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## **Management accounting in hospitality: case study in a Lisbon 5-star hotel**

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Master's in Hospitality and Tourism Management

### Supervisors:

Professor Renato Jorge Lopes da Costa, PhD, Assistant Professor with Aggregation, ISCTE Business School

Professor André Filipe Martins Narciso, Master degree, Guest Assistant Professor, ISCTE Business School

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## **Dedication and Acknowledgments**

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## **Resumo**

Nos últimos anos, o turismo posicionou-se como uma das indústrias com a maior taxa de crescimento, existindo necessidade constante de diversificação, melhoria contínua e foco na performance. A pandemia Covid-19 veio exacerbar a importância de um modelo de gestão hoteleira focado na otimização de custos, nunca descorando do papel do capital humano.

Com efeito, manter a satisfação dos hóspedes torna-se cada vez mais exigente dada a competitividade existente no mercado. Os hotéis lutam diariamente para se tornarem mais eficientes e rentáveis através de uma afetação inteligente dos seus recursos.

Em geral, os gestores hoteleiros cada vez mais têm apetência para utilizar informação contabilística de forma precisa para planeamento, controlo e tomada de decisões. Isto faz com que recorram a informação financeira associada a ferramentas de apoio à gestão para que toda a organização se possa focar na melhoria do desempenho.

Este estudo centra-se primeiramente na caracterização do modelo de controlo de gestão existente no Corpo Santo Lisbon Historical Hotel. À luz das recomendações da literatura, foi proposta a atualização do modelo focado na implementação de um balanced scorecard com recurso a indicadores de performance (KPIs).

Este estudo permite compreender como a contabilidade de gestão pode servir diariamente as necessidades na tomada de decisão de um hotel.

A contabilidade de gestão faz uso extensivo de técnicas de medição de desempenho para apoiar operações e decisões estratégicas. Por conseguinte, é recomendável que este instrumento seja incorporado na gestão contínua dos hotéis portugueses de forma a promover a sua competitividade e eficiência.

**Palavras-Chave:** controlo de gestão; contabilidade de gestão; balanced scorecard; hospitalidade, indústria hoteleira

## **Classificação JEL:**

L83 – Desporto, Jogos, Restauração, Lazer e Turismo

M41 - Contabilidade

## **Abstract**

In recent years, tourism has positioned as one of the industries with the highest growth rate, with a constant need for diversification, continuous improvement and focus on performance. The covid-19 pandemic has amplified the importance of a hotel management model focused on cost optimisation, never neglecting the role of human capital.

In fact, maintaining guest satisfaction becomes more and more demanding given the existing competitiveness in the market. Hotels strive daily to become more efficient and profitable through an intelligent allocation of their resources.

In general, hotel managers are increasingly keen to use accounting information accurately for planning, control, and decision-making. This makes them to use financial information associated with management support tools to the whole organisation can focus on improving performance.

This study focuses primarily on the characterisation of the management control model in place at Corpo Santo Lisbon Historical Hotel. Based on the literature recommendations, it was proposed to update the model focused on the implementation of a balanced scorecard using performance indicators (KPIs).

This study allows understanding how management accounting can serve the daily decision-making needs of a hotel.

Management accounting makes extensive use of performance measurement techniques to support operations and strategic decisions. Therefore, it is recommended that this tool be incorporated in the continuous management of Portuguese hotels to promote their competitiveness and efficiency.

**Keywords:** management control; management accounting; balanced scorecard; hospitality; hotel industry

## **JEL Classification:**

L83 – Sports, Gambling, Restaurants, Recreation, and Tourism

M41 – Accounting

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## Introduction

The concept of tourism is now very large and englobes many types of places, accommodation, and activities. Various researchers have emphasized that the motivations of tourists to choose destinations are very different, they are more demanding about the experience quality and interested in more specific and enthusiastic things.

The relationship between tourism and hospitality is very important given the role the latest in consumer's satisfaction experience (Rahimi et al., 2017).

Guests only perceive the Front of the House (FOH) performance, but management practices have impact in all organizational behaviours. So, good management practices raise from quality decision-making which in turn is fuelled by extracting valuable information.

The business environment in the hotel industry is highly competitive, so it is fundamental that hotels measure their performance at financial and non-financial level. Several studies such as Altin et al. (2018) conducted a deep analysis on this subject.

This in-company project focuses precisely on management accounting in hospitality since management accounting's primary focus is information for internal decision-making and performance control.

Given the collaboration and opening of the management team of Corpo Santo Lisbon Historical Hotel it was possible, for 6 months, to describe and analyse the management accounting practices in place. The analysis was conducted based on:

- Identification of the responsibility centres of the Hotel (mainly departments).
- Mapping of the responsibility centres most vulnerable and impactful in terms of guest experience and costs.
- Identification of the accounting management practices in terms of costs, management performance and control.

In line with Phillips' paper (2007), this in-company project shows that observation method can help the implementation and outcome of the balanced scorecard (BSC) by a hotel providing a more realistic and comprehensive perspective successfully. In this case, although the BSC is powerful as a strategic control tool, the main purpose of this study is to explore its importance in managing the day-to-day operation by including several key performance indicators.

It is expectable that the management accounting system be available with the necessary information in an appropriate format to managers enhance the quality of decisions they make, which in turn improve the organizational performance.

Since data without analysis and insight are not knowledge, management accounting can translate the numbers into meaningful analysis to create value for the companies. Due to the hard task to

translate data into knowledge and value creation for the companies using management accounting analysis, the objectives for this study are as follows: i) to introduce the management accounting principles, in terms of cost absorption, according to the literature; ii) to introduce the BSC and key performance indicators (KPIs) as valuable management accounting tools to support management decisions; iii) to investigate the management accounting methods at Corpo Santo Lisbon Historical Hotel; iv) to compare these methods with others, as outlined in related literature; v) to create, adapt or improve a performance evaluation model in a real company's case study; and, vi) to propose the implementation of a new management control system, namely BSC.

## Chapter I - Literature Review

### 1. Management Accounting

#### 1.1. The role of accounting as a resource for decision-making

For years, the business scenario has been changing due to factors such as new structure of the economy, mechanisation and technological progress, new people skills, intense global competition, and environmental issues (Giguère, 2006).

In general, the market has new characteristics and needs, *customer satisfaction* is now the overriding priority, as well as the *rationalization of resources* (Akter et al., 2021). Both manufacturers and service companies already understood the importance of relevant, reliable, and timely *information* to keep competitive advantages and profitability (Taipaleenmaki & Ikaheimo, 2013). Therefore, the definition of accounting has evolved, and new operation systems and management approaches have emerged (Akter et al., 2021).

For years, accounting was seen as a technical activity of managing financial resources or recording transactions of an organization in monetary terms (Burchell et al., 1980). According to the prestigious American Accounting Association is currently “the process of identifying, measuring and communicating economic information to permit informed judgements and decisions by users of the information” (Drury, 2018).

Nowadays, accounting is considered the “language of the business” (Guliyeva, 2020) capable of controlling, planning, and reporting both financial and non-financial information which help the decision-makers to *control* and *make good decisions* (e.g., finance, activities), at the lowest possible cost (Downie, 1997). Thus, there is an articulation between the financial controls and performance management (Asatiani et al., 2019) which provides useful information for the various interested elements of the organizations (*stakeholders*) who have their own requirements and objectives about the business activities (Bettinazzi & Feldman, 2021). Namely, these can be split in *internal users* within the organization (managers and employees) and *external users* outside the organization (shareholders, financial institution/lenders, suppliers, customers, government, and others) (Singh et al., 2022).

As consequence of the differences among internal and external stakeholders, accounting assumes different perspectives, namely *financial accounting*, *management accounting* and *cost accounting* (Kaplan R. , 1984).

#### 1.2. Financial accounting information – management decision-making outcome for stakeholders

Financial accounting is the field of accounting responsible for the measurement and disclosure of audited data concerning the financial position and performance to the interested external

stakeholders, (e.g., shareholders, investors, suppliers, banks, customers, government agencies) on an annual or more frequent basis (Bushman & Smith, 2003).

Fundamentally, financial reporting is meant to achieve information of two main organisational objectives – *stewardship* and *valuation*, having a decision usefulness (Beyer et al., 2010). In other words, stewardship regards to stakeholders assess what already happened in the company (Holmstrom, 1979), as well as valuation allows them to predict the timing, amount and risk of future cash flows (Guttman, 2013), being particularly important on management incentives for the financial objectives achievement and investment opportunities (Armstrong et al., 2010).

Other reason is the mandatory and transparent monitoring the whole business performance to avoid conflicts with regulators (Hadiyanto et al., 2018), which must follow authoritative guidelines which differ across countries (Parsa et al., 2005).

Besides the great importance of the historical financial information, it is not enough to fully analyse the operating activities for quality decision-making in future. So, it must be complemented by management accounting practices (Pelger, 2016).

### **1.3. Management accounting information – the source for management decision-making**

In 1980 and following years, management accounting systems started changing significantly, so in this section, the understanding of this evolution is a prerequisite to understand the applicability of management accounting systems in hotels later (Kaplan & Johnson, 1987).

Historically, since the Industrial Revolution of 19<sup>th</sup> century that large enterprises (i.e., textile, steel, iron) have used management accounting information focusing the *cost determination* and financial control (IFAC, 1998). Hence, managers had already recognized that management accounting systems were an important support tool to optimize economic resources (Chandler, 1962).

Changes in both internal and external environments, mainly new organizational structures and strategies (i.e., outsourcing), and globalization and technological development (i.e., ecommerce) (Jones, 2008), which have coupled increased pressure of customer demand with increased competition (Sharaf-Addin et al., 2014) have caused new challenges for the principal decision-makers (non-financial managers) and accountant managers constantly (Jorgensen & Messner, 2010). So, managers and researchers started seeking relevant information in more suitable management accounting practices (Pavlatos & Paggios, 2009). When managers understood the importance of the critical relationship between *management decision-making* and *customer satisfaction*, and its impact on profitability (Collier & Gregory, 1995). Thus, management accounting systems were no longer only a simplistic tool of short-period strategic planning and financial controller (Nishimura, 2002), but focused on *quality*,

*innovation and continuous improvement, and cost efficiency* (Parasuraman et al., 1985; Anthony & Govindarajan, 2007).

Since then, management accounting is an internal process of companies (Kaplan R. , 1984) which combines *accounting, finance, and management* to drive a successful business (Paiva et al., 2016). This makes management accounting designed to measure, analyse, and report financial and non-financial information, mainly used by the internal stakeholders (managers and employees) to improve the efficiency and effectiveness of existing operations and resources (Kaplan R. , 1984) (Abdel-Kader & Luther, 2008).

In a business perspective, management accounting always has an economic approach and is a value creation instrument (Jordan et al., 2015) in order to contribute to the success of companies (Campos et al., 2022). On this way, management accounting focuses on information regarding the strategic decisions and business strategy; financial implications of projects and business decisions; long-,medium- and short-term operations control; efficient resources usage; allocation of costs of goods sold (COGS); financial and non-financial performance to management and other stakeholders; corporate governance procedures, risk management and internal business control; impact of the competitiveness; and potential organizational value creation (Jorgensen & Messner, 2010).

Management accounting system should involve all organizational members to improve individual and corporate performance. It is essential to consult past and actual happenings and define the future planning. Operational managers are the main characters of the management accounting process because they can negotiate objectives and action plans, supervise their realization, and propose corrective measures (Jordan et al., 2015).

Over time, there has been an effort to overcome limitations linked to accounting-based performance indicators by the improvement of the accounting information used to support management control and decision-making processes, and the identification of performance measures which are broader in focus and include qualitative measures (Phillips, 2007).

### **1.3.1. The design of a management accounting system**

There are four key themes in management decision-making which should guide the design of a management accounting system. 1) *Customers focus* since managers need to solve the dilemma of how to invest sufficient (but not excessive) resources in customer satisfaction continuously such that profitable customers are attracted and retained. Hence, customer performance measures and customer-profitability are fundamental and explained below.

The 2) *Value-chain and supply chain analysis* represents the sequence of phasis that add value to products or services, usually divided into i) research and development where start the creation of, and

experimentation with, ideas related to new products, services, or processes; ii) design regards to the detailed planning and conception of products, services, or processes; iii) production is the main phasis of coordination and assembly of resources and activities to produce a product or deliver a service; iv) marketing corresponds the way by which individuals or groups learn about and perceive the value of products and services attributes); v) distribution is the mechanism by which products or services are delivered to the customers; and vi) customer service is about all activities of support provided to customers.

Also, the economic viability of an organisation is directly affected by operational factors. Over the years, customers have been such demanding with levels of performance so the 3) *key success factors* regard to the existing pressure to companies continuously reduce their unnecessary *costs* on their products or services; the high level of *quality* which customers expect , being less tolerant of low quality than before; the *time* taken in many aspects as to develop and bring new products to market, the speed at which companies meet customers' requests, the fulfilment reliability on promised delivery dates; and, the continuous flow of products or services *innovation* which is a prerequisite for the ongoing success of most organizations in the market.

On this way, the constant market competition makes that 4) *Continuous improvement and benchmarking* makes that within many organizations never stop searching for higher levels of performance. Shortly, the information generated by management accounting is relevant to three main functions namely, to help managers make better *decisions* (strategic and operational), and *control*, which involves planning, performance measurement and continuous improvement. The third one is about the allocation of *costs* and inventories for internal and external reporting (Malmi & Brown, 2008) which origins the *cost accounting* that will be addressed further.

### **1.3.2. Traditional vs. sophisticated management accounting systems**

Management accounting has suffered several improvements over the years, so there are two categories of management accounting systems according to the level of sophistication: *traditional* and *contemporary* (Pavlatos & Paggios, 2009). However, Shields and Young (1989), and Jones (2008) explain that despite contemporary techniques are very developed in theoretical terms, their adoption is reduced within companies because a large part of human resources still misunderstand the objectives and have inadequate knowledge to use new management accounting systems, and high costs of implementation (Campos et al., 2022).

To fill this gap, this sub-chapter explains the difference between both models, and respective operability and utility.

The first assumption is that regardless the level of sophistication of the management accounting systems, their application only makes sense if take into consideration the kind of business model (Harris, 2006): manufacturing, merchandising or *service* organizations, because they have different necessities, resources, processes, and targets.

Drury (2018) explains that the first steps of sophisticated systems were taken in the manufacturing industry and only later in the service industry. However, the management accounting approaches applied in manufacturing industry may not be applicable in services industry such as hotels (Lokman & Chenhall, 1994).

Therefore, Harris and Brown (1998) points out three reasons for the approaches used in manufacturing industry are not the same than in services industry as follow:

- The processes of *repetition and automatization* do not fit in services industry due to their intrinsic characteristics. This means a process of products transformation can be repetitive since raw materials and other goods pass through standard and mechanised production process but in services is not like that. For example, the provision of guest accommodation in hospitality industry and food and beverage services involve considerable customer interaction, which is intensified by the large guests' heterogeneity (e.g., genre, age, culture, tastes, a mix of reasons for travel). Thus, it creates demand for multiple types of services.
- The *personalization and customization* increase the job variety in any industry. Specifically in service industry, some organizations (e.g., hotels) pay more attention to these aspects than others. Management accounting systems are necessary for service providers since most of them are characterized by few transactions, highly customized, process oriented, long contact time and most value added in the front-office.
- The *fluctuating demand* greatly affects service activities because there is not a production plan to accomplish as in the push manufacturing strategy or even by-order previously. In most cases, the production, delivery, and consumption of the services take place simultaneously, and the products associated may be perishable and intangible. So, if the resources are available but the services are not performed and sold, they are lost, and it is not possible for managers take remedial action. For example, in hotels if a bedroom or a restaurant table is not sold on that day, the potential selling of them for that day is lost forever. Even bookings regarding bedrooms or restaurant tables can fluctuate on daily and seasonal basis. However, previous research suggests that the use of the management accounting system by managers is positively associated with the *reduction of uncertainty at work* (Lokman, 1993).

The *second point* is to understand that the determining criteria of the chosen level of sophistication of a management accounting system in organizations is the *costs versus benefits*, and they are free to choose which one they want to perform with.

Authors as Campos et al. (2022) state that traditional systems are cheaper to operate but more susceptible to inaccurate cost assignments which may lead manager to wrong conclusion and a high cost of errors. Otherwise, sophisticated systems are more expensive to operate but they minimize the cost of errors. Over the past fifteen years, researchers and practitioners have developed advanced management accounting practices which they consider more “strategically oriented through an integration of processes, customers, HR and financial” than the more traditional practices with emphasis on operational issues (Cadez & Guilding, 2008).

According to Jordan et al. (2015), the management accounting phases are 1) to establish objectives, 2) to plan and 3) to supervise the results. Therefore, the most recommended instruments by budgeting, budgeting deviation analysis, tableau de bord, *operational planning* or *balanced scorecard*.

The adoption of modern management accounting techniques can connect operations with business strategies and objectives (Chenhall & Smith, 1998) in a forward-looking perspective (Fullerton & McWatters, 2002) in order to occupy a role of *value creation* (Abdel-Kader & Luther, 2008).

### **1.3.3. Balanced Scorecard (BSC) – Key role on management support**

For almost 30 years that companies fight for transforming strategic objectives into a set of measurable and tangible practices of performance. This is how *Balanced Term* was born, which in this case refers to the balance between financial and non-financial factors, internal and external processes, short- and long-term performance goals (Vitezic et al., 2019).

Therefore, functions such as planning, monitoring and evaluation performance led to the emergence of balanced scorecard since this strategic management and measurement system links strategic objectives with KPIs (Kala & Bagri, 2013).

This prominent performance measurement tool was introduced by Norton and Kaplan (1992). Rather than only focusing on financial results as traditional accounting methods, balanced scorecard dedicates to two distinct management activities – management control and strategy control. So, these authors, as well as this in-company project, point out how a HR measurement system can impact on two dimensions: i) *costs control through enhancing operational efficiency*; and ii) *value creation through ensuring that employees’ characteristics relate to the strategy implementation processes*.

Based on this, even years later Phillips (2007) stated that BSC is able to fulfil two control levels – strategic and operational. At the strategic level the focus is on determining what is the organisation’s aim, while at the operational level the focus is on monitoring the key processes.



So, the set of strategic objectives and critical success factors on the conception of the BSC translate the organisational mission and vision, measured by indicators that allow to align the initiatives with the medium- to long-term prospects.

According to the BSC founders (Kaplan & Norton, 1992), its design always depends on the *strategy*. The strategy is decided and transmitted by the executive team who has a high degree of awareness and consensus around the financial strategy, as well as the priorities for operational process improvement. On this way, it is possible to monitor and manage the strategy on BSC through four general and cross-cutting pillars for any organisation as follows:

- Financial Perspective – This perspective encompasses the majority interests of shareholders. Essentially there are four guiding principles towards measuring financial performance: profitability, value creation, debt reduction, and growth. Although shareholders expect to achieve financial success ultimately, there is a long way to go related to customer, internal processes, and learning and development (Schmeisser et al., 2011).

- Customer Perspective – Any business needs customers to survive. Hence, this perspective is such interesting, because increasingly is not enough to have guests but also satisfy, retain, and become them advocates. This can be explained because recently customers greatly influence each other through social media, online reviews, and word of mouth. These aspects are too valuable for hotels.

On this way, this perspective is assessed at the *level of satisfaction*, retention, loyalty, and growth. However, this perspective is highly dependent on the company's market positioning and target audience (Pramudita, 2016).

- Internal processes Perspective – This perspective strongly refers to the importance of improving productivity and efficiency. The day-to-day of the organisations is translated into several interdependent and independent processes that are part of the whole, so if all the processes and resources are at their maximum, organisations can maximise their results.

Kaplan and Norton (1996) stated that the value chain of internal business consists into *innovation*, *operation*, and *customer service processes*. This perspective worries with minimise the risk of wasting resources unnecessarily which could be applied in other functions to create value. Several authors refer concepts as “*rationalisation*”, “*organisation*”, “*efficiency*” and “*quality*”.

- Learning and development Perspective – This perspective emerged because Kaplan and Norton (1996) realised that the financial, customer and internal processes perspectives could fail due to *people* and *procedures*. According to Phillips (2007), employees can increase their performance if organisation can retain, train, and satisfy employees, and innovate instead only track the most usual HR outcomes such as total compensation, employee turnover, and cost per hiring. As well, recruit competent staff before.

On in this way the continuous improvement of operations allows that organisations grow. For example, in industries as hospitality, people highly make the difference. The truth is that there is a cause-effect relationship in all the strategic objectives indicated in each of the perspectives above which, when integrated as a whole in the organisation, allow to perceive the added value that each perspective has for the global strategy of the organisation (Baldrige Foundation, 2019).

Despite recent studies show that companies can take two major advantages of balanced scorecard - decision-making and performance measurement (Fatima & Elbanna, 2020), industries as hospitality, with a high inter-reliability of employee and customer satisfaction, intangible assets, human resources focused and service inconsistency, still do not use BSC (Ribeiro et al., 2019).

## **2. Tourism and hospitality**

Since the 2<sup>nd</sup> World War, tourism has been a key socio-economics activity around the world (Ghobadiana et al., 1994) for both developing and advanced countries to help in direct and indirect jobs creation, poverty alleviation, structure enhancement, entrepreneurship promotion, and local economies development (UNWTO, 2020).

In late 20<sup>th</sup> century, international tourism was one of the most booming industries and it is expectable to develop further during the 21<sup>st</sup> century (McKercher & Tung, 2015).

In this report it is desirable to provide a quick overview of the three worldwide tourism trends - before, during and after the covid 19 pandemic.

Until the covid-19 pandemic comes, tourism was growing faster than the world economy – 2019 was the 10<sup>th</sup> consecutive year of sustained growth (+4%). The item Travel & Tourism meant 10.3% of the global Gross Domestic Product (GDP). In terms of employment, Travel & Tourism supported 333 million jobs, meaning 1/10 of global employment in 2019.

In contrast to 2020, when the pandemic was declared, this item only meant 5,3% of the global GDP (-5%). So, this resulted into a \$4.9 trillion GDP loss (-50,45%). Consequently, there were 62 million jobs lost, leaving just 271 million employed across the sector globally.

In 2021, the first steps of recovery were taken but slower than expected due to the appearance of the Omicron variant. Despite the difficulties of 2021, it was possible to increase the GDP by \$1 trillion (+21,7%) to reach \$5.8 trillion. Thus, Travel & Tourism increased its impact on the global GDP again, meaning 6,1%. Also, 18.2 million jobs were recovered (World Travel & Tourism Council, 2022).

At this moment, tourism experts believe that international tourism will return to pre-covid levels by the end of 2023 (UNWTO, 2021). It is expected that the average annual growth will be 5.8% between 2022 and 2032. As well as the creation of 126 million new jobs within the next decade.

Even with the covid-19 scenario, the competitiveness in the tourism sector remains heavy, requiring improvement of organizational performance levels. Touristic destinations compete with

others to attract and satisfy potential tourists, especially when their tastes and requirements are very volatile (Rieg, 2018). Hence, Lewis and Chambers (1989) identify the *customer satisfaction* needs as a paramount key to success in tourism, and specifically in hospitality.

Findings show a clear close linking between tourism and hotels because the most relevant attribute for tourists when express their satisfaction about a place are the accommodation facilities (Ozdemir, et al., 2012). They mutually support and partially depend on each other due to the location, client/traveller, and *performance indicators*.

The hotel location has a huge impact on tourist attractiveness. For some years now, tourists spend a large portion of time searching about the nearest physical surroundings of the hotel. Apart from the hotel location influences the comments made by the guests, also influences the type of tourism the is expected (Shoval et al., 2011). For example, in Portugal, the development of some locations with infrastructures and activities in the 20th century contributed to its denomination as touristic destination directly, viewing to attract people (Cunha, 2010).

The existence of endless personal features makes it necessary to have various consumer segments. Thereby, several indicators embody the tourists' profile who represent each segment (Huerta-Muñoz et al., 2017). Market segmentation contributes to destinations and hotels know more about and adapt the strategies to the targets aiming to drive their expectations, obtain satisfied customers and consequently, increase profits (Miguéns et al., 2008).

Therefore, tourism activities and hospitality regularly use indicators and generate statistical reports about such as number of visitor arrivals, traveller nationality, average length of stay, rooms demand, occupancy rate, and revenue per available room (Yang et al., 2014; Hemsworth, 2019).

The management of customer expectations is imperative in one of the most topics of discussion in hotel industry – *service quality*. This results from the comparison between the customer expectations about the service and their perceptions of the way the service has been performed, although Mei et al. (1999) showed that the task of measuring service is not such easy because the imprecise standards and interpretations related to “friendliness”, “politeness” and “helpfulness”, and seasonal demand.

Thus, Strategic Planning Institute (Akbaba, 2005) analysed that the perception of quality has a positive impact in the organization's financial performance since the companies with perceived high-quality products and services have higher market share, higher return on investment and asset turnover than companies with perceived low quality.

It becomes evident how tourism is an umbrella under which one of the most important elements is the hotel industry. Thus, location, traveller segment and tourism segment indicators do not only characterize the tourism type as also embody the profile of the hotel guest.

## 2.1. Types of tourism

Bagdan (2019) and UNWTO (2021) agreed that “to travel may be essential for business, for fun and life-enriching”. Recently, UNWTO (2010) found out that most people travel i) “to change”, living like a local, questing for authenticity and transformation; ii) “to show”, collecting ‘Instagramable’ moments, experience, and destinations; and iii) “to pursuit of a healthy life”, practicing walking, wellness, and sports tourism.

On this way, tourism trips are classified by the main purpose which are made. They can be *personal* which is divided holidays, leisure, and recreation; visiting friends and relatives; education and training; health and medical care; religion; shopping; transit; and other such as volunteerism), or business and professional which regard to the attendance at conferences, meetings, and similar.

Commonly, the Travel & Tourism sector is divided into *domestic or international*, and *leisure or business* (World Travel & Tourism Council, 2022).

As a matter of relevance to this study, in general leisure travellers look to make advance commitments, accept various quality levels, are flexible regarding to the destination, have price elasticity and a higher average length of stay than business travellers (Hanks et al., 2002).

It is possible to observe how Portugal developed tourism in the last 15 years, leaving behind the traditional tourism product which had lived by since the decade of 1960: the 3 S tourism – Sun, Sea and Sand (Daniel, 2010). In 2006, The Portuguese Government created the National Strategic Tourism Plan (PENT) and enhanced the development and consolidation of 10 strategic tourism products – Sun and Sea, Cultural and Landscape Touring, City Break, Business Tourism, Tourism of Nature, Nautical Tourism (which includes Cruises), Health and Wellness, Golf, Integrated Resorts and Residential Tourism, and Gastronomy and Wines. The update of this plan for 2027 aims to include among others training and education in tourism and hotel management to enhance people as Portugal’s main asset (Hemsworth, 2019).

Since tourism has gradually become an international phenomenon, managers need more appropriate information to meet their customers’ expectations and achieve their organizational goals (Damonte et al., 1997).

## 2.2. Hospitality sector

Hospitality is inserted in the service industry (Paiva, Reis, & Lourenço, 2016) as a business-to-consumer (B2C) service (Parasuraman et al., 1985), and main part of the tourism sector (Makrigiannakis & Soteriades, 2007).

There are several types of tourism enterprises, but here the focus is on the study of hospitality establishments, particularly *hotels*, because it could still be apartment-hotels or guesthouses (Abranja et al., 2019).

Hospitality started growing quickly becoming one of the most important sectors of the world since the second half of the 20<sup>th</sup> century (Paiva et al., 2016). In the early years, hotels were only associated with the core business of *lodging*, but nowadays is strongly supported by food and beverage services (Lakshmi, 2011). Some authors as Bagdan (2019) still add entertainment, sports, meeting rooms, and health care (i.e., Spa).

As a service industry, if hotels want that guests perceive quality in the service experience is recommended that have a strategy which integrate the building, *planning, operations, employees* and training, brand marketing, *systems*, and core product successfully (Bagdan, 2019). The determination of a strategy and target segment(s) allow hotels to build customer loyalty, positive word-of-mouth, employee satisfaction and commitment, enhanced brand image, reduced costs, and increased business performance (Enz & Potter, 1998; Akbaba, 2005).

Therefore, in order to managing decisions and strategies, it is fundamental to be aware of the several characteristics which distinguish a service industry as hospitality from products manufacturing (Kandampully et al., 2001). Namely, (1) *heterogeneity* refers to the variation and lack of uniformity in performing services, basically there are no two times equal because is predominantly performed by people and these differ among them. This makes a service be unique (Bagdan, 2019); (2) *perishability* shows that services are experienced, rather than possessed. On this way, they cannot be stored for consumption later; (3) *intangibility* refers to the difficulty to perceive a service by the five senses. That is, cannot be tasted, felt, seen, smelled, or heard at, at least until to be consumed; and (4) *simultaneity* makes that the production and consumption of services happen at the same time (Parasuraman et al., 1985).

However, the four characteristics above complicate the processes of *planning, standardization, evaluation of quality*, and pricing (Parasuraman et al., 1985; Mia & Patiar, 2001), as well as bring unpredictability to buyers who do not know how the experience will be bought until the moment of consuming it (Parasuraman et al., 1985). Hence, Christou (2013) seems reasonable to infer that *human resources* hold key role and differential importance in this sector.

Based on this, authors as Ariffin and Maghzi (2012) claim that *personnel's performance* has a great impact on all hotel-related *operations*, through *intangible aspects* towards service quality such as *efficiency, personalized and innovative services, paying attention to guests*, warm welcoming the guest, natural behaviour, and comfortable atmosphere.

Since that hospitality is the perfect example of a consumer-orientated and competitive market (Downie, 1997), Spinelli and Canavos (2000) state that guests evaluate the staff performance on two perspectives: attitude and technical. This means that the quality of the interaction between front-liners and guests greatly impacts the emotional value of the experience. Emotions created by smiles and genuine behaviour tend to increase service satisfaction (Lashley, 2008). However, it is also

necessary that hotel managers have transversal competencies and skills to other types of business, namely related to *finances, operations management, logistics*, economics, law, statistics, entrepreneurship, IT, marketing, human resources, and languages. To help the analysis, the knowledge related to *lodging management, front-office services, housekeeping*, food & beverage management, kitchen, restaurant, bar, oenology, gastronomy, tourism, and event management is also necessary. All these competencies concern with the interaction triangle of the elements of services: *guest, employee*, and infrastructure (Hemsworth, 2019).

On the other hand, hotels rely on several functional and aesthetic elements which can be called *tangible* such as location, surroundings, environment, natural resources, activities developed, and direct investment related to the customers. According to Israeli (2002) and Zeithamal et al. (2013), these aspects strongly influence guest expectations, especially because have impact on due the star-rating scheme. Basically, the star-rating scheme in hospitality is a way to harmonize international standards, which aims to differentiate and improve facilities and services. The hotels classification by the stars is one way to segment the guests, such as budget (1\*), economy (2\*), mid-market (3\*), upper-market (4\*) and *luxury* (5\*) (Carrasqueira, 2021).

Specifically, several studies show that before booking and staying in a hotel, guests take the following attributes as decisive: “*cleanliness*”, “*price*”, “*location*”, “*star rating*”, “*security*”, “*personal service*”, “*physical attractiveness*”, “*opportunities for relaxation*”, and “*reputation*”. For example, Smith Travel Research (1995) claimed full-service hotels have a greater probability of matching products and services with guest need, being synonymous of guest loyalty and greater willingness to pay high prices (Enz & Potter, 1998). So, this type of hotels usually follows a policy of *differentiation* through a large diversity of products and services (i.e., fine dining, poolside, and Spa), can have *greater costs* but a premium price above the costs (Porter, 2000). The more the average revenue per available room (RevPAR) increases, the more guests are demanding about the service quality. For example, 5-star hotels in August 2022 had a RevPAR of 189€, whereas last year it had been 133.5€ (INE, 2022).

On other hand, hotels which adopt the *costs competitive advantage* use a strict costs management to increase the profit, since it is calculated by revenues and costs gap (Porter, 2000). These usually are limited-service hotels only have rooms with basic services and amenities with budget- or economy-price segments (Smith Travel Research, 1995).

### **2.2.1. Portuguese hospitality sector analysis**

Traditionally, Portugal is a country where tourism has an expressive importance at an economic and cultural level. In 2019, its demand meant 15,4% of GDP, but as in the worldwide panorama has changed. As consequence to the 54% decrease of commercial flights and 69,4% fewer passengers, the

hotel industry only welcomed 6,5 million guests in 2020. The main nationality visitors kept much the same as previous years such as United Kingdom (16,3%), Germany (14,6%) and Spain 14,5%).

Portuguese hospitality uses the following indicators:

<b>Lisbon Area</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022 (accum.)</b>
Occupancy	77%	30%	35%	69%
ADR	111 €	87 €	101 €	132 €
RevPar	85 €	25 €	35 €	91 €
<b>5-star Hotels</b>				
Occupancy	56%	40%	28%	60%
ADR	149 €	148 €	183 €	226 €
RevPar	84 €	59 €	51 €	136 €

Figure 1 - Hotels indicators

### 3. Management accounting in hospitality

The main objective of this section is to analyse how management accounting can be essential to support decision-making in hotels.

Year after year, the active interest in service industry has launched a lot of research in accounting practices of hotels (Hesford & Potter, 2010). Riley and Jauncey (1990) analysed the structure of decision-making in hotels and found that was generally limited or even random. They felt this was possibly due to the wide scope of managers' tasks, lack of specialization, and overlapping responsibilities.

Hotels managers can be guided by two main sources of information strongly interdependent: *accounting*, as referred above, and market research. Accounting information is used to analyse past performance, evaluate opportunities, and establish budgets, whilst market research is used to evaluate customer needs and satisfaction, and forecast future business. For example, in pricing decisions, the prices charged must be attractive and acceptable to the customer (using marketing information), and sufficient to generate an acceptable profit for the company (using accounting information) (Downie, 1997).

Therefore, studies identified two important areas of accounting in the hotel industry: financial accounting and *management accounting* (Sharma, 2002). In addition, *cost accounting* contributes to this literature because the cost structures of hotels are unique (Paiva et al., 2016). The joining between the direct observation (i.e., quantity of rooms, seats, processes) and data investigation (i.e., balanced and income statement) can be successfully used to analyse and measure the actions taken by organizations (Borges & Rodrigues, 2007).

The truth is that many hotels still rely on financial accounting systems exclusively due to legal obligations and need to interact with other partners, but also because management accounting requires specific skills that usually are not present on financial accounting. Damonte et al. (1997)

emphasizes that an appropriate information system in hotels can help to satisfy the customers' expectations and achieve organizational goals.

Namely the use of management accounting in decision-making processes (Rowe et al., 2008) can bring more operational efficiency to hotels, becoming them more competitive in the market (Homma & Hu, 2012). However, it is necessary that management accounting systems add value only if the information provided is adequately related to the product, service, or business (Harris, 2006). In case of hotels, there are two complexities which challenge the process of management since they englobe three different kinds of business activities: *service*, retail, and production (Harris, 1999). This means that is necessary different types of information to support the operations, leading to perform with a single information system for all three activities combined (Harris, 1995). As well as they operate under conditions of *sales instability* and a *cost structure* with high proportion of fixed costs.

Therefore, to produce and interpretate management and financial data about operations, departments, products, services, and guests is harder (Brignall et al., 1991; Harris, 1995).

The hotel environment and procedures such as check-in and check-out times, meals, housekeeping tasks, among others (Akbaba, 2005) may be highly volatile due to the peaks of demand during the day, week, or year. Regardless the occupancy, the resources all displayed so fixed costs mean approximately three-quarters of the total cost in most hotels Pavlatos and Paggios (2009) in most of hotels.

On this way, Mongiello and Harris (2001) suggest the performance evaluation is balanced between the financial and *non-financial measurements*. They took the example of the adoption of balanced scorecard in Europe which has increased to *operationalize performance in hospitality industry* (Kang et al., 2015) since additionally the performance can be evaluated with non-financial measures.

According to the study of 20 hotels developed by Campos et al. (2022), the most techniques used in hospitality are budgeting, ratio indicators, benchmarking, activity-based costing, return of investment, customer profitability analysis, *balanced scorecard*, and USALI. Most of these techniques are related to each other. Namely, budgeting is the most widely used management accounting technique because it allows planning, control, coordination, and evaluation.

Next are ratio indicators related to the performance measurement systems of specific factors such as RevPAR, revenue per worker, revenue to costs, F&B revenue to costs, Average Daily Rate (ADR), and occupancy rate. Briefly, these serve to analyse productivity growth, profitability, and efficiency (Urquidi, 2013) (Jones, 2008).

In hospitality, the measurement of non-financial performance is highlighted to monitor the customer satisfaction (Banker et al., 2000). For example, the adoption of BSC has increased to operationalize performance in hospitality industry (Kang et al., 2015) since can be added if there need to evaluate performance with non-financial measures (Campos et al., 2022). However, Santos et al.



(2013) conducted research about the management accounting techniques adopted in a sample of 61 Portuguese hotel enterprise concluded that traditional management are mostly used than sophisticated techniques i.e., BSC, Tableau du bord).

As curiosity, previously five-star hotels showed to be more efficient than four-star hotels (Paiva et al., 2016).

### **3.1. Cost accounting applied to the hotels**

Management accounting literature has used the terms “fixed”, and “variable” to describe how a cost reacts to changes in activity. Shortly, fixed costs are not affected by changes in activity, keeping constant for a specific period of time, while variable costs directly vary according to the volume of activity. Other authors still add the “semi-fixed” and “semi-variable costs”.

Therefore, it is no accident that budgeting is the technique most used by hotels, but one of the main reasons is that managers must understand the cost behaviour to identify areas for costs reduction (Robin & Robert, 1988). Its elaboration and understanding are useful for expenses and revenues control (Collier & Gregory, 1996), planning and performance measurement (Enz & Potter, 1998).

Considering hotel costs structure, Makrigiannakis and Soteriades (2007) states that the main accommodation activity has a heavy fixed cost structure and high investment in construction and equipment.

In order to cover the high fixed costs and lower variable costs, the minimum hotel occupancy rates must be ensured – break-even point (BEP). Otherwise, below the BEP, due to the fixed capacity of the buildings, hotels cannot cover even the fixed costs, being that the number of rooms sold are also restricted by the total number of rooms, despite some hotel chains practice the phenomenon of *overbooking sales*.

Therefore, hotels make efforts to boost the number of sales in low trading periods but balance those efforts towards daily occupancy and rates in high trading periods. The priority is to maximise the revenue generated by the sales of rooms. Additionally, hotel managers have been interested in originating revenues from food and beverage facilities – restaurant, bar, and room minibars. Such others the Spa, shops, parking space, events and entertainment, the casino and golf courses.

This makes that hotels which render a variety of services above the average pay more attention to aspects such as i) the premium prices must be higher than extra costs to achieve the differentiation; ii) the hotel really needs to be unique and differentiated for guests understand the reason for the premium price; and iii) the hotel should reduce all costs which do not add value for guests (Porter, 2008).

Specifically, this study also focuses on cost analysis as a performance advantage, including fixed and variable costs related to the *accommodation* department – housekeeping and reception. On this way, the analysis of the fixed costs is more relevant than variable costs on the maximization of a guest's contribution for the room purchase.

On other side, the standard costing system focuses on direct materials and direct labour quantities and costs allocated to specific activities. Hence, these two types of direct costs (materials and labour) can be considered as “semi-variable” costs because a proportion of them cannot change according to the volume of activity and other yes. For example, hotels use more laundry if there is a higher number of rooms occupied and can need to hire outsourced staff if do not have enough in-house staff to clean the rooms or serve in the restaurant (Raiborn et al., 1993).

In research, Hesford and Potter (2010) concluded that despite the direct labour costs could be 20% of the total cost, hotels still fail in assessing the human productivity and controlling the number of employees. Even the employee turnover in this industry is quite high.

Costs analysis is a key element of any pricing policy but not alone, because it must be understood together with the demand and competition environment. Pricing is not a free element, since there is a direct relationship between pricing and the positioning of a company, client segmentation, turnover, and market share. Through information systems, hotels can recently adjust prices in real time, according to criteria pre-defined by the revenue manager (i.e., price above a specific competitor, events nearby, and number of arrivals of flights to the town).

## **Chapter II – Methodology**

This chapter aims to present the Company under analysis of this in-company project as well as its management accounting system. To conduct this analysis, it was requested to the Company to allow an internship program during a period of 6 months that took place between 10<sup>th</sup> May 2022 and 30<sup>th</sup> November 2022.

The student had opportunity to observe, measure and evaluate the company's employees under their daily routines. Also, the Company provided all the information requested, namely manual of procedures and checklists of several departments; financial statements of 2018, 2019, 2022; internal management control maps; and information about management control policy in place.

Although this information was made available to support the process of evaluating the management control model, given its confidential nature, it will not be presented in this document. Additional details on the methodology applied will be presented after the presentation of the Company under analysis.

## 1. Corpo Santo Lisbon Historical Hotel presentation

- **History** – In 2015, Manji's family, owner of the pharmaceutical company Farmaka, bought the first Pombaline building. During the construction, archaeological discoveries were found. On 1<sup>st</sup> September 2017, Corpo Santo Lisbon Historical Hotel opened.

- **Location** – It is located in one of the most prestigious areas of Lisbon city centre, Cais do Sodré. The Largo do Corpo Santo inspired the Hotel name.



Figure 2 - Fernandina's living room

- **Building** – The architecture of the building is Pombaline, so it is possible to find a lot of traditional Lisbon touches spread throughout the Hotel and clear luminosity. It is also marked by all rooms are different, making each stay unique. Its small dimension of 75 rooms which 8 are suites. Depending on the size which varies between 20m<sup>2</sup> and 36m<sup>2</sup> or landscape, the room types are divided into Classic Room, Superior Room, Premium Room, Superior Deluxe Room, Superior Family Room, Suite Junior, Prestige Suite, and Family Junior Suite.



Figure 3 - An example of room

- **Category** – Corpo Santo is a 5-star hotel which belongs to the *boutique* category because fulfils some criterion: it has less than 90 rooms, and is associated with a specific luxury design, themes, and high-quality services. In fact, it is strongly involved in joining the luxury and comfort and putting the market *differentiation by quality* first than price.

Regarding to the theme, it is a *Historical* Hotel because is marked by two different periods of the Portuguese History. Each floor corresponds to a specific décor theme, smell, and music based on the

main countries (North Africa, Central Africa, Asia, Brazil, and Lisbon) stopped by the Portuguese seamen during The Discoveries, and the Fernadina's Wall on the floor -1.

- **Services** – According to the Culture of the company is fundamental to establish a very close relationship between the staff and guests, becoming the service more personalised. Thus, it does not just provide typical accommodation with bed, bathroom, wardrobe, desk and chair, telephone, television, hair dryer, air conditioning and window, or complementary such as soap, shampoo, body shower, body lotion, conditioner, notebook and pencil, water, slippers, etc. But also, it provides special offers and facilities such as multilingual concierge, valet parking, free walking tours daily, free minibar in the room, free ice cream on the entrance, reading and living room with ruins of Fernandina's Wall, prestigious restaurant and bar, Spa, and gastronomy events.



Figure 4 - An example of facilities

- **Target Segment** – Hotel fights for imposing a luxury brand image and providing unique experiences with a premium price. So, the target segment is guests with greater buying power and specifically, foreign tourists. With all Hotel characteristics described above such as comfort, interaction, relax, quality, History, and luxury attract mainly leisure guests in couple or family trips.

Figure 5 - Main Hotel segments



Figure 6 - The most guests nationality

- **Mission, Vision, Values, and Culture** – The Hotel does not follow any Mission or Vision, simply has one purpose: “Only the best”, which is guided by the following Values: i) empathy: always from the moment the guest arrives at the Hotel until he leaves it; ii) authenticity: through smiles and in the way of being and interacting; iii) consistency: in all services provided by the Hotel, interactions with the various staff members, and exceeding expectations of the guests; and iv) anticipation: before arriving at the Hotel, on the observation of all the guests’ moments and in conversation with guests.

The organisational culture is extremely focused on “Make it happen”, so it skips a few too formal steps which may delay the Values accomplishment. Chief executive officer (CEO) constantly appeals that employees have *attitude* to solve problems, and this starts by “Meet the small needs that make the difference in the guests’ experience because it is in the little details that is the difference between the good, the bad and the exceptional”.

- **Awards**

Figure 7 - Corpo Santo Lisbon Historical Hotel Awards



- **Organisational Structure** – The company's organisation chart (Figure 8) represents the operational and management structure. Everyone has a main manager and may have one or more shift managers, mainly in the restaurant. Objectively, it is not a multi-level or complex structure.

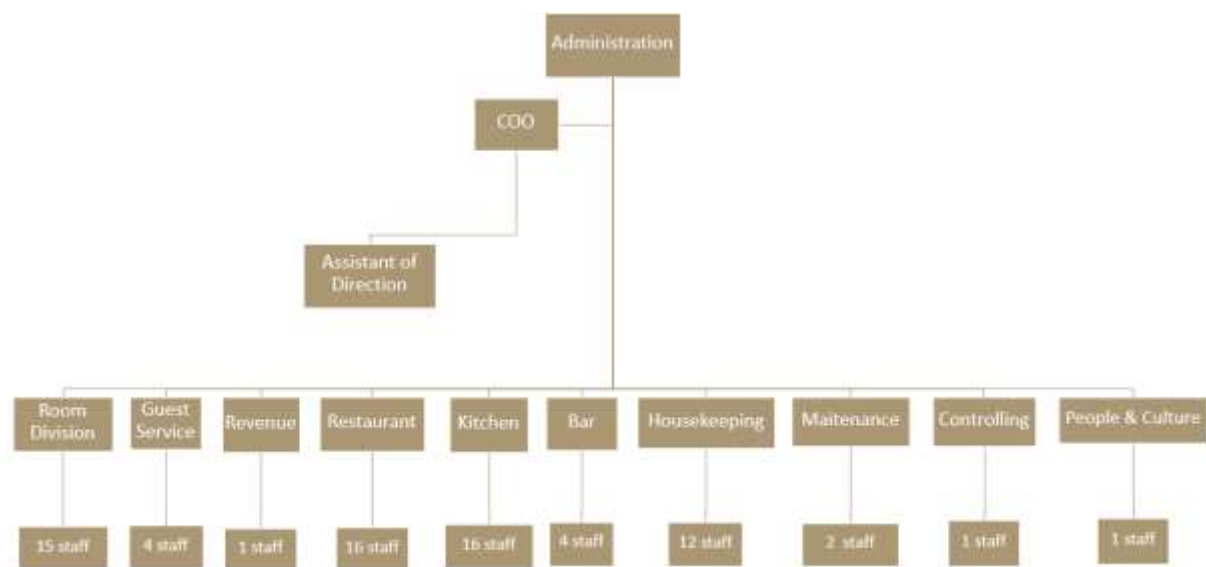


Figure 8 - Organisational chart

### 1.1. Company's Financial Performance

The accounting and the preparation of the financial statements are performed by an external specialised firm. Thus, it is not possible to have access to the Profit and Loss (P&L) Statement anytime, but monthly.

The Hotel accounting is monitored by the Primavera BSS software. Some financial details regarding to the period of 2018-2022 are present below:

Indicators	2018	2019	2020	2021	2022 (accumulated)
Total Income	4 817 490 €	5 304 733 €	1 690 043 €	1 914 214 €	4 340 688 €
Average Occupancy rate	77%	87%	43%	44%	87%
Total Rooms Sold	21 423	23 128	10 033	11 632	17 736
Total Personnel Costs	1 351 937 €	1 600 581 €	1 159 051 €	761 460 €	1 256 602 €
Gross operating profit (GOP)	1 696 978 €	1 966 066 €	-423 497 €	238 425 €	1 521 716 €
<b>Accommodation</b>					
Sales	3 750 189 €	4 110 049 €	1 209 841 €	1 405 847 €	3 345 907 €
Personnel Costs	481 625 €	557 847 €	421 503 €	294 446 €	470 334 €
<b>Housekeeping</b>					
Personnel Costs	167 683 €	225 367 €	158 838 €	73 096 €	215 197 €

Figure 9 - P&L Items

### 1.2. Characterisation of the management accounting system in Corpo Santo Hotel

This sub-chapter presents the management accounting strategies applicable by the Hotel in study. So, it is intended to explain to the following research points:

**Refer the systems used for accounting, bookings control, employees, and management control**

– In most of cases, the first touch point of the experience between the Hotel and guests is the *booking*, being possible through the following four ways by: telephone, email, website and two online travel

agencies (OTAs) - Booking and Expedia. Both telephone and e-mail are directed to the reception, since this is the department that manages bookings since there is no bookings coordinator.

Bookings made through the website or OTAs are handled by Guestcentric, which is the channel manager and booking engine. Guestcentric platform works both ways by receiving and sending information. Depending on the sales strategy, which can be influenced by various factors such as room types, seasonality, etc., the revenue manager stipulates various restrictions and prices are generated in the Revenue Manager System (RMS) - Climber, which in turn also considers the availability of rooms sent through the Host Property Management System (PMS) just in time. This is how Guestcentric performs its channel manager and booking engine functions: it receives prices automatically, sends availability and rates to the various online sales channels, records reservations in the Host PMS and even generates booking emails to the reception email account, according to all the restrictions and availability applied in Climber and Host. From here the process is conducted by the receptionists.

Since the Host PMS allows to know bookings in advance, it is possible to prepare a future planning.

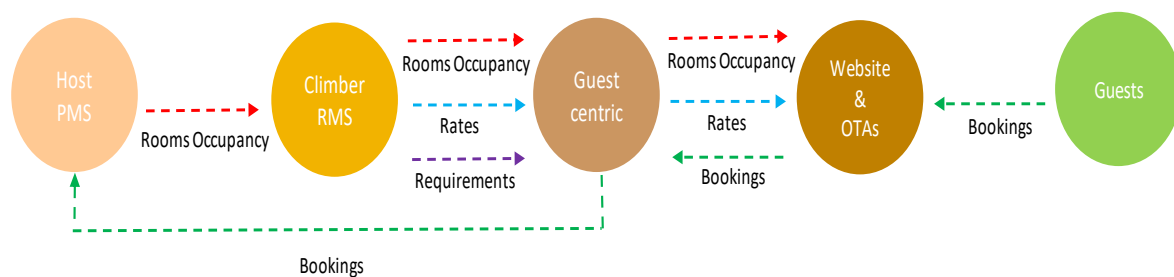


Figure 10 - Bookings cycle

Daily, employees' punctuality and assiduity are controlled by the Factorial programme since these register their entrance, breaks, and exit through the employee number. This information is connected with the Primavera software which monitors the salaries.

**Describe the work of decision making.** It is intended to understand whether the Hotel promotes autonomy and decision-making of operational managers, and communication between departments, for example through weekly and/or monthly meetings – Internally, meetings with different stakeholders are promoted. Each one has specific objectives as follows: i) Online Meetings between the Chief Operating Officer (COO) and Administration every Friday in the morning. They usually discuss about the financial results (i.e., restaurant and bar attractiveness), brainstorming about new hospitality projects, and opportunities of investment; ii) Meetings between the COO and Departmental Head Managers every Tuesday and Thursday at 3:30pm, where the COO mediates the discussion of the topics presented by each head such as daily situations, human resources issues, complaints, and improvement opportunities; iii) Operational Meetings every day at 10am and 3:30pm with a representative from each of the following sections: reception, housekeeping, guest service, restaurant

or bar, and maintenance. Currently, topics such as occupancy rate of the week, online reviews, menu of the daily gastronomic event and RevPAR are referred to here; and lastly iv) Monthly Results Presentation Meetings to the 1st line managers, which is carried out by the COO on PowerPoint. From May until now, these meetings took place twice. He presents two types of results: financial and online guests' feedback.

Outside these meetings, the operational managers, and other employees in general, have a high degree of autonomy to take decisions to solve problems and add value, since the priority is that guests feel that the time spent at the Hotel was exceptional and that the whole team did everything to provide them with the best. Neither administration or the COO want decisions with little impact or low associated cost to be reported to them. The COO states that it must be managers who make operational decisions and manage their teams, as he asks them only to report to him situations that they cannot solve or that can generate negative consequences for the Hotel, such as complaints. At this point, he guides them.

In contrast to hotel chains' philosophy, here the bureaucracy is low in decision making. The more informal proximity that exists between the COO and other managers daily, means that there is a lot of sharing of ideas and that the development of projects is speeded up.

It is also very usual that, when the managers do not develop process improvement proposals, he is the one who suggests them. Then, he delegates them the task of researching information, analysing the best option and possible alternatives, and the process of implementation, while he just monitors them.

- **Explain what the organisational objectives are and how they are shared internally** – There are goals that stay the same over time, but there are others that only make sense in a certain period of time. Thus, at this moment, Hotel aims to improve the quality management, development of the sustainability project and employee retention (short-term), win the 5 stars in the Forbes Travel Guide Award (medium-term), and continuous development of sustainable practices and the expansion for a hotel chain (long-term).

The first contact to share the Hotel profile and the organisational and objectives is made at the Welcome Session for all new employees and trainees. Forward, the Hotel has a shared folder subdivided into several folders depending on the department or subject. This makes it possible to have access to what is being developed in each department and to historical data. However, some documents have restricted access. All relevant information about corporate and employee performance is shared in a transparent way.

- **Explain the performance evaluation model** – Every month, each manager evaluates all members of his or her team individually. The aim is for the manager to give feedback to each employee on their performance, including strengths, weaknesses and areas for improvement, and there is a short



brainstorming session. The evaluation method is very simple, as it is generated through Microsoft Forms. The aim is that from the individual data survey, the overall picture of each department is obtained to detect behavioural patterns.

After all employees have undergone the evaluation, the responsible of People and Culture prepares the final report, which includes departmental and general feedback, and sends it to the manager of each department by e-mail, with the knowledge of the COO.

The evaluation form starts with 1) Employee Name, 2) Employee No. and 3) Department Name. Then, the form aims to evaluate the following points: 4) Punctuality, attendance, and availability; 5) Human relations at work; 6) Relationship with the guest/service; 7) *Cost control/reduction and optimisation of resources*; 8) *quality in the work developed*; 9) Professional knowledge; 10) *Work organisation*; 11) Number of training sessions attended in the previous month; and 12) Comments box.

- **If employees receive financial incentives based on results achieved, explain them** – Financial incentives for staff were suspended during the pandemic but are now back in place. Any employee can earn since she/he meets KPIs related to financial performance, quality, sustainability, and training. KPIs differ among the departments:

Figure 11 - Theoretical KPIs used in Rooms Division and Guest Service

Rooms Division		Guest Service	
Item	KPI	Item	KPI
TripAdvisor (20%)	0.83% increase in online comments 4 times the receptionists' names on reviews	TripAdvisor (20%)	0.83% increase in online comments 10 times the receptionists' names on reviews
Booking.com (20%)	0.83% increase in online comments 4 times the receptionists' names on reviews	Booking.com (20%)	0.83% increase in online comments 10 times the receptionists' names on reviews
Expedia (10%)	0.83% increase in online comments 4 times the receptionists' names on reviews	Expedia (10%)	0.83% increase in online comments 4 times the receptionists' names on reviews
Training (15%)	Teach 4 hours per month	Training (15%)	Teach 4 hours per month
Plan of action (15%)	Fulfillment of the proposed activities	Plan of action (15%)	Fulfillment of the proposed activities
Walk-ins Sales (10%)	10 room nights	ReviewPro GRI (10%)	Achieve 96% on Global Review Index
Parking Sales (10%)	60% occupancy of the car park	Internal Sales (10%)	Sale of 20 bookings in the Hotel restaurant

Figure 12 - Theoretical KPIs used in Food & Beverage and Revenue Management

Food & Beverage		Revenue Management	
Item	KPI	Item	KPI
TripAdvisor (30%)	0.83% increase in online comments 4 times the receptionists' names on reviews	Room Sales (20%)	Keep to the budgeting on lodging
Booking.com (20%)	0.83% increase in online comments 4 times the receptionists' names on reviews	GoPar (20%)	Keep to the Gross operating profit per available room
Sales (10%)	Keep to the budgeting	RevPar (20%)	Keep to the budgeting
Costs (10%)	Keep to the budgeting	ReviewPro GRI (10%)	Achieve 96% on Global Review Index
Training (15%)	Teach 4 hours per month	Training (15%)	Teach 2 hours per month
Plan of action (15%)	Fulfillment of the proposed activities	Plan of action (15%)	Fulfillment of the proposed activities

- **If Hotel has a management control model such as the balanced scorecard, present it** – The Hotel does not have a balanced scorecard in use yet. It follows a budget management and some KPIs to measure departmental performance (i.e., GOP, REvPar), to compete for important awards in the hotel market and to give productivity bonuses.

### **1.3. Management accounting on operational departments**

#### **1.3.1. Housekeeping**

At Corpo Santo Hotel, the director of accommodation does not exercise any power in the housekeeping department as in other hotels. Currently, the department is composed of the housekeeping manager, 7 room housekeepers and 3 common area housekeepers. By choice of the director of operations, the Hotel does not have floor manager, laundry manager or housekeepers allocated only to the laundry.

Every day, the housekeeping manager and room housekeepers start working at 8am, before that one area common housekeeper has already started cleaning the lobby, restaurant and bar, toilets, halls, gym, living room and offices from 7am until at 3:30pm. At 2:20pm other two area common housekeepers start working and finish at 11pm. In the second shift, there are two housekeepers working because there are more long tasks to do, such as cleaning the rooms that do not want cleaning earlier, so they ask for cleaning when they go to dinner, and turndown in all the rooms.

#### **1.3.2. Reception**

Corpo Santo Hotel follows the traditional hospitality pattern since the *reception* is included in the front office department, as well as the portering and guest service. The reception team is constituted by the rooms division manager, 7 receptionists, 2 night auditors and 3 bell boys.

The morning and afternoon shifts are always shared by two receptionists. The morning shift starts at 7:30am and finishes at 4pm, and the afternoon shift starts at 3:30pm until 0:00am. The night auditor is the only person who stays in the Hotel during the night, between 11:30pm and 8am.

Since the Hotel does not have many rooms, the management chose not to have a reception manager, reservations manager, cashiers, or telephone operator. Guest service department is headed by another manager. However, reception is the department which interacts most with others, such as housekeeping, maintenance, guest service and F&B, aiming to give them instructions on guest requests and get feedback.

As well as the reception strongly contacts with guests face-to-face, so managers strive to hire people with a set of soft skills such as good physical image, good hygienic image, serenity, friendliness, confidence, security, creativity, vitality, and care. However, the work of the reception is sustained by a technological base, namely Outlook for receiving and sending e-mails and PMS which is a computer

system designed for hotels, which interconnects the software and hardware used in bookings, registrations, databases, sales channels, accounting services and other electronic services.

This is how the receptionists, with the supervision of the manager, usually perform the various tasks during *pre-arrival, arrival, stay and departure*: i) provide information about rooms, other facilities, and services (can be done personally or via email); ii) analyse in PMS the availability of rooms and room status (i.e., occupied, free, clean, dirty, under maintenance); iii) execute bookings on PMS, changes, or cancellations; iv) manage all non-guaranteed bookings and walk-ins, as it may be necessary to request deposit or prepayment; v) check PMS bookings and respective data; vi) watch the lobby to greet guests and anticipate their needs; vii) check ins and provide necessary information to make the stay a pleasant one; viii) perform check outs and resolve all pending situations; ix) pay extra attention to billing and payment issues; x) register and transmit all important information to the next shift; and xi) keep the work environment clean and organised.

### **Chapter III – Improvement Proposals**

This project is predominantly focused on *housekeeping* and *room division* departments due to the Hotel needs and limitation of time. Over time, through literature the importance of these two departments was better understood (Baldrige Foundation, 2019).

The first step was taken when the COO asked me to audit the *rooms cleaning procedures*, which are performed by the housekeeping department. Thus, the purpose of this first task was to study rooms cleaning *time* and *quality*, and main variables which determine both.

Initially I had some conversations with housekeeping manager, but the information was not reliable because in her mind everything was fine. So, the data collection was imposed by a previous case study (Roser, 2016) – For two weeks, I used two very simple practices, namely *direct observation* and *active listening* to the problems reported by the housekeepers. All these days, I wrote the report with everything I saw, heard and my perceptions from the time that housekeeping manager assigned the rooms to housekeepers around 8am until they finished the working day around 4:30pm. Every 2 days, I chose different housekeepers to analyse their way of cleaning to detect patterns or not and, followed their every movement to analyse inefficiencies.

After two weeks, I had registered data about a sample of 73 occupied and 37 check out rooms, which gives a total of 110 rooms. So, I understood most of the housekeeping routine and processes, so I was able to monitor several *situations* and make some considerations.

According to all housekeepers, the rooms' cleaning duty was more difficult and delayed due to the following reasons:

- High number of rooms to clean.
- Existence of little laundry, mainly medium and large pillowcases, face towels and bath towels.

- A lot of time spent looking for cleaning products and amenities with other colleagues or waiting for the housekeeping manager to bring them.

The truth is that the literature shows that the rooms cleaning must be taken as a priority competence since it impacts on competitive advantage (Espino-Rodríguez & Ramírez-Fierro, 2017). According to Gundersen et al. (1996), and Chen and Chen (2014) the cleanliness of both rooms and restaurants are attributes of the service quality and corporate image is very important for guest perceptions. In a recent study, respondents considered that “cleanliness” is the item that most contribute to the quality of the service experience, right below it comes the environmental quality in hotels (Hsieh & Chuang, 2020). However, I quickly observed these shortcomings as well.

After some processes were already running in housekeeping, I went to develop an identical job in reception. The initial process was very similar, for a two-week period I observed and prepared daily reports with all the information. I gathered about i) BackOffice operations of the rooms division manager; ii) Front Office operations of the receptionists and bell boys; iii) Interaction with other departments, such as guest service and housekeeping; iv) Fulfilment of tasks based on checklists; v) Existence of standards and templates for booking confirmation, date availability and cancellation of bookings; and vi) Follow-up practices.

As shown below, the process analysis, implementation and testing took 5 months. Later, I was even able to cover the housekeeping manager during her 3 weeks holiday.

*Figure 13 - Timetable in-company project*

May	June	July	August	September	October	November
Housekeeping Study			Reception Study		HSK Holiday Maker	In-company Project Preparation

In both departments, the optimisation of processes and resources was developed and controlling measures were implemented and developed as follows in the next sub-chapter. Readers also must know that all improvement proposals below were discussed with the COO before having been implemented and tested for at least 1 month.

For all reasons above, the improvement proposals are related with the ability to optimize operational resources and processes to have a positive impact on the Hotel financial performance. Hence, besides the analysis focused on the management control, an evaluation work was carried out on the main responsibility centres with the aim of identifying improvements.

Recent literature as Baldrige Foundation (2019) shows that is possible use the practice measurement, analysis, and knowledge and management to track information on daily operations and performance in these two departments.

In the following improvement proposals, operational ratios, and indicators such as total occupancy rate, occupancy rate, revenue ratios, staff costs, and customer satisfaction will be referred in order to obtain the necessary information for decision-making (Yalcin, 2021).

## **1. Improvement proposals on operational activities – Housekeeping (HSK)**

### **1.1. Room cleaning time**

Housekeeping manager had a lot of lacks in the planning, since her management style was very rudimentary and poor technology skilled. Daily, she attributed at least 14 rooms per housekeeper, regardless the number of occupied or check out rooms. Automatically my question was “Why 14 rooms?” since during the time that I observed the housekeepers cleaning the rooms, I was able to understand that 14 rooms might compromise the cleaning quality. It was visible that housekeepers were rush and stressful all day.

It is proved that the number of rooms assigned to an housekeeper per day variable is a determinant of cleaning time with a negative coefficient which means that housekeepers reduce time per room when they are subject to clean more rooms because they do not want to extent the workday which they are been paid for (Seifer & Messing, 2006).

Recently, housekeeping tasks are increasingly more complex and subject to pressure because of certain business strategies such as more operations, more amenities to put in the rooms and heavier objects to be cleaned (i.e., extra beds and cribs). So, after some research I understood that would be useful to measure cleaning times and which variables influence them (Manhas, 2015). The most usual studies about cleaning regard to technical aspects such as *efficiency* and *cost reduction*, and respective *organisation* (Vlijmen, 2019) as this one.

However, the housekeeping manager had never calculated the room cleaning time to obtain the average room cleaning time. This meant that she did not know the appropriate number of rooms that each housekeeper should clean in 8 working hours.

One of the pioneer studies by Onsoyen and Mykletun (2009) mentioned a cleaning time of 20-30 minutes per room in four chain-affiliated hotels in Norway, which mean that housekeepers cleaned approximately 17 rooms. In contrast to the Hotel studied, these hotels are 4-star. So, the following results meet with a study already developed at two American luxury city hotels, which belong to Corpo Santo Hotel segment – housekeepers clean 12 rooms per shift.

According to Sherman (2011), three interesting aspects to set room cleaning times were considered: the *identification of the activities* carried out during cleaning and their *time measurement* (directly), and *allocation of the number of rooms* per workday (indirectly). On this way, both occupied and check out rooms were analysed, and understood that cleaning an occupied room is not the same

than a check out room. Namely, occupied room corresponds to a room which the guest is going to keep the room the same day, while check out room corresponds to a room which needs to be perfectly ready for the entry of a new guests (Aguilar-Escobar et al., 2021).

Despite check out rooms take more tasks to perform and time (Sherman, 2011), this analysis does not consider this depth of detailing because only would complicate the process of rooms' allocation daily. So, an analysis about the workforce management was done based on the average time of the rooms cleaning:

Figure 14 - Average Rooms Cleaning Time

Average Time 1 HSK		Average Time 2 HSK		Grand Total	
Occupied	Check Out	Occupied	Check Out	Occupied	Check Out
00:23:21	00:51:50	00:18:32	00:37:06		
Total Average 1 HSK 00:36:55		Total Average 2 HSK 00:25:58		00:22:14	00:49:23

As consequence of an inappropriate distribution of work, housekeepers or the housekeeping manager often helped other colleagues to clean the rooms, so I compared the average time between rooms cleaned by one housekeeper and the average time of rooms cleaned by two housekeepers. However, having two housekeepers cleaning the same rooms is not a hypothesis of improvement because according to these results, to double the number of housekeepers cleaning the same rooms does not mean that those rooms are cleaned in half-time. In other words, they are less productive. As I observed, housekeepers talk with each other and distract more often, reflecting in slower work and less attention to the details.

Therefore, in the productivity calculations, the value used was 00:36:55, which was around up to 37 minutes, corresponding to the *average time taken to clean rooms by 1 housekeeper*:

Figure 15 - Allocation of rooms to housekeepers

Perfect Scenario	Reality
1 room ----- 37 minutes	1 room ----- 37 minutes
? rooms ----- 480 minutes	? Rooms ----- 450 minutes
$? = (1 \cdot 480) / 37 = 12,97$	$? = (1 \cdot 450) / 37 = 12,16$
Rounding up = 13 rooms	Rounding up = 12 rooms

In a perfect scenario, if housekeepers worked at 100% and no interruptions, they would be able to clean 13 rooms. However, as we are analysing a 5-star hotel, the COO and I agreed that the new objective is that housekeepers do not only clean rooms during the 8 hours. They should do other tasks such as: cleaning and hoovering the corridor, tidying the storage room, organize the cleaning products and amenities in the cleaning trolley and delivering extra orders to guests.

Apart from the room type (occupied or check out), the literature (Dalci et al, 2010) also recognise that the room cleaning schedule also disturb the *level* and *time of cleaning work* (i.e., if all check out guests leave the rooms at the same time, if all guests put the “Ready to Clean” card on the door handle). In particular, the behaviour of the guests affects working time, as the housekeepers only clean the room when the guests leave. Another unpredictable factor is the use that the guests have made of the room (Sherman, 2011).

For all these reasons, we decided to adapt the calculations to the Hotel's reality, taking off 30 minutes. Therefore, currently the housekeepers clean 12 rooms, dedicating 7 hours and 30 minutes to room cleaning, which is equivalent to 93.75% of their working hours, and the remaining time to the tasks already mentioned.

Therefore, since the occupancy of the hotel is known in advance, and now the number of rooms to be cleaned by housekeepers it is possible to know the staff needs.

### 1.2. Planning of in-house and outsourced housekeepers

In particular, this improvement proposal highly follows the literature by Tiwari et al. (2022) which states that *outsourcing* is one of the two heaviest expenses items in this department depending on two factors: *the number of in-house housekeepers*, and *occupancy*.

Figure 16 - Outsourcing costs

Costly Indicator	2018	2019	2020	2021	2022 (accumulated)
HSK Outsourcing	22 902 €	25 301 €	1 446 €	85 284 €	72 266 €

Actually, the use of outsourcing in this department has intensified after the closure of the Hotel, because almost all employees were fired in the covid 19 pandemic. As can be seen, outsourcing costs increased by more than 50 thousand euros.

The other expensive items regard to the amenities consumed, and external laundry which will be focused later. Thus, this proposal is about planning and controlling the daily capacity *versus* occupancy through an algorithm that allow to get an absolute number of housekeepers needed in order to avoid unnecessary costs with outsourcing.

Newly, every Thursday morning the housekeeping manager analyses the staff needs for the next week (Monday – Sunday). Basically, it was prepared two interconnected boards in a Microsoft Excel file: one with the housekeepers’ schedule and other with a planning map for housekeepers outsourced.

This document can be viewed anytime to take future information, as well as previous day’s occupancy to analyse the trend. The planning board works automatically on the following way: i) only the yellow cells can be changed manually; ii) fill up the minimum date to be analysed; iii) fill up the number of rooms (the number of rooms occupied on a determined day will be clean on the next day);

iv) fill up the number of in-house housekeepers on holidays or injured on each day. Being that the KPI of 12 rooms for in-house housekeepers and 9 for outsourced housekeepers can be changed any time according to the strategy (McPhail et al., 2015).

The boards used to support the daily housekeeping planning follow are:

Figure 17 - Room Housekeepers planning

	quinta-feira	sexta-feira	sábado	domingo	segunda	terça	quarta	quinta	sexta-feira	sábado	domingo
	17/nov	18/nov	19/nov	20/nov	21/nov	22/nov	23/nov	24/nov	25/nov	26/nov	27/nov
	LEILA IDALINA INÁCIA ELSA LILIANA	LEILA CLÁUDIA P. ELSA LILIANA	LEILA CLÁUDIA P. ELSA LILIANA SÔNIA	LEILA CLÁUDIA P. IDALINA INÁCIA SÔNIA	LEILA CLÁUDIA P. IDALINA INÁCIA SÔNIA	CLÁUDIA P. INÁCIA IDALINA ELSA LILIANA	IDALINA INÁCIA ELSA LILIANA SÔNIA	LEILA IDALINA INÁCIA ELSA LILIANA	LEILA CLÁUDIA P. ELSA LILIANA	LEILA CLÁUDIA P. ELSA LILIANA SÔNIA	LEILA CLÁUDIA P. IDALINA INÁCIA SÔNIA
Férias/Baixa	2	1	1	2	2	2	1	1	1	1	2
Nº HSKs	3	3	4	3	3	3	4	4	3	4	3

Figure 18 - Outsourcing solution

	quinta-feira	sexta-feira	sábado	domingo	segunda	terça	quarta	quinta	sexta-feira	sábado	domingo
	17/nov	18/nov	19/nov	20/nov	21/nov	22/nov	23/nov	24/nov	25/nov	26/nov	27/nov
# OCC	62	62	63	69	50	57	56	52	59	70	72
Staff Hotel do dia	3	3	4	3	3	3	4	4	3	4	3
Quartos por Staff Hotel	12	12	12	12	12	12	12	12	12	12	12
Necessidade	5,2	5,2	5,3	5,8	4,2	4,8	4,7	4,3	4,9	5,8	6,0
Staff em falta	2	2	1	3	1	2	1	0	2	2	3
# OUTSOURCING	26	26	15	33	14	21	8	4	23	22	36
Quartos por Outsourcing	9	9	9	9	9	9	9	9	9	9	9
Outsourcing Necessário	3	3	2	4	2	2	1	0	3	2	4

The red algorithms correspond to the number of extra housekeepers needed on each day. After that, the housekeeping manager copy this board and paste on a request e-mail. The planning also englobes the common areas housekeepers:

Figure 19 - Common area housekeepers planning

	quinta-feira	sexta-feira	sábado	domingo	segunda	terça	quarta	quinta	sexta-feira	sábado	domingo
	17/nov	18/nov	19/nov	20/nov	21/nov	22/nov	23/nov	24/nov	25/nov	26/nov	27/nov
MANHÃ	Mª ANJOS	Mª ANJOS	Mª ANJOS	CLÁUDIA B.	CLÁUDIA B.	Mª ANJOS	Mª ANJOS	Mª ANJOS	Mª ANJOS	Mª ANJOS	CLÁUDIA B.
		CLÁUDIA B.	CLÁUDIA B.						CLÁUDIA B.	CLÁUDIA B.	
TARDE	CLÁUDIA B.			MARIAZINHA	MARIAZINHA	CLÁUDIA B.	CLÁUDIA B.	CLÁUDIA B.			MARIAZINHA
	MARIAZINHA					MARIAZINHA	MARIAZINHA	MARIAZINHA			
Férias/Baixa	1	1	1	0	0	1	1	1	1	1	0
Nº HSKs	2	1	1	2	2	2	2	2	1	1	2



	quinta-feira	sexta-feira	sábado	domingo	segunda	terça	quarta	quinta	sexta-feira	sábado	domingo
	17/nov	18/nov	19/nov	20/nov	21/nov	22/nov	23/nov	24/nov	25/nov	26/nov	27/nov
# Occ	62	62	63	69	50	57	56	52	59	70	72
Staff Hotel	2	1	1	2	2	2	2	2	1	1	2
Staff em Falta	1	2	2	1	1	1	1	1	2	2	1
MANHÃ	1	1	1	1	1	1	1	1	1	1	1
TARDE		1	1	1	1				1	1	1

Figure 20 - Outsourcing solution

This aims to solve the two major problems that existed: the overload of rooms for in-house housekeepers in a way that putted in risk the service quality and their health or having extra costs with outsourced housekeepers without being necessary.

In fact, it was possible a reduction in the Randstad invoice expense from September comparing with last months:

Figure 21 - Improvement on housekeeping outsourcing

Agency	Bill	Time	Normal Hours Cost	Normal Hours Δ	Total Cost	Total Cost Δ
Randstad	FT10A10509	29/08 a 28/09	6 494,26 €	-	8 279,38 €	-
Randstad	FT10A11696	23/09 - 23/10	4 067,09 €	-2 427,17 €	5 145,00 €	-3 134,38 €
Randstad	FT10A13698	28/10 a 27/11	3 356,32 €	-710,77 €	4 512,55 €	-632,45 €
<b>Total</b>			<b>13 917,67 €</b>	<b>-3 137,94 €</b>	<b>17 936,93 €</b>	<b>-3 766,83 €</b>

As it appears in the table above, the cost of the outsourcing portion is quite expressive in housekeeping, so it is a point that deserve all the attention. Truly, due to the planning and control of the necessary number of housekeepers required relying on the occupancy (Gautreau & Kleiner, 2001), the Hotel stopped requesting housekeepers unnecessarily, and consequently saved 3 137,94€. In total, it saved 3 766,83€, but it depends on the number of public holidays or night hours which are more expensive. The sample used was 90 days, meaning the reduction of 3 137,94€ so considering one extra housekeepers per day with a cost of 60€ (8 hours \* 7,5€/hour) there was 53 days (3 137,94€ / 60€) that one spare housekeeper was not requested.

On other hand, if the Hotel would not want to hire outsourced housekeepers (i.e., due to the lower productivity, more expensive than in-house workers), housekeeping manager needed to calculate how many housekeepers should get annually, considering 104 days off and 22 holidays, as well no personnel lacks. This means that housekeepers are out of the Hotel 34,52% of the year by ((104 days off + 22 holidays) / 365 annual days).

These calculations were developed with focus on the worst scenario – 70 rooms occupied because the Hotel has as sales policy to leave 5 rooms free to change some guests who complain or accept some walk-ins. Keeping this in my mind, and that each housekeeper cleans 12 rooms:  $70/12 = 5,8(3)$ , which means that are necessary 6 housekeepers to fulfil this occupancy. Therefore, the incremental formula is based on:

**(1 - Percentage of time worked per year) \* Number of housekeepers needed per day**

(=)  $(1 - (100\% - 34,52\%)) * 6 = 9,9$ , which approximately is *10 housekeepers needed per year*.

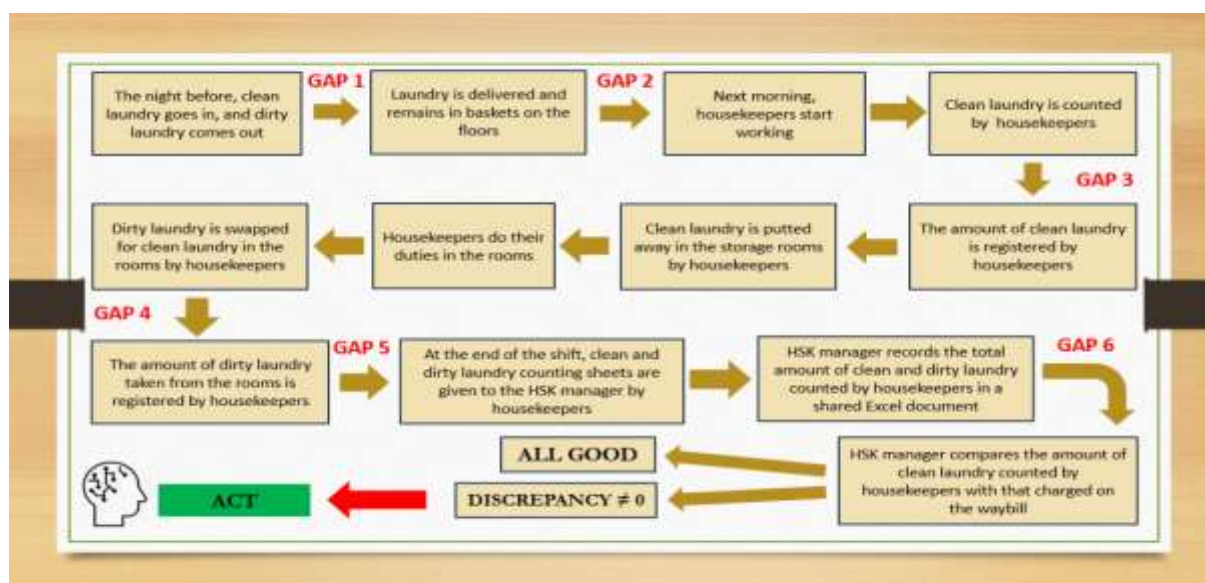
### **1.3. Laundry Control**

I sought to understand if the Hotel already was having little stock of laundry available, because during the 5 years open there was laundry that got spoiled and no more were bought to replace it, or if there were operational gaps linked to the laundry collection, delivery or counting.

In many workdays the quantity of pillow covers, and towels were not enough to change for new ones in all rooms, so the housekeeping manager had to wash them in the Hotel's washing machine suddenly. Then, the laundry inventory showed that it was necessary to order more quantity of some items.

Within 3 to 6 weeks, the new items had arrived, and part of the problem was solved, but it was not enough. In fact, it was necessary to improve the operability of the housekeeping jobs and laundry control, because both represent fundamental and highly expensive fields to the Hotel. On this way, I illustrated the external laundry's cycle digitally on PowerPoint to detect some possible gaps as following:

Figure 22 - Laundry flow



Namely, the gaps found out were:

GAP 1 – Unbalance in the quantity of laundry items in the various baskets, which caused the housekeepers to circulate on the floors in search of clean laundry to put in the rooms.

GAP 2 – Laundry was delivered to the Hotel every evening, but only it was counted at the day after in the morning. As there was little laundry, other housekeepers pick up laundry in the baskets when guests asked extra laundry, so it was not worth wasting time on something that was not real.

GAP 3 – Possible human error on counting or writing the number of pieces.

GAP 4 – Many times housekeepers did not fill in the Control of Laundry's sheet or filled it in randomly just for the housekeeping manager does not get upset with them.

GAP 5 – Possible loss of the Control of Laundry's sheets because housekeepers moved a lot into rooms and floors. As well as there was a lot of disorganized archives in the housekeeping manager office.

GAP 6 – The housekeeping manager did not insert the quantity of pieces counted on the computer or compared with the quantities on the waybill.

Based on the gaps above, it was decided to put some changes in trial such as:

- **Make an analysis of the activities and inherent cost of the laundry** – In the past, the controller had already done an ABC analysis of the 38 items sent to the external laundry. At the end of each month when he received the invoice from the external laundry, he only briefly analysed the 9 items, these being large pillowcases, king covers, king sheets, bath towels, face towels, robes, beside rugs, and tablecloths and napkins from the restaurant.

In the trial, only these 9 items, but at the end of August I realized that this sample did not even reach 70% of the laundry invoice expense. Thus, the ABC analysis needed to be reviewed, a stock management model which shows that not all items have the same degree of importance for the company. Based on this, it was possible to conclude that if there are items with different degrees of consumption, so different management policies should be adopted. In essence, it is a way of differentiating the "attention" and management resources for each category of items. In fact, this analysis is a method for classifying each group of items into three classes: class A, class B and class C. Respectively, *Class A* contains the highest sum of consumption/expenditure (80%), although the smallest number of articles, must deserve the greatest attention; *Class B* is an intermediate group which requires less surveillance. However, the items close to the border with class A and C should be monitored given the variations that can occur in their financial value; and *Class C* does not deserve such a complex and dedicated stock management given its insignificant financial value in the many articles that constitute it.

ABC analysis was an important leverage to adapt the counting process. Thus, when the laundry items arrived at the Hotel, the counting started to focus on a sample of 16 items, representing about 95% of the expenditure on the August and September invoices. This means that we included all items of importance A and some of importance B, as we had the installed capacity.

After the analysis and planning phasis, it was time to make some changes and put in practice:

1) Stop counting the dirty laundry:

Based on the laundry flow (Figure 22), it was possible to conclude that it was useless to continue counting the dirty laundry for two reasons: the laundry is clearly tagged so the laundry or its employees would gain nothing by stealing them, and its aim is not to put less pieces of laundry on the waybill because the more pieces are registered the more the Hotel will be charged.

It seems contradictory, but with fewer counting processes and registration papers it was possible to improve the laundry control since it is enough to monitor the clean laundry and waybills daily, and monthly invoices.

2) Hire a part-time worker to perform the two tasks that used to occupy the most housekeepers' time such as:

- Count the laundry

Every morning, the first housekeepers' task when went up to the floors was to count all the washed and ironed laundry that had been delivered at the night before. In parallel, they noted the quantities of each laundry item on the Laundry Control Sheet and putted it away in the storage room and on the housekeeping trolleys.

Also, on the Duty Sheets the housekeepers had to register all dirty laundry items taken off from each room. Thus, the housekeeping manager's aim was to join the quantities of dirty and cleaned

laundry items counted by all housekeepers to compare the waybill and analyse the consumption. In fact, the quantity of dirty laundry items sent to the external laundry should be the same that return to the Hotel on the following day.

Despite housekeepers spend over 30 minutes counting all dirty and cleaned laundry daily, there was not any control because the housekeeping manager just accumulated these paper sheets without analysing them. This is a problem because the Hotel only can claim discrepancies within 5 days. Otherwise, these counting processes were highly fallible as the Figure 22 shows.

- Distribute cleaning products and amenities to all the floors

Through the hiring of an additional employee, it was possible to solve the problem of access to cleaning products and amenities. Basically, housekeepers did not have access to the cleaning products and amenities, so whenever they needed to refill the containers or more amenities, they had to ask to the housekeeping manager or moving into the floors. This was synonymous of long waits, more stress and tiredness, and time losses every working day.

The truth is that all floors have a storage room which before was full of spare laundry. So, they were emptied and prepared with all materials that housekeepers need all the time. They do not need to worry about the stock of materials during the service because the part-time worker who counts the laundry also replenishes materials in these storage rooms. Housekeepers everyday can write their material needs on a document stuck on the inside of the door.

- 3) Agree with the supplier an earlier laundry delivery time, 6pm – 7pm

Before, laundry delivery and collection were very unpredictable as there was no timescale. This disturbed the work, so it was agreed with the external laundry owner that the timescale would be between 6pm and 7pm, and this has been adhered to. This is because the employee who counts the laundry items has a schedule between 6pm and 10pm.

Once the implementations above went well, consequently other improvements could be achieved.

#### **1.4. Better cleaning services**

Apart from the quantitative aspects such as costs, time and quantity of rooms and laundry, I also verified qualitative aspects based on a check list, which at the end of the day I transferred to a Microsoft Excel file. The check list was the same for all rooms.

Initially, the main sequence of 10 steps were 1) opening windows; 2) taking out the garbage; 3) removing used clothes from the bed; 4) removing used clothes from the bathroom; 5) applying cleaning products in the bathroom; 6) leaving cleaning products to act in the bathroom; 7) making the bed; 8) cleaning the bathroom; 9) cleaning the dust; 10) hoovering the room and bathroom. One of

the big advantages of the direct observation is easier to estimate the time spent on each phasis, identifying weaknesses of performance, and control the cleaning quality (Edghiem & Mouzughi, 2018).

So, I also could understand that housekeepers always made the same mistakes such as mixing the cloths on the various surfaces, not waiting for the products to act on the surfaces, washing the cups in the bathroom sink, not opening the room windows to enter fresh air, and forgetting various amenities, always for the same reason - the rush. According to Gundersen et al. (1996) this is a critical point because tangible aspects of the housekeeping department have a huge impact on the overall satisfaction.

They were rush all the time due to the lack of organisation and productivity, and incorrect allocation of rooms per housekeeping. Since the time was insufficient, housekeepers only worried about cleaning the rooms to not exceed 3pm. Basically, due to the omission of redundant tasks such as the double counting and storing of laundry and looking for the materials, the housekeepers now have time to i) clean 12 rooms more attentively and accurately; ii) clean the respective corridor; iii) organise storage spaces.; iv) order materials for the respective floor by writing; and v) prepare cleaning trolleys and products for the next day.

So, it is possible to infer that the productivity and service quality was improved. The increase of productivity was not reflected in more rooms per housekeeper but as a 5-star hotel, the main objective is not that one but give them more time to improve the quality of cleaning service in rooms and outside, avoiding complaints.

The cleaning service performance has a direct impact on the financial performance of the Hotel because every time there is a complaint, i.e., I found hair in the bathroom or objects from previous guests, the Hotel tends to offer one or more nights or assign a VIP menu, meaning no revenues or extra costs.

### **1.5. Reduced water consumption in the rooms**

While observing the cleaning of rooms I realised that one of the tasks where the housekeepers took the longest and most inelegant for guests come to the room and see was the washing of the coffee cups in the bathroom sink. This task also required the housekeepers to have an extra sponge to wash them and a cloth to dry them. So, the solution was to buy 200 coffee cups to rotate into kitchen, floors and rooms - the kitchen would wash the racks with the dirty cups at the end of each day, delivered by the housekeepers, and when they were washed, they would put them in a rack on each floor for the housekeepers to use the next day. This is a cycle.

Figure 23 - Impact on water consumption

	Months	Consumption (m3)	m3 Impact	Cost/m3	Total Cost	Difference	Cost Impact
Before	March	793	2850	1,8499 €	1 466,97 €	-	5 272,22 €
	April	607		1,8499 €	1 122,89 €	-344,08 €	
	May	723		1,8499 €	1 337,48 €	214,59 €	
	June	727		1,8499 €	1 344,88 €	7,40 €	
After	July	665	2584	1,8499 €	1 230,18 €	-114,69 €	4 780,14 €
	August	609		1,8499 €	1 126,59 €	-103,59 €	
	September	645		1,8499 €	1 193,19 €	66,60 €	
	October	665		1,8499 €	1 230,18 €	37,00 €	
	<b>Total</b>	<b>5434</b>	<b>-266</b>		<b>10 052,36 €</b>	<b>-237 €</b>	<b>-492,07 €</b>

### 1.6. Reduced electricity consumption of floors

The Corpo Santo Hotel strongly advocates sustainable practices governed by the Sustainable Development Goals (SDGs). Although it was not something planned, during the observation and analysis of the housekeeping tasks, I realised that there was a high unnecessary energy consumption on all floors:

Housekeepers switched on the lights in two or three storages per floor but did not turn off the lights when they did not leave the storage spaces, so the lights could remain on all day or even night. This meant a lot of unnecessary energy consumption, which due to the rising cost of energy became a critical issue for the Hotel.

As soon as I presented this reality to the COO and sensor lights as a solution, he instantly approved and asked to the head of maintenance to request two quotes for comparison and install them in August. Within two weeks all the storage spaces had sensor lights. After there was no movement, the lights took 30 seconds to turn off. According to the housekeepers, this implementation did not affect their work at all, they even had less worry and action of turning the lights on and off.

Therefore, 15 motion sensors were ordered at 17,59€ plus VAT, but only 10 were required for the implementation. For the installation, the maintenance employee needed 4 hours and this cost was calculated based on a salary of 1 000 euros. On this way, this update of technology required an investment of:

Figure 24 - Investment on light sensors

Item	Quantity	Cost	Cost Type
Ligth Sensor	10	175,9 €	Direct Material
Maintenance Worker	4 hours	25,0 €	Direct Labour
<b>Total Investment</b>		<b>200,9 €</b>	

In November it was concluded that the impact of this measure had been reflected in electricity consumption and monthly cost as follows:

Figure 25 - Impact on electricity consumption

	Months	Consumption (Kwh)	Kwh Impact	Cost/Kwh	Paid	Difference	Cost Impact	Occ	% Occ
Before	May	60791	189841	188,74 €	11 473,69 €	-	35 830,59 €	2014	90,15%
	June	60055		188,74 €	11 334,78 €	-138,91 €		2023	92,97%
	July	68995		188,74 €	13 022,12 €	1 687,34 €		2143	94,61%
After	August	59865	182989	188,74 €	11 298,92 €	-1 723,20 €	34 537,34 €	1518	80,06%
	September	63865		188,74 €	12 053,88 €	754,96 €		1654	96,44%
	October	59259		188,74 €	11 184,54 €	-869,34 €		1911	87,84%
	<b>Total</b>	<b>372830</b>	<b>-6852</b>		<b>70 367,93 €</b>	<b>-289 €</b>	<b>-1 293 €</b>	<b>11263</b>	

### 1.7. Paper dematerialisation

I could understand that the rooms' information that the housekeeping manager transmits to housekeepers depends on the information sent by the night auditor. Briefly, every morning around 7am all department managers, including housekeeping, receive an e-mail sent by the night auditor with the following reports attached:

- Residents' Report informs which guests and respective rooms are checked in the Hotel at that moment, being that some of them stay and others check out at that morning.
- Check Ins' Report only shows the new guests and rooms attributed to them at that day, as well as their special requests.
- Check Outs' Report shows all guests who check out the Hotel at that day

By chance, there is other additional information that housekeeping manager needs to pay attention to plan the working day such as early check ins, late check outs, no shows, and length of stay extension.

Basically before 8am, the housekeeping manager printed the reports above to get daily information about:

- How many rooms need to be cleaned.
- Which room numbers need to be cleaned.
- What is the status of each room: available, occupied or check out.

Available rooms were not a problem because almost always they were cleaned from the day before. However, other two room status, occupied and check out, must be clean. So, this information is fundamental because the tasks and level of cleaning differ among them.

Firstly, housekeeping manager printed several Duty Sheets, which had all room numbers of the corresponding floor. Then, according to the Residents' Report she marked with a ball pen the room numbers to be cleaned by each housekeeper, and respective rooms status. Later, housekeeping manager consults the Check ins' Report to point out the special requests made by new guests in the corresponding rooms.



The Check Outs' Report was only useful to double verify the check outs during the night, which the HOST PMS do not consider on Residents' Report.

After this, housekeeping manager delivered these Duty Sheets with a set of rooms to clean, as well as other two sheets named Control of Laundry and Consumption of Minibar.

Secondly, as already was presented, housekeepers used the Control of Laundry to take useless notes of quantities of dirty and clean laundry.

Thirdly, on other sheet named Consumption of Minibar, housekeepers filled up the number of drinks replaced per each room's minibar. The Hotel offer some free juice, water, and beer cans for guests in every room daily. Every evening this information was passed to the night auditor insert on the computer, and next day the controller would analyse.

This was synonymous of high use of A4 paper sheets, high level of paper archive and disorganisation, unnecessary time spend on printing the documents by the housekeeping manager, and unnecessary time spend on controlling the free consumption of minibar.

On this way, all A4 paper sheets printed before, around 20 sheets every day, were replaced by just one A6 plastic paper card which could be filled up with permanent pen by the housekeeping manager and housekeepers. This card is dual sided: the front serves to write the room status on the various room numbers and respective special orders by guests, and housekeepers can note the quantity of drinks consumed in the rooms' minibar (only the most expensive ones since the order can be consulted on Primavera software). At the end of the day, the important information on the cards is extracted to the computer and are wiped with alcohol. The idea is the reusability. This important information regards to the number of rooms cleaned by each housekeeper daily, because newly there is a monthly rate of 75 euros for more productive housekeepers – at least 12 rooms per day.

Figure 26 - Plastic Cards Impact

Paper Sheets		Plastic Cards	
Days	Average Consumption	Average Consumption	Δ Consumption
1	20	7	-13
365	7300	7	-7293
Days	Average Paper Cost	Average Cost	Δ Cost
1	0,04 €	7,00 €	6,96 €
365	14,60 €	7,00 €	-7,60 €
Days	Average Printing Cost	Average Printing Cost	Δ Cost
1	0,01 €	0,00 €	-0,01 €
365	3,65 €	0,00 €	-3,65 €
Days	Average Time Spent by HSK manager	Average Time Spent by HSK manager	Δ Time
1	00:05:00	00:00:00	-00:05:00
365	30:00:00	00:00:00	-30:00:00
Days	Average Time Cost by HSK manager	Average Time Cost by HSK manager	Δ Cost
1	1,42 €	0,00 €	-1,42 €
365	518,30 €	0,00 €	-518,30 €
Days	Average Time Spent by housekeepers	Average Time Spent by housekeepers	Δ Time
1	01:00:00	00:10:00	-00:50:00
365	365:00:00	60:00:00	-305:00:00
Days	Average Time Cost by housekeepers	Average Time Cost by housekeepers	Δ Cost
1	5,00 €	0,83 €	-4,17 €
365	1 825,00 €	300,00 €	-1 525,00 €
Annual Physical Paper Impact			
		-7293	-99,9%
Annual Time Impact			
		-335:00:00	-84,8%
Annual Monetary Impact			
		-2 054,6 €	-52,1%

As it is possible to verify above, the main advantages of this measure are physical, time, and monetary reduction regarding to the optimization of resources due to the increased productivity and simplification of the process. Now, housekeeping manager does not have to spend between 5 to 10 minutes every day, the probability of mistakes is reduced, the use of the printer is drastically reduced, which reflects in lower printer wear and tear, and cartridge consumption, and more space to store other materials more important than useless paper archive. Additionally, these cards are much easier to housekeepers fill up because unnecessary information was taken off, resulting in less time wasted – before each housekeepers took 10 minutes each on walking to pick up the dossier and filling in.

### 1.8. Standardisation

Identical to Aguilar-Escobar et al. (2021) case study, this Hotel works with a fixed housekeepers assigned to each floor since it allows to control and assess the condition and quality of the rooms easier. Thus, housekeepers achieve greater work efficiency because they know the status of the rooms

on her floor, and that increases the level of involvement and commitment to work well done. On this way, housekeeping can responsible them positively or negatively easier.

Due to holidays or day offs, housekeepers need to swap the floors, this means that they occasionally can clean room in different floors. So, each time that they move to other floors they did not know where the cleaning products or laundry were there because each housekeeper tidied up the things on her way. This allows me to understand that would be necessary *standardisation*. On this way, all door of the storage rooms and racks were identified with labels on the same way. This problem was quickly solved. Even the part-time housekeeper or outsourced housekeepers can easily store the laundry on the right shelves position.

### **1.9. Clean and inspected room by telephone**

As it is normal in a 5-star hotel with high standards of service and cleanliness, the housekeepers clean the rooms and then the inspector or executive floor maid inspects the rooms to see if the cleaning has been done well and nothing is missing before the guests enter. In the case of the Corpo Santo Hotel there is no inspector or executive floor maid, so it is the housekeeping manager who performs this function.

As we know the Hotel has 75 rooms, on average people stay for 3/4 days, meaning that every day 20 to 30 rooms are occupied again. The housekeeping manager wasted a lot of time walking around the floors asking the cleaners which rooms were already cleaned and as this was very tiring, she waited that the rooms were almost all cleaned by 1:30pm to 3pm, as 3pm is check-in time.

This way of working had several disadvantages, such as:

- Accumulation of people in the reception and lobby.
- Accumulation of guests' luggage in the storage room and office while guests were walking around.
- Receptionists did not know how many and which rooms were already cleaned to give feedback to guests, so to get it they had to call the housekeeping manager,
- Lost opportunity of selling early check-in and
- Loss of the WOW effect – Guest: “Oh I came earlier but my room is already ready!”.

Through dialogue with employees, I realized that we had a feature in the room telephones that could solve this gap. The process is based on:

When housekeepers finish cleaning a checked-out room, they enter the following code into the room telephone: 7 2018 1. This makes that rooms are shown up as "Clean" on HOST PMS, allowing to reception and housekeeping manager have access to this. By using this, both intervenient know which rooms are getting clean at the time. This allows to the baggage handlers take the luggage to the rooms and the housekeeping manager goes and supervises the rooms already in the system and put the code

7 2018 5 which records them as “Inspected” on Host PMS. So, receptionists can sell early-check ins or simply inform the guests that rooms are ready before 3pm, to exceed their expectations – the WOW effect. This also reduces the traffic in the lobby and reception area.

This just comes to support previous literature by Gundersen et al. (1996) which observed an important cooperative relationship regarding to guests wishes, cleaning timings and rooms availability between housekeeping and reception departments.

## **2. Improvement proposals on operational activities - Reception**

Identically to Jones et al. (1999), I concluded that the use of technology is very useful in the reception procedures, but without forget the interpersonal skills.

Based on items studies by Baum and Odgers (2001), this reception has problems related to response times and quality by e-mail, standard house procedures, 100% of accurate billing, and guest follow-up. Therefore, I verified the following opportunities for improvement:

### **2.1. Increased efficiency and quality of response to e-mails**

Operationally, each shift has two receptionists operating on two computers. Mainly, each computer serves to make check-ins and check-outs, verify bookings, assign rooms, receive, and reply to guest e-mails and make SPA appointments.

Regarding to the receiving and sending guest emails, the reception uses two Outlook accounts, namely [reception@corposantohotel.com](mailto:reception@corposantohotel.com) and [info@corposantohotel.com](mailto:info@corposantohotel.com). This meant that the two receptionists on the shift did not have access to the same e-mails, resulting in them moving around behind the counter or forward e-mails between computers. Today in hotels reception desk is performed with help of computer technology (Galicic & Ivanovic, 2006).

Generally, the receptionist who used the computer on the side of the snack shelves had more workflow of check ins and outs, and questions from guests. However, it was also this computer that received most of the e-mails from guests, which had to be answered quickly. So, either the busiest receptionist would be late in answering the emails, or the e-mails would be forwarded to the Outlook account associated with the other computer and the guest would get an answer via another Outlook account, which made no sense to me.

With all these inefficiencies, which put the quality of service at risk, and since no one has given me reasons why there are two Outlook accounts. I have implemented only one Outlook account associated with [reception@corposantohotel.com](mailto:reception@corposantohotel.com). Today, receptionists have access to the same e-mails simultaneously, meaning that any of them can answer, and can dedicate more attention to face-to-face guests since receptionists do not waste forwarding e-mails anymore.

## 2.2. E-mail response templates

In parallel, I also realised that there were not e-mails response templates, so each receptionist wrote all text manually, resulting in a huge waste of time, and many spelling and formatting errors. The solution was to create specific templates on Microsoft Word in order to promote the standardization and quickness of e-mails response and save them on Outlook.

The pre-setting of the most used templates as availability request, booking confirmation and booking cancellation brought a more organised and aesthetic e-mail presentation, shorter response time for guests, more free time for receptionists to do other tasks, fewer typing errors, and easier for newer receptionists to learn the Hotel's processes and standards.

Gundersen et al. (1996) when studied four hotels and concluded that intangible aspects of the reception department are extremely important on the overall satisfaction. So, it follows the impact of this measure:

Figure 27 - Impacts of E-mail Response Templates

30 e-mails/day = 10 950 e-mails/year	E-mail without template (no interruptions)	Templates (no interruptions)	Daily E-mail Response	Daily E-mail Response	Annually E-mail Response	Annually E-mail Response	Annually Reduction
<b>E-mail Response Time (minutes/hours)</b>	7 minutes	1,5 minutes	3,5 hours	45 minutes	1 277,5 hours	273,75 hours	- 1 003,75 hours
<b>Cost Associated (euros)</b>	0,58 €	0,13 €	2,03 €	0,10 €	6 351 €	1 423,50 €	- 4 927,5 €

Average Receptionist Salary = 900€

## 2.3. Updates of the check lists for the morning shift, afternoon shift and night auditor

In the three shifts of the day (morning, afternoon, and night) there are activities in common and distinct. During and my research I realised that some tasks were not done due to forgetfulness, so the checklists were restructured. So recently, during each shift the receptionists must write down the name of who performed each task, as well as take a photo of the sheet and send it via WhatsApp to the room division manager. Thus, in cases of errors in a particular task it was easier to responsible the receptionist.

## 2.4. Automated weekly HOST PMS reports

I detected that the Hotel had opened accounts waiting for payment in the HOST PMS system waiting for payment from the beginning. The sum of them exceeded 100 thousand euros. As receptionists and room division manager had not solved this problem, it was proposed that the Open Accounts Report starts being generated every Thursday to be discussed at the managers' meeting.

Truly, technology programmes as HOST PMS allow that reception department had improved the quality of managing and accounting of incomes and out-goings made by the various departments (Galicic & Ivanovic, 2006).

At this moment, Hotel still needs to collect 30 thousand euros.

### 3. Improvement proposal on management accounting – Cost Center Analysis

Importantly, the hotel financial performance largely depends on its ability to *optimize operational resources* (Sainaghi, 2010). For this reason, in addition to an analysis focused on the management control, an evaluation work was carried out on the main responsibility centres with the aim of identifying improvements.

According to the Figure 8, the organization is structured by department. Some of them are able to generate revenues since are associated to the sales activity, while other support costs but fundamental for the Hotel render all its products and services. Thus, the division into departments brings the following advantages: i) decentralisation of power and decision-making; ii) greater levels of autonomy and responsibility of the members of each department; iii) association of a certain type of tasks to a certain department; iv) managers supervise smaller teams; v) better analysis of the gains and errors of the departments; vi) greater career possibilities.

Figure 28 - Revenue and Cost centres

Revenue centres	Cost centres
Rooms Division	Direction
Restaurant	Guest Service
Bar	Revenue
Spa (outsourcing)	Kitchen
	Housekeeping
	Maintenance
	Controlling
	People & Culture

### 4. Improvement proposal on management accounting – Balanced Scorecard

According to Porter (2008), the strategical option and consequent level of profitability are explained by two reasons: the first one is the *structure* of industry sector, which in this case is the Portuguese hotel industry, and the second one regards to the *positioning* that each hotel occupies there.

All companies, and hotels are no exception, compete with others to catch value, so they need to obtain a sustainable competitive advantage which can be achieved by *differentiation*, or *cost*, or *both*. The choice must be clear (Porter, 2000). Denton and White's case study (2000) was used to analyse the use of balanced scorecard as a strategic control in the hotel sector. It was concluded that hotels which operate in a high level of competition rather to use BSC, usually implemented at the same time as benchmarking. Other studies such as Phillips and Louvieris (2005), and Atkinson and Brown (2011) highlighted the use of the return on investment in the BSC as a financial measure.

This study, despite BSC help shareholders to analyse both strategic and operational costs-benefits, and most of the improvements presented had regarded to the operational cost-benefit analyses, also considers the existent balanced scorecard of the Corpo Santo Hotel and improves it. At this point in

the reading, the profile of the Hotel is already known in terms of the Values and Culture, staff characteristics, guest segments, and products and services offered is easier to develop the strategy. Additionally, Baldrige Foundation (2019) refers the importance of understanding the competitors and how they operate, market changes, innovation opportunities to compare information.

The next steps are to understand the advantages and main challenges of the chosen strategy, and lastly, understand how to implement, evaluate, and continuously analyse the performance of processes and resources.

Since not all departments were analysed, and the Hotel already has its own profile, market positioning, and very well consolidated strategy, this does not focus on a corporate balanced scorecard but rather on an operational balanced scorecard targeted at the housekeeping and reception departments. The indicators chosen match with several objectives according to the four perspectives. In turn, indicators have different weights in the performance of the section, being more or less significant, which led to the development of a weighting scale totalling 100 points. In this case, the scale varies between 1 (little important) and 10 (priority).

Having understood the COO's objectives, I outlined specific KPIs and presented them to him. The fundamental objective of this BSC is to:

- Achieve the short-, medium- and long-term objectives.
- Decentralise the management control system.
- The department manager is held accountable, and this holds the team accountable

However, an essential part of making it work is the *monitoring of the control systems* and follow-up of these areas by the *controller*, since this is how failures in the operations can be identified and corrected. The implementations and monitoring of these implementations were often done by me, but it is the controller who should do this together with the managers. As well as they can modify the system and review methodologies due to new challenges or goals. The approach to the data presented in the BSC should be monthly and not cumulative.

Perspective	Objectives	Indicators	Weighting Factor	Unit of Measure	KPIs			
					Year N	Real N	Year N+1	Year N+2
Financial	Increase in Turnover Profitability	Amount of Walk Ins Sold	2	Euros				
		Amount of Refunds due to Complaints	6	Euros				
		Amount of Extra Hours	4	Euros				
		Staff Costs	7	Euros				
Customer	Increase customer loyalty	Turnover per Existing Guest	4	Unit				
	Increase in overall customer satisfaction	Service Index on TripAdvisor	10	Unit				
		Service Index on Booking.com	10	Unit				
		Number of Comments with Reference to the Reception	7	Unit				
Internal Processes	Decrease of unnecessary procedures	Response Time to Guests by E-mail	9	Days				
		Average Payment Charging Time	6	Days				
		Average Check In Time	2	Minutes				
	Improve technical efficiency	Number of Lacks Identified	4	Unit				
	Increase service quality	Number of Complaints <i>versus</i> Rooms Sold	6	Percentage				
		Number of Negative Reviews	9	Unit				
		Number of Early Check Ins Sold	2	Unit				
Growth & Development	Maximise the level of satisfaction of human resources	Satisfaction Index	3	Percentage				
		Number of Extra Hours	3	Unit				
		Average Contract Time	2	Unit				
	Increase innovation in processes and services	Number of Training Hours	2	Unit				
		Number of Cross-Training Hours	2	Unit				

Figure 29 - Operational BSC in reception



Perspective	Objectives	Indicators	Weighting Factor	Unit of Measure	KPIs			
					Year N	Real N	Year N+1	Year N+2
Financial	Increase in turnover profitability	Average Energy Cost per Guest	7	Euros				
		Average Water Cost per Guest	7	Euros				
		Amount of Outsourcing	7	Euros				
		Laundry Cost per Room	7	Euros				
		Personnel Costs	8	Euros				
		Amenities Cost per Guest	6	Euros				
Customer	Increase in overall customer satisfaction rate	Satisfaction Index with Cleanliness on TripAdvisor	10	Unit				
		Satisfaction Index with Cleanliness on Booking.com	10	Unit				
Internal Processes	Improve technical efficiency	Average Number of Rooms Cleaned by Housekeepers	6	Unit				
		Number of Early Check Ins Sold	3	Unit				
	Increase service quality	Number of Cleaning Complaints versus Number of Guests	9	Percentage				
		Number of Negative Reviews	9	Unit				
Growth & Development	Maximise the level of satisfaction of human resources	Satisfaction Index	4	Percentage				
		Number of Outsourced to Hotel Staff	3	Unit				
	Increase innovation in processes and services	Number of Training Hours	2	Unit				
		Number of Cross-Training Hours	2	Unit				

Figure 30 - Operational BSC in housekeeping

As the activity runs and produces results, the controller compares them to the goals set. It is this comparison that enables the Hotel managers to know whether these departments meet, exceed, or fail their objectives, according to:

*Figure 31 - Evaluation scale*

Metrics	Scale	Colour
Exceeds a lot	> 131%	Green
Exceeds	111% > < 130%	Light Green
Fulfills	91% > < 110%	Yellow
Not fulfills	71% > < 90%	Orange
Insufficient	< 70%	Red

The colours are intended to make it more practical for managers locate the indicators with the most problematic values. For example, the budget for total sales related to accommodation for November was 100 000 (one hundred thousand) euros, and at the end of November the reached was 75 000 (seventy-five thousand) euros, so the 75% value will appear, which symbolises the orange colour. After identification, the manager should identify the source of the problem taking into account the weighting factor, always prioritising the unsatisfactory indicators with the highest weighting.

## 5. Key Performance Indicators at Corpo Santo Lisbon Historical Hotel

As on recent papers (Abdelrazaq et al., 2021) the importance of management and operational practices in a 5-star hotel has been determined.

Since that, internationally and nationally, the hospitality increasingly recognises the importance of balancing financial, environmental, and social needs (Wyngaard & Lange, 2013), this sub-chapter is dedicated to determining the impact of management practices in sustainability and guest satisfaction at Corpo Santo Hotel. Unconsciously, our “green” practices have a positive return in terms of reducing costs and getting a good reputation.

On this way, hotels have increasingly adopted the concept of sustainability, as well as Corpo Santo Lisbon Historical Hotel (Vila et al., 2010). Last year, the sustainability advocate in the company has focused on developing measures to comply with the Sustainable Development Goals (SDGs).

This means that despite the direct financial, operational and HR development benefits, especially through the improvements of productivity and efficiency, it was possible to add value to some of these SDGs, using KPIs already expressed on the institutional website:

Figure 32 - Sustainable Development Goals



### 5.1. Implementation of the recycling practice by housekeepers

As already mentioned, once we have balanced the number of rooms per housekeeper and continuous improvement of processes, today it is possible to go to the next level - developing other useful tasks for guest satisfaction and hotel image without compromising the room cleaning service.

Corpo Santo Hotel has been attentive to recent research that have recognized the importance of sustainability strategies, as well as the use of the balanced scorecard supports that (Fatima & Elbanna, 2020).

In sum, all implementations regarding to the management of electricity and water consumption, and solid waste treatment follow the idea of Wyngaard and Lange (2013) which the application of sustainable practices can lead to a reduction of direct costs.

### 5.2. Customer satisfaction KPIs

From here, as Seetharaman et al. (2016) have shown, it is fundamental to measure operational performance not only on accounting or financial perspectives, but also non-accounting and non-financial perspectives. So, after all operational changes, the customer satisfaction impact was also measured through a platform which aggregates all online feedback by Corpo Santo Hotel guests – ReviewPro. Additionally, the indicators evaluated were: The general, service and cleaning rating on Expedia, Booking.com and TripAdvisor.

Culturally and strategically, the Hotel recognizes the positive reviews and best ranking as key motivations for guests want to visit it. Hence, there is a back-office employee who only reply to online comments. When comments or evaluation is not positive, he reports to all managers and one of them contact these guests to obtain feedback and fix the situation.

The items considered on each online platform varies but generally they are related to *service* (i.e., staff), *cleanliness*, value, location, comfort, eco-friendliness, and facilities (i.e., rooms and amenities).

Evaluation	Expedia Rate	Booking.com Rate	TripAdvisor Rate
Cleanliness	9,7 out 10	9,7 out 10	5,0 out 5
Service	9,7 out 10	9,8 out 10	5,0 out 5
<b>General</b>	<b>9,6</b>	<b>9,5</b>	<b>5</b>

Figure 33 - Online Cleanliness and Service Rates

Positively, both strongest items related to housekeeping and reception departments are above the general rate. In case for TripAdvisor, all items are rated on 5,0 points – the maximum.



Figure 34 - TripAdvisor Items



Figure 35 - Expedia Items



Figure 36 - Booking.com Items

Online Feedback on OTAs by ReviewPro			2019					
			Items	July	August	September	October	
			Service	99,0%	98,9%	98,2%	98,3%	
			Room	97,3%	97,4%	97,1%	96,1%	
			Location	99,7%	99,2%	98,8%	98,0%	
			Value	96,8%	94,9%	93,7%	93,8%	
			Cleanliness	98,4%	98,9%	98,3%	98,2%	
			Global Review Index	94,8%	95,6	96,3	96,4	
			Reviews	180	172	213	211	
		2022						
Items	March	April	May	June	July	August	September	October
Service	97,8%	98,3%	97,9%	98,2%	95,6%	96,7%	98,7%	95,1%
Room	94,2%	98,4%	96,1%	96,2%	94,3%	95,9%	97,3%	95,7%
Location	96,7%	98,3%	95,4%	97,3%	96,4%	96,3%	96,8%	94,7%
Value	94,2%	94,2%	90,9%	89,6%	90,8%	91,7%	91,0%	88,0%
Cleanliness	97,3%	98,6%	96,7%	96,8%	96,2%	95,9%	96,3%	93,8%
Global Review Index	96,0%	97,5%	96,4%	96,8%	95,2%	96,8%	95,9%	92,9%
Reviews	227	194	191	192	177	166	145	150

Figure 37 - Online feedback overview

These new implementations have been well accepted by staff and guests, as we have not lowered our rankings. It was not possible to improve some items, namely cleanliness and service, due to complaints about stained carpets in the rooms and corridors and the inexperience of the new team of receptionists. Nevertheless, all target goals were met.

## Chapter IV – Conclusions

Tourism, particularly the hotel sector, lacks management control methodologies in view of the high competitiveness and the need for sustainability. However, the increasing use of management, accounting, and technological techniques has enabled resource optimisation and performance assessment methods.

The pressure to be profitable in a hotel like this after a pandemic need to be conducted in a way that does not fall into the mistake of putting the quality of service or products at risk, as the strategy is governed by differentiation. However, it is mandatory that costs are reduced, but in internal processes that do not add value to guests.

On this way, like Atkinson and Brown (2011) who argued that financial performance in the hospitality industry depends much more on demanding financial targets and operational control than on future strategy, this in-company project focuses on the data collection about various daily activities, improvements implementation, processes control, KPIs development, and results analysis. Since that beginning that the objectives were to solve problems in housekeeping and reception departments, reduce the ineffectiveness and inefficiency by increased quality and decreased costs, and improve the Corpo Santo Lisbon Historical Hotel's operability and profitability.

The KPIs developed have shown to be strengths for planning and controlling through supporting information, creating transparency, and supporting management (Badawy et al., 2016)

In these 3 or 4 months of tests, in terms of costs, it can be verified that the Hotel has already been able to save more than 5 000 €. It is estimated that the drastic reduction in outsourcing requests, energy consumption, water and laundry, and the increase in productivity may mean a reduction in variable costs of around 100 000 euros per year.

Therefore, it was possible to achieve positive impacts regarding to operational, financial, and even sustainable impacts. In this case sustainability was not an objective, but a positive consequence which was detected during the project.

After the creation of a system of planning, organisation, and control of activities it was possible to develop a balanced scorecard, being able to explain departmental performance of management accounting practices. The application of the BSC in this activity sector is still scarce in most small structures unlike the large international hotel chains as some published studies show (Huckestein & Duboff, 1999; Denton & White, 2000).

Lastly, I am very proud with the work developed because despite not having any formal training for measurement of cleaning work or reception, I developed a trust approach to the team and could explore and implement several management-related measures. This research is fully representative because all workers were under supervision, including managers.

Nowadays, the COO or even the board can look these balanced scorecards and perceive the situation in the departments. The Hotel clearly recognised the importance of BSC in both operational and strategic levels.

### **Research Limitations**

Over these months of study, I perceived that in hospitality still there are sceptical managers of change and technology, so can be a barrier to the processing of integrative and real-time information, allowing query-based solution. As well as high turnover and outsourcing can be difficult to communicate the company's Culture and implement consistent processes and quicker.

Since there is no single indicator able to explain the variety of services rendered by the Hotel, other balanced scorecards will be developed for each department and a corporate one in the future.

### **Opportunities for further research**

As a priority, the Hotel's ambition is i) to continue to develop this job of analysis and improvement proposal in the remaining departments, ii) to give more value to on-the-job and cross-training, iii) continuous improvement of processes (i.e., investment on RFID laundry's tags which do not need counting, internal communication and reporting between staff on apps such as iAuditor and Setmore), and iv) better sustainable practices that provide increased profitability (i.e., sale of paper, plastic and glass to other businesses). In the medium- and long-term, these processes may be extended to other hotels in the Group that are already being built nationally and internationally.

Ultimately, this Group is already putting in practice and hopes to continue expanding the brand in a sustainable way, i.e., ensuring that existing hotels (assets) remunerate them themselves and generate enough returns to reinvest in more hotels.

## References

- Abdel-Kader, M., & Luther, R. (2008). The impact of firm characteristics on management accounting practices: A UK-based empirical analysis. *The British Accounting Review*, 2-27.
- Abdelrazaq, H., Aljaffal, T., Daruwalla, P., & Wardle, K. (2021). Business Sustainability Trough Environmental and Operational Management in Five Star Hotel in Amman, Jordan. *Journal of Accounting, Business and Management*, 31-51.
- Aguilar-Escobar, V., Garrido-Vega, P., Julián, M.-M., & Camuñez-Ruiz, J. A. (2021). Hotel Room Cleaning: Time Study and Analysis of Influential Variables in a Spanish Hotel. *Journal of Industrial Engineering and Management*, 645-660.
- Akbaba, A. (2005). Measuring service quality in the hotel industry: A study in a business hotel in Turkey. *International Journal of Hospitality Management*, 170-192.
- Akter, M., Hoque, M., & Chandra, N. (2021). Factors Influencing the Choice of Sophisticated Management Accounting Practices - Exploratory Evidence from An Emerging Market. *Emerging Markets Journal*, 2-12.
- Altin, M., Mehmet, K., Yu, X., & Riasi, A. (2018). Performance measurement and management research in the hospitality and tourism industry. *International Journal of Contemporary Hospitality Management*, 1172-1189.
- Anthony, R., & Govindarajan. (2007). *Management Control Systems*. England: Mccgraw-Hill Education.
- Ariffin, A., & Maghzi, A. (2012). A preliminary study on customer expectations of hotel hospitality: Influences of personal and hotel factors. *International Journal of Hospitality Management*, 191-198.
- Armstrong, C., Guay, W., & Weber, J. (2010). The role of information and financial reporting in corporate governance and debt contracting. *Journal of Accounting and Economics*, 179-234.
- Asatiani, A., Apte, U., Penttinen, E., Ronkko, M., & Saarinen, T. (2019). Impact of accounting process characteristics on accounting outsourcing - Comparison of users and non-users of cloud-based accounting information systems. *International Journal of Accounting Information Systems*, 2-18.
- Atkinson, H., & Brown, J. (2011). Rethinking performance measures: Assessing progress in UK hotels. *International Journal of Contemporary Hospitality Management*, 128-135.
- Bagdan, P. (2019). *Guest Service in Hospitality Industry*. Dubuque, USA: Kendall Hunt publishing company.
- Baldrige Foundation. (2019). *Baldrige Excellence Framework - Proven leadership and management practices for high performance*. United States.



- Banker, R., Potter, G., & Dhinu, S. (2000). An Empirical Investigation of an Incentive Plan That Includes Nonfinancial Performance Measures. *THE ACCOUNTING REVIEW*, 65-92.
- Baum, T., & Odgers, P. (2001). Benchmarking Best Practice in Hotel Front Office. *Journal of Quality Assurance in Hospitality & Tourism*, 93-109.
- Bettinazzi, E., & Feldman, E. (2021). Stakeholder Orientation and Diversity Activity. *Academy of Management Journal*, 1078-1096.
- Beyer, A., Cohen, D., Lys, T., & Walther, B. (2010). The financial reporting environment: Review of the recent literature. *Journal of Accounting and Economics*, 296-343.
- Borges, A., & Rodrigues, J. (2007). *Contabilidade e Finanças para a Gestão*. Lisboa: Áreas Editora.
- Brignall, T., Fitzgerald, L., Johnston, R., & Silvestro, R. (1991). Performance Measurement in Service Businesses. *Management Accounting*, 34-36.
- Burchell, S. C., Hopwood, A., Hughes, J., & Nahapiet, J. (1980). The roles of accounting in organizations and society. *Accounting, Organizations and Society*, 5-27.
- Bushman, R., & Smith, A. (2003). Transparency, Financial Accounting Information, and Corporate Governance. *FRBNY Economic Policy Review*, 65-87.
- Cadez, S., & Guilding, C. (2008). An exploratory investigation of an integrated contingency model of strategic management accounting. *Accounting, Organizations and Society*, 836-863.
- Campos, F., Santos, L. L., Gomes, C., & Cardoso, L. (2022). Management Accounting Practices in the Hospitality Industry: A Systematic Review and Critical Approach. *MDPI - Publisher of Open Access Journals*, 243-264.
- Carrasqueira, H. (2021). *Hotelaria Internacional*. Lisboa: CONJUNTURA ACTUAL EDITORA.
- Chandler, A. (1962). Chapters in the History of the Industrial Enterprise. Em A. Chandler, *Strategy and structure* (pp. 800-803). Cambridge: Cambridge: M.I.T. Press.
- Chen, W. J., & Chen, M. L. (2014). Factors Affecting the Hotel's Service Quality: Relationship Marketing and Corporate Image. *Journal of Hospitality Marketing & Management*, 77-96.
- Chenhall, R., & Smith, K. (1998). Adoption and benefits of management accounting practices: an Australian study. *Management Accounting Research*, 1-19.
- Christou, E. (2013). Revisiting Competencies for Hospitality Management: Contemporary Views of the Stakeholders. *Journal of Hospitality & Tourism Education*, 25-32.
- Collier, P., & Gregory, A. (1996). *Management Accounting in Hotel Groups (CIMA Research)*. London: Chartered Institute of Management Accountants (CIMA).
- Collier, P., & Gregory, A. (31 de December de 1995). Management Accounting in Hotel Groups. *CIMA*, pp. 1-104.
- Cunha, L. (2010). Fluxos & Riscos. *Desenvolvimento do Turismo em Portugal: Os Primórdios*, pp. 127-149.

- Dalci, I., Tanis, V., & Kosan, L. (2010). Customer profitability analysis with time-driven activity-based costing. A case study in a hotel. *International Journal of Contemporary Hospitality Management*, 609-637.
- Damonte, T., Rompf, P., Bahl, R., & Domke, D. (1997). Brand Affiliation and Property Size Effects on Measures of Performance in Lodging Properties. *Hospitality Research Journal*, 1-16.
- Daniel, A. (2010). Caracterização do Setor Turístico em Portugal. *Revista de Estudos Politécnicos*, 255-276.
- Denton, G., & White, B. (2000). Implementing a Balanced Scorecard Approach to Managing Hotel Operations: The Case of White Lodging Services. *Quarterly, Cornell Hospitality*, 94-107.
- Downie, N. (1997). The Use of Accounting Information in Hotel Marketing Decisions. *International Journal of Hospitality Management*, 305-312.
- Drury, C. (2018). *Management and Cost Accounting*. United Kingdom: Cengage Learning EMEA.
- Edghiem, F., & Mouzughi, Y. (2018). Knowledge-advanced innovative behaviour: A hospitality service perspective. *International Journal of Contemporary Hospitality Management*, 197-216.
- Enz, C., & Potter, G. (1998). The Impacts of Variety on the Costs and profits of a Hotel Chain's Properties. *Journal of Hospitality & Tourism Research*, 57-142.
- Espino-Rodríguez, T., & Ramírez-Fierro, J. C. (2017). Factors determining hotel activity outsourcing. An approach based on competitive advantage. *International Journal of Contemporary Hospitality Management*, 2006-2036.
- Fatima, T., & Elbanna, S. (2020). Balanced Scorecard in the hospitality and tourism industry: Past, present and futures. *International Journal of Hospitality Management*, 2-18.
- Fullerton, R., & McWatters, C. (2002). The role of performance measures and incentive systems in relation to the degree of JIT implementation. *Accounting, Organizations and Society*, 711-735.
- Galicic, V., & Ivanovic, S. (2006). Computerization of reception desk business in hotel. *Tourism and Hospitality Management*, 111-122.
- Gautreau, A., & Kleiner, B. (2001). Recent Trends in Performance Measurement Systems - The Balanced Scorecard Approach. *The Service Industries Journal*, 153-156.
- Ghobadiana, A., Speller, S., & Jones, M. (1994). Service Quality - Concepts and Models. *International Journal of Quality & Reliability Management*, 43-66.
- Giguère, P. (1 de April de 2006). Improving the cost accounting advantage. *CMA Management*, pp. 15-17.
- Gomes, C., Arroteia, N., & Santos, L. (2011). Management accounting in Portuguese hotel enterprises: the influence of organizational and cultural factors. *Readings Book of Thirteenth Annual International Conference GBATA*, (pp. 1-8). Istanbul, Turkey.

- Guliyeva, L. (2020). The Influence of Financial Accounting and Reporting on the Management of a Business Organization and A Case Study. *International Journal of Management & Development*, 136-143.
- Gundersen, M. G., Heide, M., & Olsson, U. H. (1996). Hotel guest satisfaction among business travelers: What Are the Important Factors? *Cornell Hotel and Restaurant Administration Quarterly*, 72-81.
- Guttman, I. (2013). Discussion of On the Stewardship and Valuation Implication of Accrual Accounting Systems. *Journal of Accounting Research*, 335-347.
- Hadiyanto, A., Puspitasari, E., & Ghani, E. (2018). The effect of accounting methods on financial reporting quality. *International Journal of Law and Management*, 1401-1410.
- Hanks, R., Cross, R., & Noland, P. (August de 2002). Cornell Hotel and Restaurant Administration Quarterly. *Discounting in the Hotel Industry: A New Approach*, pp. 94-103.
- Harris, P. (1995). A Development Strategy for the Hospitality Operations Management Curriculum. *International Journal of Contemporary Hospitality Management*, 29-32.
- Harris, P. (1999). *Profit Planning*. Oxford: Butterworth - Heinemann.
- Harris, P. (2006). The profit planning framework: applying marginal accounting techniques to hospitality services. Em P. Harris, & M. Mongiello, *Accounting and Financial Management* (pp. 137-150). Oxford: Butterworth-Heinemann.
- Harris, P., & Brown, J. (1998). Reserach and Development in Hospitality Accounting and Financial Management. *International Journal of Hospitality Management*, 161-181.
- Hemsworth, K. P. (2019). *A multi-participative competency model for the hotel management industry stakeholders*. Lisboa: ISCTE.
- Hesford, J., & Potter, G. (2010). Accounting Research in the Cornell Quarterly: A Review with Suggestions for Future Research. *Cornell Hospitality Quarterly: SAGE Journals*, 502-512.
- Holmstrom, B. (1979). Moral hazard observability. *The Bell Journal of Economics*, 74-91.
- Homma, S., & Hu, J.-L. (2012). Analyzing Japanese hotel efficiency. *Tourism and Hospitality Research*, 155-167.
- Hsieh, Y. H., & Chuang, I. C. (2020). Evaluation of key factors for service experience. A comparison of tourism factories and international tourism hotels. *Tourism Economics*, 404-436.
- Huerta-Muñoz, D., Ríos-Mercado-Roger, & Ruiz, R. (2017). An iterated greedy heuristic for a market segmentation problem with multiple attributes. *European Journal of Operational Research*, 75-87.
- IFAC. (1998). International Management Accounting Practice Statement: Management Accounting Concepts. *Financial and Management Accounting Committee*, (pp. 82-100). New York.

- Israeli, A. (2002). Star rating and corporate affiliation: their influence on room price and performance of hotels in Israel. *International Journal of Hospitality Management*, 405-424.
- Jones, E., Dainty, G., & Botteril, D. (1999). *Wales, Use of Technology by Tourism Operators in*. Cardiff: Interim Report.
- Jones, T. (2008). Improving hotel budgetary practice—A positive theory model. *International Journal of Hospitality Management*, 529-540.
- Jordan, H., Carvalho das Neves, J., & Azevedo Rodrigues, J. (2015). *O Controlo de Gestão ao serviço da estratégia e dos gestores*. Lisboa: Áreas Editora, SA.
- Jorgensen, B., & Messner, M. (2010). Accounting and strategising: A case study from new product development. *Accounting, Organizations and Society*, 184-204.
- Kala, D., & Bagri, S. (2013). Applicability of Balanced Scorecard in Hotels. *Journal of Tourism*, 78-87.
- Kandampully, J., Mok, C., & Sparks, B. (2001). *Service Quality Management in Hospitality, Tourism, and Leisure*. New York: The Haworth Hospitality Press.
- Kang, J.-S., Chiang, C.-F., Huangthanapan, K., & Downing, S. (2015). Corporate social responsibility and sustainability balanced scorecard: The case study of family-owned hotels. *International Journal of Hospitality Management*, 124-134.
- Kaplan Financial. (25 de September de 2020). *Types of cost and cost behaviour* . Obtido de Kaplan Financial Knowledge Bank: <https://kfknowledgebank.kaplan.co.uk/acca/chapter-4-types-of-cost-and-cost-behaviour>
- Kaplan, R. (1984). The Evolution of Management Accounting. *The Accounting Review*, 390-418.
- Kaplan, R., & Johnson, T. (1987). Relevance Lost: The Rise and Fall of Management Accounting. *Journal of Management Accounting Research*, 22-30.
- Kaplan, R., & Norton, D. (1992). The Balnaced Scorecard - Measures That Drive Performance. *Harvard Business Review*, 71-79.
- Kaplan, R., & Norton, D. (1996). The balanced scorecard: translating strategy into action. *Harvard Business Press*.
- Lakshmi, P. (September de 2011). Role of CMAs in adapting Contemporary Techniques in Hospitality Management. *The Management Accountant*, p. Volume 46.
- Lashley, C. (2008). Studying hospitality: insight from social science. *Scandinavian of Journal Hospitality and Tourism*, 69-84.
- Lewis, R., & Chambers, R. (1989). *Marketing Leadership in Hospitality: Foundations and Practices*. New York: Van Nostrand Reinhold.
- Lokman, M. (1993). The role of MAS information in organizations: an empirical investigation. *British Accounting Review*, 269-285.

- Lokman, M., & Chenhall, R. (1994). The usefulness of management accounting systems, functional differentiation and managerial effectiveness. *Accounting, Organizations and Society*, 1-13.
- Makrigiannakis, G., & Soteriades, M. (2007). Management Accounting in the Hotel Business - The Case of the Greek Hotel Industry. *International Journal of Hospitality & Tourism Administration*, 47-76.
- Malmi, T., & Brown, D. (2008). Management control systems as a package—Opportunities, challenges and reserach directions. *Management Accounting Research*, 287-300.
- Manhas, P. S. (2015). Understanding service experience and its impact on brand image in hospitality sector. *International Journal of Hospitality Management*, 77-87.
- McKercher, B., & Tung, V. (2015). Publishing in tourism and hospitality journals: Is the past a prelude to the future? *Tourism Management*, 306-315.
- McPhail, P., Herington, C., & Davidson, M. (2015). Development and initial validation of a hospitality employees' job satisfaction index: Evidence from Australia. *International Journal of Contemporary Hospitality Management*, 1814-1838.
- Mia, L., & Patiar, A. (2001). The use of management accounting systems in hotels: an exploratory study. *International Journal of Hospitality Management*, 111-128.
- Miguéns, J., Baggio, R., & Costa, C. (2008). Social media and Tourism Destinations: TripAdvisor Case Study. *Advances in Tourism Research*, 1-6.
- Mongiello, H., & Harris, P. (2001). Key Performance Indicators in European Hotel Properties: General Managers' Choices and Company Profiles. *International Journal of Contemporary Hospitality Management*, 120-127.
- Nishimura, A. (2002). Asia Economic Growth and Management Accounting. *Malaysian Accounting Review*, 87-101.
- Onsoyen, L. E., & Mykletun, R. J. (2009). Silenced and Invisible.: The Work- experience of Room-attendants in Norwegian Hotels. *Scandinavian Journal of Hospitality and Tourism*, 81-102.
- Ozdemir, B., Aksu, A., Ehtiyar, R., Çizel, B., Çizel, R., & İçigen, E. (2012). Relationships Among Tourist Profile, Satisfaction and Destination Loyalty: Examining Empirical Evidences in Antalya Region of Turkey. *Journal of Hospitality Marketing & Management*, 506–540.
- Paiva, I., Reis, P., & Lourenço, I. (2016). Research in hospitality management and accounting: a research synthesis and analysis of current literature and future challenges . *Problems and Perspectives Management*, 83-91.
- Parasuraman, A., Zeithaml, V., & Berry, L. (1985). A Conceptual Model of Service Quality and Its Implications for Future Research. *Journal of Marketing*, 41-50.
- Parsa, Self, J., Njite, D., & King, T. (August de 2005). Why restaurants fail. *Cornell Hotel and Restaurant Administration Quarterly*, pp. 304-322.

- Pavlatos, O., & Paggios, I. (2009). Management accounting practices in the Greek hospitality industry. *Managerial Auditing Journal*, 81-98.
- Pelger, C. (2016). Practices of standard-setting e An analysis of the IASB's and FASB's process of identifying the objective of financial reporting. *Accounting, Organizations and Society*, 51-73.
- Phillips, P. A. (2007). The Balanced Scorecard and Stategic Control: A Hotel Case Study Analysis. *The Service Industries Journal*, 731-746.
- Phillips, P., & Louvieris, P. (2005). Performance Measurement Systems in Tourism, Hospitality, and Leisure Small Medium-Sized Enterprises: A Balanced Scorecard Perspective. *Journal of Travel Research*, 201-211.
- Porter, M. (2000). What Is Strategy? *Harvard Business Review*, 1-20.
- Porter, M. (2008). The Five Competitive Forces That Shape Strategy. *Harvard Business Review*, 24-41.
- Pramudita, C. D. (11 de agosto de 2016). Anchor Academy Publishing. *The Balanced Scorecard as Strategic Controlling Instrument. Introducing the Indicators-based BSC for Implementation of a Corporate Strategy from Four Different Perspectives*, pp. 1-62.
- Rahimi, R., Koseoglu M., A., Ersoy A., B., & Okumus, F. (2017). Customer relationship management research in tourism and hospitalitu: a state-of-the-art. *Tourism Review*, 209-220.
- Raiborn, C., Barfield, J., & Michael, K. (1993). *Managerial Accounting*. New York: South-Western College Pub.
- Ribeiro, M. L., Vasconcelos, M. L., & Rocha, F. (2019). Monitoring performance indicators in the Portuguese hospitality sector. *International Journal of Contemporary Hospitality*, 790-811.
- Rieg, R. (2018). Tasks, interaction and role perception of management accountants: evidence from Germany. *Journal of Management Control*, 183-220.
- Riley, M., & Jauncey, S. (1990). Examining Structure in Decision Making in Hotels. *International Journal of Contemporary Hospitality Management*, 11-15.
- Robin, C., & Robert, K. (1988). How cost accounting distorts product costs. *Management Accounting*, 20-27.
- Roser, C. (2016). *Faster, better, cheaper in the history of manufacturing*. Florida: CRC Press.
- Rowe, C., Birnberg, J., & Shields, M. (2008). Effects of organizational process change on responsibility accounting and managers' revelations of private knowledge. *Accounting, Organizations and Society*, 164-198.
- Sainaghi, R. (2010). Hotel performance: state of the art. *International Journal of Contemporary Hospitality Management*, 920-952.
- Santos, L., Gomes, C., Arroteia, N., & Almeida, P. (2013). *Management Accounting in Portuguese Hotel ENterprises - update research*. Leiria: Global Business and Technology Association.
- Schmeisser, W. (2011). *Controlling und Berliner Balanced Scorecard Ansatz*. Munich: Oldenbourg.

- Seetharaman, A., Patwa, N., Jadhav, V., & Saravanan, A. S. (2016). Accounting and financial systems and tools for effective leadership and management. *Journal of Accounting, Business and Management*, 45-60.
- Seifer, A. M., & Messing, K. (2006). Cleaning Up After Globalization: An Ergonomic Analysis of Work Activity of Hotel Cleaners. *Antipode*, 557-578.
- Sharaf-Addin, H., Omar, N., & Sulaiman, S. (2014). Target Costing Evolution: A Review of the Literature from IFAC's (1998) Perspective Model . *Asian Social Science*, 82-99.
- Sharma, D. (2002). The differential effect of environmental dimensionality, size, and structure on budget system characteristics in hotels. *Management Accounting Research*, 101-130.
- Sherman, R. (2011). Beyond interaction: Customer influence on housekeeping and room service work in hotels. *Work, Employment and Society*, 19-33.
- Shields, M., & Young, M. (1989). A behavioural model for implementing cost management systems. *Journal of Cost Management*, 17-27.
- Shoval, N., McKercher, B., Ng, E., & Birenhoim, A. (2011). Hotel location and tourist activity in cities. *Annals of Tourism Research*, 1594-1612.
- Singh, S. K., Del Giudice, M., Nicotra, M., & Fiano, F. (2022). How Firm Performs Under Stakeholder Pressure: Unpacking the Role of Absorptive Capacity and Innovation Capability. *IEEE Transactions on Engineering Management*, 3802-3813.
- Smith Travel Research. (1995). *The HOST Study: 1994 hotel operating statistics*. Hendersonville: Smith Travel Research.
- Spinelli, M., & Canavos, G. (December de 2000). Investigating the Relationship between Employee Satisfaction and Guest Satisfaction. *Cornell Hotel and Restaurant Administration Quarterly*, pp. 29-33.
- Taipaleenmaki, J., & Ikaheimo, S. (2013). On the convergence of management accounting and financial accounting – the role of information technology in accounting change. *International Journal of Accounting Information Systems* , 321-348.
- Tiwari, A., Singh, M., & Dahiya, A. (20 de April de 2022). 2022 International Mobile and Embedded Technology Conference. *A study on the effect of Technological Innovation on Outsourcing in the Hotel Housekeeping Department*, pp. 37-40.
- UNWTO. (2010). *International Recommendations for Tourism Statistics 2008*. New York: United Nations.
- UNWTO. (2020). *International Tourism Highlights 2020 Edition*.
- UNWTO. (January de 2021). *2020: A year in review*. Obtido de Covid-19 and Tourism: <https://www.unwto.org/covid-19-and-tourism-2020>

- Urquidi, A. (2013). The Choice of Management Accounting Techniques in the Hotel Sector: The Role of Contextual Factors . *Journal of Management Research*, 65-82.
- Vila, M., Costa, G., & Rovira, X. (2010). The creation and use of scorecards in tourism planning: A Spanish example. *Tourism Management*, 232-239.
- Vitezic, N., Setnikar Cankar, S., & Linsak, Z. (2019). Effectiveness Measurement Using DEA & BSC Methods in Public Health Services. *The NISPAcee Journal of Public Administration and Policy*, 199-216.
- Vlijmen, J. v. (2019). Being a cleaner in The Netherlands: Coping with the dirty work stigma. *Facilities*, 280-291.
- World Travel & Tourism Council. (2022). *Travel & Tourism - Economic Impact 2022*. Oxford: WTTC.
- Wyngaard, A. T., & Lange, R. d. (2013). The effectiveness of implementing eco initiatives to recycle water and food waste in selected Cape Town hotels. *International Journal of Hospitality Management*, 309 - 316.
- Yalcin, S. (2021). Adoption and benefits of management accounting practices. An inter-country comparison. *Account. Eur.*, 95-110.
- Yang, Y., Pan, B., & Song, H. (2014). Predicting Hotel Demand Using Destination Marketing Organization's Web Traffic Data. *Journal of Travel Research*, 433-447.