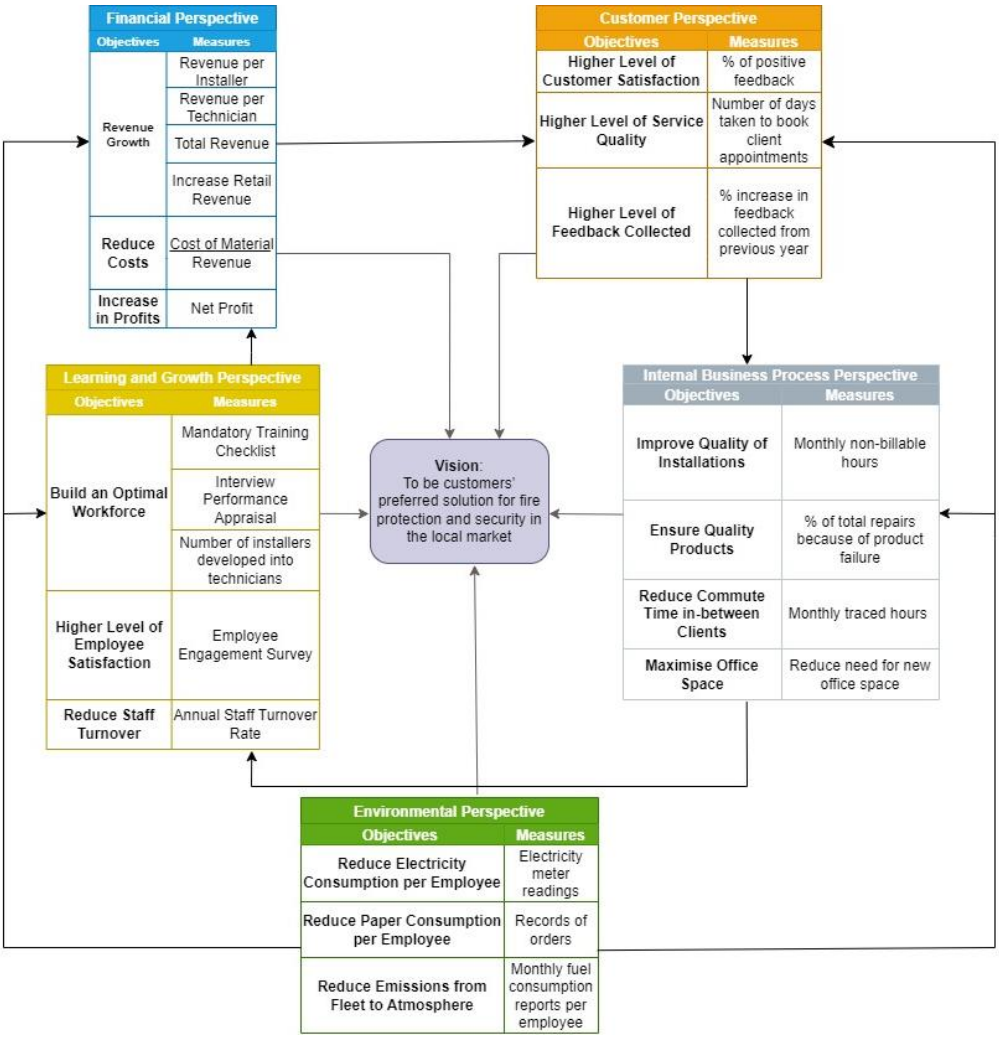

Figure 5.2: The Proposed BSC

5.3 Validation of Findings

The final proposed BSC was laid before the CFO in the validation meeting. While well received, the CFO provided some recommendations to refine the BSC. These were reflected in the final BSC design presented in Section 4.6.10.

Overall, the CFO gave several justifications for why implementing the BSC model would make sense for the case company. The BSC is comprehensive, which is particularly important given that Environmental, Social and Governance (ESG) aspects of business are increasingly considered pivotal. Furthermore, as indicated in Section 4.6.1 and acknowledged by the CFO, a comparison of the

current PMS with the BSC concludes that the main change required to refine the PMS towards the BSC is the formal linkages between objectives and the strategy. However, the CFO argued that this is not presently a priority for the case company. It is currently focused more on revamping the ERP system given that eight years have passed since its implementation. Implementing the BSC now ahead of dramatic changes is not sensible. In saying that, this revamping exercise will make its implementation easier because all processes will be integrated within the system, thereby facilitating the preparation of the scorecards and linkages.

5.4 Recommendations

Stemming from the findings discussed in Chapter 4, the study sets forth the following recommendations:

5.4.1 First Objective

- At that stage, certain efforts could have improved the basic PMS that the case company had, even if it did not have the ERP system or other sophisticated software. Therefore, it is recommended to SMEs at the early phases of the growth stage in their life cycle with a similar unsophisticated PMS to set a standard format of Excel sheets to be utilised by departments to measure performance. With this sound structure, performance evaluation at top management level could be conducted in a more coordinated and integrated manner, improving efficiency and comparability to help them along their growth path.

5.4.2 Second Objective

- This case study revealed that company growth needs to be accompanied by developments in capabilities. Hence, PMS development should not stop. Instead, it is a matter of continued evolution aiming to maintain alignment with internal and external environments. Although the current PMS may be perceived to be sufficient, the case company should not be complacent because of the uncertainties surrounding the business. The business is advised to continue focusing on improving its PMS. Within this context, integrating the various aspects could be the next step of this evolution.

- Building on this recommendation, other businesses are advised to get prepared for the fact that if they are going to grow, they need to have a better PMS, including more advanced IT capabilities, allowing them to expand accordingly. Therefore, SMEs should invest in systems which grant them this flexibility.

5.4.3 Third Objective

- The study primarily suggests the implementation of the designed BSC and strategy map presented in Sections 4.6.10 and 4.7. Despite management reservations discussed in Section 5.3, as explained in Section 4.8, this will not present significant additional costs, both financial and organisational. Moreover, although the scope of the current PMS already extends beyond control, the introduction of the BSC would encourage a shift from performance measurement to performance management. This is ideal for the case company given that it addresses the shortcomings of the current PMS despite being sophisticated by merely summarising the most critical KPIs under each perspective and the introduction of formalising cause-and-effect relationships.

- If the case company implements the BSC model, it should update the scorecards and the strategy map as designed in Sections 4.6.10 and 4.7 upon frequent monitoring of the internal and external environment for any changes. This is particularly required given the competitiveness of the industry. As the case company is technologically advanced, adequate software to facilitate this procedure may be utilised.

5.5 Areas for Further Research

Emanating from the research findings, the below suggestions for further research have been identified:

- **Implementation of the BSC within the case company**

Given that Section 4.8 established its probable feasibility, a future study could implement the BSC model within the case company as recommended in Section 5.4, particularly after the revamping exercise is complete. This study could conduct an in-depth analysis of the results and identify and evaluate the resources consumed as compared with expectations.

- **A case study with another company using the ERP system itself for implementing the BSC**

As the case company already has an ERP system in operation, the proposed BSC was designed as an add-on since there is no BSC module in its current ERP system. A further study could assess how an ERP system that has an integrated BSC module that automatically establishes linkages and cause-and-effect relationships may render the process more feasible.

5.6 Concluding Remarks

The in-depth analysis of the past, present and future of the case company's PMS concluded that in the face of an evolving external and internal business environment, particularly company growth, it is critical for the PMS to continue evolving to ensure business needs are satisfied. As stated by Najmi, Rigas et al. (2005, p.119):

> *"For organisations that use PMS as the basis for their operations and development, the health of the organisation depends on the effectiveness of the PMS".*

This research study has highlighted that not only a PMS becomes more sophisticated in the growth phase of its lifecycle, yet this is a proactive approach which drives further growth. Also, a comparison of the findings and validation with previous local dissertations concludes that utilising sophisticated software such as an ERP system for measuring performance renders the adoption of the BSC easier.

The recommended BSC outlined in Section 5.4 has the potential of developing further the PMS of the case company to address current limitations, allowing it to make more meaningful decisions. Moreover, the suggested BSC is worthwhile as it is only requiring a few amendments to its current sophisticated PMS while stepping performance measurement up to performance management. The overarching advice of this case study promoting the continued evolution of the PMS, particularly in line with growth, also applies to other companies.

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Appendices

Appendix 1: Interview Schedules

Schedule 1: Chief Financial Officer

Objective 1: The Evolution of the Performance Measurement System:

1. Describe the Performance Measurement System of the company before the implementation of the Enterprise Resource Planning system.
2. How was the reporting structure before the implementation of the current Performance Measurement System? Did it involve informal correspondence?
3. Could you explain the matrix structure as applied by the company?
4. What internal and external factors motivated the company to introduce a new Performance Measurement System?
    a. Was this required to attain the International Organisation for Standardisation (ISO) certificates?
    b. Was the new Performance Measurement System implemented to meet new needs as a result of growth (e.g., more volume of data, organisational structure became sophisticated and formalised strategic planning), because the company had grown or for both reasons?
5. When the company was still classified as a Small and Medium Enterprise, what factors influenced the nature of the Performance Measurement System that the company adopted?
6. When did the company start introducing non-financial Key Performance Indicators?

Objective 2: The Current Performance Measurement System:

1. What is the current approach for measuring performance?
2. How is the Enterprise Resource Planning system contributing to performance measurement?

3. What is the reporting structure regarding performance measurement (e.g., who reports to who, how often are reports created so that budgets and Key Performance Indicators are compared with actuals)?
4. Are budgets and other Key Performance Indicators aligned with strategy? Are there processes in place to ensure this alignment is maintained?
5. Who is responsible for selecting the financial and non-financial Key Performance Indicators and setting the target levels for the budgets and other Key Performance Indicators?
6. How does the company decide on the selection of financial and non-financial Key Performance Indicators? By way of example, why are the Key Performance Indicators of the Projects Department and the Servicing Department considered critical for achieving overall performance?
7. Why are certain profit centres not assigned financial Key Performance Indicators?
8. How has the preparation of budgets and the introduction of financial and non-financial Key Performance Indicators been helpful?
9. What factors led to disaggregation of measures? What are the advantages?
10. What factors led to decomposition of measures? What are the advantages?
11. Why did the company introduce ‘Number of employees’, ‘Number of fuel allowances’ etc. in the budgets?
12. Are target levels for the budgets and other Key Performance Indicators changed from year to year? Why?
13. How have non-financial Key Performance Indicators evolved since being developed (ex: the recent introduction of environmental Key Performance Indicators)? Can you identify the internal and external factors that triggered such changes?
14. What do you think is the purpose of the Performance Measurement System? To make sure that the behaviour of employees is coherent with the company’s overall strategy or as a method of controlling the departments?
15. How do you think the current Performance Measurement System can be improved?

Objective 3: The Design of the Balanced Scorecard:

1. What are the main financial objectives of the company (e.g., revenue growth, reduction of costs and increase in profits)?
2. What measures (ex: net profit, revenue per installer etc) are used to evaluate the firm's success in achieving these objectives?
3. What are the associated targets?
4. What are the initiatives being taken to achieve these targets?
5. Are linkages between financial and non-financial Key Performance Indicators formally recognised?
6. Has the company ever considered the adoption of the Balanced Scorecard?

Schedule 2: Projects Department Manager

Generic Questions:

1. What main functions does your department perform?
2. How are you made aware of the company's strategy?
3. What role does the Projects Department play in performance measurement?
4. Why do you think Key Performance Indicators relating to your department are important aspects of performance which should be measured?
5. How is employee performance analysed in your department?
6. Are Key Performance Indicators under the responsibility of your department communicated to employees within your department?

Objective 1: The Evolution of the Performance Measurement System:

1. Before the Enterprise Resource Planning system was implemented, each department measured performance for its own. Could you explain the approach at the time?
2. Has the company always set Key Performance Indicators for internal business processes?
3. How has the Performance Measurement System become more sophisticated over time?
4. What limitations did your department face in terms of performance measurement when the company was still categorised as a Small and Medium Enterprise?

Objective 2: The Current Performance Measurement System:

1. How are you involved in the performance measurement process? Has it always been this way?

2. Are there any measures that you would add or remove?
3. Do you perceive the target levels to be fair?
4. What would generally happen if targets were not met? Does the response depend on whether the variance is favourable or adverse?
5. Do you find performance measurement of financial and non-financial aspects to be useful for your day-to-day work?
6. What do you think is the purpose of the Performance Measurement System? To make sure that the behaviour of employees is coherent with the company's overall strategy or as a method of controlling the departments?
7. Is the Enterprise Resource Planning system contributing to measuring attainment of objectives relating to internal business processes?
8. How do you think the current Performance Measurement System can be improved?

Objective 3: The Design of the Balanced Scorecard:

1. What are the company's main objectives relating to its internal business processes?
2. What measures are used to evaluate the firm's success in achieving these objectives?
3. What are the associated targets?
4. What are the initiatives being taken to achieve these targets?
5. How important are employee training and quality performance?
6. What are the initiatives being taken regarding employee training and quality performance?
7. Do you believe the attainment of the objectives relating to its internal business processes consequently help in the attainment of objectives falling under the two other perspectives (i.e., customer and financial objectives)?

Schedule 3: Accounts Manager

Generic Questions:

1. What main functions does your department perform?
2. How are you made aware of the company's strategy?
3. What role does the Accounts Department play in performance measurement?
4. How is employee performance analysed in your department?
5. Are Key Performance Indicators under the responsibility of your department communicated to employees within your department?
6. Why do you think environmental Key Performance Indicators are important aspects of performance which should be measured?

Objective 1: The Evolution of the Performance Measurement System:

1. Before the Enterprise Resource Planning system was implemented, each department measured performance for its own. Could you explain the approach at the time?
2. How has the Performance Measurement System become more sophisticated over time?
3. What limitations did your department face in terms of performance measurement when the company was still categorised as a Small and Medium Enterprise?
4. Has the company always measured environmental aspects of performance? When were environmental Key Performance Indicators formally introduced?

Objective 2: The Current Performance Measurement System:

1. How are you involved in the performance measurement process? Has it always been this way?

2. Are there any measures that you would add or remove?
3. Do you perceive the target levels to be fair?
4. What would generally happen if targets were not met? Does the response depend on whether the variance is favourable or adverse?
5. Do you find performance measurement of financial and non-financial aspects to be useful for your day-to-day work?
6. What do you think is the purpose of the Performance Measurement System? To make sure that the behaviour of employees is coherent with the company's overall strategy or as a method of controlling the departments?
7. Is the Enterprise Resource Planning system contributing to measuring environmental aspects of performance?
8. How do you think the current Performance Measurement System can be improved?

Objective 3: The Design of Balanced Scorecard:

1. What are the company's main environmental objectives?
2. What measures are used to evaluate the firm's success in achieving these objectives?
3. What are the associated targets?
4. What are the initiatives being taken to achieve these targets?
5. Do you believe the attainment of the environmental objectives consequently help in the attainment of the other objectives?
6. How important are employee training and quality performance?
7. What are the initiatives being taken regarding employee training and quality performance?

Schedule 4: Marketing Executive

Generic Questions:

1. What main functions does your department perform?
2. How are you made aware of the company's strategy?
3. What role does the Marketing Department play in performance measurement?
4. Does the Marketing Department measure performance of solely the non-financial aspects (ex: customer care)?
5. How is employee performance analysed in your department?
6. Why do you think these Key Performance Indicators are important aspects of performance which should be measured?
7. Are Key Performance Indicators assigned under the responsibility of your department communicated to employees within your department?

Objective 1: The Evolution of the Performance Measurement System:

1. Before the new Enterprise Resource Planning system was implemented, each department measured performance for its own. Could you explain the approach at the time?
2. Has the company always measured customer care? How has the Performance Measurement System become more sophisticated over time? When were customer care Key Performance Indicators formally introduced?
3. What limitations did your department face in terms of performance measurement when the company was still categorised as a Small and Medium Enterprise?

Objective 2: The Current Performance Measurement System:

1. How are you involved in the performance measurement process?

2. Are there any measures that you would add or remove?
3. Do you perceive the target levels to be fair?
4. What would generally happen if targets were not met? Does the response depend on whether the variance is favourable or adverse?
5. Do you find performance measurement of financial and non-financial aspects to be useful for your day-to-day work?
6. What do you think is the purpose of the Performance Measurement System? To make sure that the behaviour of employees is coherent with the company's overall strategy or as a method of controlling the departments?
7. Is the Enterprise Resource Planning system contributing to measuring customer care?
8. While customer loyalty is crucial for Small and Medium Enterprises, as the company has grown, are customer loyalty and customer satisfaction still important?
9. How do you think the Performance Measurement System can be improved?

Objective 3: The Design of the Balanced Scorecard:

1. What are the company's main customer objectives?
2. What measures are used to evaluate the firm's success in achieving these objectives?
3. What are the associated targets?
4. What are the initiatives being taken to achieve these targets?
5. What happens when a customer is unsatisfied?
6. How important are employee training and quality performance?
7. What are the measures, targets and initiatives regarding customer satisfaction and employee training?
8. Do you believe the attainment of customer objectives consequently help in the attainment of financial objectives?

Schedule 5: Technical Resources Manager

Generic Questions:

1. What is your main role and how does it help in the achievement of the strategy?
2. How long have you been working as Technical Resources Manager?
3. What are the benefits of adopting a matrix structure?
4. How are decisions taken on assigning resources?
5. How are you made aware of the company's strategy?
6. Currently, how challenging is it to find the resources required to achieve the strategy?

Objective 1: The Evolution of the Performance Measurement System:

1. Before the new Enterprise Resource Planning system was implemented, each department measured performance for its own. Could you explain the approach at the time?
2. What limitations did your department face in terms of performance measurement when the company was still categorised as a Small and Medium Enterprise?
3. How has the Performance Measurement System evolved throughout the years in line with changes in the organisational structure?

Objective 2: The Current Performance Measurement System:

1. What are the benefits of setting highly detailed Key Performance Indicators in relation to your work? How do you use the detailed budgets and Key Performance Indicators to evaluate your performance?
2. Which are the Key Performance Indicators under your responsibility?
3. To what extent are you involved in the performance measurement process?

4. Are there any measures that you would add or remove?
5. Do you perceive the target levels to be fair?
6. What would generally happen if targets were not met? Does the response depend on whether the variance is favourable or adverse?
7. Who do you report to?
8. How often are actuals reported? Does this apply for both financial and non-financial?
9. Do you find performance measurement of financial and non-financial aspects to be useful for your day-to-day work?
10. What do you think is the purpose of the Performance Measurement System? To make sure that the behaviour of employees is coherent with the company's overall strategy or as a method of controlling the departments?
11. How do you think the Performance Measurement System can be improved?

Objective 3: The Design of the Balanced Scorecard:

1. What are the main objectives of the company relating to internal business processes?
2. What are the initiatives being taken to achieve these objectives?
3. In your opinion, how important are employee training and quality?
4. What are the initiatives being taken regarding employee training and quality?
5. Do you believe the attainment of internal business process objectives consequently help in the attainment of objectives falling under the two other perspectives (i.e., customer and financial objectives)?

Schedule 6: Assistant Resource Manager

Generic Questions:

1. What are your main tasks and how does it help the company to attain its strategy?
2. How are you made aware of the firm's business strategy?
3. In your opinion, what are the benefits of adopting a matrix structure?
4. Currently, how challenging is it to find the resources required to achieve the strategy?

Objective 1: The Evolution of the Performance Measurement System:

1. What was the approach to performance measurement before the Enterprise Resource Planning system was implemented?
2. Do you think that the Enterprise Resource Planning system was adopted because the company grew or to help the company grow?
3. What were the internal and external factors that led the company to introduce a new Performance Measurement System?

Objective 2: The Current Performance Measurement System:

1. To what extent are you involved in performance measurement?
2. How is the performance of employees monitored?
3. How is your performance measured?
4. Do installers and technicians give their own feedback on the targets?
5. Are there any measures that you would add or remove?
6. Do you perceive the target levels to be fair?
7. Do you find performance measurement of both financial and non-financial aspects to be useful for your day-to-day work?

8. Why do you think is the purpose for performance measures? To make sure that the behaviour of employees is coherent with the company's overall strategy or as a method of controlling the departments?
9. How do you think the Performance Measurement Systems can be improved?
10. If the company continues to grow, do you think that there is need for the PMS as it is now would be sufficient or do you think that it would need to grow as well?

Objective 3: The Design of the Balanced Scorecard:

1. Which Key Performance Indicators relate to your work?
2. What are the main objectives of the company relating to internal business processes?
3. What are the initiatives being taken to achieve these objectives?
4. In your opinion, how important are employee training and quality?
5. What are the initiatives being taken regarding employee training and quality?
6. Do you believe the attainment of internal business process objectives consequently help in the attainment of objectives falling under the two other perspectives (i.e. customer and financial objectives)?

Schedule 7: Human Resources Manager

Generic Questions:

1. What main functions does your department perform?
2. Are you aware of the company's strategy?
3. What role does the Human Resources Department play in performance measurement?
4. How is employee performance analysed in your department?
5. Why do you think Key Performance Indicators relating to employee-wellbeing are important aspects of performance which should be measured?
6. Are Key Performance Indicators assigned under the responsibility of your department communicated to employees within your department?

Objective 1: The Evolution of the Performance Measurement System:

1. Before the new Enterprise Resource Planning system was implemented, each department measured performance for its own. Could you explain the approach at the time?
2. Has the company always measured employee-wellbeing? How has the PMS become more sophisticated over time? When were employee well-being Key Performance Indicators formally introduced?
3. What limitations did your department face in terms of performance measurement when the company was still categorised as a Small and Medium Enterprise?

Objective 2: The Current Performance Measurement System:

1. How are you involved in the performance measurement process? Has it always been this way?
2. Are there any measures that you would add or remove?

3. Do you perceive the target levels to be fair?
4. What would generally happen if targets are not met? Would there be a different response if the variance is favourable or adverse?
5. How often are actuals reported?
6. Do you find performance measurement of both financial and non-financial aspects to be useful for your day-to-day work? Has it always been this way?
7. Why do you think your department is assigned certain performance measures? To make sure that the behaviour of employees is coherent with the company's overall strategy or as a method of controlling the department?
8. Is the Enterprise Resource Planning system contributing to measuring employee wellbeing?
9. How do you think the Performance Measurement System can be improved?

Objective 3: The Design of the Balanced Scorecard:

1. What are the initiatives being taken to achieve employee wellbeing objectives?
2. In your opinion, how important is employee training?
3. Do you believe the attainment of learning and growth objectives consequently helps the attainment of objectives falling under the three other perspectives (i.e., internal business process, customer and financial)?

Schedule 8: Executive Assistant to the Directors

Generic Questions:

1. What are the different lines of business of the company?
2. What is the management structure of the company?

Objective 1: The Evolution of the Performance Measurement System:

1. Can you provide a brief overview of the history of the company?
2. How was the organisation structured ten years ago?
3. Could you describe the growth in recent years?
4. In which year did the company start being classified as Large?
5. How many employees are currently employed?
6. At what stage was the company at the time it decided to develop the Performance Measurement System?
7. How would you describe the external market?
8. What internal and external factors motivated the company to introduce a new Performance Measurement System? Was the new Performance Measurement System implemented to meet new needs as a result of growth (e.g., more volume of data, organisational structure became sophisticated and decentralised, formalised strategy), because the company had grown or for both reasons?

Objective 2: The Current Performance Measurement System:

1. At what stage of the business lifecycle is the company currently? Birth, growth, maturity, revival or decline stage?
2. How would you describe the external market for this sector?
3. How is the Enterprise Resource Planning system contributing to performance measurement?
4. What are the benefits of the matrix structure?

5. For the matrix structure to operate, was a sophisticated Performance Measurement System a pre-requisite?
6. Why do you believe performance measurement is important? What are the benefits of having Key Performance Indicators?
    a. Is performance measurement helpful in assessing whether the short-term and long-term strategy are being achieved?
    b. Do you think the current Performance Measurement System gives the company a competitive advantage?
7. Do you believe performance measurement, and its increased sophistication over the years, has helped the company to grow? Was that the intention? Or because the company was big?
8. Are there any planned future changes to the Performance Measurement System?

Objective 3: The Design of the Balanced Scorecard:

1. What are the company's strengths, weaknesses, opportunities and threats?
2. What are the company's vision and mission statements?
3. What is the company's overall strategy to achieve this vision and mission?
4. What initiatives are being taken to attain performance measures relating to environmental aspects? How important is Corporate Social Responsibility?