

Critical success factors of the maintenance function in the South African hotel sector

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PREFACE

Incidentally, I started this dissertation while working at a guest house where I was placed in charge of maintenance oversight (after the owner saw that I had some understanding of maintenance). While attempting to find and identify a research gap as my undergraduate research module lecturer instructed us years ago, and simultaneously undertaking my everyday duties, I realised that there appeared to be a general lack of acknowledgement and recognition for the maintenance profession.

It dawned on me that this was quite possibly that “gap” that I was searching for. After some tentative foraging in the academic literature wilderness, this idea was further strengthened when I experienced difficulty in obtaining relevant resources on the subject matter. Working alongside these men and women who (quite often) needed to put their dignity and distaste for certain tasks aside for the sake of the greater good, I become resolute in my decision to bridge, or, at least, attempt to bridge, this research “gap”.

What a daunting task it turned out to be. A massive lack of participation from the target community, which I believe is due to loyalty towards their hotels, even though all of the information was collected anonymously and any possible confidential questions were limited to a minimum, and a general lack of appropriate and relevant literature in the field of hotel maintenance were obstacles that I at times almost considered too daunting.

However, three years and countless hours later, I am able to provide a document that I still hope can at least in part bridge that divide between academic research and practice, and give greater insight into a selfless profession which is, even more so in my mind today than when I set out on this undertaking, often undervalued and underappreciated.

My only request is that next time, when you, the reader, encounter an individual who is practising the art of maintenance, whether it be at your home, at work or at your favourite vacation destination, acknowledge their endeavours and thank them for their service. We all need a little recognition from time to time, and may you do so for these men and women.

“By the sweat of their brow.”

Carel Neethling
November 2015

DECLARATION

I, Carel Ludolph Neethling, identity number 8612315013080 and student number 21254079, hereby declare that this research submitted to the North-West University, for the Master study in dissertation format: *Critical success factors for managing maintenance within hotels in South Africa*, is my own independent work, and complies with the Code of Academic Integrity, as well as other relevant policies, procedures, rules and regulations of the North-West University; and has not been submitted before to any institution by myself or any other person in fulfilment (or partial fulfilment) of the requirements for the attainment of any qualification.

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15 December 2015

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PROF MARTINETTE KRUGER

Supervisor

15 December 2015

DATE

FINANCIAL ASSISTANCE

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DISCLAIMER

Statements, suggestions and opinions expressed or implied in this study are those of the author and should not be regarded as those of the North-West University (Potchefstroom Campus).

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To my friend, with whom I started the journey in academics and who herself now have attained a PhD, thank you, (Dr) Corné Pretorius. We have been through many things and seen much since our friendship started, and here's to the long road ahead. May more mysteries of this universe be unlocked through hard work and friendship.

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A special thank you goes out to the respondents of this study, for without your valuable input and feedback this study would never have taken place. To all the men and women working each day in often quite unsavoury situations, mending, repairing and maintaining that which is needed to provide a seamless and excellent hotel experience, thank you. Moreover, keep up the good work, lest we all succumb to critical maintenance failures!

ABSTRACT

Critical success factors of the maintenance function in the South African hotel sector

Research and the literature available abound regarding the general management of hotels, as well as when looking at departments such as marketing, human resources and housekeeping. However, when attempting to obtain the literature or research that relates specifically to the hotel maintenance department, there appears to be a massive lack of this information in the academic world. This seems strange, given that any department within any organisation can only function when the supporting infrastructure is in place and working properly. Even more so when looking at hotels and taking into consideration that the only physical aspect that the guest can experience at the hotel is comprised of the tangible assets of the hotel itself. This indicated an overwhelming lack of appreciation and understanding of the important role that the maintenance function fulfils with the hotel's organisation, and an ideal research opportunity presented itself to attempt to address this shortfall.

The primary goal of the study was therefore to determine the critical success factors of the maintenance function in the South African hotel sector. For this goal to be achieved, four objectives were formulated.

The first objective, to do an analysis of the hospitality industry, and of hotels, in particular, was achieved by conducting a literature study. The literature study on the hospitality industry and of hotels, in particular, was explored by understanding hotel management, which was achieved by discussing aspects relating to a hotel (by defining the concept of hotel, identifying the different classifications of hotels, explaining how the grading system of hotels work and which organisational bodies regulate it in South Africa, and the importance of hotel management); discussing the importance of hotel managers as well as characteristics and personal traits of these managers; and investigating the critical success factors that are needed in effectively managing hotels. Modern hotel managers are an essential part of the hotel organisation. For the hotel to remain successful, the focus needs to be on customer experience, staff attitude and aptitude, and the appearance of facilities and the physical aspects of the hotel. Good customer experience especially requires that these aspects be monitored and controlled in fine detail.

The second objective, to do an analysis of hotel maintenance, was also accomplished using a literature review. It was necessary to understand what hotel maintenance management entails; what the importance of maintenance management is for hotels; how the maintenance department fits into the organisational structure of the hotel (by outlining the process of designing a

maintenance strategy, understanding the costs associated with the maintenance aspects, investigating the challenges faced in order to accomplish effective maintenance management within hotels, and taking into consideration the role that outsourcing plays with the maintenance function); as well as understanding how maintenance within hotels is classified and grouped according to type (be it planned or unplanned maintenance, and how to audit the maintenance function). In the process of obtaining the literature for the relevant chapter, it became apparent that the importance of maintenance within hotels is an aspect that appears to be neglected not only internationally, but also within the borders of South Africa as a developing country. No relevant studies or literature from a South African perspective could be found regarding the maintenance function within hotels, even more so when viewed as critical to the success of the hotel.

The third objective, to determine the critical success factors (CSFs), and the personal characteristics or traits, needed in effectively managing maintenance within hotels in South Africa, was accomplished using an empirical survey. The survey itself was composed of formulating questions from relevant literature and was web-based in nature. Hotels were e-mailed and maintenance managers invited to participate in the anonymous study. Once all the results were collected, four separate factor analyses were done to determine the different factors. Five personality trait factors, seven CSFs for general hotel management, eight maintenance management CSFs and three maintenance management expertise factors were identified. Statistically significant differences were also found when conducting *T*-tests, ANOVAs and Spearman's Rank Order Correlations. These analyses showed that the personal characteristics of maintenance managers within hotels, combined with the hotel's organisational structure and possibly the company profile, influences how important the different factors that were identified are about the effective maintenance management of hotels in South Africa. This should, therefore, be taken into account when looking at the maintenance aspects within hotels in South Africa, as these underlying factors will influence the effectiveness of the maintenance department and the hotel.

The fourth and final objective, to draw conclusions and make recommendations regarding CSFs, personality traits and expertise as required for effective maintenance management in South African hotels, indicated that this study not only made a significant contribution to the literature for academics to understand better and appreciate the role of the maintenance function within hotels in South Africa but can also be used by the maintenance managers of hotels to potentially improve some of the processes relating to the management of their maintenance department. Future research on this topic should be conducted on a qualitative basis, as the challenges faced with the quantitative study were numerous. This will also create the opportunity for more involvement by the hotel maintenance manager community in shaping and expanding the

research and available literature on the subject. It is important that the hotel maintenance function is also understood and studied as well as its sister department, housekeeping, on which various studies and literature are already readily available.

Keywords: critical success factors (CSFs), hotel, hotel management, maintenance, hotel maintenance management, personal characteristics and skills, South Africa.

OPSOMMING

Kritiese sukses-faktore vir die instandhoudingsfunksie in die Suid-Afrikaanse hotel sektor

Daar is volop navorsing en literatuur beskikbaar rakende die algemene bestuur van hotelle, sowel as wanneer daar na departemente soos bemarking, mensehulpbronne en huishouding gekyk word. Wanneer enige literatuur of navorsing egter probeer bekom word wat spesifiek betrekking het tot die hotel instandhoudingsdepartement, blyk daar 'n geweldige tekortkoming van hierdie inligting binne die akademiese wêreld te wees. Dit is vreemd, siende dat enige departement binne enige organisasie slegs kan funksioneer wanneer die ondersteunende infrastruktuur in plek is en behoorlik werk. Nóg meer so wanneer daar in ag geneem word dat die enigste fisiese aspek wat die gas by die hotel kan ervaar, bestaan uit die tasbare bates van hotelle. Hierdie dui op 'n oorweldigende tekort aan waardering en begrip van die belangrike rol wat die instandhoudingsfunksie vertolk binne die hotel organisasie, wat aanleiding gegee het tot die identifisering van 'n ideale geleentheid om hierdie tekort aan te spreek.

Die primêre doel van die studie was dus om die kritiese sukses-faktore vir die instandhoudingsfunksie in die Suid-Afrikaanse hotel sektor te bepaal. Vier doelwitte is gestel ten einde hierdie doel te bereik.

Die eerste doelwit was om 'n analise te doen van die gasvryheidsbedryf, spesifiek van hotelle, deur middel van 'n literatuur-oorsig. Die literatuur-oorsig was ondersoek deur aspekte te bespreek wat verband hou met hotelle (deur die hotel-konsep te definieer, deur die verskillende klassifikasies van hotelle te bespreek, te verduidelik hoe die gradering stelsels van hotelle werk en watter organisatoriese liggame binne Suid-Afrika dit reguleer, asook die belangrikheid van hotel bestuur); die belangrikheid van hotel bestuurders asook die karaktereienskappe en persoonlik eienskappe en vaardighede van hierdie bestuurders te bespreek; en deur die kritiese sukses-faktore te ondersoek wat benodig word om hotelle effektiewelik te bestuur. Moderne hotel bestuurders is 'n noodsaaklike deel van die hotel organisasie. Vir die hotel om suksesvol te wees moet die fokus wees op die kliënte-ervaring, personeel se houding, asook die voorkoms van die fasiliteite en die fisiese aspekte van die hotel. Goeie kliënte-ervarings vereis spesifiek dat hierdie aspekte noukeurig gemonitor en kontroleer word.

Vir die tweede doelwit is hotel instandhouding geanaliseer deur ook gebruik te maak van 'n literatuur-oorsig. Dit was nodig om te verstaan wat hotel instandhoudingsbestuur behels; wat die belangrikheid van instandhoudingsbestuur vir hotelle is, hoe die instandhoudingsdepartement in die organisatoriese struktuur van die hotel inpas (deur te omskryf wat die proses vir die ontwerp van 'n instandhouding-strategie behels, te verstaan watter kostes verband hou met die instandhoudingsaspekte, te ondersoek watter uitdagings die departement mee gekonfronteer

word sodat effektiewe instandhoudingsbestuur binne hotelle kan plaasvind, asook in ag te neem watter rol uitkontraktering binne die instandhoudingsfunksie vertolk); sowel as om te verstaan hoe instandhouding binne hotelle geklassifiseer en groepeer word volgens tipe (hetsy dit beplande of onbeplande instandhouding is, en hoe om die instandhoudingsfunksie te ouditeer). Gedurende die proses om literatuur te bekom vir die verwante literatuur hoofstuk, het dit duidelik geraak dat die belangrikheid van instandhouding binne hotelle 'n aspek is wat nie net internasionaal afgeskeep word nie, maar ook binne die grense van Suid-Afrika as 'n ontwikkelende land. Geen relevante studies of literatuur vanuit 'n Suid-Afrikaanse perspektief rakende die instandhoudingsfunksie binne hotelle kon bekom word nie, nog meer so wanneer dit na gekyk word as krities vir die sukses van die hotel.

Die derde doelwit, om die kritiese sukses-faktore (KSF), sowel as die persoonlike karaktereienskappe en vaardighede wat benodig word om instandhouding effektief te bestuur binne hotelle vas te stel, is bepaal deur gebruik te maak van 'n empiriese vraelys. Die vraelys was opgestel deur vrae vanuit relevante literatuur te formuleer en was web-gebaseerd. Hotelle is per e-pos daarvan verwittig dat die instandhoudingsbestuurders uitgenooi word om deel te neem aan die anonieme studie. Vier aparte faktor-analises is gedoen om die verskillende faktore te bepaal, sodra al die resultate versamel was. Vyf persoonlikheidskappe, sewe KSFs vir algemene hotel bestuur, agt instandhoudingsbestuur KSFs en drie instandhoudingsbestuur kundigheid-faktore was hierdeur geïdentifiseer. Statistiese beduidende verskille is ook gevind deur *T*-toetse, ANOVAs en Spearman se Rangkorrelasies te doen. Hierdie analises het getoon dat die persoonlike karaktereienskappe van hotel instandhoudingsbestuurders, gekombineer met die hotel se organisatoriese struktuur en moontlik ook die maatskappy-profiel, beïnvloed hoe belangrik die verskeie identifiseerde faktore is rakende die effektiewe instandhoudingsbestuur van hotelle in Suid-Afrika. Derhalwe moet dit binne berekening geneem word wanneer daar na die instandhoudingsaspekte binne hotelle in Suid-Afrika gekyk word, omdat hierdie onderliggende faktore die effektiwiteit van die instandhoudingsdepartement en die hotel sal beïnvloed.

Die vierde-, en laaste, doelwit, om gevolgtrekkings en aanbevelings te maak rakende KSFs asook persoonlike karaktereienskappe en vaardighede soos benodig vir die effektiewe instandhoudingsbestuur in Suid-Afrikaanse hotelle, het aangedui dat die studie nie alleenlik 'n beduidende bydrae gemaak het tot die huidige literatuur vir akademici om die rol van die instandhoudingsfunksie in hotelle in Suid-Afrika beter te verstaan en waardeer nie, maar dit kan ook deur die instandhoudingsbestuurders van hotelle gebruik word om potensieel sommige van die aspekte wat verband hou met die bestuur van die instandhoudingsdepartement te verbeter. Toekomstige navorsing oor hierdie onderwerp moet plaasvind op 'n kwalitatiewe basis, omrede daar vele uitdagings was wat ondervind is tydens die kwantitatiewe studie. Dit sal ook die geleentheid skep vir meer betrokkeheid deur die hotel instandhoudingsbestuurder

gemeenskap om die navorsing en beskikbare literatuur op die onderwerp uit te brei. Dit is ook belangrik dat die hotel instandhoudingsfunksie so goed verstaan en bestudeer word soos die suster-departement, huishouding, waarvoor daar verskeie studies en vele literatuur geredelik beskikbaar is.

Sleuteltermes: kritiese sukses-faktore (KSF), hotel, hotel-bestuur, instandhouding, hotel instandhouding bestuur, persoonlike karaktereienskappe en vaardighede, Suid-Afrika.

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CHAPTER 1: INTRODUCTION, PROBLEM STATEMENT, OBJECTIVES AND METHOD OF RESEARCH

1.1 Introduction

Hotels are the prime provider of accommodation within the hospitality sector and will most probably continue to be so for the foreseeable future. As Medlik and Ingram (2000:4) remark, “hotels are as essential to economies and societies as are adequate transport, communication and retail distribution systems for various goods and services”. As a highly competitive player within the accommodation sector, the hotel sector is central to the success of the tourism industry (Nasution & Mavondo, 2008:204). Solnet, Paulson and Cooper (2010:139) expand on this, observing that within the accommodation sector the hotel sector specifically plays an important role in the context of tourism systems. Shoval and Cohen-Hattab (2001:910) argue along the same lines, viewing hotels as being the most prominent and representative expression of tourism, especially due to their physical prominence in the urban landscape. Hotels can, therefore, be viewed as being one of the key pillars of the tourism industry (Lai & Yik, 2012a:229).

If one examines the statistics on the contribution of hotels to the economy, the importance of hotels within the lodging sector is highlighted even further. This is also the case in a developing country such as South Africa. At the end of June 2009, 45 978 employees were permanently employed by the hotel sector, with a further 2834 temporary and 1949 casual employees, totalling 50 761 people employed by hotels in South Africa. Of these, 69% are employed by large enterprises, and, interestingly enough, 19% by micro enterprises, which accounts for more than the total of medium and small enterprises combined (STATSSA, 2011). Compared to the end of June 2012, 76 611 people were employed in the hotel sector, which accounts for 73% of the employment within the accommodation industry (STATSSA, 2012). This means that 25 850 more people were employed in the hotel sector by 2012 than in 2009, indicating a staggering 50.9% increase in total employment within the hotel sector during those three years.

Hotels contributed a staggering R10 187 million, or 67%, towards the total R15 237 million income in the accommodation industry by the end of March 2013, and is responsible for a 7.7% (out of 11.6%) increase of income contribution by the accommodation industry within the country compared to the first quarter of 2012 (STATSSA, 2013). In 2015, for the three months June to August, hotels accounted for R2 792 million, or 64%, towards the total R4 358 income within the accommodation industry for those three months (STATSSA, 2015).

The capital expenditure on new assets by hotels accounts for 86% of the total by the accommodation industry. Land, buildings and construction (33%) and plant, machinery and equipment (27%) contribute millions of Rands towards this capital expenditure, highlighting the important contribution that aspects relating to maintenance has on the accommodation sector and the economy in general (STATSSA, 2011). When compared to the end of June 2012, capital expenditure by hotels on new assets decreased to 85% of the total capital expenditure within the accommodation industry (STATSSA, 2012). Land, buildings and construction increased to 45% and plant, machinery and equipment to 38% of the contribution towards the total capital expenditure (STATSSA, 2012). From this it can be seen that the negligible decrease in total hotel capital expenditure within the accommodation industry is more than compensated for by the massive increase in employment as well as expenditure on maintenance related aspects.

The statistics above show that hotels play a critical part in the accommodation sector within the country. The nature of the hospitality industry is such that it can be said to be the industry where service weighs the heaviest, with the product and the experience both contributing to this end. Customer satisfaction is a product of quality service, as the service rendered is viewed as the interaction and transactions between customers and staff members, forming a customer relationship (Tesone, 2010:4). In the case of a hotel, this relationship is then between the guest and the hotel. O'Fallon (2011:199) is of the opinion that engineering (maintenance) can be considered a guest service, for although it is mostly behind the scenes it is a service that is critical to a safe and comfortable, and, therefore, a successful, guest experience at the hotel. Jones and Jowett (1998:2) agree with this, stating that managing the physical assets or property is of considerable relevance to hotels, as these assets form a major part of the product package that is sold to customers. It is therefore quite unfortunate that many organisations, hotels included, have not yet or do not wish to recognise the significant contribution that the facility maintenance and operations function makes to the ultimate success or failure of the business (Rondeau, Brown & Lapidés 1995:486). Narayan (2004:154) adds to this statement by arguing that in many organisations upper management still harbours the traditional out-dated views of maintenance being nothing more than an unavoidable cost burden and an interruption.

This chapter discusses the research process followed in this study of the critical success factors needed for effectively managing maintenance within hotels in South Africa. This is realised by analysing the background to the problem and problem statement that is followed by the goals and objectives of the study, the method of research, definitions of key concepts and lastly, the chapter classification.

1.2 Background to the problem

Four aspects have to be considered to fill the knowledge gap on maintenance within hotels: maintenance and what it entails, critical success factors, personal characteristics and skills required by managers and previous research conducted on this topic. In this section, the literature relevant to these aspects is discussed.

1.2.1 Understanding maintenance within hotels

Within literature, the terms facility management, engineering and maintenance are often used interchangeably. The following appears to be the interaction between these terms: Facility management has, among others, an engineering or maintenance department, of which maintenance operations comprise one of the duties. In the present study, the term maintenance is used, keeping in mind where it fits into the organisational framework. Maintenance can be described as those activities needed to keep something in its current state or to preserve something from failure or decline, which is preferable to repairing something only after it has fallen into disrepair (Stipanuk, 2002:32). Jones and Jowett (1998:83) expand on this, in that maintenance for them also refers to the upkeep of the fabric of the building, including the exterior of the building and site, as well as the plant, equipment and services. The maintenance department is responsible for the physical plant aspects of the property (Tesone, 2010:80). In delivering value to their guests, hotels make use of various techniques, which include, among others, the quality of rooms and recreational and sporting facilities, as well as the general atmospherics of the hotel (Nasution & Mavondo, 2008:206). This is undeniably true, as the visual aesthetics within a hotel or any other building is the most prominent feature that a visitor observes. It can adversely affect their views of the organisation operating within the particular building. Chan (2008:35) as well as Olagunju, Adedayo, Ayuba and Abdulsalam (2012:109) indicate that proper maintenance of the building structure, fabric, components, finishes and engineering services is crucial in satisfying the hotel guest's wants and expectations. Lai and Yik (2012a:235) found that the workload generated from guestrooms, as measured by the work orders issued, far outweigh those of the non-guestroom areas, indicating that the guestroom remains the most important physical area that affects how the guest's expectations on service quality are met.

Desmet, Caicedo and Van Hout (2009:5) found that in general, decorations and facilities can elicit boredom from guests, and even fear when it comes to aspects such as poor lighting, bad maintenance and general quality within the hotel. These unpleasant emotions can serve as signals to hotel management of failing service quality. Given that hotel maintenance already generally evokes negative or unpleasant emotions (Desmet *et al.*, 2009), upper management

should stop fostering conventional views of facility maintenance and operations as an interruption and unavoidable cost burden (Narayan, 2004:154), and should regard general maintenance as vital in protecting the core competencies of the hotel and therefore essential in providing good customer service (Espino-Rodríguez & Padrón-Robaina, 2005:715). Lai and Yik (2012a:229) are of the same opinion, as the maintenance functions served by engineering facilities in a hotel is no less critical to keeping hotel guests satisfied. The importance of proper hotel- and maintenance management is also not lost on Chan (2008:48), who observes that the success of a hotel relies principally on satisfying customers' wants and expectations through the quality of service, to which maintenance contributes significantly.

The maintenance practises within hotels are therefore of major importance, as keeping the performance of so many rooms and public spaces on standard requires a well-organised approach and technical know-how (Olagunju *et al.*, 2012:108) as hotels are quite complex and costly when it comes to maintenance (Aryee, 2011:7). Chan (2008:36) indicates that an appropriate maintenance strategy and programme appear to be critical to sustaining the quality of services rendered while facing global competition and stringent cost control. Chan (2008:45) argues further that health and safety have become vital requirements for a business's success. This aspect depends on good maintenance practises to avoid potential hazards and minimise risks. A well-planned maintenance strategy would therefore definitely aid in meeting and exceeding the crucial aspect of guest expectations within the hotel sector (Chan, 2008:45). Rondeau *et al.* (1995:486) are of the opinion that, unfortunately, many organisations have not yet recognised the significance of the contribution that the facility maintenance and operations function makes to the ultimate success or failure of a business. For example, when one takes into account the importance that maintenance management plays in improving energy efficiency and usage by keeping total operating costs optimal as far as possible (Aryee, 2011:7), neglecting aspects like these can lead to the demise of a hotel.

Hotels, therefore, require intense management expertise and high levels of ongoing investment in especially maintenance and equipment (Solnet *et al.*, 2010:139). Senior management within hotels, consequently, need to effectively and efficiently manage the different hotel infrastructures to deliver continued quality service (Chan, 2008:36). This can be done by identifying the critical success factors managers regard as important when it comes to maintenance, as well as what personal characteristics and skills maintenance managers require to be effective.

1.2.2 Critical success factors, characteristics and skills required for effective maintenance within hotels

Rockart (1979:82) was one of the first academics to write about managerial critical success factors (CSFs), which was also developed in the late 1970's by the Sloan School of Management at the Massachusetts Institute of Technology (MIT), based on the work of Daniel (1961). Critical success factors (CSFs) are those factors that, for any business, are those limited number of areas in which satisfactory results will ensure successful competitive performance for the organisation (Rockart, 1979:85). Thompson and Strickland (as cited by Slabbert & Saayman, 2003:8), define critical success factors as prerequisites for success within the hospitality industry, as they are the particular strategy elements, resources, competencies, product attributes and business outcomes that determine the competitive and financial success of the establishment and the difference between profit and loss. In other words, these factors are those elements that are essential for the successful reaching of goals in the operation of a business.

Management within hotels, especially maintenance management, differs from other establishments within the accommodation sector and management, therefore, plays an essential role. It is, in all probability, the most important process within the whole organisational structure. Managing a hotel effectively is a continuous process and requires managers to complete certain tasks to attain the company's goals and objectives. To accomplish this, a successful maintenance manager must have certain characteristics and be aware of the importance of critical success factors in managing a hotel, as well as how these factors have to be present to a manager to complete his or her tasks (Boynton & Zmud, 1984:17). These personal characteristics can therefore also be seen as a CSF in itself.

These characteristics vary from individual to individual, but Ineson and Stone (2010:161) listed key characteristics identified with successful licenced retail house managers. Deery and Jago (2001:335) also identify attitudes to aspects of work. Managers have to be committed and prepared to work hard for long hours, as well as be physically fit and possess stamina. Being charismatic, friendly, approachable, communicative and pleasant with a general tendency to enjoy sharing life with people helps them to be caring employers and good listeners. This will make staff feel as if they are viewed and treated as part of the (business) family and in doing so the manager will be able to manage time and people by being adaptable and flexible, vigilant and having a keen eye for attention to detail. A good manager thrives on challenges and is always ready for one. A good sense of humour and the ability to learn from mistakes and criticism, being open-minded and not too proud to ask for help, being patient and slow to anger assists in realising

that problems cannot be ignored, but must be resolved. The job must be done irrespective of personal problems and being able to talk about different aspects so that they are not emotionally bottled up will aid in avoiding later complications. Stipanuk (2002:64) notes that management of the maintenance department should have at least some level of electrical or mechanical skill as well, in addition to other characteristics or skills.

Gee (1996:365) is of the opinion that this necessitates that upper management should have a basic understanding of engineering. In many cases upper management still views the engineering department and maintenance operations as a “basement-bottom and out of sight” department (Mounts & Meinzer, 2011:189), or allocates insufficient space to engineering and maintenance activities in which to operate (Stipanuk, 2002:472). Given this situation, it can only be to the advantage of a hotel if upper management has a better understanding of the intricate complexity and pivotal role that maintenance operations have within a given hotel.

Previous research into the critical success factors within hotel management and other tourism operations have identified certain factors as being critical to managers to work optimally at their tasks. These factors are briefly discussed in the next section.

1.2.3 Previous research

Within the hotel industry, research regarding CSFs is limited. Sila and Ebrahimpour (2003), Brotherton (2004), Jonker, Heath and Du Toit (2004), Akrivos, Ladkin and Reklits (2007) and Lemmetyinen and Go (2009) have all addressed CSFs that relate to various aspects within the tourism and hospitality industry. However, apart from Brotherton’s (2004) study relating to CSFs within UK corporate hotels, Appel, Kruger and Saayman’s (2013) research and findings are the most relevant, as it specifically focuses on the supply side of hotels within South Africa. It is the only relevant unpublished South African study regarding CSFs within hotels within South Africa that the author could obtain.

This seems to indicate a lack of appreciation and understanding of the importance that the engineering department and maintenance operations have on the ability of a hotel to deliver successfully exceptional service to the guest. There is, therefore, a lack of research on the subject of CSFs within hotels, and so far the author could find no research within South Africa that focuses on CSFs within specific functions or departments of a hotel, such as maintenance. Other researchers (Lai & Yik, 2012b:142) indicate that only a paucity of studies focusing on the maintenance performance of hotels exist. Chan (2008:50) observes that there are limited literature and a lack of research available regarding maintenance, benchmarking and cost

analysis in the hotel industry. Lai and Yik (2012a:229) admit that internationally, in-depth research findings of aspects such as workload, manpower input and outcome of maintenance operations for hotel engineering departments and facilities remain unavailable. Interestingly enough, there appears to be a current increase in hotel maintenance-related research in China. This could indicate that within academic circles the importance of this type of research is gaining momentum, albeit not in South Africa as yet.

An early study that relates specifically to managers of the engineering department indicates that the importance of the chief engineer/engineering manager/maintenance manager has not gone totally unnoticed. Rutherford (1987:72) is of the opinion that the chief engineer's position is not always clearly understood by others in the hotel. As discussed earlier, this appears to be still the case today. Rutherford (1987:78) found that chief engineers typically spend more of their time on managerial matters and less on the technical aspects of the job, but that successful chief engineers should none the less exhibit a blend of technical knowledge and managerial expertise (1987:75).

The abovementioned research only focuses on CSFs regarding general hotel management and a full discussion of the findings of these studies is reserved for the literature chapters. To gather insight as to what maintenance managers or chief engineers at hotels regard as critical success factors in managing maintenance within hotels, as well as which personal characteristics are regarded as being critical to managers, further research is required. This study attempts to answer this very important and so far neglected question.

1.3 Problem statement

Taking the benefits of proper hotel maintenance into consideration, it is crucial for managers to be aware of the characteristics and critical success factors needed for managing maintenance within a hotel effectively. To date, limited and virtually no research has been done regarding the hotel industry in South Africa and the critical success factors and personal characteristics needed to manage the maintenance aspect thereof. Borsenik (1977) already recognised the importance of maintenance within hotels, as well as the limited academic acknowledgement hereof. Lai (2013:426) is of the same opinion and states that "research on maintenance for hotel engineering facilities is rare." This apparent lack of appreciation in academic circles for, and importance of, maintenance within establishments, therefore in all likelihood also extends to the hospitality industry, thus creating a problem that needs to be addressed. Therefore, the research questions that this study attempted to address from a supply side are:

- What are the personal characteristics and skills that maintenance managers need to successfully manage their department?
- Which maintenance factors can be seen as being more critical than others?
- Are there key differences regarding the factors within different hotel structures?

This research aimed to determine ultimately what critical success factors are needed in managing maintenance within hotels in South Africa.

1.4 Goal of the study

1.4.1 Goal

To determine the critical success factors of the maintenance function in the South African hotel sector.

1.4.2 Objectives

1. To do an analysis of the hospitality industry and hotels by means of a literature review.
2. To do an analysis of hotel maintenance by means of a literature review.
3. To determine the critical success factors and personal characteristics needed in managing maintenance within hotels in South Africa by means of an empirical survey.
4. To draw conclusions and make recommendations regarding the critical success factors and personality traits and expertise required for efficient maintenance management in South African hotels.

1.5 Method of research

The next section discusses the method of research followed in the present study.

1.5.1 Literature study

In the process of obtaining information for the literature study, the following keywords were used: critical success factors (CSFs), hotel, hotel management, personal characteristics and skills, facility management and maintenance management. The study was conducted by consulting book and article sources, theses and dissertations, as well as online electronic sources such as the internet and electronic databases. These electronic databases included library catalogues, database indexes and academic research indexes such as Hospitality and Tourism Index, Academic Search Premier, EbscoHost, ScienceDirect, EconLit, Business Source Premier, the

North-West University's OneSearch database search engine and Google Scholar. These sources were essential in establishing the baseline for personal characteristics in managers of hotel maintenance departments and the critical success factors in operational hotel maintenance management, as well as ensuring the academic validity of sources used as far as possible.

1.5.2 Empirical survey

The following section outlines the aspects pertaining to the empirical survey.

1.5.2.1 Research design and method of collecting data

A descriptive research design was used in conducting this study, as well as quantitative methods in the process of collecting data. The purpose of this study was to provide an overview and insight into the critical success factors, as well as personal characteristics and skills needed for managing hotel maintenance effectively, in which regard descriptive research was perfectly suited for the task. Furthermore, these patterns and behaviour characteristics can be used in the process of planning and managing hotels, as it is also used in the planning and development of policy making and the establishment of baselines for future monitoring. It will, therefore, create the foundation for future maintenance management practises within hotels in South Africa.

Quantitative data collection was used, as the sample size had to be quite large to be representative of the data collected from the population studied. The nature of the proposed study also required statistics to be presented to determine what personal characteristics and skills and critical success factors are needed in managing hotel maintenance effectively in South Africa and what their rank of importance is based on the research to be collected.

1.5.2.2 Sampling

The target population for this study was the maintenance managers of hotels within South Africa. A sample frame was put in place by utilising the Tourism Grading Council of South Africa's (TGCSA) database of all graded hotels within the country, to determine how many maintenance managers had to be used in the sample. Currently, there are 600 graded hotel establishments within the country, ranging from 1-star to 5-star. In calculating the sample size for the study, the size of the population was taken into account, as well as the nature and accessibility of the target population. The uniqueness of the study population leads this study to attempt a saturation survey where all the members of the target population may be studied. Krejcie and Morgan (1970:608) developed the following formula to calculate the sample sizes needed to conduct research:

$$s = \frac{X^2 NP(1-P)}{d^2(N-1) + X^2 P(1-P)}$$

- s = Required sample size
- X² = The table value of chi-square for 1 degree of freedom at the desired confidence level (3.841)
- N = Population size
- P = Population proportion (assumed to be 0.50 since this would provide the maximum sample size).
- D = The degree of accuracy expressed as proportion (0.05).

From the calculation and the table for determining sample size from a given population by Krejcie and Morgan (1970), at least, 234 participants had to be included in the calculation of the final study results. However, to further enhance the precision of the study, this was increased to 250 participants. Each maintenance manager within the target population had an equal chance of being included in the study as simple random sampling was used by making use of the number method. In using this method, all the respondents' feedback was used by the order in which they were received.

1.5.2.3 Development of questionnaire

The questionnaire was based partly on the work by Appel *et al.* (2013). Section A and B was based on their work. Section C and D was based on a study and consolidation of relevant literature (including Kelly, 2006; Wireman, 2005; Stipanuk, 2002; Lai, 2012b; Narayan, 2004; Gee, 1996; Rondeau, Brown & Lapides, 1995; Jones & Jowett, 1998; Mounts & Meinzer, 2011; Kappa, Nitschke & Schappert, 1997; Adamo, 1999; Lawson, 1995; Tesone, 2010; Powers and Barrows, 2003; Ransley, 2004a). The questionnaire consisted of four sections, measuring the following (see Annexure 1):

- Section A focused on obtaining institutional information and demographic data for the respondent (age, gender, hotel experience and position, as well as time in the position, province and local location of the hotel, hotel grading and size).
- Section B listed 25 personal managerial characteristics and traits of successful hotel managers, based on a Likert 5-point scale of importance (1=not at all important, 2=not important, 3=neutral/not applicable, 4=important, 5=extremely important).

- Section C addressed 30 CSFs needed for successful general management of a hotel, also based on a 5-point Likert scale of importance.
- Section D addressed various CSFs needed for successful operational maintenance management of a hotel, also based on a 5-point Likert scale of importance. There were 62 in total. This was compiled by cross-referencing various aspects of maintenance, between literature sources from published books and journals. This then produced a list that is quite relevant according to literature, and also supported by various authors and studies.
- Section E listed ten statements with regards to hotel maintenance management, based on a Likert 5-point scale of agreement (1=strongly disagrees, 2=disagrees somewhat, 3=neutral/not applicable, 4=agrees somewhat, 5=strongly agree). The statements as made in literature could therefore be measured against respondent's reactions to the statements. Respondents also had the opportunity to make suggestions regarding the successful management of hotel maintenance.

1.5.2.4 Survey

A self-completion web-based e-questionnaire was used. The online questionnaire was designed in Adobe® FormsCentral. A request to partake in the study was e-mailed to all hotel maintenance managers from the different hotels that form part of the target population, with the link to the website where the e-questionnaire was hosted. In other words, e-mail lists were used for a web-based survey. This was accomplished by mailing the requests to hotel maintenance managers, who in turn opened the link to the web-based questionnaire and then completed it anonymously. The data captured on the website was then collected and analysed.

The benefits of using a web-based survey included short response time, low variable costs, convenience for respondents and researchers, no media gap to overcome, the willingness of respondents to answer open-ended questions extensively and a high item response rate (Grant, Teller & Teller, 2005:663).

However, this was, unfortunately, not the case with this study. Of the required 234 completed questionnaires, only 110 was received. This was not due to a lack of time or trying, over a period of almost two years elapsed since the first requests for participation went out. Amongst others, the difficulties in obtaining the correct contact particulars for hotels were numerous. One of the major problems in this instance proved to be that the details of hotels on the website of the

Tourism Grading Council of South Africa, the TGCSA, was quite flawed in many cases. Contact particulars of hotels had changed or hotels had closed down, and this was never updated on the website. Had the author been a tourist from a foreign country visiting South Africa for the first time, the frequent failures of the available data would have been very disappointing, as e-mail would in many cases be the only method in which to contact an establishment to secure a booking. When looking at the extensive timeframe allocated for the completion of the questionnaires, it must be kept in mind that e-mail requests or reminders for participation were frequently sent out, but that the response from the target population was poor at best. Most cited was that the kind of information requested in the questionnaire was classified and that participation was not an option. This was particularly true for the larger hotel groups, which it appears has a zero participation policy for this kind of research. Also worth mentioning is that often responses were quite hostile, bordering on hate mail responses. This is unfortunate, as not only is there an apparent lack of appreciation of the academic community regarding the importance of maintenance for hotels, but the very hotel (maintenance) community itself does very little to further the attempts at rectifying this shortfall through research.

1.5.2.5 Data analysis

The data was captured in Adobe® FormsCentral® and then exported to Microsoft Excel ©. IBM SPSS (Statistical Package for Social Sciences) software was used for basic data analysis. Statistical services at the North-West University's Potchefstroom Campus assisted in the processing of the data. SPSS software was used to process the information, utilising two-way frequency tables for profile determination of managers. Factor analysis was also used to determine the personal characteristics of successful managers and the critical success factors needed in successful hotel management operations. A factor analysis was used to find latent variables or factors among observed variables, and in doing so reduced the number of variables where there exists many (Tustin, 2005:668). Pietersen and Maree (2007:219) simplify the technical description of a factor analysis, defining it as an analysis that determines which items are answered similarly and, therefore, measure the same factor. Furthermore, the factors that were identified in the factor analyses were used in a one-way analysis of variance (ANOVA) and independent T-tests together with Spearman's Rank Order Correlations. These analyses were performed to determine differences in hotel structures as well as the relationship between the factors. The ANOVA test is used when there are three or more variables, to determine how the independent variables measures against the continuous dependent variables (Pallant, 2007:187). T-tests are used determine whether there are significant differences between two independent variables (Brace, Kemp & Snelgar, 2013:119) The main difference between ANOVAs and T-tests

are that with a T-test two groups are compared to one another, and an ANOVA test compares three or more groups against one another (Mitchell & Jolley, 2010:368; Terrell, 2012:243). The Spearman Rank Order Correlation is used to find a measure of association between two random/independent variables if the data is scaled ordinally (Wegner, 1995:316).

1.6 Definitions of key concepts

The following concepts are used throughout the study and, therefore, should be clarified.

1.6.1 Critical success factors (CSFs)

Critical success factors (CSFs) are those managerial areas that must be given continuous and special attention to bring about high performance within the business, thereby ensuring success for the manager and the organisation (Boynton & Zmud, 1984:17). Oxford Reference (2013, online) simply defines it as those strengths and weaknesses that most affect the success of an organisation, usually measured against those of its competitors. According to Rockart (1979:85), CSFs are those elements that are essential to reach the goals of the business successfully. Thompson and Strickland (as cited by Slabbert and Saayman, 2003:8) define CSFs as prerequisites for success within the hospitality industry that determine the competitive and financial success of the establishment and the difference between profit and loss.

1.6.2 Hotel

The International Organisation for Standardisation (2003:2) defines a hotel as an accommodation establishment with services, reception, additional facilities and in most cases meals. The World Tourism Organisation (as cited by Johnson, 1999:13) expands this definition, stating that hotels are arranged in rooms that exceed a specified minimum and provide certain services such as room service, and are grouped into categories according to the facilities and services that they provide. A hotel is regarded as an establishment providing formal accommodation with full or limited service, comprising of a dining room and reception area and, at least, six rooms (but usually more than 20) according to the Tourism Grading Council of South Africa (2011:1). A more expansive definition is put forth by the Oxford English Dictionary (2013:a) where hotels are regarded as being distinguished from other forms of temporary lodging for travellers in that they are of larger size and have a wider range of facilities, but they may also be smaller in size.

1.6.3 Hotel management

Tesone (2010:7) sees management as the process of accomplishing an organisation's objectives through the activities of others. The goals and objectives of businesses and organisations are attained by planning, organising, leading and managing people and resources (Page & Connell, 2009:645). Harrison and Enz (2005:4) focus more on the importance of strategic management, defining it as a process through which organisations analyse and learn from their internal and external environments, establish strategic direction, create strategies that have the purpose of moving the organisation in the direction of their goals and objectives, and implement these strategies in an effort to satisfy all key stakeholders within the organisation or business.

1.6.4 Maintenance

Stipanuk (2002:32) sees maintenance as those activities needed to keep something in its existing state or to preserve something from failure or decline, which is preferable to repairing something only after it has fallen into disrepair. Jones and Jowett (1998:83) expand on this by adding that it refers to the upkeep of the fabric of the building, including the exterior of the building and site, as well as the plant, equipment and services. Quite simply put, maintenance is the action of keeping something in working order or in repair, such as a building or equipment (Oxford English Dictionary, 2013:b).

1.6.5 Personal characteristics and skills

Feist and Feist (2009:4) define personality as "a pattern of relatively permanent traits and unique characteristics that give both consistency and individuality to a person's behaviour". They go on to say that characteristics are "unique qualities of an individual that include such attributes as temperament, physique and intelligence". Taking a somewhat different approach, Ashton (2007:27) interprets it as "differences among individuals in a typical tendency to behave, think, or feel in some conceptually related ways, across a variety of relevant situations and across some fairly extended periods of time". The Oxford English Dictionary (2013:c) defines *personal* as that which relates to, affects or concerns a person as a private individual, and *characteristic* as serving to indicate the essential quality or nature of persons...displaying character; distinctive; typical (2013:d). A skill is viewed as the capability of accomplishing something with precision and certainty, where practical knowledge is utilised in combination with the ability (Oxford English Dictionary, 2013:e).

1.7 Chapter classification

Chapter one focuses on the introduction, the background to the problem, problem statement, goals and objectives, method of research, definitions of key concepts and chapter classification. The method of research comprises the literature study and empirical survey, the latter made up of the research design and method of collecting data, sampling and development of the questionnaire, the survey and data analysis. It sets the stage for the chapters that are to follow.

In chapter two the focus shifts to the literature study, which was briefly discussed in chapter one. The scope is much wider, covering all the essential elements of the study and exhaustively detailing them so that the reader may have a better understanding of all the concepts related to the study and the research that has been done in these areas. The focus is on hotels and their management in general. Aspects that are addressed include definitions, classifications, types and ratings/grading, to name but a few. This serves to provide a fuller understanding and appreciation of the nature and results of the empirical study in chapter three.

The literature study continues in chapter three, with the second literature study chapter that shifts in focus to the aspects relating to the management of maintenance within hotels. Within the context of hotels and the hospitality industry, the importance of maintenance to the continued successful operation of the hotel is discussed. The more technical aspects relating to maintenance within hotels are addressed, such as which systems are more important than others, as well as which systems and management systems should be incorporated to ensure the effective functioning of the maintenance department and all associated personnel.

The process of data collection and analysis is then discussed in chapter four by means of an empirical study. Findings are also discussed, based on the analysis of collected data and information gathered from the literature study. The importance that is placed on various CSFs by the respondents becomes clear, as well as what they believe to be important personal skills and characteristics that maintenance managers need to be successful in their chosen profession. This is compared with the information gathered from the literature study, to gain a better understanding of how literature and practicality correlate or differs, and how each can be improved.

Chapter five concludes the study, briefly giving an overview of the purpose of the study and the main findings. Recommendations for future studies are made, along with recommendations and conclusions regarding the study, specifically about the aspects that take note of in the process of managing their hotels. The research not only contributes to maintenance managers within the hotel industry, but managers from other departments within the industry and even other industries

may utilise it to gain a better understanding of the scope of the maintenance process and its importance. Hotels will be able to assess better their maintenance factors, and even improve the processes that are already in place. The following chapter investigates the process and aspects of hotel management and is the first of the two literature chapters to follow.

CHAPTER 2: CONCEPTUALISING HOTEL MANAGEMENT BY MEANS OF A LITERATURE OVERVIEW

2.1 Introduction

The importance of hotels within the hospitality industry cannot be overlooked, as this form of lodging is still the largest provider of accommodation and related services. Solnet, Paulson and Cooper (2010:139) regard the hotel industry as playing an important role in the context of the tourism system. It is furthermore the most visible and significant sub-sector within the lodging sector of the hospitality industry (Cooper, Gilbert, Fletcher, Wanhill & Shepard, 1998:315). According to Medlik and Ingram (2000:4), hotels provide the facilities in most countries for the transaction of business and meetings and conferences, and even recreation and entertainment. As such, hotels are as essential to economies and societies as are adequate infrastructure and other support systems (Medlik & Ingram, 2000:4). Hotels are, along with resorts and motels (the latter being more common in the United States of America) still the type of lodging that is the most widely known and utilised by the travelling public. Therefore, Shoval and Cohen-Hattab (2001:910) consider the hotel to be “the most prominent and representative expression of tourism”.

The success of hotels, however, are not only linked to the size and scope of the hotel industry, as it is still people-driven and people-directed in the process of supplying its services and products. As Knowles (1998:115) so eloquently states, the similar nature that so many hotels share requires that a crucial competitive edge is found, and in many cases it is accomplished by the human element that captures success for one hotel above another. Timothy and Teye (2009:29) agree with this, adding that hotels and other accommodation establishments comprise one of the most labour demanding sectors in tourism, and it is only with these key players and great effort that success can be achieved. Effective management of any hotel is, therefore, crucial for the continued successful existence of said hotel, for resources need to be continually directed and managed to achieve the company’s objectives and ensure competitiveness in the dynamic tourism and hospitality environment. Hotels, therefore, need to be aware of critical success factors (CSFs) for effective hotel management, as well as the fact that managers must possess certain skills and personal characteristics to ensure the continued competitiveness of the hotel.

In order to gain a comprehensive understanding of management and the importance of effective general management in the hotel industry, the remainder of this chapter provides a detailed discussion of the latter and on the important managerial characteristics of managers and their

role and function in an organisation, focusing especially on the critical success factors needed to successfully manage a hotel. This is necessary to gain insight into how complex managing a hotel is, and, therefore, to understand better the role and importance of the maintenance function (which will be discussed in the next chapter) within a hotel when viewed within the overall context.

2.2 Understanding hotel management

To understand exactly what hotel management is, it is necessary to deconstruct the term into its two base words, hotel and management.

2.2.1 Defining the concept “hotel”

Hotels, in the broad sense of the word, can be viewed as businesses that supply paid for lodging on a short-term and temporary basis (Timothy & Teye, 2009:134). It can also be viewed as an operation that provides accommodation and ancillary service to people away from home (Jones & Lockwood, 2004:1). Morrison (2002:87) states that apart from accommodation, hotels also offer food, drink and other facilities in return for the monetary charge to its customers. Slabbert and Saayman (2003:17) confirm this, in that hotels offer food and drink, and if so required, sleeping accommodation to any traveller who is able and willing to pay for the services and facilities provided, without any prior special contract.

The International Organisation for Standardisation (2003:2) focuses on more specific aspects, stating that a hotel is an accommodation establishment that provides services and in most cases meals, which also has a reception area and other additional facilities. Probably the most used definition of a hotel is that of the World Tourism Organisation (as cited by Johnson, 1999:13) which states that hotels are arranged in rooms that exceed a specified minimum, provides certain services and are grouped into categories depending on the facilities and services that they offer. In the end, each hotel will offer its particular package of facilities as the modern hotel guest expects to find many more complementary and auxiliary facilities in addition to the basic ones of accommodation, food and drink (Knowles, 1998:53). This is also illustrated by the difference in size of various hotels, as seen in Table 2.1.

Table 2-1: Characteristics of various sizes of hotel establishments

Size range	Characteristics
<25 rooms	Typical guesthouses, farmhouse and cottage conversions, small private hotels and traditional inns and lodges. Usually family-run and individually owned. This form of small-scale dispersed tourism development is actively encouraged in many rural tourist areas. The unique Turbine, Hotel & Spa in Knysna, is an example of such a hotel (25 rooms).
50-80 rooms	Includes the smaller independent hotels and country houses and luxury conversions of stately houses. Hotels of this size are large enough to employ a separate manager and may be operated independently or as part of a company or marketing consortium (e.g. 12 Apostles, Camps Bay, 70 rooms).
80-120 rooms	Most new budget hotels, inns, lodges and motels are in this size range, providing standard rooms with an independent restaurant. Depending on location, the development may include a small outdoor swimming pool and children's play area. The Road Lodge group of economy hotels fall into this category (average 93 rooms).
120-200 rooms	New provincial hotels in Europe tend to be in this size range. The number of rooms allows for better utilisation of space and facilities – which usually include some business meeting/private function rooms, a separate coffee shop and restaurant and health-fitness centre (e.g. Protea Hotel OR Tambo Airport +200).
150-250 rooms	Luxury hotels in resorts and spas. Hotels of this size can retain a personal service while offering a wide range of exclusive facilities (private beach, golf-course, speciality restaurants, and remedial treatments) (e.g. Beacon Island Hotel, 200 rooms).
200-300 rooms	Typical size for resort hotels, supporting more extensive dining areas, lounges and recreational facilities. This size is also representative of mid-scale city centre hotels and many airport hotels (e.g. Palazzo Hotel, Monte Casino Complex, 243 rooms).
300-500 rooms	High grade hotels in city centres, downtown and prime resort locations. Invariably these provide more than one restaurant, a health-fitness club including an indoor pool and extensive business facilities. This size has to support more extensive convention facilities (Palace of the Lost City, 338 rooms).
500-800 rooms	Most integrated resorts, holiday centres and club complexes have a large capacity to support extensive recreational and entertainment facilities and marketing costs. For example, the Southern Sun Waterfront Hotel in Cape Town has 537 rooms.
800-1000+ rooms	Mega city centre hotels where economies of scale can allow spectacular designs and cost savings in construction and operation. This includes the larger convention hotels and casino hotels. South Africa does not currently have hotels in this size range. Las Vegas in Nevada, USA, has one of the highest clusters in the world of these mega-hotels.

Source: Adapted from Lawson (1995:23)

Within South Africa a hotel is typically defined according to the criteria of the Tourism and Grading Council of South Africa (TGCSA, 2011:6), the only officially recognised organisation that provides authorisation to tourism establishments to display quality stars, as providing “formal accommodation with full or limited service to the travelling public, having a reception area and dining facility, and consisting of a minimum of six rooms but more likely exceeds 20 rooms”. From

this definition one can say that a hotel consists of more than six rooms, offering serviced accommodation, food and drink and other services, depending on the size and grade of the establishment. Based on the descriptions above, it is clear that there are various aspects that should be taken into consideration when managing a hotel.

This is especially important to acknowledge since the hospitality business is fiercely competitive (Enz, 2010:3). This is because the tourism and hospitality industry, by its very nature, is a sector that requires the coordination of a large number of separate activities, such as accommodation, travel and catering (Old, 2006:61). Traditionally, when one thinks of a product, one thinks of a single item or entity. This is not the case within the tourism industry, even more so when applied to hotels. As Knowles (1998:122) explains, “hotels are more a combination of products contained and managed within a single system”. One of the key skills required for the success of a hospitality organisation is, therefore, its strategic ability to compete in the marketplace and its ability to change and adapt to new conditions and business strategies (Page & Connell, 2009:113).

To maintain and enhance its competitive edge, a hotel, therefore, needs to strive to be at the top of its class. This can only be done if the hotel has a clear idea of the (grade) classification it falls into, as is discussed in the following section.

2.2.2 Classification of hotels

Hotels can be classified based on certain criteria that include the size, location, services and amenities, price tier, guest profile and corporate structure of the establishment (Timothy & Teye, 2009:145; Bhatia, 2006:178). This is illustrated in Figure 2.1.

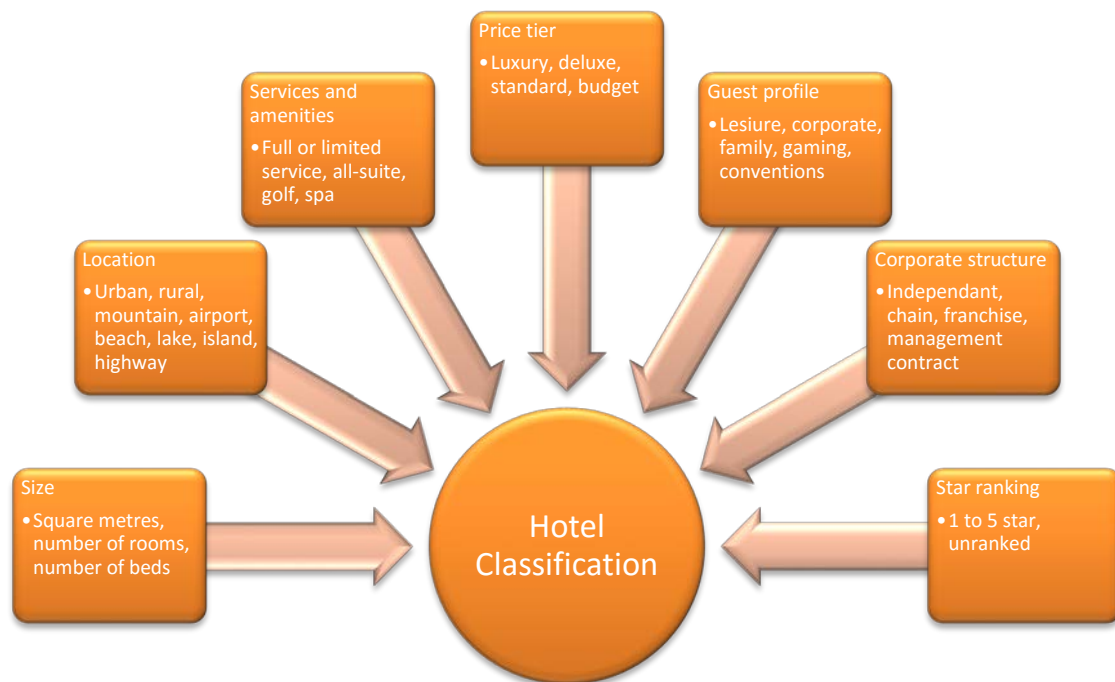


Figure 2-1: Hotel classification

Source: Adapted from Timothy and Teye (2009:145)

Hotels can on a basic level furthermore be classified into three service categories, those categories being the economy, mid-range and first class or luxury hotels (Knowles, 1998:106). Bhatia (2006:179) adds that they can be fully serviced, partially serviced or non-serviced; cater for business travellers or families on holiday, or be divided into different categories: international, commercial, residential, resort, floating, capsule or airport hotels. Walker’s classification (as cited by Slabbert & Saayman, 2003:17) shares many similarities, in his identification of several types of hotels as they are encountered by the travelling public. Table 2.2 provides a description of each of these types of hotels with an example of South African hotels that fall under each classification.

Table 2-2: Types of hotels

Type of hotel	Description
Resort hotels	Mainly located in exotic scenery, such as beaches and mountain scenery, drawing guests who travel for leisure and pleasure purposes. They offer luxury, middle-class economy, condominium, timeshare and convention accommodation. Beacon Island Lifestyle Resort in Plettenberg Bay falls into this category of a resort hotel.
City Centre hotels	These hotels offer a wide range of services and facilities, from a butler and twenty-four hour room service through to an airline office and a doctor or nurse on call. These hotels offer luxury, first class, mid-scale and economy accommodation. Sandton Sun in Sandton is a prime example.

Airport hotels	Focusing mainly on airline passengers who need accommodation, customers vary from business to group and leisure travellers. Quality ranges from the luxurious to the inexpensive. Certain hotels also have meeting/conference facilities available for businesspeople who wish to fly in, meet, and fly out. Protea Johannesburg O.R. Tambo Airport is one of these types of hotels.
Freeway hotels	Freeway hotels are situated along the major freeways of a country as a means to provide mid-scale and economy overnight accommodation. Facilities offered can include satellite television, game rooms, soft-drink machines, pools, restaurants and lounges. The Sun 1 Hotels are classified as freeway hotels.
Casino hotels	Casino hotels, as the title implies, are situated as part of casino complexes, therefore offering casinos, restaurants, entertainment centres or golf courses as part of the facilities on offer. They provide accommodation ranging from the luxurious to the inexpensive. A casino hotel is one such as the Emperors Palace Hotel Casino Convention and Entertainment Resort.

Source: Adapted from Walker (as cited by Slabbert & Saayman, 2003:17)

Hotels, therefore, come in a variety of types and sizes, offering a diversity of services and amenities at varying prize ranges. Classification is, therefore, a useful tool for a hotel to help determine what niche of the hotel market it is. However, it makes it somewhat difficult for the guest to link easily expectations to the multitude of classifications. Grading a hotel according to specific criteria facilitates the process of linking the guest's expectations to the quality and variety of services offered by the hotel.

2.2.3 Grading of hotels

All organisations must have a reason for existence, hotels being no exception to this. As such, a mission statement is necessary as it defines the unique purpose that sets the hotel apart from its competitors (Knowles, 1998:96). Timothy and Teye (2009:135), when looking at hotels in the global sense, have found that no global standard exists for the use of the term "hotel" due to the difficulties encountered in trying to assimilate so many varying qualities and characteristics in so many different destinations.

Du Plessis and Saayman (2011:142) found there to be a strong relationship between grading and price, and that the aim of grading is therefore to ensure quality, to provide value for money to guests and to obtain a competitive advantage over other competitors within the industry.

Measuring or grading the quality of service offered by establishments is challenging. Núñez-Serrano, Turrión and Velázquez (2014:78) relate to this, stating that "measuring quality in the service sector in general and in the hotel sector, in particular, poses a range of problems related to the intangible nature of the final product". However, as can be seen in South Africa through the TGCSA star grading system, certain government institutions and private companies (such as the

Automobile Association) have developed grading systems that are used for quality assessment of the products and services that accommodation establishments offer. The grading requirements of both these institutions are consequently briefly discussed.

2.2.3.1 The Tourism Grading Council of South Africa (TGCSA)

TGCSA is a dynamic public sector organisation that ensures the standard of quality of accommodation and meetings, exhibitions and special events (MESE) throughout South Africa, by providing a rigorous framework and process for the grading and implementation of its Star Grading System: “The star grading is an independent assessment of what guests can expect to find at an accommodation establishment or conference venue. It is based on the overall quality and service and takes into account the facilities you would expect to accompany a particular star grading” (TGCSA 2011:2). Stars vary from one star to five stars, one denoting the most basic and five the very best quality.

The TGCSA (2011:3) lists several benefits of being star graded, including:

- A quality graded establishment that offers substantial consumer confidence.
- Graded establishments may use the TGCSA logo (star) in all their marketing material. All graded establishments get a free listing on the TGCSA website.
- Only graded establishments and conference venues have the right to advertise in the official TGCSA accommodation guide.
- The guide is the official accommodation guide distributed by SA Tourism via its call centre and offices worldwide.
- South African Tourism endorses and uses star graded establishments on the official South African Tourism website: www.southafrica.net
- Grading gives organisations a competitive advantage.
- All government departments are required to procure accommodation from graded establishments only.
- Grading is a constant quality control tool as customers can call the customer feedback centre or go through the tourism grading website at www.tourismgrading.co.za.
- The TGCSA extensively markets star grading directly to consumers, tour operators and travel agents.
- Graded establishments may display the TGCSA plaque, an internationally recognised star rating, outside their premises.

- Graded properties will receive a valid certificate for display on their premises.
- All graded establishments have the right to access comprehensive (historical and current) details of all their assessments by using their unique login details.
- All graded establishments can load pictures, hyperlink and a write-up of their establishment through their listing page on the TGCSA website.
- The TGCSA Customer Feedback Management System (CFM) will provide comprehensive consumer feedback received about their establishment.
- Graded establishments receive regular communication updates.

In the process of being graded, several steps are followed (TGCSA, 2011:3). Firstly, the establishment utilises the grading criteria and minimum requirement document to take an in-depth look at each area and aspect of the services that the establishment offers. Table 2.3 illustrates these minimum requirements in a simplified format. Secondly, once management or the owner is satisfied that they have met these requirements, they can log onto the TGCSA website or contact the TGCSA accredited star grading assessor of that region to commence the application process. Finally, once the application has been approved, the establishment receives an official TGCSA invoice, after which the relevant grading fee is paid. The accredited grading assessor then physically assesses the establishment, after which it will be recommended to a monthly awards committee meeting where a final decision will be made, and the establishment is notified accordingly as to what the results were. As mentioned earlier, the TGCSA (2011:4) defines a hotel as an establishment providing formal accommodation with full or limited service to the travelling public, having a reception area and offering a dining facility and consisting of at least six accommodation rooms but more likely exceeding 20.

Table 2-3: TGCSA star grading: Hotel minimum requirements

Minimum requirements (1 to 3 star only)	Minimum requirements (4 and 5 stars only)
<p>Minimum requirements must include the following:</p> <ol style="list-style-type: none"> 1. A formal reception area. 2. Servicing of rooms seven days a week (includes linen/towel change, removal of rubbish and cleaning). 3. Breakfast provided/available. 4. The on-site representative must be contactable 24 hours, seven days a week. 5. Plus some of the other requirements listed under 4 and 5-star minimum requirements list (depending on the star grading). 	<p>Minimum requirements must have the full list of:</p> <ol style="list-style-type: none"> 1. Provides accommodation seven days a week. 2. Provides accommodation all year round. 3. A formal reception area. 4. Offers a dining facility. 5. The on-site representative must be contactable 24 hours, seven days a week. 6. All meals (breakfast, lunch and dinner) and beverages must be provided by outlets within the complex.

	<ol style="list-style-type: none"> 7. Servicing of rooms seven days a week (includes linen/towel change, removal of rubbish and cleaning). 8. Onsite parking with security for guests. 9. Valet service available. 10. Room service must be available. 11. Concierge, portering and luggage handling. 12. Central business centre. 13. A range of other miscellaneous services provided e.g. baby/child minding services, message services, shoe polish, delivery of newspapers. 14. Full housekeeping and laundry services provided. 15. Universal access compliance.
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Source: Adapted from TGCSA (2010)

Universal access compliance, as stated in no. 15 of above requirements is compliance with the universal accessibility (UA) requirements. These requirements are integrated with standard star grading criteria, but in no way affects the standard quality or star grading assessment, as it specifically measures physically handicapped accessibility grading across the areas of communication accessibility, visual accessibility and mobility accessibility (TGCSA, 2011:6). Three levels of this rating can be achieved, with level one meeting all minimum requirements for UA compliance in the category, level two meeting all minimum requirements at a very good standard, and level three meeting all minimum requirements of an outstanding standard.

The score that the establishment received in the process of being graded therefore determines the star grading that will be awarded, except the first assessment of compliance after being graded for the first time where only 300 points have to be achieved to remain graded within the programme (TGCSA, 2011:5). The point allocation is illustrated in Table 2.4.

Table 2-4: TGCSA hotel star grading

*****	880 – 1000	Outstanding/Exceptional quality and luxurious accommodation matching the best international standards.
****	740 – 879	Excellent quality in the overall standard of facilities, furnishings, service and guest care.
***	580 – 739	Very good quality in the overall standard of facilities, furnishings, service and guest care.
**	440 – 579	Good quality in the overall standard of facilities, furnishings, service and guest care.
*	330 – 439	Basic quality in the overall standard of furnishings, service and guest care.

Source: TGCSA (2010)

2.2.3.2 The Automobile Association Limited (AA)

The Automobile Association Limited, more commonly known as the AA, is the other organisation offering grading of accommodation establishments in South Africa, although it is not part of the public sector as is TGCSA, but of the private sector. Its star grading differs slightly from that of TGCSA, as Table 2.5 illustrates. In distinguishing a hotel from other forms of accommodation, the AA defines it as being a formal accommodation offering full hotel services. Apart from this, other forms of hotels are also classified, those being (AA, 2010):

- Country house hotel – a hotel with ample grounds or gardens set in a rural or semi-rural location; the property has an emphasis on peace and quiet.
- Small hotel – smaller establishments with a maximum of twenty bedrooms and personally run by the proprietor.
- Townhouse Hotel – a high-quality property of distinctive style with a maximum of 50 bedrooms, set in a town or city centre; possibly no dinner but room service is available instead.
- Metro Hotel – a town or city property providing full hotel services except dinner, close to a range of places to eat.

Table 2-5: AA hotel star grading

*****	Luxurious accommodation and public areas, with a variety of extra facilities and a multilingual service available. Guests are greeted at the hotel entrance. High-quality menu and wine list.
****	Professional, uniformed staff responds to guest's needs and requests, and there are usually well appointed public areas. The restaurant or dining room is open to residents and non-residents, and lunch is available in a designated eating area.
***	Staff are smartly and professionally presented. The restaurant or dining room is open to residents and non-residents.
**	A restaurant or dining room serves breakfast daily and dinner most evenings.
*	Courteous staff provides an informal yet competent service. All rooms are <i>en-suite</i> or have private facilities, and a designated eating area serves breakfast daily and dinner most evenings.

Source: AA (2010)

Hotels are therefore graded according to how certain pre-determined criteria are met, with one being the lowest rated and five the highest rated of graded hotels. Grading, on the one hand, provide a standard against which hotels can measure themselves, and, on the other hand, provide guests with an accurate expectation of what level and quality of service and amenities can be expected at the hotel.

All of the sections above are but a part of the diverse operations that have to be managed for the hotel to be successful. Hotel management is, therefore, crucial to ensure not only the continued

existence of the hotel organisation but also its continued effectiveness and competitiveness. The next section subsequently focuses on discussing management within hotels in more detail.

2.2.4 Hotel management

Murphy (2008:31) takes a simplified approach to the term “management” in that it is the process whereby one’s resources (individuals or other organisational entities), including time, is utilised to achieve a goal. In the case of a company such as a hotel, management is, therefore, concerned with achieving the goals of the company, as set out in corporate level strategic management. The ability to work towards a common set of objectives and goals thus characterises organisations within the tourism and hospitality industry (Page & Connell, 2009:111).

Depending on the nature of the establishment, if an accommodation operation such as a hotel is systems modelled (input, process, output and feedback), a core system can be identified along with sub-systems or ancillary systems according to the services that the establishment may or may not offer, as illustrated in Figure 2.2 (Goss-Turner, 2002:15). This systems model approach enables managers to view the main areas of operational concern within the hotel at a glance, thereby simplifying how all of the operations within the hotel structure fit together.

The hotel management team consists of the hotel manager, one or more assistant managers and the various heads of departments (Knowles, 1998:55). According to Bresler (2005:180), the typical hotel employment structure consists of 6% managerial, 8% supervisory, 22% technical and 64% operational staff, in that order of decision-making importance. Functional areas of hotel management include front-of-house (reception, reservations, conference and communication facilities), food and beverage (restaurant, bars, room service and banqueting facilities), leisure facilities and back-of-house (food production, cleaning and laundry) (Page & Connell 2009:235). Knowles (1998:109) points out that it should, however, also be kept in mind that within the normal operation of any hotel, maintenance is also a continuous process, be it routine, preventative or scheduled.



Figure 2-2: Systems modelled approach

Source: Adapted from Goss-Turner (2002:15)

As Goss-Turner (2002:15) illustrates in Figure 2.3 and Figure 2.4, changes within the organisational structure of hotels since the 1980's have led to fewer management levels, thereby increasing the level of control that managers have in the hotel. It also simplifies the lines of communication within the structure, leading to increased clarity of communication and enhancing the effectiveness of operations within the hotel.

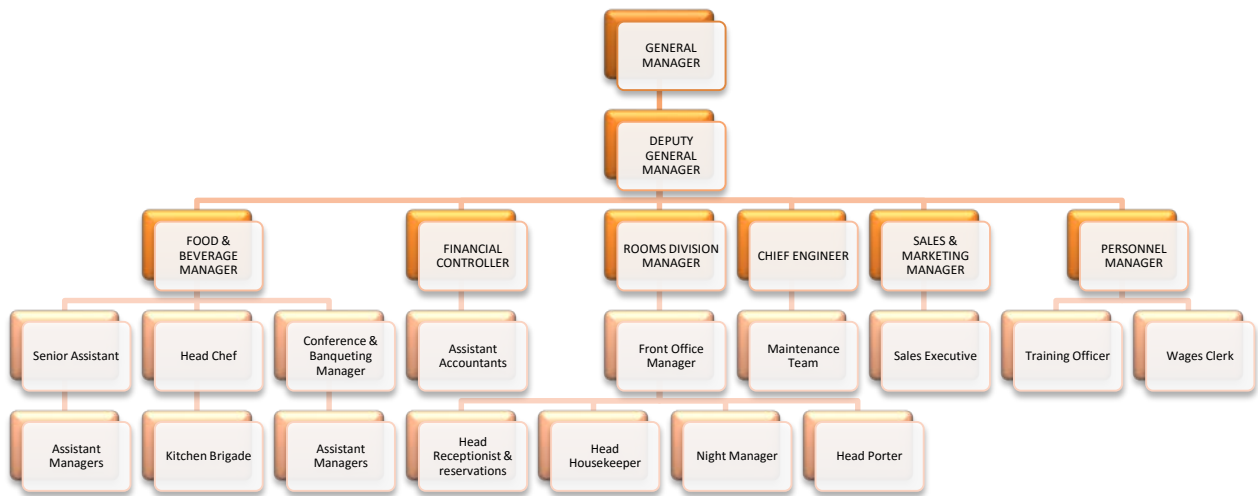


Figure 2-3: 1980's hotel organisational chart

Source: Adapted from Goss-Turner (2002:56)

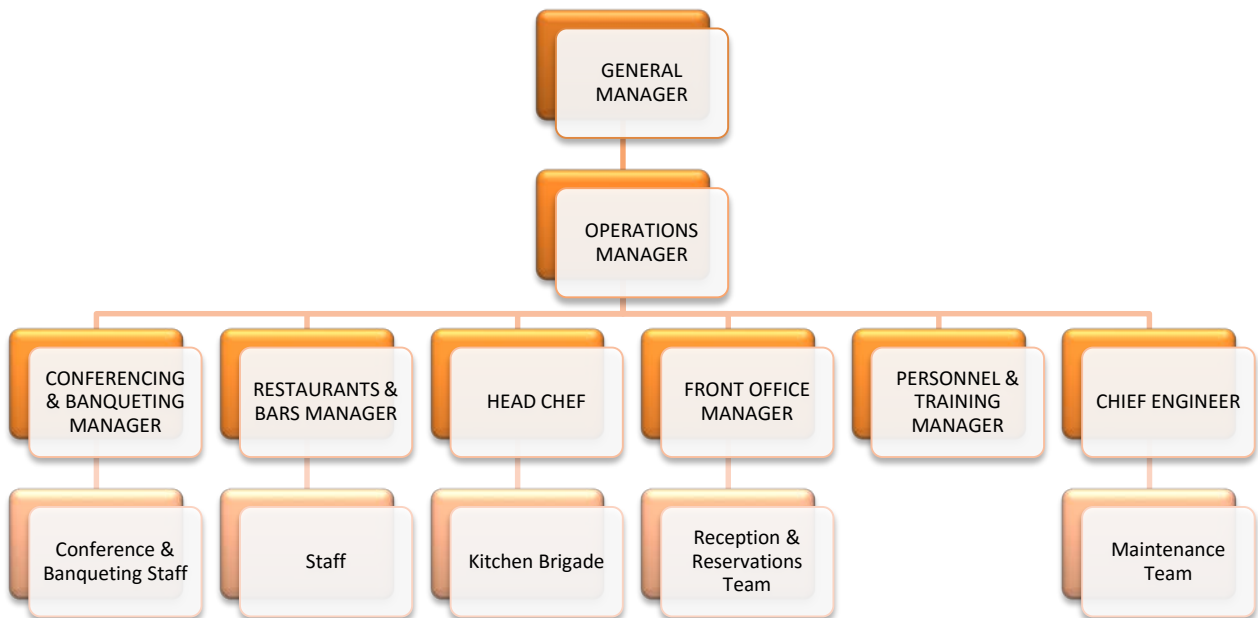


Figure 2-4: 1990's hotel organisational chart

Source: Adapted from Goss-Turner (2002:57)

Nel (2007:180) relates specifically to hotels in South Africa, indicating how the typical modern hotel organisational structure is in most instances applied to hotels in South Africa, as illustrated in Figure 2.5. Operational staff in the different divisions each report to their relevant head of the department. The heads of the various departments report to the managing director, who in turn reports to the board of directors, who are at the head of the organisation.

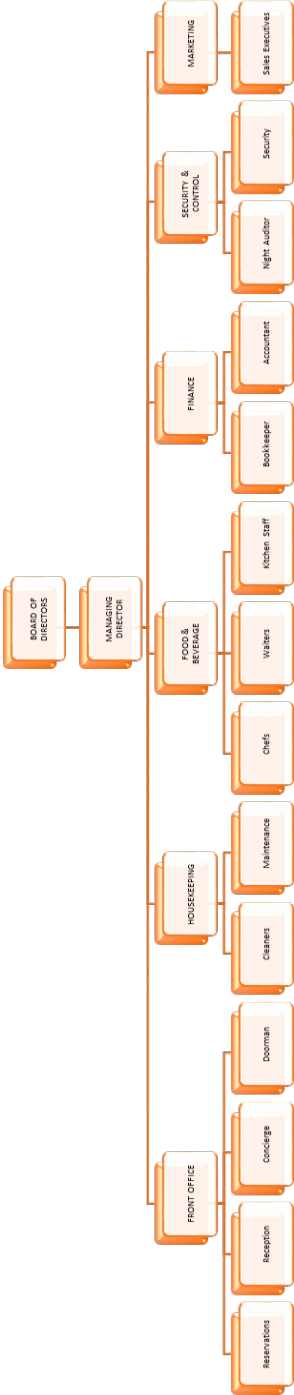


Figure 2-5: Average organisational chart for a hotel in South Africa
Source: Nel (2007:180)

According to Page and Connell (2009:235), hotel management must ensure that each accommodation unit can function profitably and ensure high levels of customer satisfaction and a quality experience by generating income and profit from customer demand while managing the supply side elements. Regarding management decisions, Tesone (2010:55) regards the three levels of management as each performing a specific task: top management has to make unstructured decisions in the process of strategic management, middle management varies between structured and unstructured decision making in the process of tactical management, and lower management utilises structured decision making in the role of supervisory or operational management, as is illustrated in Table 2.6.

Table 2-6: Different organisational levels within a hotel organisation

CEO / General Manager	<p>Responsible for the whole organisation, accountable to the board of directors and other representatives for ultimate performance of the organisation.</p> <ul style="list-style-type: none"> • Board of Directors • Managing director
Top Managers	<p>May act as part of an executive team, usually confined to a specific function such as marketing, finance and communication.</p>
Middle Managers	<p>More specialised than top managers, typically heads of divisions and responsible for performance in that area. Recent trends have these managers removed from the organisational hierarchy, enabling a flatter organisational structure, thereby cutting costs and improving the flow of communication, adding more responsibilities and duties to either top or first-line managers.</p> <ul style="list-style-type: none"> • Front office manager • Executive housekeeper • Food & beverage manager • Financial manager • Security Manager • Marketing Manager
First-line Managers	<p>Supervise non-management staff who affect day-to-day operations of the organisation. Lowest level of management, also sometimes called operational management.</p> <ul style="list-style-type: none"> • Head reservationist • Head of housekeeping • Head chef
Subordinates	<ul style="list-style-type: none"> • Receptionists • Housekeeping staff • Kitchen staff

Source: Adapted from Page and Connell (2009:111) and Nel (2007:175)

Four main areas can furthermore be identified within organisational functions that influence a hotel's ability to respond to the changes in the dynamic external environment (Okumus, Altinay & Chathoth, 2010:71):

- Operational functions deal with daily operations within the hotel system to ensure that the correct systems and procedures are in place to deliver consistent quality of its services and products.
- Marketing functions manage the challenges of demand by developing and implementing appropriate pricing strategies, as well as conducting marketing campaigns and programmes through the marketing tools that are available to the marketer.
- Human resources are tasked with carrying out a careful analysis of how human assets of an organisation such as a hotel add value to the organisation and contribute to its sustainable competitive advantage. It also manages all of the human resource-related aspects such as employee selection and recruitment.
- The financial functions identify main sources of funding and financing to operate the hotel in a cost-effective way. It also systematically analyses how different financial resources add value to the hotel and contributes to its competitiveness.

As can be seen from the above, the typical organisational structure of hotels has changed through the years. Many levels and tall organisational structures have made way for fewer levels and flatter organisational structures, thereby increasing the effectiveness of communication and operations, and making control easier to establish and maintain. Managers are ultimately in control of keeping the hotel operating within the operational parameters of that particular hotel, and for the hotel to be effective, the managers need to be effective in their duties. The individuals who are tasked with managing the hotel, therefore, need to have certain skills and traits to accomplish this task, which will be discussed in the following section.

2.3 Importance and characteristics of effective hotel managers

Managers play a vital role in the success of the hotel organisation. As such it is important to understand exactly what their importance is within the organisational structure and what the average profile or characteristics of these managers are. The next section, therefore, focuses on the importance, role and function of managers and the characteristics that set successful managers apart from average managers.

2.3.1 Importance, role and function of hotel managers

The process of managing a hotel is highly complex and operates in a relative turbulent and competitive environment (Jones & Lockwood, 2004:25). Managers are therefore key components

of managing a hotel establishment within this environment. As Leiper (2004:170) explains, managers are needed to give organisations a better chance of surviving and fulfilling their purpose. Tesone (2010:54) states that “managers are paid to make decisions that will enhance the productivity of the organisation”. To make effective and efficient decisions, managers require skills in the processes of planning, organising, leading/influencing and control (Nel, 2007:173). The difference therefore between a manager and an “ordinary” employee, or subordinate, is that a manager plans, makes decisions, leads, organises and controls, whereas subordinates have to implement these plans and decisions that were made by management (Bresler, 2005:165).

Jones and Lockwood (2004:26) in using Nailon’s contextual model in which management is carried out, identify four components that managers must manage: (1) human resources, (2) the external environment, (3) the management information system (IS) and (4) the technical infrastructure. Enz (2010:150) states that one of the most important tasks for managers is to facilitate knowledge creation, retention, sharing and utilisation. Each task requires different management skills and organisational arrangements. Outstanding execution of these tasks can lead to superior performance. Apart from these tasks that must be managed, Harrison and Enz (2005:78) state that most scholars would agree on five important responsibilities of (strategic) leadership that seem to be present in most successful organisations: creating organisational vision, establishing core values, developing strategies and management structure, fostering an environment conducive to organisational learning and development and to serve as a steward for the organisation.

Managers are responsible and accountable to four stakeholder groups, those being the customers, shareholders, employees and the community. Proactive managers realise that the interests of all of these stakeholders are vital to ensuring the long-term success of the organisation, as well as their managerial careers (Tesone, 2010:29). Managers as employees of the organisation are, in that respect, already members of at least one of the stakeholder groups, with the possibility existing that they may be part of even more of these groups (Tesone, 2010:30). In seeking to integrate all elements of the hotel to ensure that they run smoothly and work towards a common set of goals, a hotel manager must possess a wide range of skills to accomplish this (Page & Connell 2009:235). Goals commonly include the following, and, as can be seen, they are much more diverse than mere profitability (Page & Connell, 2009:112):

- Profitability
- Efficiency

- Effectiveness
- Other goals (such as coordination)

These goals of the organisation and the execution of the appropriate strategies can, according to Ninemeier and Perdue (2008:39), only be attained by the travel and hospitality industry by utilising a finite amount of resources in an effective and efficient manner as possible. The resources can be classified as:

- Labour (employees/human resources);
- Money;
- Products (food, beverages, supplies);
- Machinery (equipment);
- Time;
- Methodology (organisational processes and procedures); and
- Energy.

Mintzberg (as cited in Jones & Lockwood, 2004:27) suggests that there are three main roles that a manager must fulfil in the execution of his tasks and the attainment of the goals of the hotel organisation. These roles can further be divided into subgroups so that a total of ten roles are identified, as can be seen in Table 2.7:

Table 2-7: Main roles of a hotel manager

- | |
|---|
| <ol style="list-style-type: none"> 1. Interpersonal roles. <ol style="list-style-type: none"> a) Act as figurehead b) Act as leader c) Provide the necessary liaison between individuals and functions 2. Informational roles. <ol style="list-style-type: none"> a) Monitor the environment for information b) Disseminate the information to the right people within the organisation c) Act as spokesperson for the organisation 3. Decisional roles. <ol style="list-style-type: none"> a) Act as an entrepreneur b) Deal with problems as they arise c) Allocate resources d) Negotiate between internal and external environments |
|---|

Source: Mintzberg (as cited in Jones & Lockwood, 2004:27)

According to Leiper (2004:184), the cornerstone role that a manager must fulfil is coordination. Carroll's eight job activity clusters or clusters of managers' roles provides as basis to list what it is that managers have to do and "be" within a hospitality organisation (2004:175):

1. Planners
2. Representatives
3. Investigators
4. Negotiators
5. Coordinators
6. Evaluators
7. Staffers and change agents
8. Supervisors

Quinn, Faerman, Thompson and McGrath's (1990:21) eight managerial or leadership roles are slightly different from those of Leiper mentioned above, but with the added advantage that their key competencies are also listed for each of the roles, as illustrated in Table 2.8.

Table 2-8: Eight managerial/leadership roles and their key competencies

Director Role	<ol style="list-style-type: none"> 1. Taking initiative 2. Goal setting 3. Delegating effectively
Producer Role	<ol style="list-style-type: none"> 1. Personal productivity and motivation 2. Motivating others 3. Time and stress management
Coordinator Role	<ol style="list-style-type: none"> 1. Planning 2. Organising and designing 3. Controlling
Monitor Role	<ol style="list-style-type: none"> 1. Reducing information overload 2. Analysing information with critical thinking 3. Presenting information; writing effectively
Mentor Role	<ol style="list-style-type: none"> 1. Understanding him/herself and others 2. Interpersonal communication 3. Developing subordinates

Facilitator Role	<ol style="list-style-type: none"> 1. Team building 2. Participative decision-making 3. Conflict management
Innovator Role	<ol style="list-style-type: none"> 1. Lives with change 2. Creative thinking 3. Manages change
Broker Role	<ol style="list-style-type: none"> 1. Builds and maintains power base 2. Negotiate agreement and commitment 3. Present ideas

Source: Quinn, Faerman, Thompson and McGrath (1990:21)

Clarke and Chen (2007:239) agree that managers must perform various roles depending on circumstances, but take a more generic approach to these roles. They advocate that these roles include: (1) leading, (2) acting as figurehead, (3) communicating information, (4) negotiating, (5) allocating resources, (6) handling disturbances, (7) planning, (8) overseeing implementation of plans, and (9) evaluation. These roles are then further divided into components that must be present to ensure the success of that particular role (Clarke & Chen, 2007:12):

1. Strategy: determining the direction of a company and establishing ways in which it will be able to achieve its objectives.
2. Structure: consider how the organisation is patterned and ensure structure, facilitates meeting of objectives.
3. People: management process involves dealing with people inside and outside the organisation, a variety of roles from development to discipline.
4. Operating environment: understand internal and external forces that influence the organisation and impacts they may have on the future performance of the organisation.
5. Market(s) and marketing: how will organisation select and present itself to existing and potential customers?
6. Social responsibility: demonstrating both private and social profit for the company.

A manager is therefore required to gather and analyse information on the goals that the organisation wishes to attain and to determine if it is necessary to take action to correct any deviations in the process of reaching these goals (Page & Connell, 2009:112). This is done by assuming the various management roles, the aptest role being determined by the nature of the

situation and the experience and approach that the manager wishes to use. The characteristics of the manager will ultimately also influence this decision-making process.

2.3.2 Characteristics of effective hotel managers

Effective hotel managers have to possess certain qualities that make them stand out in performing their responsibilities. These qualities are mostly intrinsic to a manager, and may vary in its intensity and scope according to different individuals. However, there are certain generalisations that can be made regarding the characteristics that are prevalent in these managers. Page (2007:309) notes that change is a key feature of a tourism business, but that internal resistance to change may be a problem for managers when attempting to move the business in a new direction. Various techniques can be used to adapt to change, these techniques thereby also being essential competencies and skills that the manager must possess to make effective use of these skills (Page, 2007:309):

- Education and communication;
- Participation and involvement;
- Facilitation and support;
- Negotiation and agreement;
- Manipulation and co-optation; and
- Explicit and implicit coercion.

The above shows that there is truly a multitude of skills and competencies needed by a manager, which implies that such a manager should maintain a certain balance. As Tesone (2010:30) states, the proactive manager is a balanced individual who is passionate about the challenges and meaning of his or her work, these also being the qualities that make him or her a respected leader. Burgess (as cited by Bresler, 2005:169) states that leading managers are more innovative; entrepreneurial; market-orientated; comfortable with taking acceptable risks; able to respond to the rich and poor duality of the South African market; realise that social responsibility is enlightened self-interest; flexible and honest, possessing integrity; good people and communication skills; able to deal with difficult times and overcome obstacles; driven and able to attract and retain high-quality staff and to motivate, mentor, train and coach these staff. Tesone (2010:32) lists several characteristics of proactive managers:

1. They are not victims of their situations, rather taking charge of their own personal and professional destiny.
2. They are mission-driven in aligning their personal goals with the organisational goals.
3. Long-term outcomes are desirable, not short-term profits or other forms of satisfaction or gratification.
4. Being empathic, they listen to and care about the needs of others, particularly their staff.
5. Win/win/win situations must be attained as much as possible for others, themselves and the organisation.
6. They are synergistic by being team stewards.
7. As holistic individuals who are in search of self-actualisation, they are spiritually, mentally, physically, emotionally and socially balanced.

This is very much in line with the dominant strategies that Akrivos, Ladkin and Reklits (2007:112) found to be present in hotel managers' top career strategies for success. These findings are illustrated in Table 2.9, in rank order with the highest ratings first.

Table 2-9: Dominant career strategies

- | |
|--|
| <ol style="list-style-type: none"> 1. Keep informed of the opportunities within the company. 2. Always try to improve communication skills and abilities. 3. Act with enthusiasm and smile. 4. Be flexible and able to adapt to any changes. 5. Establish and maintain good interpersonal relations with hotel owners. 6. Pay attention to his or her presentation by caring about presentation and speech. 7. Be able to handle diversity effectively. |
|--|

Source: Adapted from Akrivos, Ladkin and Reklits (2007:112)

Managers can, therefore, be seen as individuals who have a holistic approach, who attune themselves to the needs of the hotel and of the staff (including themselves) and utilise resources in such a manner as to be as effective as possible while retaining control of operations, all while conducting themselves in a professional yet humane and team-orientated manner.

When compared with the competencies that the average hotel manager of the late 1990's possessed, it becomes clear that certain characteristics are still required today, whereas others

are not rated as important as they were a decade ago. Those “older” management era competencies are (Deery & Jago, 2001:332):

- Authority to make decisions;
- Makes prompt decisions;
- Is approachable;
- Fully understands the employees’ jobs;
- Is competent;
- Knows what is going on in the organisation;
- Is available to answer questions;
- Help in difficult situations;
- Treats staff with respect; and
- Treats staff fairly.

Ryan, Tavityaman and Weerakit (2009), in their assessment of the impact that gender, age and education has on leadership competencies needed for success as a hotel manager, found that there were certain factors that were present in all these assessments. Leadership, motivation and interpersonal skill, strategic orientation, planning and implementation, team building and ethics, communication skills, flexibility and concern for the community were all found to be highly rated by respondents in their importance to effective management. The last factor, concern for the community, is a factor that will most probably come more into play shortly as the need for sustainable and “green” hotels increase. This is because the community is an integral part of the focus of sustainable tourism, especially ecotourism.

According to Page and Connell (2009:112), to make decisions managers have to balance and use their technical skills and “human skills”. This means they have to combine skills in their particular area of expertise with those skills required to relate to and interact with other people in the process of effectively communicating to motivate and lead others. Managers furthermore need cognitive and conceptual skills to be effective in the execution of their duties.

Cognitive skills enable managers to formulate solutions to problems, in other words, those skills that enable actions based on the beliefs and knowledge that a manager has about something (Page & Connell, 2009:113; White, 2004:310). Conceptual skills on the other hand are those skills

that enable the manager to “see the bigger picture” or to think holistically in that they can take a broader view of the organisation and see how each individual or activity contributes to the activities of the organisation as a whole (Page & Connell, 2009:113). This relationship is illustrated well by Jayawardena (2000:68) in that marketing, finance, technical and human resources all have to be utilised by the hotel general manager, as they are crucial in addressing the needs of people. These needs are those of the customer, the employee and the company. People are the very focus of the hospitality industry, as the hotel business is service-driven by and for people.

One of the most important prerequisites for being a successful general manager can, therefore, be said to be qualifications, skills and knowledge, aforementioned most notable in the areas of technical, human resources, finance and marketing. This is supported by Garrigós-Simón, Palacios-Marqués and Narangajavana (2008:375), who found that education and globalisation capabilities are the most important in explaining the accuracy of a hotel manager’s perceptions regarding the competitive environment that the hotel and hospitality industry face in the post-Internet era.

Education and knowledge are therefore rated quite high in today’s hospitality industry, and, therefore, warrants more discussion. Leiper (2004:187) advocates that managers need to know eight themes of knowledge to support their diverse activities:

1. Knowledge regarding the organisation in which they are employed.
2. Managers need knowledge of the industries in which their organisation participates.
3. Knowledge is needed for the market in which the organisation operates.
4. Managers should have developed their knowledge of management to a level of excellence.
5. Most managers have, apart from management, knowledge of at least one other specialisation.
6. As people are an integral part of any organisation, a manager needs knowledge of human behaviour and attitudes.
7. Managers need to know themselves and what their abilities are.
8. General knowledge about a wide range of topics is also needed.

Harper, Brown and Irvine (2005:56) found some interesting results in their study concerning the importance of qualifications for hotel managers. Formal qualifications are considered far more

beneficial in developing functional managerial skills, especially regarding finances, strategic planning, sales, marketing and human resource management. Considering mean times, a manager that is qualified takes only nine years and two months to reach a managerial position, compared to his or her counterpart for whom the timeframe is eleven years and ten months. Of course, when age is taken into consideration, the unqualified manager reaches this position earlier as he does not “lose time” in pursuing a tertiary qualification. Furthermore, the majority agreed that qualifications are an integral part of manager’s career development within the hospitality industry and that in these modern times more of a business than operational perspective is required and this consequently demands a higher level of technical and business skills. Interestingly enough, personal transferable skills that would not be associated with formal qualifications, such as communication, time management, decision making and leadership qualities, are considered to benefit greatly from formal qualification.

Deery and Jago (2001:332) identified competencies lacking in the late 1990’s hotel manager. These competencies are when compared to previous discussions on findings in this section, considered to be crucial for an effective hotel manager. The question that faces the industry, however, is whether or not these deficiencies have been addressed in the competencies required by the early 2010’s hotel manager:

- Communication skills
- People management skills
- Feedback provision
- Job requirement assisting
- Utilising staff skills well
- Encouraging training
- Representing staff views to senior management
- Influencing decisions in an experienced and knowledgeable way, for example, regarding salaries

The implication for the hospitality industry, especially hotels, is that this discussion illustrates which characteristics are important for individuals who wish to become successful hotel managers. This means that from a practical point of view, these findings can be incorporated into the selection process as criteria for prospective employees during interviews and suitability analysis. Managers are, in themselves, already an integral part of the whole organisational structure, and can as such probably be regarded as the most important critical success factor.

This also explains why their characteristics are important, for it directly influences the effectiveness of the hotel organisation and those critical success factors needed to manage successfully a hotel. These critical success factors are discussed in more detail in the next section.

2.4 Critical success factors in managing hotels

Management is the process by which a company's objectives are met through the activities of others (Tesone, 2010:7), and that management process must support and lead the company as it tries to operate in an effective and efficient a manner as possible (Murphy, 2008:31) within the constantly changing and evolving market conditions within the hospitality industry (Page & Connell, 2009:238). Jeffrey, Barden, Buckley and Hubbard (2002:73) add to this, by saying that it is crucial to the hotel's survival and the success of the hospitality industry to monitor and improve standards of performance. To enhance the effectiveness of the management process and the performance standards. It is, therefore, crucial for establishments within the hospitality industry to be aware of the critical success factors that will determine the success or failure of their undertakings. This is due to the fact that critical success factors are those few aspects that must go well to ensure success and must, therefore, be given continual special attention to bring about high performance, as it includes issues vital to the organisation's current operating activities and its future success (Boynton& Zmud, 1984:17). Critical success factors tie in with management in that they are mostly controllable by management and, therefore, play a very important role in determining the effectiveness of the management process (Brotherton & Shaw, 1996:114).

As far back as the early 1960's academics already started realising the importance of critical success factors, as is evident by Daniel's 1961 study. However, when looking at the last decade it can almost be said that Daniel's realisation has only now begun to bear fruit within the hospitality industry, especially the accommodation sector, as the amount of research regarding the critical success factors, particularly within hotels, has only started to increase these last few years (Brotherton, 2004; Li, Wong & Luk, 2006; Hua, Chan & Mao, 2009; Avcikurt, Altay & Ilban, 2010; Appel *et al.*, 2013). As Brotherton (2004:21) remarks, the application of the CSF approach within the hospitality industry is somewhat limited.

Boynton and Zmud (1984:18) in their assessment of critical success factors, found that there are both strengths and weaknesses within the critical success factor approach, as Table 2.10 illustrates. However, these weaknesses could also be largely overcome through the careful and knowledgeable application of the critical success factor method. Brotherton and Shaw (1996:131) propose that critical success factors can be classified into one of two groups, being either

human/soft or technical/hard in nature. The human critical success factor category has to do with the direct provision of the hospitality service. It therefore typically refers to issues associated with staff attitudes, skills, morale and training and development. The technical category, on the other hand, focuses primarily on efficiency and economy of the structures, systems, processes and procedures designed to both provide a sound foundation for the direct delivery of the hospitality product and to manage the business aspect of hotel operations' survival and success.

Table 2-10: Strengths and weaknesses of critical success factors

<p>Strengths</p> <ol style="list-style-type: none"> 1. Provides effective support for the planning process. 2. Develops insight into information services that can impact the company's competitive position. 3. Senior management is enthusiastic about critical success factors, as they identify with its thrust and potential. 4. It is the top level of structured analysis and also promotes the structured analysis process.
<p>Weaknesses</p> <ol style="list-style-type: none"> 1. The further removed managers are from senior level management, the more difficult it becomes for them to identify meaningful critical success factors. 2. Managers not involved or familiar with strategic and tactical planning can experience difficulty with the conceptual nature of critical success factors. 3. Certain managers may find it difficult to ascertain their information needs using only critical success factors.

Source: Adapted from Boynton and Zmud (1984:24)

Li *et al.* (2006:92) found that businesses looking for venture partners rated good strategic and marketing planning, ability to exchange information, strong financial background and good experience and abilities with market research as critical success factors. When looking at small hotels within Turkey, the authors Avcikurt, Altay and Ilban (2010:161) found that the most important critical success factors were the use of the internet, service quality, financial performance and marketing.

Brotherton's 2004 study concluded that most critical success factors in UK corporate hotels were similar to those of other UK hotels in Brotherton and Shaw's 1996 study. The critical success factor findings that were rated the highest current and future priority are illustrated in Table 2.11. It must, however, be noted that these critical success factors were determined from a supply view, and as such there is still room for determining what other various hotel stakeholders view as the critical success factors.

Table 2-11: Critical success factors with the highest current and future priority

1996 Findings	2004 Findings	% Agreed
Department/CSF		
Front Office		
<ul style="list-style-type: none"> • Accurate and efficient reservation system • Effective staff sales skills • Provision of high levels of customer care • Maximising occupancy levels • Development of appropriate staff attitudes • Effective revenue/yield management 	<ul style="list-style-type: none"> • Staff attitudes • Accurate and efficient reservations system • Enquiry handling • Staff appearance • Pricing, yield and profit 	<ul style="list-style-type: none"> • 95.5 • 72.7 • 72.7 • 72.7 • 72.7
Conference and Banqueting		
<ul style="list-style-type: none"> • Charge competitive prices • Produce high-quality food & beverages • Provide flexible facilities • Upselling wherever possible • Attention to detail • Maintain/improve facility quality 	<ul style="list-style-type: none"> • Attention to detail • Enquiry handling • Quality of facilities • Diary/reservation management • Flexibility of facilities 	<ul style="list-style-type: none"> • 100 • 95.0 • 80.0 • 75.0 • 75.0
Human Resource Management		
<ul style="list-style-type: none"> • Effective recruitment and selection • Staff training • Staff morale and loyalty • Reduce staff turnover • Staff appraisal • Staff development 	<ul style="list-style-type: none"> • Staff development • Morale & loyalty • Guest accommodation • Consistent quality • Staff training 	<ul style="list-style-type: none"> • 95.0 • 95.0 • 95.0 • 95.0 • 95.0
Food and Beverage (Service)		
<ul style="list-style-type: none"> • High level of service • Enhanced customer care • Develop and maintain staff skills • Staff attitude and appearance • Quality of ambience and environment • Quality of food and drink presentation • Quality of food and drink 	<ul style="list-style-type: none"> • Staff attitude and appearance • Quality of food and drink • High level of service • Service response time • Improved sales 	<ul style="list-style-type: none"> • 90.5 • 90.5 • 76.2 • 76.2 • 52.4

Leisure Operations		
<ul style="list-style-type: none"> Quality facilities Range of facilities Membership levels Attractiveness of facilities Quality of staff Cleanliness and hygiene 	<ul style="list-style-type: none"> Attractiveness of facilities Cleanliness and hygiene Customer safety Quality of staff Range of facilities 	<ul style="list-style-type: none"> 100 93.3 86.7 80.0 80.0
Sales and Marketing/Hold/Increase Market Share		
<ul style="list-style-type: none"> Maintaining market share Quality of sales team Effective advertising Market intelligence Client database Competitor intelligence 	<ul style="list-style-type: none"> Quality of sales team Competitor intelligence Client database Effective advertising 	<ul style="list-style-type: none"> 90.0 81.8 81.8 59.1
Food and Beverage (Production)		
<ul style="list-style-type: none"> Consistent food quality Use of standards and procedures Purchasing and liaison with suppliers Minimal food wastage Use efficient production methods Maintain high hygiene standards 	<ul style="list-style-type: none"> Staff skills and training Maintaining high hygiene standards Minimising food wastage Use of standards and procedures Using efficient production methods 	<ul style="list-style-type: none"> 90.0 90.0 75.0 75.0 60.0
Back Of House Operations		
<ul style="list-style-type: none"> Planned maintenance programmes Effective cleaning regimes Effective security systems Laundry quality and efficiency Interdepartmental liaison 	<ul style="list-style-type: none"> Effective cleaning regimes Guest safety Planned maintenance programmes Laundry quality and efficiency 	<ul style="list-style-type: none"> 95.2 85.7 81.0 47.6
Accounting and Control		
<ul style="list-style-type: none"> Revenue control Accurate financial reports Budget control procedures Prompt payment of monies Bad debt control procedures Accurate costings 	<ul style="list-style-type: none"> Accurate financial reports Prompt payment of all monies 	<ul style="list-style-type: none"> 95.5 81.8

Guest Accommodation		
<ul style="list-style-type: none"> • Consistent quality • Cleanliness • Customer needs • Training programmes • Minimise costs • Variety of rooms 	Not applicable	Not applicable

Source: Adapted from Brotherton and Shaw (1996); Brotherton (2004)

Hua *et al.* (2009:65) attempted to address the gap in Brotherton's study (critical success factors were determined from a supply side view only) by following a different route in that their study focused on critical success factors as seen from the industrial professional, the government authority, the hotel investor and hotel guests. The top five critical success factors were then determined, as well as the five dimensions that they relate to, as illustrated in Table 2.12. In short they found the critical success factors to be the physical product, service quality, price, promotion and location.

Table 2-12: Critical success factors and dimensions

Critical success factors				Dimensions
Industrial professional	Government authority	Hotel investor	Hotel guest	
<ul style="list-style-type: none"> • Guest safety and security. • Guest bedroom and comfort level. • Hygiene and cleanliness. • Convenient locations. • The speed of guest service. 	<ul style="list-style-type: none"> • Strong brand differentiation. • Guest safety and security. • Value for money accommodation. • Guest bedroom comfort level. • The speed of guest service. 	<ul style="list-style-type: none"> • Strong brand differentiation. • Central sales / reservation system. • Geographic coverage of hotel network. • Value for money accommodation. • Guest bedroom comfort level. 	<ul style="list-style-type: none"> • Guest security. • Provision of all kinds of amenities. • Responsiveness to customer demands. • Operation flexibility / responsiveness. • The speed of guest service. 	<ul style="list-style-type: none"> • Physical product. • Service quality. • Price. • Promotion. • Location.

Source: Adapted from Hua *et al.* (2009:65)

Jeffrey *et al.* (2002:82) decided to focus more on the occupancy aspect of hotel performance and found that there were several factors contributing to the strong occupancy rates of certain hotels. These factors can also be seen as critical to the success of the hotel, but with a different approach. The authors remark that good management practices are the key influences that set the strong occupancy performers apart, focusing especially on diverse marketing tools and implementation

of a variety of marketing initiatives aimed at different markets. Good relationships with repeat visitors encouraged positive word-of-mouth through offering a quality product and commitment to high service standards. Loyal and experienced staff, as well as promotional packages to spread demand to off-peak periods, also contributed to these higher occupancy levels. A wider range of booking channels has also been found to be essential to the success of the hotel operation.

Jones and Lockwood (2004:173) found five potential areas that are needed to shift hotel organisations into the mode of future and forward thinking, those being:

1. Organisational design.
2. Management development.
3. Culture and climate.
4. Performance measurement; and
5. Management information systems.

Brotherton (2004:36) in his conclusion found that when his results were compared to those from Brotherton and Shaw (1996), it is very reasonable to conclude that an overwhelming majority of critical success factors are generic in nature. This is in line with the finding that generic themes such as consistency, quality, appropriateness, flexibility and adaptability came strongly forward (Brotherton & Shaw, 1996:133). Avcikurt *et al.* (2010:161) found that for small hotels the internet, service quality, financial performance and marketing is important. Service quality appears to be one of the most mentioned critical success factors, which indicates the importance of service quality to guests. This is in line with Hua *et al.*'s (2009:69) observations.

2.5 Previous research concerning critical success factors in South Africa

The aforementioned section discussed the findings of previous research regarding the critical success factors in specifically managing hotels. To date, this topic has not been researched in South Africa, except the unpublished word by Appel *et al.* (2013), who sought to identify and understand the critical success factors needed in managing hotels in South Africa. Several important critical success factors that hotel managers need to increase effectiveness and the chances of success for the hotel have been identified, including quality and customer satisfaction, organisational management, purchasing management and green management, risk and policy management, as well as marketing and experience management, in that order of importance.

Apart from Appel *et al.*'s (2013) study regarding hotel operations, critical or key success factors (CSFs) have been determined for other tourism operations in the country, such as a guesthouse (Van der Westhuizen, 2003), wedding events (De Witt, 2006), a conference centre (Kruger, 2006), a wine festival (Marais, 2009), and an arts festival (Erasmus, 2011). The results of these studies are displayed in Table 2.13.

Table 2-13: Previous studies on critical success factors in South Africa

Van der Westhuizen (2003)	Critical success factors for developing and managing a guesthouse.	<ol style="list-style-type: none"> 1. Owner-manager establishes and upholds a high standard of quality. 2. Human resource management should show courtesy to guests. 3. Owner-management must inspire, motivate and praise employees. 4. Self-sufficient owner-manager. 5. Good leadership qualities. 6. Ability to share positive information freely. 7. Providing the services and facilities guests need. 8. High level of hygiene. 9. Guests welcomed in a personal manner. 10. Well-trained employees. 11. Attractive natural surrounding landscapes.
De Witt (2006)	Critical success factors for managing special events: The case of wedding tourism.	<ol style="list-style-type: none"> 1. Strategic planning and performing a SWOT analysis. 2. Operational services that include high levels of hygiene having a liquor licence providing secure parking, providing a variety of menus and the accessibility of the venue. 3. Human resource management and creating positive organisational behaviour. 4. Financial management including control of finances through financial operating systems, an operating budget and a break-even analysis. 5. Marketing aspects such as market segmentation, market positioning and promotion, which includes personal selling, development of efficient public relations and advertising the venue, to ensure the success of the special event.
Kruger (2006)	Critical success factors in managing a conference centre in South Africa.	<ol style="list-style-type: none"> 1. Functional layout and providing the right variety of facilities. 2. Good marketing management. 3. Having the proper operational aspects in place. 4. Conducting proper planning before any conference. 5. Providing an attractive venue. 6. Performing human resource management.
Marais (2009)	Critical success factors in managing the Wacky Wine Festival.	<ol style="list-style-type: none"> 1. Quality and good management, including factors such as adequate facilities for children. 2. Wine farm attributes that include adequate numbers of staff, selection of wine and affordable wine. 3. Effective marketing.

		<ol style="list-style-type: none"> 4. Route development that includes aspects such as information available about the wine route, a well-organised route and a route map. 5. Festival attractiveness consisting of whether the festival is managed in a friendly way, well-managed enquiries, adequate security and value for money. 6. Entertainment activities including a variety of entertainment, adequate variety and friendly staff. 7. Accessibility consisting of comfortable wine farm facilities, clear indications to farms and well-managed farms.
Engelbrecht (2011)	Critical success factors for managing the visitor experience at the Kruger National Park.	<ol style="list-style-type: none"> 1. General management 2. Wildlife experience 3. Facilities 4. Green management 5. Leisure and hospitality management 6. Interpretations 7. Variety activities 8. Accommodation facilities 9. Luxuries
Erasmus (2011)	Key success factors in managing the visitor experience at the Klein Karoo National Arts Festival.	<ol style="list-style-type: none"> 1. Safety and personnel. 2. Marketing and accessibility. 3. Venues. 4. Accommodation and ablution. 5. General aspects and social impact. 6. Parking and restaurants. 7. Shows and stalls.
Manners (2011)	The critical success factors for managing the visitor experience at a major musical event.	<ol style="list-style-type: none"> 1. General management 2. Souvenirs 3. Marketing 4. Venue and technical aspects 5. Accessibility and parking 6. Amenities and catering
Appel, Kruger and Saayman (2013)	Critical success factors in managing hotels in South Africa.	<ol style="list-style-type: none"> 1. Organisational management. 2. Quality and customer satisfaction management. 3. Marketing and experience management. 4. Human resource management. 5. Purchasing management. 6. Risk and policy management. 7. Green management.

Source: Author's Own Compilation

When looking at these previous studies it becomes quite clear that critical success factors differ from one tourism product to the next, be it a slight variation or total variation. It is, therefore, logical to assume that, as each hotel is a different entity and is therefore managed differently, those critical success factors that may work for one hotel will not necessarily work for another hotel. If

so, the critical success factors within hotel management are not limited to a particular hotel group or chain, but rather an inherent part of hotel establishments within the hospitality industry. Identifying these critical factors that are unique to each establishment or hotel group will then provide insight into the unique strengths of that business, enabling managers to focus on these points to enhance the productivity and effectiveness of the business and in doing so, enhance the competitive advantage of the establishment.

2.6 Conclusion

This chapter focused on hotels and hotel management within the hospitality industry. Hotel management and the classification and grading of hotels were inspected to provide a more thorough understanding of the hotel organisation. Furthermore, the role, function and importance of hotel managers were discussed, as well as their personal characteristics, to determine those qualities that make for effective hotel managers. Lastly, the critical success factors in managing hotels were discussed, including those studies that focused specifically on critical success factors within the South African Hospitality industry.

The typical modern hotel organisational structure is quite flat when compared to earlier years, such as the 1980's. This is mainly due to a wider span of control that enables better communication within such a flat organisational structure. This has also influenced the management structure within hotels, as the organisational levels needed to adapt to this adjustment. TGCSA was found to be the only definitive authority to grade hotels in South Africa, as it is a government run tourism organisation that ensures the standards of quality that hotels can adhere to within the hospitality industry. However, the AA also grades hotels, although this is not seen as essential to the success of the hotel organisation, for it is not government endorsed.

Modern hotel managers are an essential part of the hotel organisation and the roles that they play and functions that they fulfil are extremely diverse and complex. To perform their functions effectively, it appears that there is a very strong tendency today within the hotel industry to place more value on education so that this may be accomplished. The factors that are critical to the success of the hotel organisation focus on customer experience, staff attitude and aptitude, and the appearance of facilities. However, the focus of these categories appears to be more on the finer detail, especially regarding the customer experience.

This chapter has outlined the importance of effective management and especially the significance of hotel managers' personal characteristics and identifying the critical success factors in managing hotels. The next chapter discusses the importance of hotel maintenance management, as well as the critical success factors needed to manage effectively these hotels in the country.

CHAPTER 3: A LITERATURE OVERVIEW OF THE HOTEL MAINTENANCE FUNCTION

3.1 Introduction

In the hotel industry, maintaining the engineering system(s) is very important despite it being quite complex, as the effectiveness of the maintenance will directly influence the quality of various services within the hotel, thereby directly and significantly influencing the guest's impression of the hotel (Kannan, 2013:127). As far back as 1977, the importance of maintenance within hotels was recognised by Borsenik (1977), who at the time offered three reasons for the limited academic acknowledgement and inclusion of maintenance within subjects, which he postulated was due to a lack of awareness, instructors and texts. Lai (2013:426) concurs and states that "research on maintenance for hotel engineering facilities is rare." Lai and Yik's (2008:280) remarks on some of the challenges that the author also experienced in conducting this research ring true, such as that information on staff resources and being a key cost centre, are seldom disclosed. The same is true of reports and data on the costs of repair and maintenance for improving facilities performance. As Lai and Yik (2008:281) so accurately state: "The fear of divulging sensitive cost data of staff resources, operation and maintenance contracts and utility consumptions was another information barrier encountered when collecting the data." As discussed in Chapter 2 (c.f.2.1), hotels are complex and, therefore, costly with regards to maintenance, as there are various spaces with different uses, each requiring a functional engineering system for its maintenance (Kannan, 2013:127).

Even after almost 40 years have elapsed since Borsenik made his statement on the limited focus on maintenance by academic researchers, this statement still holds very true in many areas today. The challenges faced in obtaining cooperation from respondents for this study were numerous, and even more so in obtaining any form of relevant academic insight into hotel maintenance management. As such this chapter gives an overview of maintenance within hotels, but only insofar as the author was able to obtain relevant literature. The interchangeable use of different terms (c.f.1.2.1), such as maintenance and engineering, also further complicated and increased the complexity of the study.

This chapter, therefore, looks at whether this statement still holds true today by investigating the literature that is relevant to the management of maintenance within hotels. This is done by understanding hotel maintenance management and the importance of the maintenance function for the hotel, as well as where the maintenance function fits into the organisational structure of

the hotel and by examining the different types of maintenance. Each of these aspects are discussed in detail in the remainder of the chapter.

3.2 Understanding hotel maintenance management

Since there is currently to the researcher's knowledge no fixed definition of hotel maintenance management, each component is defined separately in the attempt to develop a workable definition.

Maintenance, according to the Oxford English Dictionary (2015a) is "the process of preserving a condition or situation or the state of being preserved". Alternatively, more simply put, it is "the process of keeping something in good condition" (Oxford English Dictionary, 2015a).

Engineering, on the other hand, is defined as "the branch of science and technology concerned with the design, building and use of... machines and structures" (Oxford English Dictionary, 2015b). It can also be seen as "a...activity concerned with modification or development in a particular area (Oxford English Dictionary, 2015b).

Gee (1996:366) differentiates between engineering and maintenance in that engineering can be defined as "the planning, designing, construction and management of buildings and their energy and resource systems, machinery and equipment, roads, bridges, water routes, and other supporting structures", whereas maintenance can be viewed as "the work of keeping the engineering system in peak working condition and its equipment, buildings, fixtures and supporting structures in good repair". Stipanuk (2002:32) simplifies the definition, stating that maintenance refers to those activities that are done to keep something in its existing state or to preserve something from failure or decline.

One can see from the above definitions how maintenance can be interpreted as a part of the engineering function. However, as mentioned previously, due to the terms being used interchangeably, especially when looking at different parts of the world, it was decided to simplify the idea and refer to it as "maintenance" within this study.

For this study, therefore, maintenance is defined as the engineering function tasked with keeping all surfaces, systems, structures, equipment, grounds and any other relevant fixtures in optimal working condition and to keep it from degrading with time and use.

Management, as discussed previously (c.f. 2.2.4), is the process through which resources are utilised to obtain a goal. In the context of hotel management, the resources are therefore optimally applied in such a manner as to best achieve the hotel's objectives and goals (c.f. 2.2.4).

Powers and Barrows (2003:294) are of the opinion that managing the maintenance department entails that the department oversees all of the hotel's mechanical equipment and operates and maintains the air conditioning, refrigeration, lighting and transportation (elevator) systems. Gee (1996:365) is of a similar opinion, indicating that a thorough understanding is needed of all the engineering systems to operate correctly and manage the physical plant, recreational facilities, grounds and equipment. A department is classified as being a division within an organisation dealing with a specific area of activity (Oxford English Dictionary, 2015c).

The separate analysis of the concepts as discussed above brings one to a definition of **hotel maintenance management** as that department within a hotel that is tasked with keeping all surfaces, systems, structures, equipment, grounds and any other relevant fixtures and assets in optimal working condition, with keeping it from degrading with time and use, and with repairing or replacing any such aspects should it be deemed necessary to ensure the continued optimal functioning of the hotel.

3.3 The importance of maintenance for hotels

According to Liu (2013:107) hotels have become so important in the economic development of a country or region, that they can be considered irreplaceable. Kutucuoglu, Hamali, Irani and Sharp (2001:173) state that (plant) maintenance has evolved to be one of the most important areas in any business environment. Parida and Kumar (2006:240) take it a step further, stating that the organisation's success and survival hinge on the efficiency and effectiveness of the maintenance system to a large extent.

Proper maintenance, therefore, has a direct and significant effect on a guest's impressions of a hotel (Chan, Lee & Burnett, 2001:494). Mattilla and O'Neil (2003:339) found that the importance of long-term capital upkeep (maintenance) cannot be overemphasised, as guests' perceptions of other aspects of the hotel may be clouded by negative perceptions of upkeep. As Lepkova and Zukaite-Jefimoviene (2012:1) remark, in today's modern world a bare necessity of conducting competitive business is to be customer orientated. Breakdowns in the main areas of the hotel's operations and maintenance (O&M) seriously inconvenience guests (Powers & Barrows, 2003:295). Cesarotti and Spada (2009:2) found in their research that there is an increase in the importance of focusing on maintenance as a method to improve customer satisfaction. A different study conducted in Australia on senior citizens and marketing managers found that hotel facilities are the most important attribute that affects customer satisfaction, followed by room furnishings (Wei, Ruys & Muller, 1999:207).

To keep high system availability and achieve acceptable environmental conditions for the guests, more and more emphasis is placed on the development of a suitable maintenance strategy for a hotel (Kannan, 2013:127). Liu (2013:107) is of the opinion that maintenance does not only promote the operating efficiency of a hotel, but it also assists greatly in achieving excellent customer service. Mak *et al.* (2005:100) found that their research indicated that the better the facilities and ambience of the hotel as perceived by the guest, the more positive the perceived service quality of the hotel will be.

As the quality of the hotel product that is offered increases, so does the associated maintenance requirements (Davis, 2004:227). The quality of service and the management of the service quality is, therefore, crucial for any hotel within the hospitality industry (Mahalik & Satpathy, 2011:110). Mak, Sim and Jones (2005:96) indicate that hotels look at various strategies that could be utilised to improve the quality of their services. These service quality elements include factors such as ambience, timeliness of customer service, as well as facilities. Liu (2013:107) states that quality service can only be achieved if the hotel's facilities and equipment are intact and in a good state of repair. Lai and Yik (2013:7) add to this, stating that apart from satisfying guests demand for quality services, the maintenance team also has the responsibility to safeguard the health and safety of guests, visitors and any other persons.

The importance of those aspects as discussed above therefore suggests that constant updating and maintenance of the hotel's facilities is of paramount importance (Mak *et al.*, 2005:101). This highlights the importance of including adequate funds in the annual budget for improvement of facilities and other capital-related expenses.

Maintenance management also plays a pivotal role in improving energy efficiency within the hotel to keep operating costs at optimal levels (Aryee, 2011:7). The costs of operating and maintaining the engineering systems, especially the in-house staff, out-house contractors, energy usage and equipment condition, must be properly monitored and controlled at all times (Aryee, 2011:7).

Maintenance as such can, therefore, be seen as an investment, as resources are spent today on maintenance to reduce cost/expenses or gain more benefits in future when compared to the resources not being spent (Kannan, 2013:128). In summarising some of the main reasons for the significance of maintenance within hotels, Kannan (2013:128) deemed the following to be of note:

- to remain competitive;
- to keep or increase the hotel's market share;

- to develop the operational competence of the hotel, which in turn will lead to an increase in productivity and long-term savings with regards to operational expenses;
- to retain the corporate image and standards as applicable to the specific hotel;
- to promote the hotel to a higher class of guests;
- to keep up and conform to the new and current trends and technology in the market

Maintenance, therefore, has a very important role to play in the hotel, and as such also, by inclusion, plays a role within the organisational structure of the hotel.

3.4 Maintenance within the organisational structure of the hotel

According to Kannan (2013:127), those making the decisions that influence maintenance within a hotel should think regarding keeping informed, making the appropriate decisions, and taking into consideration that the future is uncertain. As a hotel services manager, Ingham and Killilea (2007:84) note that working directly with staff grants them the opportunity to make informed decisions and to ensure that they have all the resources needed to provide a high standard of service. Lai (2013:427) concurs, and remarks that hotel (maintenance) managers have a vital role to play in the process of ensuring the productivity of their maintenance teams, and, therefore, the effectiveness of the maintenance department. Liu (2013:108) supports the fact that informed decisions have to be made in the effective operation of the maintenance department and lists several aspects that good maintenance managers must keep in mind to enhance the department's effectiveness, namely:

- determine the life cycles of equipment and furnishings, and plan accordingly;
- adequately manage the maintenance schedules of the different areas and equipment;
- build and keep good relations with suppliers and contractors, as it will be beneficial in the long run;
- identify the main objectives and plan accordingly, such as reducing energy usage and maintenance expenditures;
- make use of modern management principles and results of the latest research to enhance effectiveness.

As mentioned previously (c.f. 3.3), energy efficiency is of the utmost importance, and therefore, the head of the maintenance department (or chief engineer) must know and be aware of energy efficient systems that can conserve energy and water, and must be able to assist in the decision-making process about which systems to acquire and implement. Various aspects, therefore, contribute to the total overall effectiveness of the maintenance function.

Parida and Kumar (2006:245) illustrated total maintenance effectiveness, when based on an organisational model, to be the internal effectiveness times the external efficiency, as can be seen in Figure 3.1. Total maintenance effectiveness is the combination of the internal and external effectiveness. External effectiveness can be said to be marketing-orientated, as it focuses mainly on customer satisfaction and the market share of the hotel. Internal effectiveness, on the other hand, focuses mainly on aspects that can be controlled by the maintenance department, such as productivity and efficiency within the department and in the utilisation of its resources.

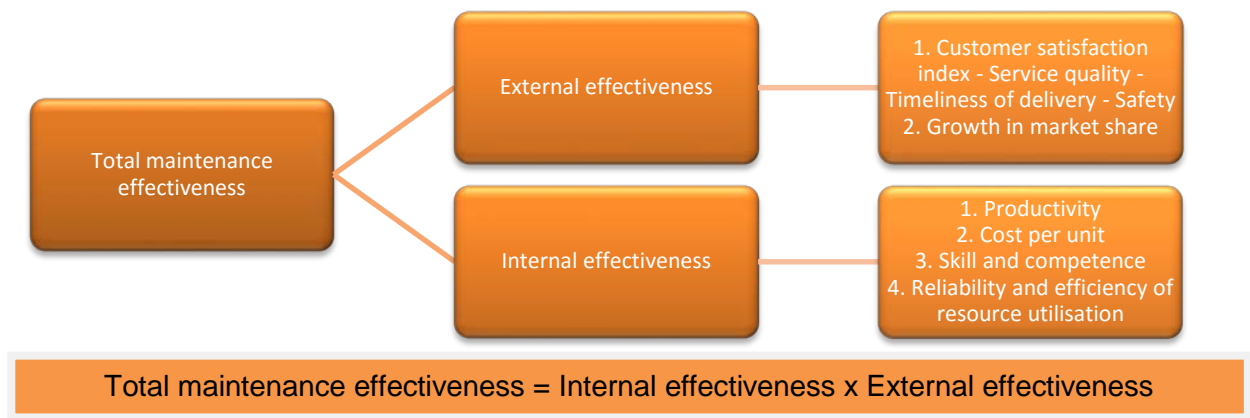


Figure 3-1: Total maintenance effectiveness
Source: Adapted from Parida and Kumar (2006:245)

According to Gee (1996:365), the maintenance department manager must have detailed knowledge and experience of how the different engineering systems work, as well as of the preventative maintenance practices that will keep the systems in optimal working condition. Stipanuk (2002:64) adds that the smaller the hotel operation, the more “hands-on” the manager will be, and the larger the hotel, the more the maintenance manager becomes a manager instead of a line (operational) worker. This can be seen in the research conducted by Powers and Barrows (2003:294-295), as large and medium hotels usually have an engineer at the head of the engineering (maintenance department) staff, whereas in smaller properties the engineer (head of maintenance) is usually just a handyman who carries out minor repairs and routine maintenance.

When one examines a larger hotel’s structure (as a smaller hotel will have a minimalist/non-existent maintenance structure as explained above), such as in Lai and Yik’s (2008:144) study of a hotel in Hong Kong, the engineering department is structured as indicated in Figure 3.2. In a nutshell, there is a director of the maintenance department with two assistant directors: one for projects, and one for maintenance. Maintenance then has a head of the department, with four duty managers, and heads of the different divisions with their work teams.

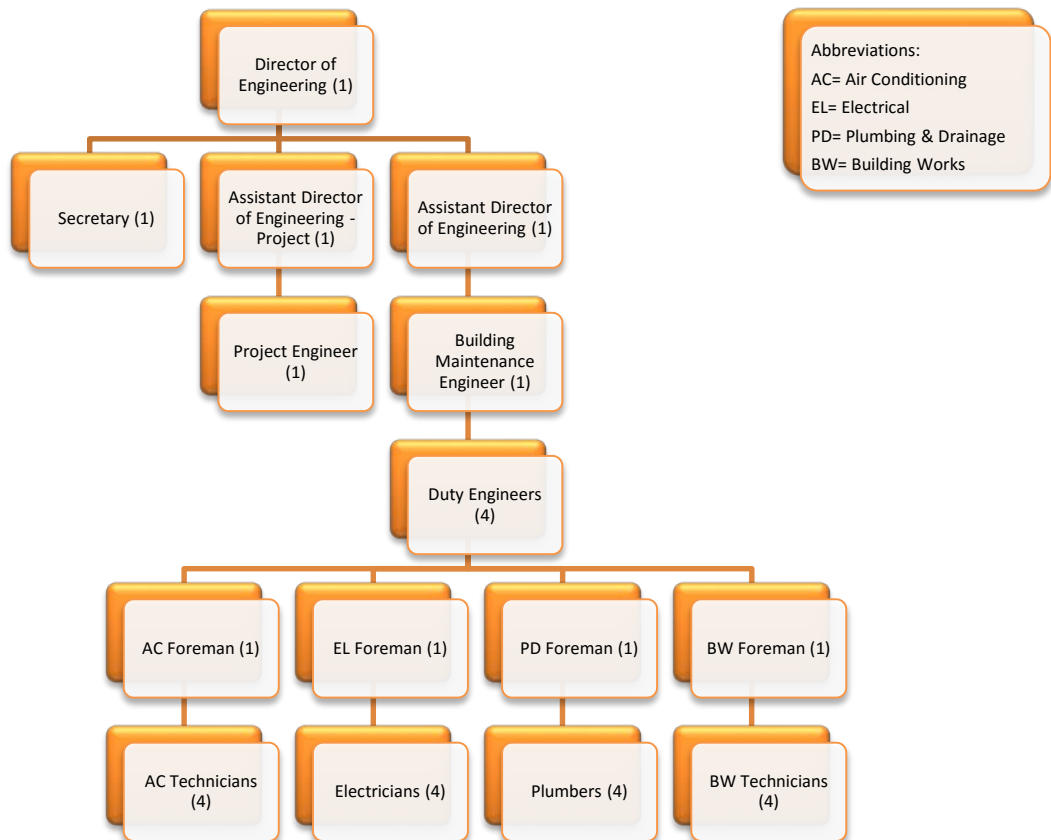


Figure 3-2: Engineering department (specific Hong Kong hotel)

Source: Adapted from Lai and Yik (2008:144)

However, when comparing Chan, Lee and Burnett's (2001:495) to Lai and Yik's study as above, it was found that in general a hotel's maintenance department was structured as per Figure 3.3. The main difference is that there is a simplified top structure hierarchy and a more diverse operational structure at the lower levels of the maintenance department to account for the different divisions/aspects within the department that are more varied.

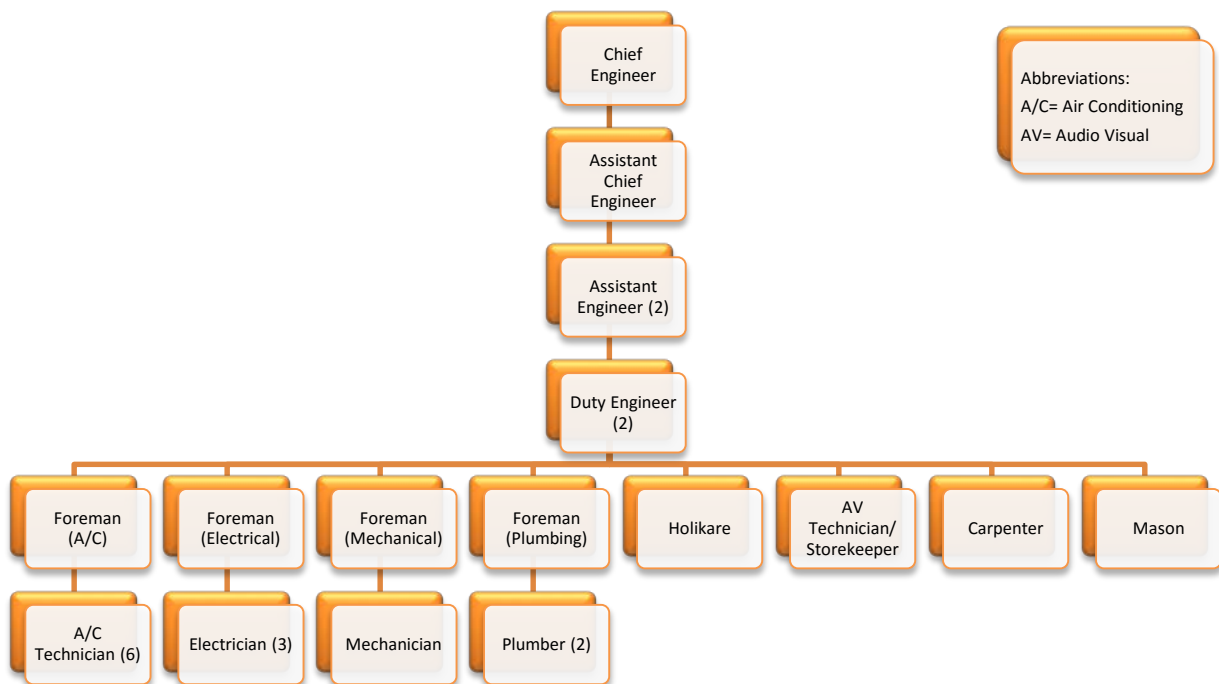


Figure 3-3: Engineering Department (generalised Hong Kong hotels)

Source: Adapted from Chan, Lee and Burnett (2001:495)

However, even the best designed organisational structure is only as good as its employees, and without a proper maintenance strategy to guide them there will be no holistic approach to the maintenance needs of the hotel.

3.4.1 Designing a maintenance strategy

The maintenance strategy guides and directs the process of maintenance management, compared to the maintenance programme that is a comprehensive schedule of maintenance works to be carried out in a specified timeframe (Kannan, 2013:128). Liu (2013:111) is of the opinion that for the maintenance management strategy to be successful, evaluation, promotion, training and innovation should be constantly kept in mind. The application of using historical work orders to improve future maintenance effectiveness is often overlooked by management (Chan, Lee & Burnett, 2001:495). Therefore to have a building project succeed, it is critical that a balance in elements of time, cost and quality be achieved (Ransley, 2004a:53).

Liu (2013:109) lists several aspects that must be kept in mind while planning maintenance aspects:

- everything that the guest can see or may have access to must be in good working condition;

- following scientific maintenance practices will decrease expenditures and increase profits;
- change passive and re-active maintenance to active and planned maintenance;
- maintenance must also be seen as a front office department; and
- innovate wherever possible to reduce downtime and expenditures, and increase customer satisfaction and service quality.

Chan, Lee and Burnett (2001:499) have proposed a hierarchy of five strategic bases of maintenance, as is illustrated in Figure 3.4. In essence, it means that maintenance strategies can be broken into five bases, namely time, performance, breakdown, renovation and integration. Each of these bases then has the two relevant maintenance approach/strategy grouped under it.

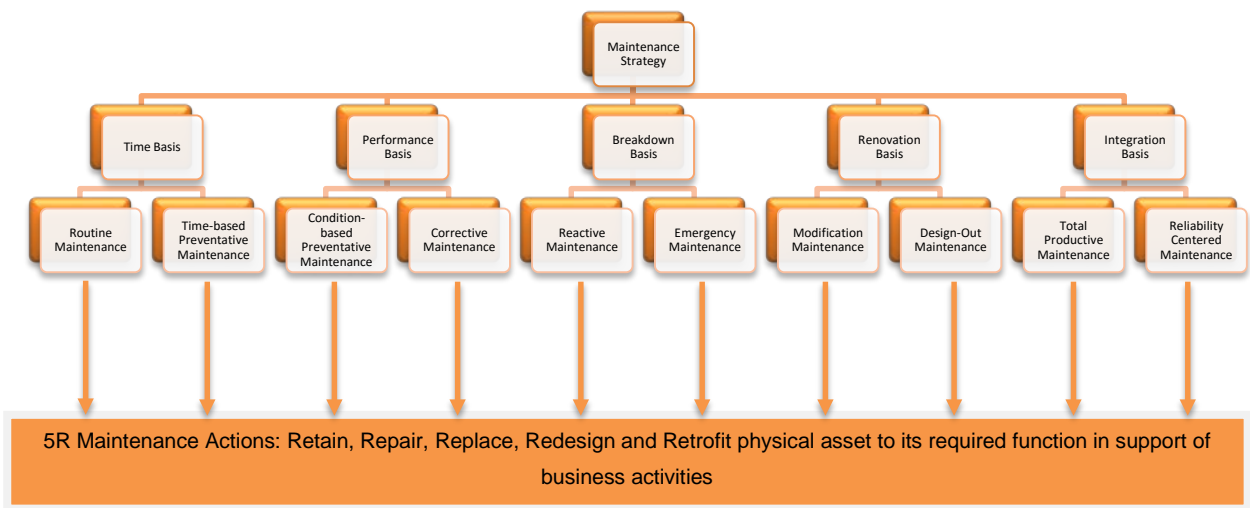


Figure 3-4: Five strategic bases of maintenance

Source: Adapted from Chan, Lee and Burnett (2001:499)

Regarding the time basis, there is the strategy of routine maintenance and time-based preventative maintenance. Routine maintenance is usually daily activities with a repetitive nature, such as sweeping pavements and starting up and shutting down equipment. Time-based preventative maintenance is utilised where it can be said with a fair amount of certainty that poor performance, or even a breakdown condition, will take place on a piece of equipment after it has been in use for a certain number of hours. Aspects such as fire extinguisher checking and (machinery) motor servicing at set intervals come to mind.

When viewing performance basis, a link is established between condition-based preventative maintenance, or CBPM, and corrective maintenance (CM). Under the former certain parameters are monitored on a regular (set) interval to establish a working trend for the item in question, for example, the pressure in the pool pump. Should it then deviate from the accepted operating conditions, CM is used to return the item to the required state. This may include aspects such as adjusting equipment or repairing or replacing the parts that are no longer functioning as required. In the case of the pool pump, for example, high pressure may indicate obstructions in the flow area, necessitating the filter to be back washed and rinsed, and possibly the filter sand replaced, to correct the operating pressure of the pump.

Unfortunately, no matter how good the time or performance (or combination of both) maintenance bases are carried out, there will still be breakdowns and failures. This is known as the breakdown basis, where either reactive maintenance or emergency maintenance is carried out. Reactive maintenance is used in those instances where an item is intended to be used until it breaks down or fails, only after which it is repaired or replaced to an acceptable operating condition. Equipment used in such a manner require no effort before the failure to prevent the occurrence of the relevant failure. A light bulb can most likely be considered in this category, as it is used until it burns out, and only then replaced. The physical bulb is not serviced or checked before its failure. Emergency maintenance is exactly what the term implies: maintenance that is carried out in an emergency situation. It requires immediate attention to rectify the failure, as it will have serious and in certain cases possibly fatal consequences if not addressed. An elevator breakdown with people trapped inside will require emergency maintenance.

When inspecting the renovation basis, it is seen to consist of both the maintenance modification strategy, as well as the design-out maintenance strategy. Modification maintenance is utilised to improve parts or items that have come to the end of their effective life cycle and that will not require extensive periods of downtime, such as (with the pool pump example) replacing the rubber O-ring seal on the pump's filter enclosure. On the other hand, design-out maintenance may require that the equipment is taken off-line for quite an extended period to effect the service. This must, of course, be scheduled in such a manner as to minimise the possible disruption of service within the hotel, such as when upgrading the pool pump to a larger model, thereby taking the swimming pool off-line for the duration of the upgrade.

The fifth and lasts basis is known as the integration basis. The two approaches that can be followed are either total productive maintenance or reliability-centred maintenance. Both are used to optimise the overall system effectiveness, thereby increasing the likelihood of attaining the

predetermined operational parameters. Total productive maintenance requires that, amongst others, all levels of management and operational staff work together to keep the entire system in good running condition, basically from the ground up. For example, where housekeeping assists maintenance by bringing any current or potential problems to their attention through the head of housekeeping. Reliability-centered maintenance attempts to balance maintenance resources with the required reliability to be achieved. The most appropriate maintenance action is, therefore, determined and chosen to ensure effective utilisation of resources and minimised downtime of services.

The last step in the process, regardless of which maintenance strategy or a combination of strategies are used, will eventually involve one of the 5R maintenance actions: retaining, repairing, replacing, redesigning or retrofitting, so that optimal operating conditions will continue to be met with the support of the overall service of the hotel.

As such, Rouse (2004:107) believes that the secret in preserving the residual value of hotels lies in maintenance, repairs and renewals, coupled with a proper programme of capital expenditure and re-investment. This can only be achieved if general management also takes certain maintenance planning into consideration in the process of day-to-day operations. Powers and Barrows (2003:295) advocate that at the very least, general management should include the following:

- determining what periodic maintenance of what equipment is required;
- drawing up and establishing a schedule to accomplish the work as identified;
- developing a reporting system and a physical inspection system that assists management in ensuring that the required work is carried out to standards and in a timely fashion.

According to Lai (2013:427) more and more hotels are making use of computerised maintenance management systems (CMMS hereafter) to enable online and real-time tracking of maintenance work. A CMMS provides very good feedback systems for management. This includes aspects such as when the maintenance orders were issued, where it was done, and when it was completed. Maintenance work orders provide useful historical data that can be used to identify failures, the location and frequency of failures, as well as of the man-hours needed to rectify the failures (Chan, Lee & Burnett, 2001:495). Apart from using CMMS for work order generation, schedules and recordkeeping purposes, larger operations may also control other primary systems via computer. This may include HVAC, fire protection interfaces, building comfort, security and electrical power management (Stipanuk, 2002:52). However, Wireman (2005:113) is of the

opinion that anything that can be done with a CMMS system can also be done manually, but the CMMS should make it easier to manage the system and to speed up and simplify the process through which data is collected and manipulated into a meaningful report.

Before a CMMS can be implemented and used, it is necessary for the hotel to tender for and determine the correct CMMS for their needs. According to Donca (2009:334), several steps can be utilised to maximise the probability of the CMMS being selected to merge with the requirements of the hotels:

1. Establish a selection committee. Make sure to include representatives from all the departments or functions within the hotel.
2. Perform a system functional analysis. This is the most difficult part, but it will identify all the hotel functions that will be affected, ranking and describing all of them.
3. Identify potential vendors. Make a selection of possible vendors based on factors such as cost, hardware and platforms.
4. Screen the short list by writing a request for proposal. This will include the detailed specifications of exactly what is needed from the system so that vendors can submit a proposal.
5. Each of the vendors must demonstrate their system, or provide a working copy to test should a demonstration not be possible.
6. Final checking, preliminary selection, and final purchase.

Once a CMMS has been successfully implemented, the workflow of the CMMS can be summarised in such a manner as through that which is proposed by Lai and Yik (2012:231) in Figure 3.5, as relating to the study that they conducted on maintenance performance.

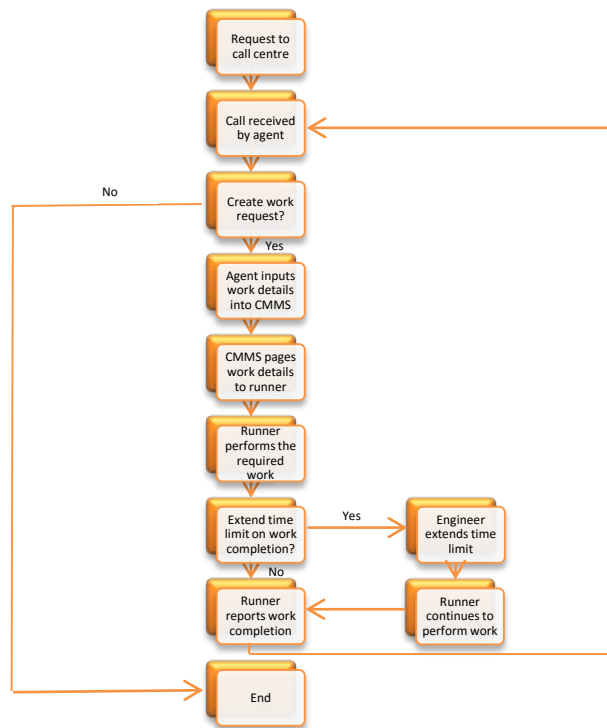


Figure 3-5: Computerised Maintenance Management Systems (CMMS) workflow
Source: Adapted from Lai and Yik (2012:231)

The request is put through to the call centre, either by a guest or one of the staff members, where it is received by the agent on duty. If a work order needs not be generated, the process comes to an end. If a work order needs to generate, the agent inputs the work details into the CMMS. The CMMS then pages/notifies the relevant runner/technician of the work to be completed, which is then attended to by the relevant person. Should the runner/technician be able to finish the required work in the allotted timeframe, work completion is reported to the agent, at which point a new work order needs not be generated and the process ends. Should the work not be finished in the allocated timeframe, a request is logged to the engineer/maintenance manager/section head to extend the time limit. The runner/technician then continues performing the required work until completion, at which time it is reported to the agent and being completed, the process ends.

Therefore to summarise the goal of maintenance management systems, according to Stipanuk (2002:34), the systems are there to:

- effectively handle the maintenance needs of the property;
- record essential information relating to the systems and equipment;
- establish standards for measuring the performance of maintenance staff;

- provide the feedback that management requires assessing the performance of the maintenance department and the status of the work and projects.

It is clear that the process of designing and choosing an appropriate maintenance strategy can be quite complex. However, once the appropriate strategy has been decided upon, created and implemented, it simplifies the entire maintenance process by giving accurate feedback and enabling maintenance managers and –staff to make informed decisions.

This allows the maintenance operation to not only be more efficient but also to be more cost-effective, as the maintenance function can have some of the most expensive costs associated with it within the hotel’s organisational structure.

3.4.2 Costs associated with maintenance

Hotels are complex, costly and dynamic buildings that have to be operated and maintained properly (Chan, Lee & Burnett, 2001:495). In general, unit operations and maintenance costs can be minimised by utilising economies of scale in the hotel. Potential factors that affect the costs of operating and maintaining the facilities include the quality of service, the age of the hotel and the occupancy rate (Lai & Yik, 2008:288).

Lai and Yik as cited in Lai and Yik (2008:283) indicate in Figure 3.6 which factors affect the operations and maintenance (O&M) cost. O&M cost is influenced by the quality of service and the scale of the work to be completed. Therefore the higher the quality of service, the more expensive the cost, as it is directly related to the grade (quality) of the building and the O&M standard that the hotel wishes to attain and keep. It applies to the scale of work as well, for the larger the project that has to be undertaken, the more expensive the project will be. The quality of the installation, such as the quality of the fittings used, and the capacity of the installation, in other words, the quantity of for example the fittings, will, therefore, influence the scale of the work and the associated O&M cost. It is, however, necessary to note that when a project or operation reaches a certain scale, economies of scale comes into play. This means that when a certain threshold is reached, certain items become cheaper to purchase and/or service as one can then make use of bulk discounts. To give a simplified example, to purchase light fittings for a hotel with twenty rooms, and then to purchase the associated light emitting diodes (LED’s) globes to install in those light fittings, will be much more expensive per fitting and per globe than it would be to purchase it for a hotel with 200 rooms.

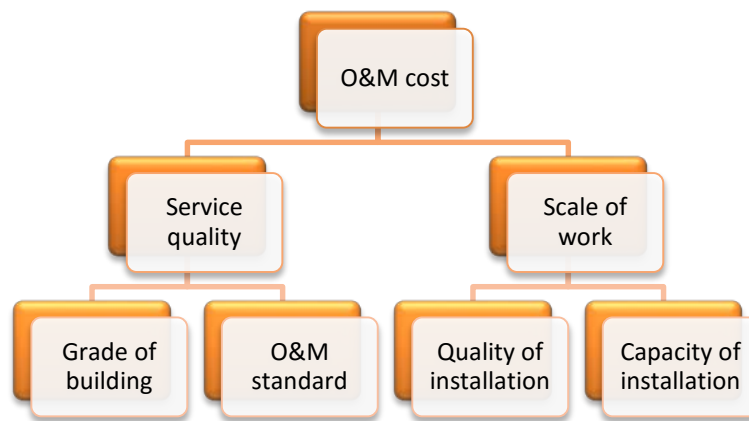


Figure 3-6: Factors influencing operations and maintenance cost
Source: Adapted from Lai and Yik (2006) as cited in Lai and Yik (2008:283)

Proper utilisation and allocation of the maintenance budget also influence the effectiveness of not only the maintenance department but also the rest of the hotel. Due to maintenance being such an integral part of the continued efficient functioning of the hotel, allocating too little to a certain area can have a profound detrimental effect on the other areas. Lai and Yik's (2008:282) findings of the average major operation and maintenance expenditures can be seen in Figure 3.7. Not surprisingly, with energy demand and costs the way they are, electricity expenditures account for the highest part of the budget at 34%. Capital projects utilise 23% of the budget, as most projects are quite expensive, irrespective of its nature. The actual repair and maintenance operations make out 19% of the budget, with staff accounting for 13% of the expenditures (maintenance staff was included as a maintenance expenditure within the study). Town gas (which is not widely available in South Africa) takes 5%, diesel and/or petrol 4%, and water the least of the maintenance expenditures, coming in at 2%.

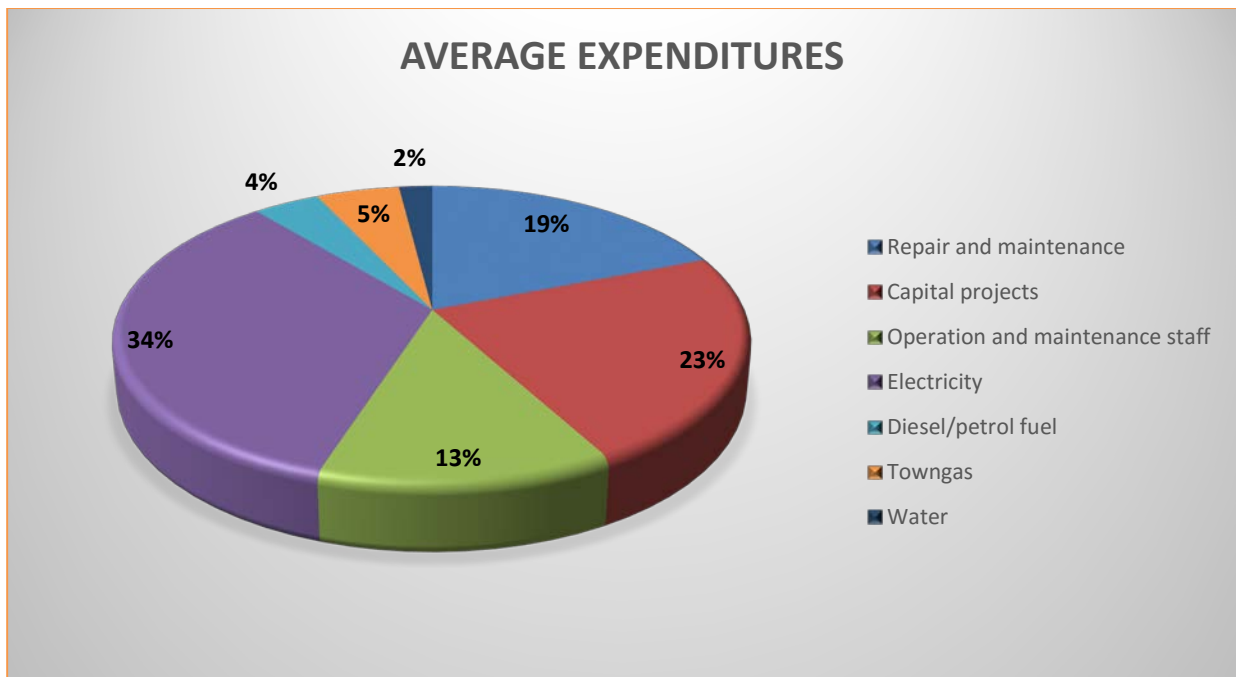


Figure 3-7: Average expenditures
Source: Adapted from Lai and Yik (2006) as cited in Lai and Yik (2008:283)

Yik, Lee and Ng (2002:412) have a very interesting theory and found that generally speaking, energy efficiency at hotels would be higher if maintenance personnel received higher incomes that are directly proportional to their skills and knowledge in particularly building energy efficiency. Maintenance management therefore also plays a pivotal role in improving aspects such as energy efficiency and keeping the total operational and maintenance costs optimal (Kannan, 2013:127). To provide timely maintenance work to resolve any problems, a hotel normally employs a group of resident staff to handle the situation promptly (De Franco & Sheridan, 2007). The reasoning behind this is quite logical and simple, as the less time maintenance staff takes to get to the problem and attend to it, the least expensive the potential expenditures and loss of income will be. This also eliminates the need to make use of outside (costly) contractors to perform certain tasks that can be accomplished in-house. As can be seen in Figure 3.8, 45.6% of expenses were incurred with in-house maintenance, compared to the 54.4% with outsourcing (26.8% on renovation, 27.6% on maintenance) (Chan, Lee and Burnett, 2001:496).

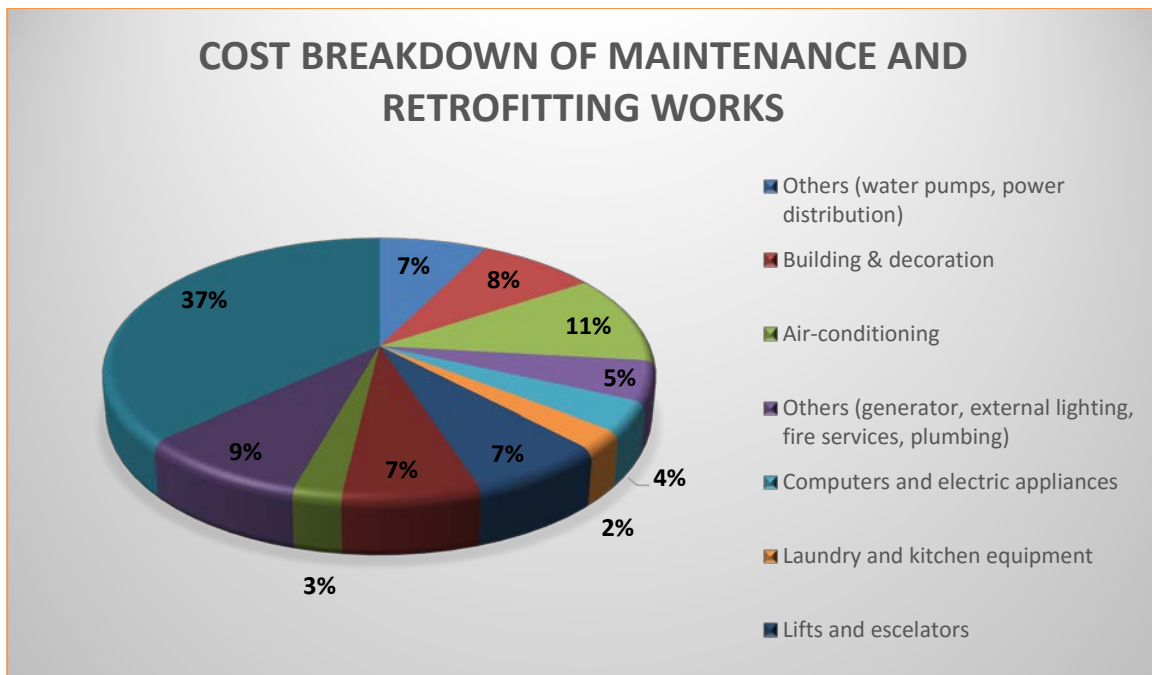


Figure 3-8: Cost breakdown of maintenance and retrofitting works
 Source: Adapted from Chan, Lee and Burnett (2001:496)

Balancing optimal functioning of the maintenance department against expenses can be quite challenging, and is but one of the many challenges faced to provide effective maintenance within hotels.

3.4.3 Challenges of effective maintenance within hotels

Maintenance faces various challenges and obstacles to be efficient and successful in their endeavours, of which expenses as per the above discussion is but one of them. Although there are still negative perceptions regarding maintenance, as in Table 3.1 (these statements were also tested for accuracy on the respondents in Section D of the questionnaire), there has been progressing with how maintenance is viewed. Parida and Kumar (2006:240) found there to be a paradigm shift in the perception of maintenance, at least about production and manufacturing (Figure 3.9). However, Lepkova and Zukaite-Jefimoviene (2012:2) remark that (facility) maintenance is unfortunately often seen as an annoyance or a necessary evil.

Table 3-1: Perceptions of maintenance

No	Statement	Author
1	Engineering and maintenance activities are often given insufficient space	Stipanuk (2002:472)
2	Upper management needs to have a basic understanding of engineering	Gee (1996:365)
3	Many organisations have not recognised the significance of the contribution of facility maintenance and operations function makes to the ultimate success or failure of the business	Rondeau <i>et al.</i> (1995:486)
4	Employees must know what management expects of them	Rondeau <i>et al.</i> (1995:495)
5	Upper management still fosters conventional views of maintenance as an interruption and an unavoidable cost burden	Narayan (2004:154)
6	Housekeeping and engineering managers need to devote attention to improving the relationship between the departments	Kappa, Nitschke & Schappert (1997:20)
7	A modern hotel manager needs a basic knowledge of engineering	Adamo (1999:128)
8	Engineering is still viewed as "basement" bottom and out of sight	Mounts & Meinzer (2011:189)
9	Maintenance personnel should take part in planning and budgeting processes	Rondeau <i>et al.</i> (1995:487)
10	Maintenance is an important function in any hotel	Author's own

Source: Author's Own Compilation

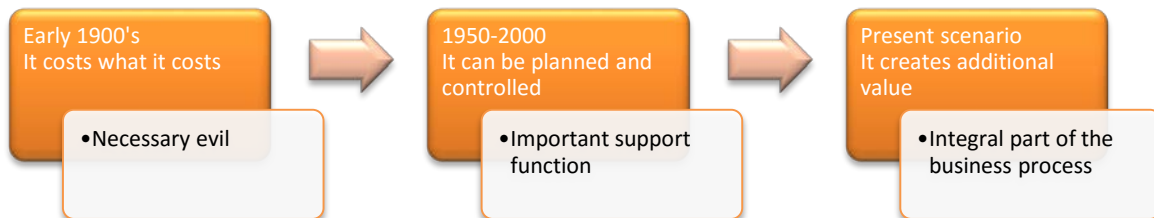


Figure 3-9: Perceptions of maintenance

Source: Parida and Kumar (2006:240)

Therefore, in view of the above, it must come as little surprise that in a study conducted by Israeli, Mohsin and Kumar (2011:369) on Indian hotels to determine which practices were most likely to be utilised in a time of crisis management, cost-cutting by postponing maintenance to the engineering systems was ranked as highest on a correlation between performance and usage. A comparison with the study of Israeli and Reichel (2003:366) that found that on a correlation between importance and usage cost-cutting by postponing maintenance to the engineering

systems in Israeli hotels was ranked as second highest, indicates that even between different countries one of the first areas to be cut financially should a crisis occur is in the maintenance department. Utility costs that have always been a major part of the hotel's expenditures have also been increasing in recent years at an alarming rate (Powers & Barrows, 2003:295). Kutucuoglu *et al.* (2001:174) remark that "the complexity of the maintenance function often makes it difficult to develop a causal relationship between the managerial decisions and the overall success or failure of the actual maintenance system". Ransley (2004a:53) remark that hospitality projects can be quite complex, especially with major refurbishments or projects where the hotel has to remain open and continue business.

While some may still regard the maintenance function as simple and routine, aspects such as more sophisticated services provision and legal requirements have made maintenance much more complicated than it once was (Lai & Yik, 2013:7). Maintenance is usually affected by the hotel's budget situation, as Kannan (2013:127) remarks. Stipanuk (2002:32) indicates that a significant portion of the property operation and management budget is used by maintenance and repair demands. As discussed earlier (c.f.3.4.2) the maintenance function of a hotel has many and varying costs associated with it. The standard that the hotel wishes to maintain will also significantly impact the associated expenses. Bridge and De Haast (2004:261) are therefore of the opinion that maintenance standards can be an area of potential conflict. Basic standards have to be maintained, as poor maintenance will lead to high repair costs, but expenditures have to be decreased in areas that are already due for major refurbishment (Bridge & De Haast, 2004:261). Cross-cooperation between different hotel departments notable housekeeping and maintenance should also assist in identifying these areas where management can balance maintenance against expenditures.

As such, Gee (1996:365) is of the opinion that every member of the management team should understand that for the maintenance function to accomplish its goals, the cooperation of all the department heads with the maintenance manager is needed. According to Cesarotti and Spada (2009:2), many managers are looking for the optimal balance between controlling expenditures and operational improvements, but they should instead focus on obtaining cost control and promoting operational improvements. Their study attempts to transfer industrial methods of obtaining operational excellence to the service sector, specifically to hotels, which will assist with the challenge that is often faced within hotels: renovate, maintain or reorganise.

To renovate a hotel (or part of it) is quite a large undertaking, and can be beyond the scope of the hotel's maintenance department. Certain tasks or activities are also more suited for outsourcing, and will be discussed in the next section.

3.4.4 The role of outsourcing and hotel maintenance

One of the commonly used strategies in the hotel industry used to squeeze operating costs in a very challenging business environment, is outsourcing (Kannan, 2013:127). The process of outsourcing allows the hotel to focus on its core competency and to strengthen its ability to adapt to the constantly changing business environment (Kannan, 2013:127). Mahalik and Satpathy (2011:110) confirm by adding that outsourcing allows the hotel to reduce operating costs while improving productivity and reduces risks and increases revenue. Outsourcing, according to Mahalik and Satpathy (2011:110) can, therefore, be defined as “the management decision to contract out to external agencies, some of the activities that were traditionally being carried out internally by the firm”. Chan, Lee and Burnett (2001:495) are of the opinion that there is no general rule of the proportion of in-house to outsourced staff. They recommend that management has to compare the outsourced services to in-house ones on cost and time, as well as whether specialised or authorised technicians are needed to perform certain maintenance tasks (such as servicing elevators).

Lai and Yik (2008:287) studied the breakdown of the average proportion of contracts apportioned to facilities maintenance, as illustrated in Figure 3.10:

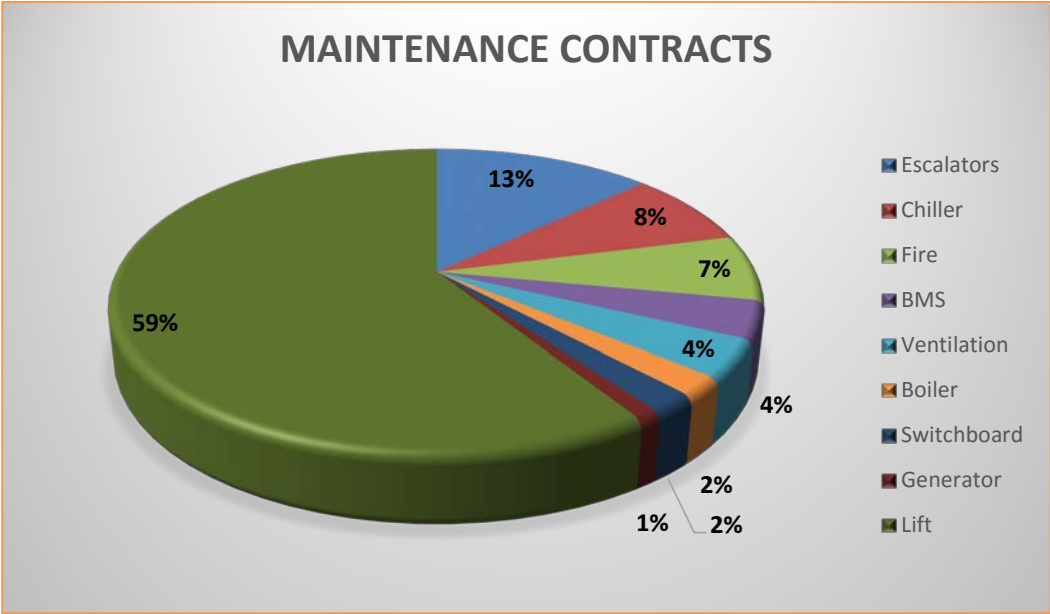


Figure 3-10: Maintenance contracts
Source: Adapted from Rawlinson (2004:151)

The maintenance manager is usually responsible for monitoring the performance of the outside contractors who are awarded service contracts with the hotel (Gee, 1996:374). Contract maintenance, as maintenance outsourcing is also known, can be undertaken for several reasons, including (Stipanuk, 2002:34):

- a temporary lack of staff;
- special tools or accreditations that may be required to perform the work;
- minimising the commitment of employed staff to handle certain activities or needs;
- dealing with emergencies (such as emergency breakdowns);
- the employed staff simply do not have the technical skills or know-how to perform the tasks optimally.

In a study conducted by Mahalik and Satpathy during 2011, in which a fuzzy analytic hierarchy process (AHP) multi-criteria decision-making approach was used to determine the prioritisation of outsourcing certain areas within hotels situated in Western Orissa, maintenance was found to be the area with the second most weight according to the combined criteria. As such it can be argued that, depending on the operational environment of the hotel, it might be both cost-efficient and productive to outsource the maintenance activities.

To determine what needs to be outsourced, there first needs to be an understanding of the different types of maintenance within the hotel.

3.5 Classification and types of maintenance management within hotels

Ransley (2004b:118) indicates that major (refurbishment) projects for hospitality properties and facilities fall under one of the following when carried out by the maintenance department:

- soft refurbishment;
- soft and hard refurbishment;
- full refurbishment;
- repositioning;
- repositioning and extension;
- building uses conversion; and
- new build.

It can therefore be seen that there is, in a nutshell, four types of major refurbishment: refurbishment, repositioning, building use conversion and new build. In a broad sense, there are two categories of refurbishment as shown in Table 3.2 (Rawlinson, 2004:151), namely either guest room refreshment or guest room re-branding.

Table 3-2: Categories of refurbishment

Categories of refurbishment	
Guest room refreshment	Guest room re-branding
This takes place every five to seven years and is aimed at keeping a hotel competitive in the market. This will usually include redecorations, replacing the furniture, fittings and equipment, and making minor improvements to the rooms.	Aimed at moving the hotel into a higher market sector, such as a star grading. It will, therefore, entail large projects such as creating additional rooms, changing the existing room layout and replacing areas such as bathrooms.

Source: Adapted from Rawlinson (2004:151)

Irrespective of the type of maintenance project underway, Lai and Yik (2012:229a) indicate that maintenance within a hotel context can be broadly classified into two categories, namely building maintenance works (such as grounds, fabrics and furniture) and building services maintenance works (such as HVAC, electrical and plumbing). Gee (1996:366) indicates that the following aspects have to be maintained: heating, ventilation, air-conditioning, electrical, plumbing, refrigeration, general repairs and maintenance, grounds and roads and recreational areas, mechanical power and vehicles and equipment, and lastly, construction (building of structures).

For this study, the physical aspects will be categorised into the following as outlined by Gee (1996):

- Heating, ventilation and air-conditioning systems (HVAC)
- Electrical systems
- Plumbing systems
- Refrigeration systems
- General repairs/maintenance
- Grounds, roads and recreational areas
- Equipment and vehicles
- Construction

A brief description of each physical aspect is consequently provided. After an extensive literature search, the researcher could not find any additional and supporting references. For this reason, this section is based solely on the work by Gee (1996).

Heating, ventilation and air-conditioning systems (HVAC)

Heating refers to a system that utilises a heating plant for the provision of heating, such as a boiler, whether it be fuelled by oil, natural gas, coal or liquid propane or butane (Gee, 1996:369). Ventilation systems move the air supply throughout the building by removing stale, dirty overheated or humid air from the room or area via an exhaust system, and replacing it with clean air (Gee, 1996:370). Air conditioning is mostly interpreted as the air in guestrooms and other areas being cooled, but it can refer to any of the functions performed by the complete air-condition system, which includes filtering, heating, cooling, humidifying, dehumidifying or ventilating the air (Gee, 1996:371).

Electrical systems

Electrical systems are without a doubt probably the single most important physical aspect that should be maintained. Without electricity, all electrically powered systems and devices cease to function, resulting in a cascade of system failures. According to Gee (1996:366), the three principal uses of electricity are light, heat and power. To service and maintain electrical systems and equipment properly, skilled personnel such as licenced electricians are needed, as technical knowledge is required to perform the necessary maintenance (Gee, 1996:367). In South Africa, residences and business alike are keenly aware of the importance of managing their electrical systems due to the tremendous problems being experienced by the state-owned national electricity supplier, ESKOM, with generating enough electricity to meet demand. Businesses manage their electrical systems not only to conserve as much energy as possible but also to continue functioning when the electricity supply is interrupted.

Plumbing systems

Water is necessary to service elements such as hot and cold water lines, ice machines, swimming pools, spas and saunas, water features, irrigation systems and fire protection systems (Gee, 1996:367) and is obtained from a public utility. Gee is of the opinion that generally, maintaining and repairing the plumbing system is a simpler task than what is required for other types of building systems (1996:367). Drainage, sewerage, boreholes and water treatment also form part

of the plumbing systems (Gee, 1996:368), and the management of water conservation in as far as is possible to reduce water usage and waste.

Refrigeration systems

Refrigeration mostly refers to the systems used for food storage and preservation and beverage cooling or chilling, but also includes aspects such as water cooling, ice making and air conditioning (Gee, 1996:371). Vapour compression cycle refrigeration is deemed to be the most common method of refrigeration within the hospitality industry (Gee, 1996:371).

General repairs/maintenance

General repairs and maintenance may include aspects such as structural maintenance of the hotel and other buildings, painting of interior and exterior surfaces, building clean-up, repairing and refinishing aspects such as walls, ceilings and floors, refurbishing or repairing furniture and other fixtures, setting up the required equipment for meetings and conventions, minor and major interior and exterior construction, and some types of equipment and furnishing installations (Gee, 1996:373).

Grounds, roads and recreational areas

According to Gee (1996:378), in smaller hotels grounds maintenance is often part of the general maintenance and repairs department, but in larger hotels more specified functions or areas of responsibility may be needed, for instance:

- Maintenance of the attractiveness of the property. Aspects such as trees, shrubs, flowers, driveways and roadways, lawns, paths and trails, water features and outdoor activity areas are included herein.
- Improvement of the grounds, which includes aspects such as planting and re-planting programmes and irrigation programmes.
- Placement and maintenance of interior potted plants.
- Establishment and control of pest control programmes. If outsourced as a contract, the grounds department should have supervision responsibility.
- Maintenance of natural areas, including trails, beaches and land contours by keeping it clean, litter and hazard free, or be repairing or reinforcing as necessary.
- Maintaining recreational activity areas.
- Maintaining interior and exterior water features, often in conjunction with the housekeeping department.

Equipment and vehicles

Transportation vehicles utilised by the hotel may include buses, vans, limousines, automobiles (cars) and even small aeroplanes or helicopters, with recreational vehicles and equipment including golf carts (with boats and snowmobiles relevant to the particular style of hotel and geographic area (Gee, 1996:373). Therefore depending on the size of the vehicular fleet, the hotel may have a workshop dedicated to performing certain maintenance and repair functions of the vehicles to optimise costs and minimise delays due to downtime. Procuring more expensive models that have lower maintenance requirements is also an approach that many hotels follow to optimise costs (Gee, 1996:374). Maintaining any form of equipment properly and within the recommended maintenance timeframe as set out in the maintenance schedule will not only increase the lifespan of the particular piece of equipment but also save time by enabling more precise maintenance rosters of equipment and minimising emergency or breakdown repairs.

Construction

Depending on the size of the hotel and the building project, the hotel may have its team that handles the construction aspects and utilise external engineers and other specialists for designing and overseeing an aspect of the project (Gee, 1996:374). The same would then also be true on the other side of the spectrum, in that smaller hotels and larger projects might utilise external contractors who handle the entire project, from design through to construction.

Different types of maintenance approaches can be used to service these physical aspects, some of which are more suited for certain activities than others. The following section will provide a better understanding of these approaches.

3.5.1 Planned maintenance

Stipanuk (2002:32) and Knowles (1998:154) view **routine maintenance** as that which occurs regularly, requires minimal skill or training to perform, and pertains to the general upkeep of the property. Mowing the lawns or cleaning the floors are examples of this. Many of these activities are carried out by the housekeeping department instead of the maintenance department.

Kannan (2013:128) views **preventative maintenance** as being time-based maintenance, requiring regular tasks of maintenance, irrespective the current condition of the item. Stipanuk (2002:32) indicates that the consensus among most practitioners is that it has several common elements: inspection, lubrication, minor repairs or adjustments and work order initiation. Knowles (1998:155) simply groups it into three parts: inspection, minor corrections, and work order

initiation. Wireman (2005:59) strongly expresses his stance as to the importance of preventative maintenance, stating that it is the foundation of the entire maintenance philosophy and that if it is ineffective, nothing else within maintenance will be successful.

According to Gee (1996:374) preventative maintenance has at its core three objectives, those objectives being:

1. To slow down the deterioration of all physical equipment and facilities, either by natural forces or operational wear and tear. It can be viewed as a capital return objective, as the equipment or facility will reach its predicted useful life.
2. To reduce the frequency and severity of malfunctions or breakdowns. One could say that it is a systems reliability and operating efficiency objective, as it usually results in less downtime and lower repair costs.
3. To keep energy costs as low as possible by eliminating as much as possible energy waste. This contributes to a high level of operating efficiency, both in the system and as an objective.

For a preventative maintenance programme to be viable, and to more easily ascertain the balance between capital savings and operational costs, a good recordkeeping control system is required to include:

- equipment inventory records;
- maintenance schedules;
- maintenance logs; and
- management reports.

Kannan (2013:128) acknowledges **condition-based maintenance**, where equipment is inspected periodically and repaired or replaced when the condition starts to deteriorate. However, the author of this study is of the opinion that this type of maintenance is, in itself, also a form of preventative maintenance, as Stipanuk (2002:32) adds that test and inspection activities that indicate action is needed can also result in preventative maintenance.

Stipanuk (2002:38) is of the opinion that the inventory record is quite remarkable, as it assists with the choice of what and how much of each item to keep in stock, which in turn directly affects the responsiveness of the maintenance department, as well as how much storage space is needed and how much has to be invested in inventory.

A different type of approach proposed in Richard, Perry, Czakon and Czernek's 2014 study, is that of **crowd-sourcing**. They propose that a hotel takes an internal function and outsources it to a large group or community, who can then collaboratively produce solutions or work independently. Their study, however, showed that housekeeping can also be used as a form of crowd-sourcing for hotel (room) maintenance. Multiple people visiting and checking the same area is far more likely to notice a larger variety of potential faults when compared to just a single person or small team doing a maintenance check-up. If this can be coupled with pride that housekeeping gets from having exceptional standards in their rooms, the intrinsic motivation for early detection of problems increases exponentially.

Scheduled maintenance usually involves more than inspection and lubrication, as it requires planning, longer timeframes for completion, specialised equipment and skills, and high levels of coordination between departments (Stipanuk, 2002:32). Knowles (1998:155) simplifies it, in that any problems beyond the scope of minor correction as identified by preventative maintenance will be scheduled for maintenance. Examples include replacing equipment and restoring the lining of swimming pools.

3.5.2 Unplanned maintenance

This form of maintenance is likely to have an immediate or near-future loss of revenue effect, and is very costly for the hotel as it is usually only solved by paying premium wages for overtime, traditional supply systems cannot be used and parts are therefore much more expensive, and it often causes other damage as a by-product of the breakdown (such as food being spoiled) (Stipanuk, 2002:33). Stipanuk (2002:48) continues to state that some tactics can be of use during maintenance emergencies:

- Always have an up-to-date list of all the contact particulars of all the maintenance staff. Both the maintenance manager and general manager must have access to it.
- Night staff need to be trained in the basics of what to do during a night-time emergency when no maintenance staff are on site to assist immediately, such as where to switch off electricity or close water valves.
- Keep ongoing good relations with contract maintenance and cleaning firms, as they are much more likely to be available and charge agreeable rates when they are suddenly needed.
- Consider having backup systems where possible and feasible, such as an auxiliary water pump that can be utilised should be the main pump break down.

Corrective maintenance, as Kanna (2013:128) remarks, is a failure-driven maintenance, where equipment is repaired only after unexpected breakdowns or malfunctions have occurred. Chan (2008:42) found in his study conducted on hotels in Hong Kong that on average 37% of

maintenance costs were utilised for routine activities, with preventative utilising 21%, corrective 31% and lastly, emergency activities at 11%. The results (in the study above) indicate that hotels are at least aware of the importance of investing more in planned maintenance activities, to delay costly emergencies that inconvenience guests and staff alike.

3.5.3 Auditing

According to Kutucuoglo *et al.* (2001:174), the importance of performance measurement cannot be overemphasised, with many authors stressing its role in today's information-driven decision-making environment. The authors, therefore, developed a framework for managing maintenance that was applied to a manufacturing enterprise in their study, but can also be adapted to suit the needs of almost any company (Kutucuoglo *et al.*, 2001:192).

Gee (1996:384) advocates that to control and reduce energy costs, utility auditing, energy auditing and energy conservation and costs control management are essential. Kelly (2006:51) defines maintenance auditing as the "structured process of 'inspection and checking' the strategy, organisational structure and systems of the maintenance management department". The utility audit provides clearer particulars on how the energy usage is measured, how the usage is billed, whether there are any potentially refundable errors in past billing cycles, and if there are low-cost ways in which to reduce future billings (Gee, 1996:384). This audit will, in the case of South Africa, only be relevant to ESKOM, it being the only electricity supplying utility company in the country.

The energy audit determines where energy is consumed within the hotel. It can be pinpointed by conducting an energy inventory where the focus is following a detailed, thorough process of locating, identifying and recording each energy consuming system, activity or unit in the complex as per Figure 3.11 (Gee, 1996:385).

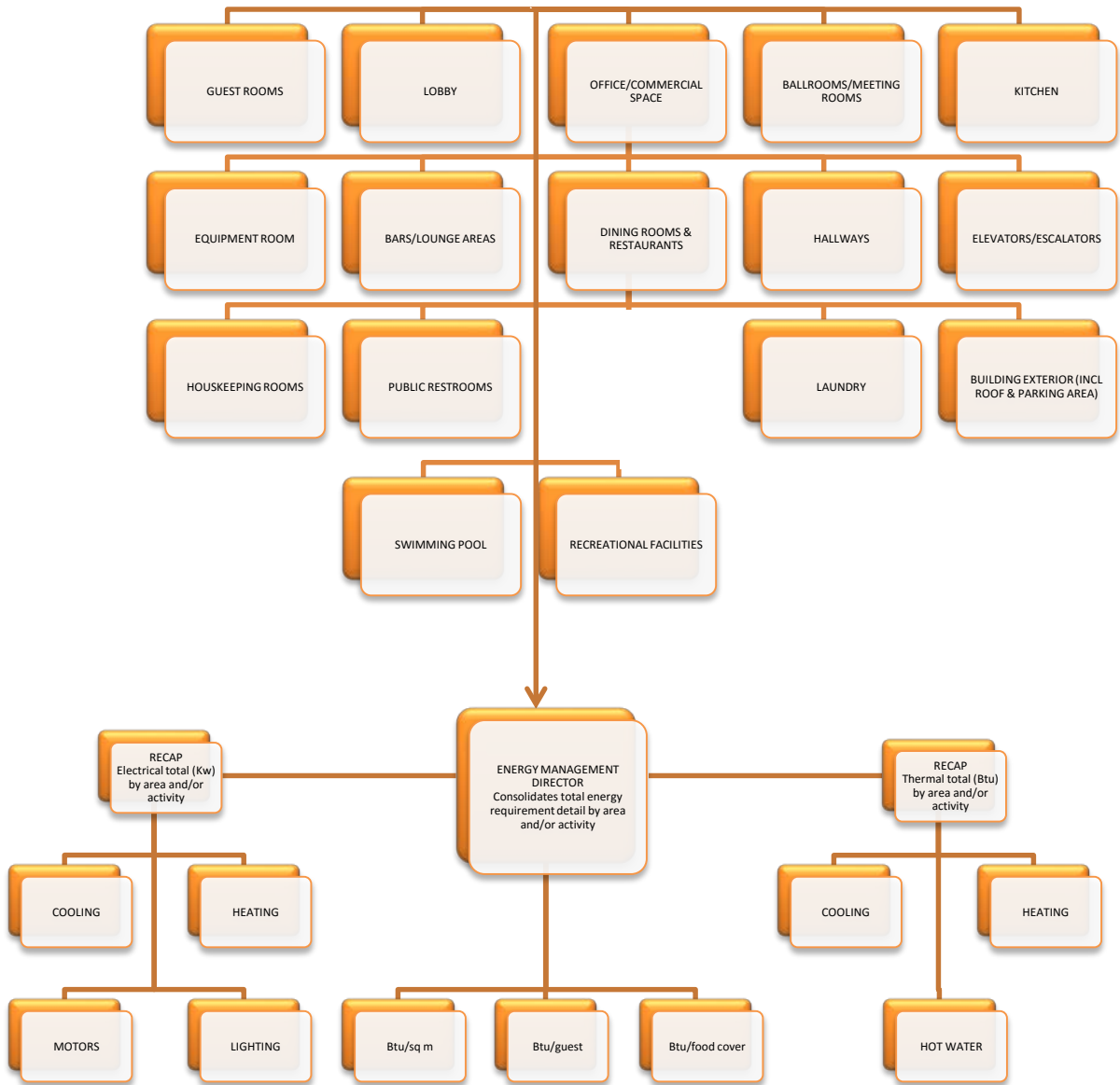


Figure 3-11: Energy audit
Source: Adapted from Gee (1996:385)

Dwight (1999:265) developed a “systems audit approach” for measuring the performance of maintenance systems after recognising the practical problems in defining maintenance performance about changes in value. He identified several generic maintenance systems activities (1999:265) that can be used during the systems audit approach, as per Table 3.3 that can potentially overcome some of the problems while preserving the focus on the business’s outcomes.

Table 3-3: Systems audit approach

Forward maintenance planning	<ul style="list-style-type: none"> • Manufacturer recommendations • Adoption of previous approaches • Detailed analysis using current knowledge (once-off) • Detailed ongoing analysis
Plan for resources	<ul style="list-style-type: none"> • Ad hoc as work arises • Detailed plan based on previous experience • Engineered and reviewed regularly
Action initiation	<ul style="list-style-type: none"> • On failure • By calendar or on failure • By calendar or based on the manufacturing situation • Through formal decision process involving all relevant parties
Work specification	<ul style="list-style-type: none"> • Ad hoc • Manufacturer’s recommendations • Planner-specified • Formal analysis
Resource scheduling	<ul style="list-style-type: none"> • Work-group scheduling • Formal scheduling team • Individual discipline scheduling • Weekly planning to meet
Work preparation	<ul style="list-style-type: none"> • Ad hoc as work arises • Separate preparation team
Execution of maintenance action	<ul style="list-style-type: none"> • Specialist teams • Multi-discipline teams • Centrally coordinated teams
Performance measurement	<ul style="list-style-type: none"> • Ad hoc • Management-established measures • ProMES type approach (Pritchard, 1990) • Audit approach used

Source people	<ul style="list-style-type: none"> Hourly hire Department owned teams Works-wide teams Contracted teams
Source replacement parts	<ul style="list-style-type: none"> Separate department responsibility Maintenance department responsibility

Source: Adapted from Dwight (1999:265)

3.6 Previous research

After an exhaustive search, previous research regarding critical success factors for managing maintenance within hotels could not be found. Research for critical success factors for hotels could be found on the subject such as customer service, marketing, ISO implementation and general management. Research could be found in CSF relating to but not directly regarding hotels, such as CSFs for construction and building projects. Therefore, in compiling a list of maintenance aspects that could be viewed as critical success factors, several sources were utilised, as can be seen in Table 3.4. The section on hotel maintenance CSFs in the survey was compiled from Table 3.4. As explained previously, there have been numerous challenges in obtaining relevant literature, and, therefore, these sources were repeatedly utilised.

Table 3-4: Potential critical success factors

	Potential critical success factors	Author(s)
1	Maintenance auditing in ensuring cost-effective operations	Kelly (2006:3)
2	Benchmarking maintenance operations to enable superior performance	Wireman (2005:29); Stipanuk (2002:61)
3	Implementation of a CMMS (Computerised Maintenance Management System)	Lai & Yik (2012b:142); Stipanuk (2002:52); Narayan (2004:159)
4	Proper Financial Management/Accounting	Stipanuk (2002:58); Rondeau, Brown & Lapedes (1995:542); Lawson (1995:321); Mounts & Meinzer (2011:193)
5	Proper Budgeting Processes	Stipanuk (2002:53); Rondeau <i>et al.</i> (1995:498)
6	Conserving energy in hotel operations	Gee (1996:384); Jones & Jowett (1998:69)
7	Managing and minimising risk	Gee (1996:437)

8	Preventive Maintenance (especially Planned Preventative Maintenance Schedule, or PPMS)	Stipanuk (2002:32); Jones & Jowett (1998:84); Gee (1996:374), Rondeau <i>et al.</i> (1995:536); Narayan (2004:151); Kappa, Nitschke & Schappert (1997:21); Lawson (1995:318); Tesone (2010:224); Mounts & Meinzer (2011:193)
9	Scheduled/general/upkeep maintenance	Stipanuk (2002:32); Narayan (2004:150); Kappa <i>et al.</i> (1997:21); Lawson (1995:316); Adamo (1999:144)
10	Emergency/Breakdown Maintenance	Stipanuk (2002:32); Rondeau <i>et al.</i> (1995:537); Narayan (2004:150); Lawson (1995:318); Adamo (1999:144)
11	Corrective Maintenance	Rondeau <i>et al.</i> (1995:528); Narayan (2004:150); Lawson (1995:318); Adamo (1999:144); Tesone (2010:224)
12	Insurance against certain risks	Gee (1996:440); Rondeau <i>et al.</i> (1995:546)
13	Maintaining and implementing electrical systems, appliances and devices	Stipanuk (2002:187); Gee (1996:366); Adamo (1999:134); Mounts & Meinzer (2011:195)
14	Maintaining and implementing plumbing systems and fixtures	Jones & Jewitt (1998:66); Mounts & Meinzer (2011:195); Adamo (1999:130); Gee (1996:367); Stipanuk (2002:164)
15	Maintaining and implementing HVAC (Heating, Ventilation and Air-Conditioning)	Powers & Barrows (2003:295); Stipanuk (2002:221); Gee (1996:369); Mounts & Meinzer (2011:195); Adamo (1999:132); Jones & Jewitt (1998:67)
16	Heating	
17	Ventilation	
18	Air-Conditioning	
19	Maintaining and implementing refrigeration systems	Stipanuk (2002:231); Gee (1996:295); Powers & Barrows (2003:295); Adamo (1999:132); Mounts & Meinzer (2011:195)
20	Maintaining and implementing effective lighting systems and adequate fixtures	Jones & Jewitt (1998:71); Powers & Barrows (2003:295); Stipanuk (2002:285)
21	Maintaining elevators	Stipanuk (2002:412); Powers & Barrows (2003:295); Mounts & Meinzer (2011:195)
22	Personnel qualifications and skills in areas of expertise	Stipanuk (2002:64); Narayan (2004:159)

23	Personnel productivity and efficiency	Tesone (2010:224); Stipanuk (2002:64)
24	Personnel training and/or certification	Narayan (2004:159); Rondeau <i>et al.</i> (1995:495); Stipanuk (2002:64)
25	Access to up-to-date equipment specifications and manuals	Stipanuk (2002:47)
26	Access to up-to-date structural-, mechanical, electrical- and electrical equipment control schematic plans	Stipanuk (2002:48)
27	Maintaining adequate emergency power systems	Stipanuk (2002:204)
28	Administering and outsourcing certain maintenance tasks/activities	Jones & Jewitt (1998:99); Stipanuk (2002:50)
29	Good inventory record-keeping and control of maintenance supplies	Stipanuk (2002:38); Jones & Jewitt (1998:145); Mounts & Meinzer (2011:193)
30	Good record- and information keeping systems of maintenance records	Lawson (1995:319); Kappa <i>et al.</i> (1997:23); Mounts & Meinzer (2011:193); Gee (1996:375); Stipanuk (2002:34); Rondeau <i>et al.</i> (1995:528)
31	Provision of clear and concise maintenance manual for employees	Rondeau <i>et al.</i> (1995:496)
32	Good relationship between maintenance and housekeeping	Stipanuk (2002:132); Kappa <i>et al.</i> (1997:20)
33	Custodial/routine/daily hotel maintenance	Kappa <i>et al.</i> (1997:21); Lawson (1995:316); Rondeau <i>et al.</i> (1995:528)
34	Prioritising service and/or work to be completed	Tesone (2010:224); Narayan (2004:158); Rondeau <i>et al.</i> (1995:532)
35	Maintaining and implementing IT/Computer Systems	Mounts & Meinzer (2011:196); Jones & Jewitt (1998:72)
36	The speedy resolution of problems	Lai & Yik (2012b:142), Narayan (2004:161); Tesone (2010:224)
37	An efficient reporting system and prompt recording of maintenance requests	Lai & Yik (2012b:142); Stipanuk (2002:34); Powers & Barrows (2003:295)
38	Effective communication between staff members	Tesone (2010:224); Rondeau <i>et al.</i> (1995:541)
39	Effective communication between management and staff	Author's adaptation
40	Effective communication between hotel departments	Author's adaptation
41	Maintaining and acquiring mechanical-, power- and vehicular equipment	Powers & Barrows (2003:295); Gee (1996:373)
42	Quality of work and workmanship	Rondeau <i>et al.</i> (1995:160)
43	Proper maintenance to improve and maintain safety and safety standards	Stipanuk (2002:130); Jones & Jewitt (1998:94)

44	Maintaining the physical building (structure & fittings)	Jones & Jewitt (1998:52); Stipanuk (2002:405)
45	Maintaining and implementing laundry systems	Stipanuk (2002:309)
46	Maintaining and implementing telecommunication systems	Stipanuk (2002:334)
47	Maintaining and structuring landscaping and grounds	Stipanuk (2002:428)
48	Maintaining and structuring roads, parking areas, walkways and other surfaces	Gee (1996:381); Stipanuk (2002:414)
49	Maintaining surface coverings, such as wallpaper	Jones & Jewitt (1998:74)
50	Maintaining, acquiring or fabrication of furniture	Jones & Jewitt (1998:79)
51	Pest control and managing pests	Jones & Jewitt (1998:92)
52	Proper control, handling and storage of hazardous materials	Stipanuk (2002:44); Jones & Jewitt (1998:146)
53	Managing logistical aspects such as inventory acquisition	Ransley (2004:295)
54	Setting clearly defined goals/objectives for all tasks	Rondeau <i>et al.</i> (1995:539); Narayan (2002:156)
55	Scheduling maintenance in order to minimise disruption and losses	Narayan (2002:158)
56	Clear, specific definitions of duties and responsibilities for staff	Rondeau <i>et al.</i> (1995:495)
57	Knowledge and experience of the head of maintenance or chief engineer	Gee (1996:365)
58	Proper supervision of subordinates when necessary	Rondeau <i>et al.</i> (1995:495)
59	Ensuring that tools are upgraded and in good supply	Author's adaptation
60	External auditing	Author's adaptation
61	Staff and performance reviews	Author's adaptation
62	Protection of hotel standards, ensuring that customer expectations are met	Author's adaptation

Source: Author's compilation

As was seen in Table 3.4, various aspects were identified by making use of the resources that were available. Throughout this chapter, it has been evident that literature dealing specifically with the maintenance function within hotels is very limited, and can be seen as a challenge. The importance of maintenance within hotels is an aspect that appears to be neglected not only internationally, but within the borders of South Africa as a developing country as well.

3.7 Conclusion

This chapter focused on hotel maintenance managers and hotel maintenance management within the hospitality industry. Hotel maintenance management and the importance of the maintenance function for the hotel was inspected. Where the maintenance function fits into the organisational structure of the hotel was also examined, by looking at aspects such as the maintenance strategy, the costs associated with maintenance, the challenges faced for maintenance to be effective within hotels, and how outsourcing relates to hotel maintenance. An overview was also provided for the classification and types of maintenance management within hotels, whether it be planned or unplanned, and how auditing can contribute to the maintenance department.

The impressions of the hotel guest are directly and greatly influenced by the services offered by the hotel. The physical aspects of the hotel, as the only tangible aspects that the guest can interact with, is therefore of the utmost importance. As such, the quality and condition of these aspects need to be monitored and controlled, and should any deviations occur, be rectified in as efficient and cost-effective manner as possible. This is the task of the hotel maintenance department.

Even though the importance of the maintenance function was identified almost 40 years ago, and recommendations made to increase the academic focus, the literature available on this subject is very limited. A further complication is that due to the often sensitive nature of the work undertaken by the maintenance department, information and participation from the industry is difficult to obtain. It can however not be denied that the maintenance department is crucial in protecting the image of the hotel, and ensuring its continued effective operation. The more the quality of the hotel product increases, the more the associated maintenance requirements also increase.

The maintenance department is only as efficient as its internal effectiveness and external effectiveness, which includes the quality of staff and their associated skills and expertise, as well as the systems that should be in place for the maintenance department to be properly managed. The department itself can vary in size, from consisting of only a handyman for very small hotels, to having an engineer at the head of several foremen and their technicians, each specialising in a specific maintenance function. Maintenance can be classified as either planned or unplanned, and a computerised maintenance management systems (CMMS) can prove useful in streamlining work orders and analysing historic information. Contractors are also often made use of where it would be more cost-effective to do so, or where the aspect that needs to be serviced does not form part of the core competencies of the department or the hotel. Auditing the maintenance department can also provide useful insight into performance-, costs, energy efficiency- and other aspects.

This chapter outlined the importance of effectively managing the hotel maintenance aspect and highlighted the critical success factors needed to effectively manage maintenance within hotels. The next chapter will discuss the research methodology followed, as well as the results of the study.

CHAPTER 4: EMPIRICAL RESEARCH AND RESULTS

4.1 Introduction

The aim of this chapter is to discuss the method of research followed in this study as well as the results of the corresponding survey. The remainder of the chapter discusses the aspects relevant to these two main sections.

4.2 Method of research

The method of research will subsequently be discussed under the following headings: (i) the questionnaire and (ii) statistical analysis.

4.2.1 Sampling method and survey

Data was gathered using quantitative data collection, as the sample size was quite large to be representative of the data collected from the population studied. The population for this study was the maintenance managers of hotels within South Africa, with the target population being maintenance managers of both graded and ungraded hotels. The websites of the Tourism Grading Council of South Africa (TGCSA), as well as that of the Automobile Association (AA) was used to compile a directory of the hotels used in the study (see Annexure B). This custom compiled directory was then used to e-mail the various hotels, and was also updated where possible to facilitate the correctness of the contact information of the hotels. In calculating the sample size for the study, the size of the population was taken into account, as well as the nature and accessibility of the target population.

A request to complete a web-based e-questionnaire was e-mailed to all hotel managers' maintenance divisions at different hotels throughout South Africa, with a link to the questionnaire taking the respondent to the relevant questionnaire as was hosted on Adobe® FormsCentral®. In other words, e-mail lists were used for a web-based survey. To ensure that results were as accurate as possible, final feedback from the target population had to equal or exceed the x number of samples. This number of samples was calculated at 234 samples. However, to further enhance the precision of the study, this was increased to 250 samples. Each maintenance manager within the target population had an equal chance of being included in the study as simple random sampling was used using the number method. In using this method, all the respondents' feedback was used by the order in which they were received. The other probability sampling methods were not used, as they required strata's or pre-determined lists to be implemented. As

can be seen, from the target population, the variety of star-grading hotels made these approaches unpractical for this study, as maintenance managers of different star-graded hotels should have had equal opportunity in participating in this study. Final samples received during the survey did not equal either the minimum required or the proposed amount of respondents. The final respondent count came in at 110 completed questionnaires.

4.2.2 Study limitations

The researcher acknowledges the limitation of an unrepresentative sample. However, since this is exploratory research, the results are never the less considered relevant and significant to consider.

4.2.3 Statistical analysis

Data was exported from Adobe ® FormsCentral to Microsoft® Excel®. IBM's SPSS version 23 (Statistical Package for Social Sciences) software was used for the data analysis, which comprised four stages. Firstly, a general profile of the hotel managers was compiled with the help of two-way frequency tables and illustrated with the help of tables and graphs.

Secondly, four principal axis factor analyses were performed using an Oblimin rotation with Kaiser Normalisation on respectively the 25 managerial traits, 30 general management critical success factor items, 62 maintenance management critical success factors and the 10 maintenance expertise items to explain the variance-covariance structure of the set of variables through a few linear combinations of these variables. In all cases the Kaiser-Meyer-Olkin measure of sampling adequacy, as well as Bartlett's Test of Sphericity, was used to determine whether the covariance matrix is suitable for factor analysis. In all four factor analyses, Kaiser's criteria for the extraction of all factors with Eigen values larger than 1 were used. All items with a factor loading above 0.3 were considered as contributing to a factor, whereas all items with factor loadings lower than 0.3 were considered as not correlating significantly with this factor (Steyn, 2000:2). Any item that cross-loaded on two factors with factor loadings greater than 0.3 was categorised in the factor where interpretability was best. A reliability coefficient (Cronbach's alpha) was computed for each factor to estimate the internal consistency. All factors with a reliability coefficient above 0.6 were considered as having acceptable internal consistency. The average inter-items correlations were also computed as another measure of reliability. According to Clark and Watson (1995:310), the average inter-item correlation should lie between 0.15 and 0.55.

Thirdly, Independent *T*-tests were conducted to determine if there were any statistically significant differences between the independent variables or group of individuals based on the respondents' demographic characteristics and company profile characteristics about the identified factors. ANOVAs and Tukey's post hoc multiple comparisons were used to determine whether there are any additional significant demographic and company profile characteristics regarding the identified factors. In both cases effect sizes were also employed. The purpose of an effect size is to establish whether any differences exist between the groups; in this case, in which combination of independent variable groups the mean values of the identified factors and the averages of the socio-demographic and company profile variables had the smallest or largest effect. Cohen (1988:79-81), Ellis and Steyn (2003:51-53) and Steyn (2000:1-3) offer the following guidelines for the interpretation of effect sizes: small effect: $d=0.2$, medium effect: $d=0.5$ and large effect: $d=0.8$.

Lastly, Spearman's Rank Order Correlations (ρ) were used to explore the relationship between the socio-demographic and company profile variables not included in the *T*-tests and ANOVAs, and the personal characteristics and the CSFs, as well as the maintenance factors and expertise. Spearman's Rank Order Correlations were also used to explore the relationship between the identified factors with one another. According to Pallant (2007:134), a value of 0 indicates no relationship, 1.0 a perfect positive correlation, and -1.0 a perfect negative correlation. Cohen (1988:79-81) suggests the following guidelines to interpret the values between 0 and 1: small effect, $r=.10$ to $.29$; medium effect, $r=.30$ to $.49$; and a large effect, $r=.50$ to 1.0.

4.3 Results of the research

The results of the research are discussed in four sections. Firstly, an overview of the profile of the respondents (hotel maintenance managers) is presented. Secondly, the results of the four factor analyses are presented. Thirdly, the results of the *T*-tests and ANOVAs are discussed and lastly the results of the correlation analysis are presented.

4.3.1 Profile of hotel maintenance managers within hotels in South Africa

Although representing hotel maintenance managers, it should be at all times be kept in mind that this profile is only indicative of the managers who responded to the survey, and cannot be viewed as an absolute for the entire hotel industry of South Africa. Please note that reference made to maintenance managers in the discussion implies the respondents of the survey.

4.3.1.1 Gender

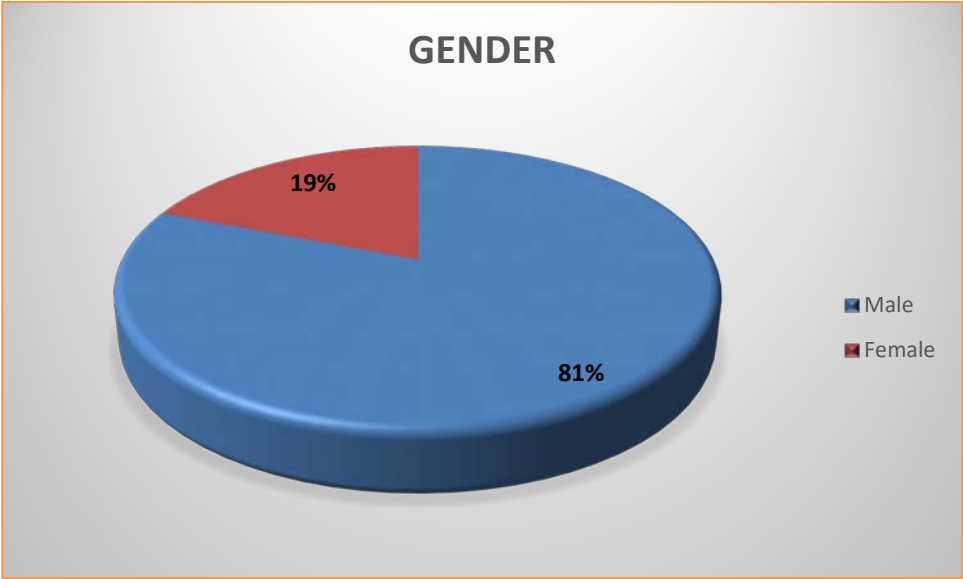


Figure 4-1: Gender

Figure 4.1 shows that respondents who participated in the survey were mainly male (81%), with 19% female respondents.

4.3.1.2 Age

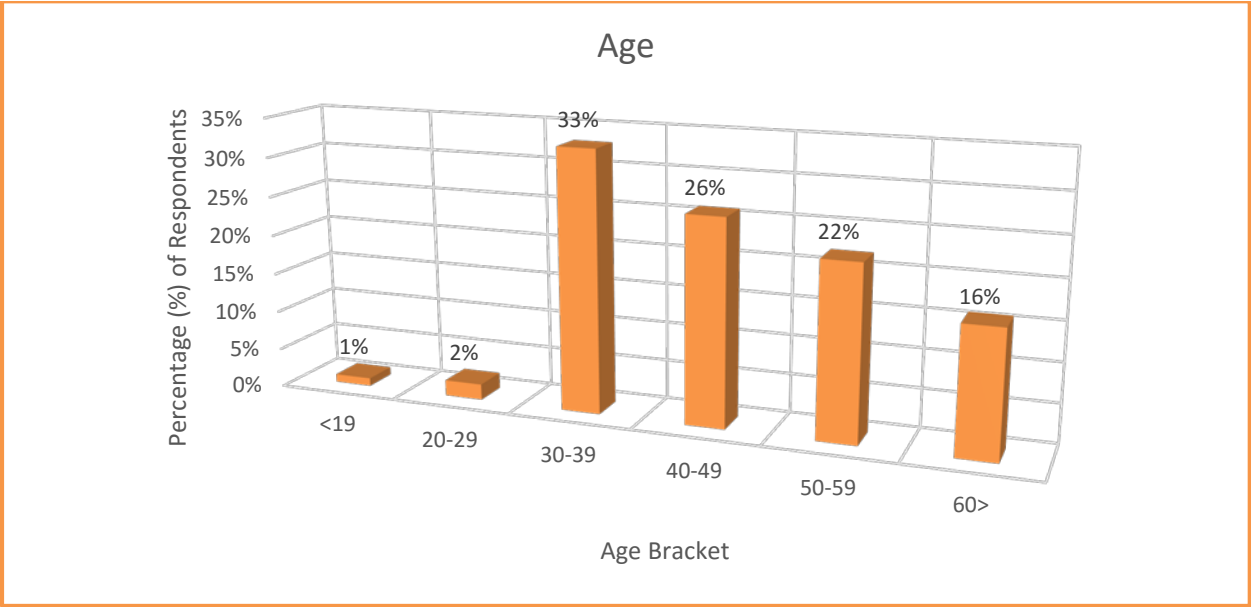


Figure 4-2: Age

With 33% of respondents falling between 30 and 39 years of age, this is clearly the major age group. Twenty-six percent (26%) of respondents were between 40 and 49 years, followed by 22% between the ages of 50 and 59 years. Surprisingly, 16% are older than 60 years. A mere 2% were between 20 and 29 years, with 1% being less than 19 years old. From the results it is clear that the industry almost exclusively appoints maintenance managers who are 30 years or older, with the gradual decrease most likely due to age and transfers to other (higher) levels of management, as can be seen in Figure 4.2. The average age of the respondents was found to be 45 years.

4.3.1.3 Highest level of education

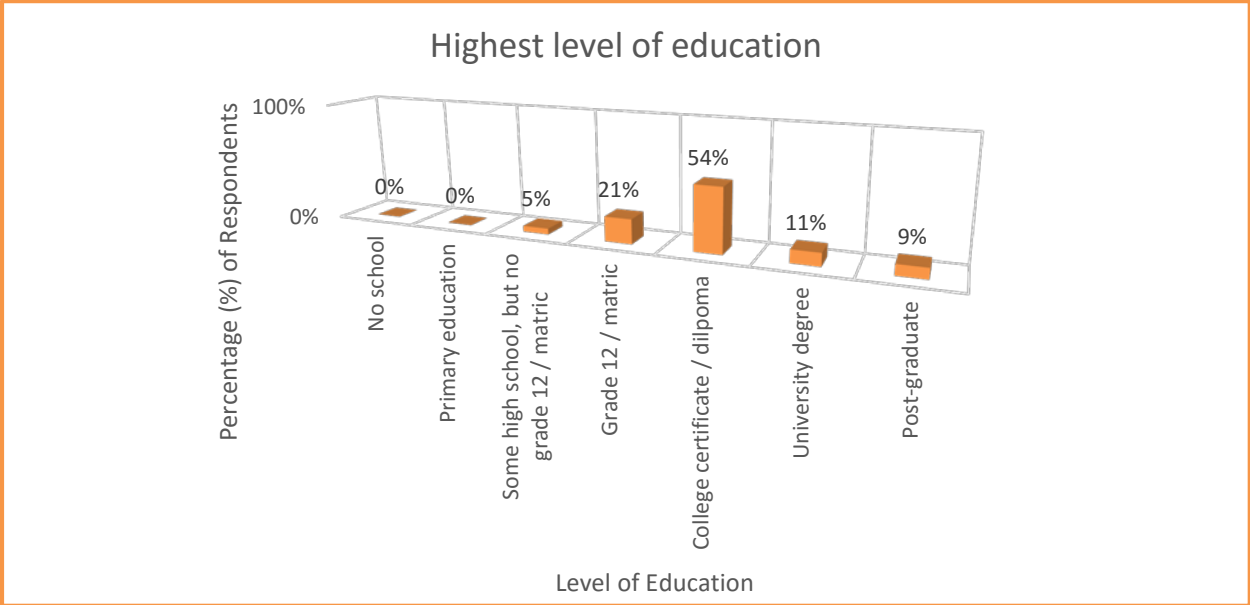


Figure 4-3: Highest level of education

The above results in Figure 4.3 reveal that a high percentage (54%) of respondents have a college certificate or diploma as the highest level of education. This is followed by 21% who have Grade 12 / matric. Eleven percent (11%) of respondents have university degrees, followed closely by post-graduate degrees (9%). A small number of maintenance managers, 5%, have some high school but did not formally finish their secondary education. There were no participating respondents who had only primary education (0%) or no schooling whatsoever (0%).

4.3.1.4 Hotels by province

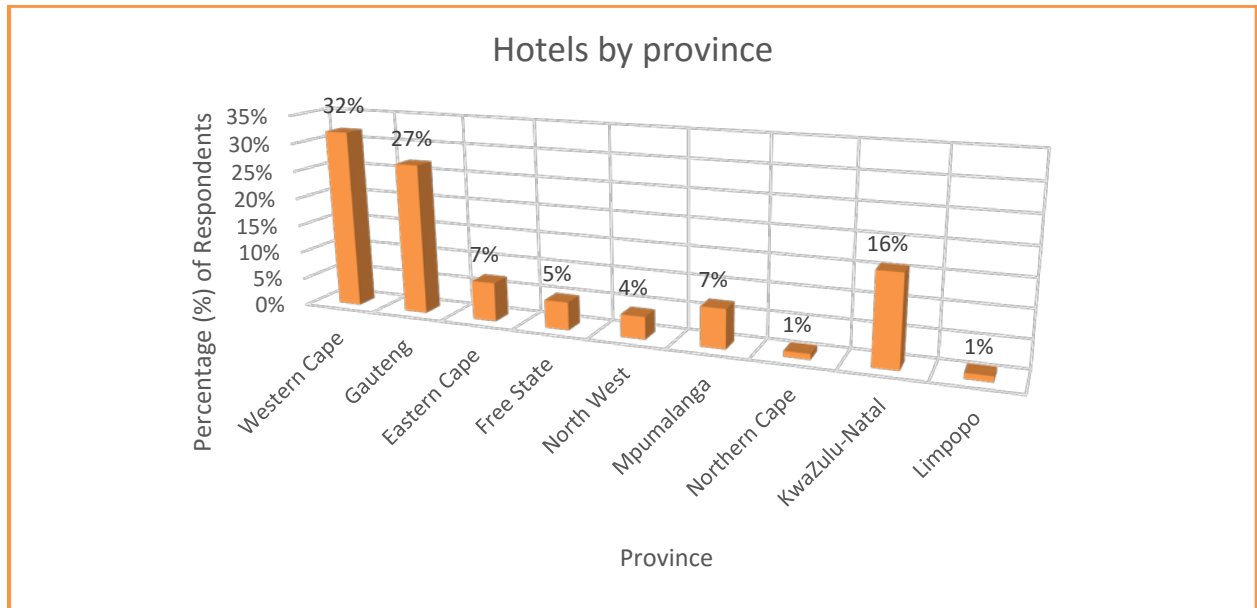


Figure 4-4: Hotels by province

Thirty-two percent (32%) of the managers who participated in the survey are stationed at hotels that are situated in the Western Cape, followed closely by participants from Gauteng (27%), as is evident in Figure 4.4. KwaZulu-Natal accounts for 16% of the respondents, while respondents from the Eastern Cape and Mpumalanga are both at 7%, followed by the Free State (5%) and the North West province (4%). The Northern Cape and Limpopo both had the lowest participation rates, at 1% each.

4.3.1.5 Hotel star grading

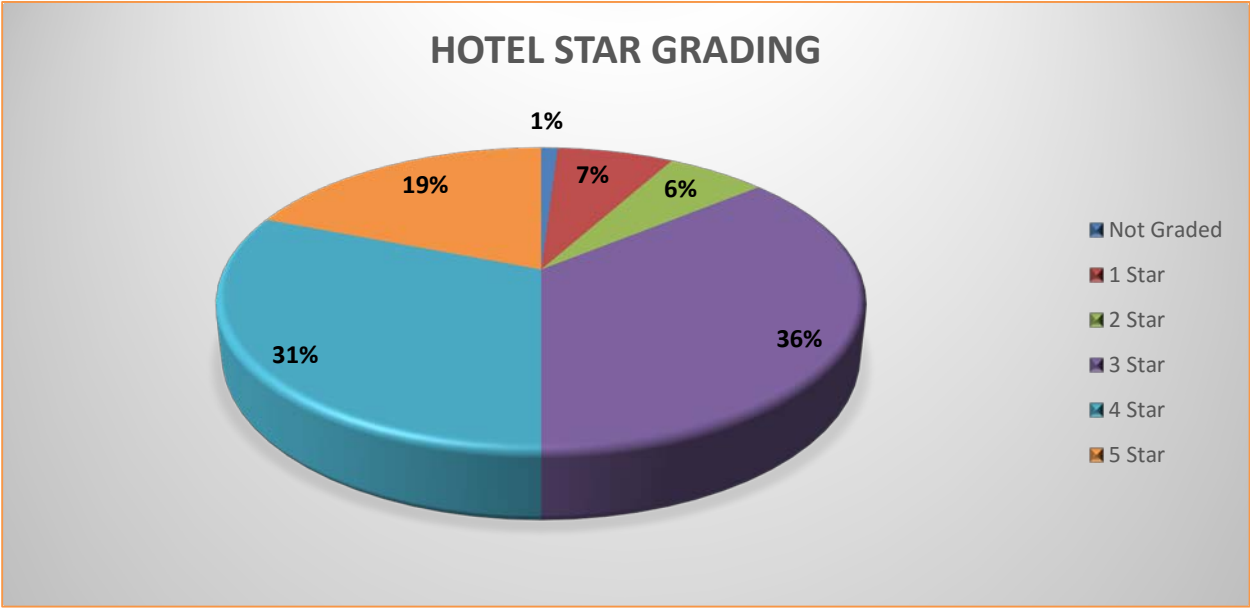


Figure 4-5: Hotel star grading

Thirty-six percent (36%) of managers who participated are employed at 3-star hotels, followed closely by 4-star hotels at 31%. 5-star hotels are at 19%. 1-star hotel managers made up 7% of the study, and 2-star hotel managers 6%. Finally, non-graded hotels make up the final 1%.

4.3.1.6 Hotel size

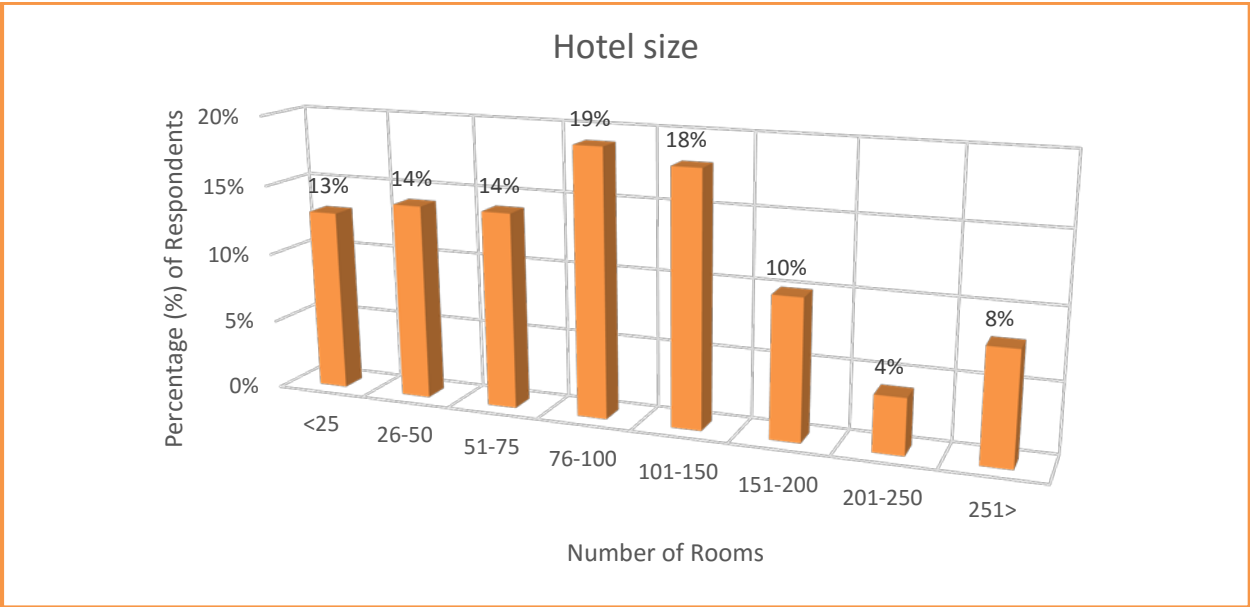


Figure 4-6: Hotel size

From Figure 4.6 it can be seen that the number of rooms / size of the hotels were more or less evenly distributed between larger, mid-sized and smaller hotels. Nineteen percent (19%) of responding managers work at hotels where there are between 76-100 rooms, followed closely at 18% with hotels with between 101 and 150 rooms. Hotels with 26-50 rooms, as well as 51-75 rooms, are both equally represented at 14% each. Hotels with fewer than 25 rooms account for 13% of the responding managers. Larger hotels at between 151 and 200 rooms account for 10%, with 8% employed at massive hotels with more than 251 rooms. Lastly, 4% are at hotels with between 201 and 250 rooms.

4.3.1.7 Division to which maintenance answered to

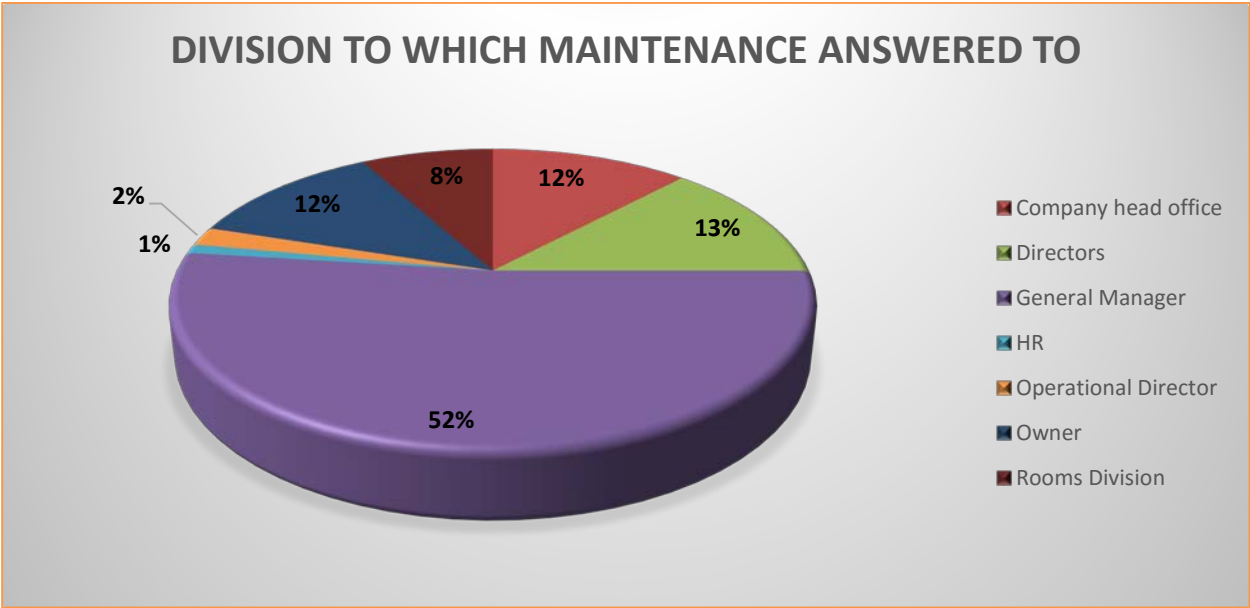


Figure 4-7: Division to which maintenance answered to

The majority (52%) of maintenance managers answer to the general manager at their respective hotels, as shown in Figure 4.7. Thirteen percent (13%) answer directly to the directors, while 12% of managers answer to the company head office, with a further 12% answering to the owner. Slightly fewer managers answer to the rooms division manager (8%). Lastly, 2% answer to the operational director, and 1% to human resources. Interestingly, the maintenance managers answering to human resources does not follow the average hotel organisational structure as per literature.

4.3.1.8 Approximate annual expenditure on maintenance

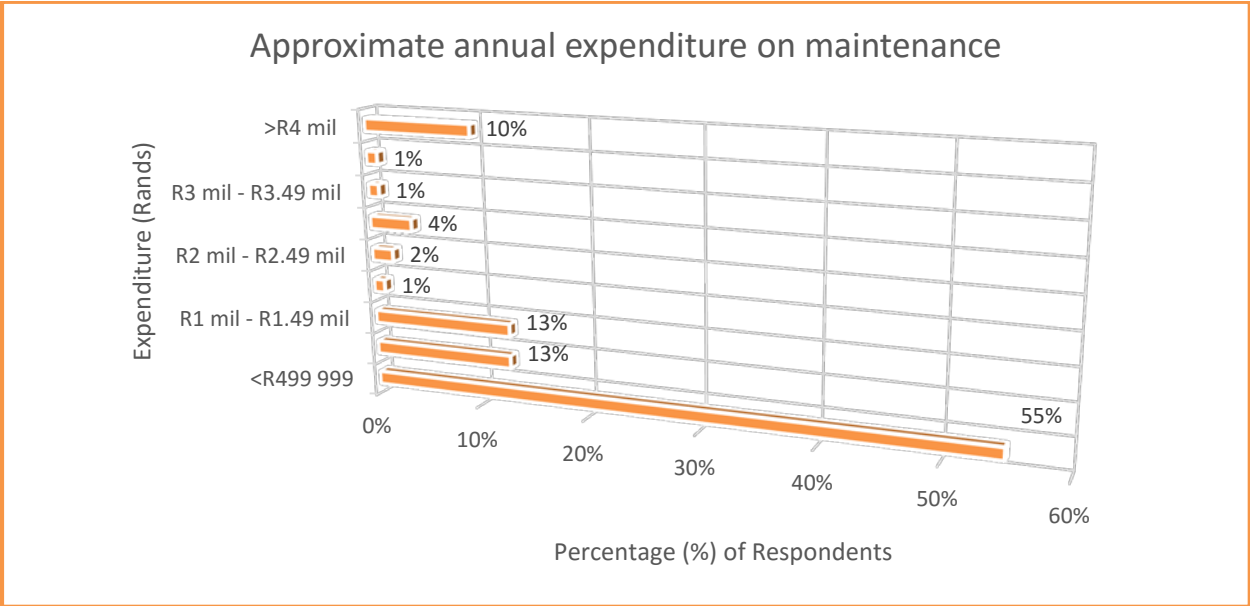


Figure 4-8: Approximate annual expenditure on maintenance

As can be seen from Figure 4.8, the majority of the hotels (55%) have maintenance expenditures that are less than R499 000 per annum. Thirteen percent (13%) spend between R500 000 and R999 999, as well as another 13% that spend between R1 million and R1.49 million. Ten percent (10%) spend more than R4 million on maintenance while 4% spend between R2.5 million and R2.99 million; 2% of hotels spend between R2 million and R2.49 million and 1% each respectively spend between R1.5 million and R1.99 million, between R3 million and R3.49 million, and between R3.5 million and R3.99 million.

4.3.1.9 Budget utilisation per maintenance aspect

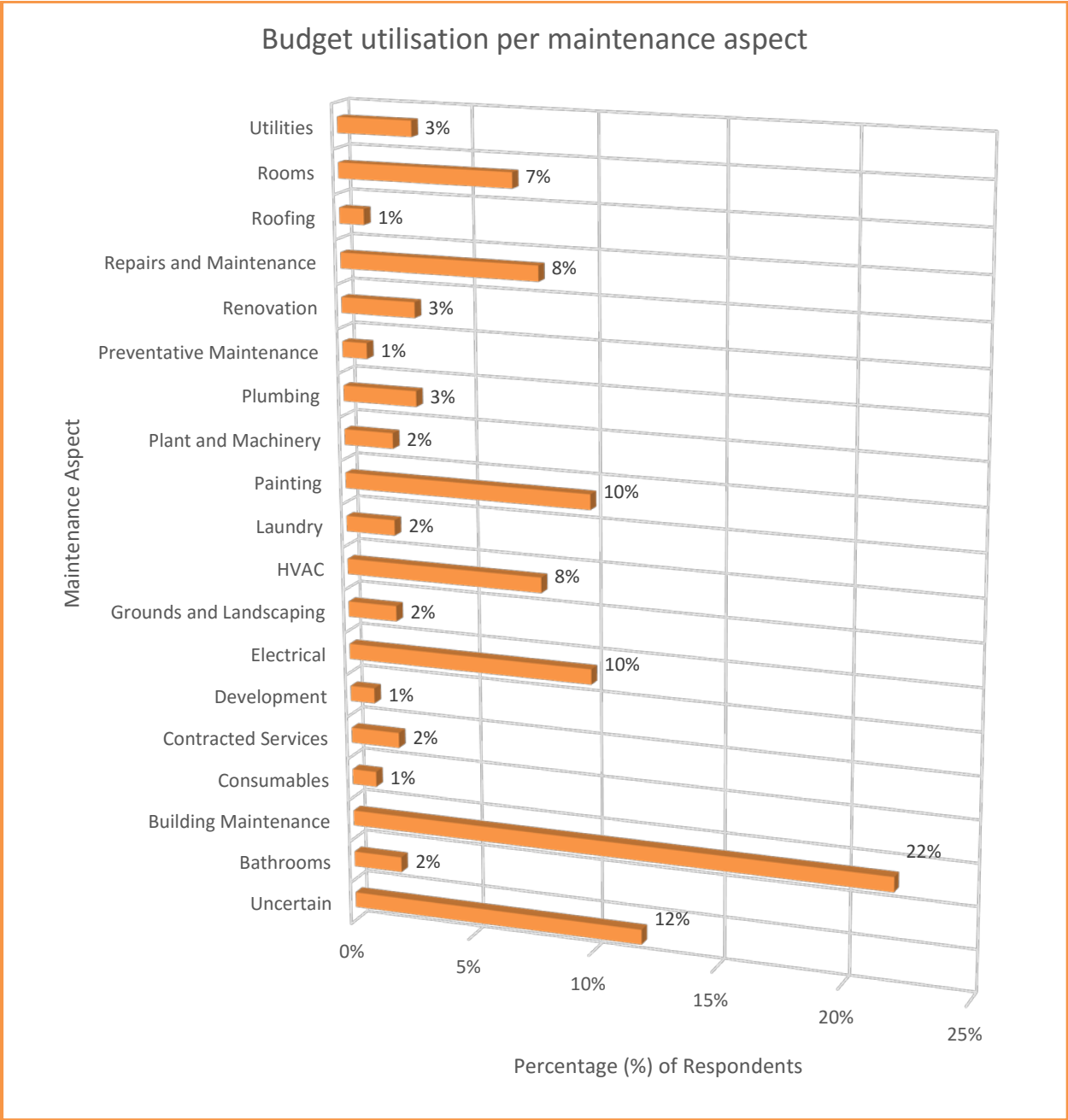


Figure 4-9: Budget utilisation per maintenance aspect

According to the results as seen in Figure 4.9, building maintenance (building upkeep) accounts for 22% of the budget utilisation. Twelve percent (12%) of respondents were uncertain as to which aspect utilises most of the budget. Painting and electrical expenditures, both account for 10% each. Heating, ventilation and air-conditioning (HVAC) is at 8%, as is general repairs and maintenance. Seven percent (7%) of the budget is allocated to the rooms, which includes aspects

such as furnishings and coverings. This is followed by utilities (3%), renovation (3%), and plumbing (3%). Plant and machinery upkeep, laundry, grounds and landscaping, contracted services, as well as bathrooms, each has a 2% usage. With the lowest utilisation, roofing, preventative maintenance, development and consumables each make up 1% of the expenditures on the maintenance budget.

4.3.1.10 Maintenance budget for the financial year 2014/2015

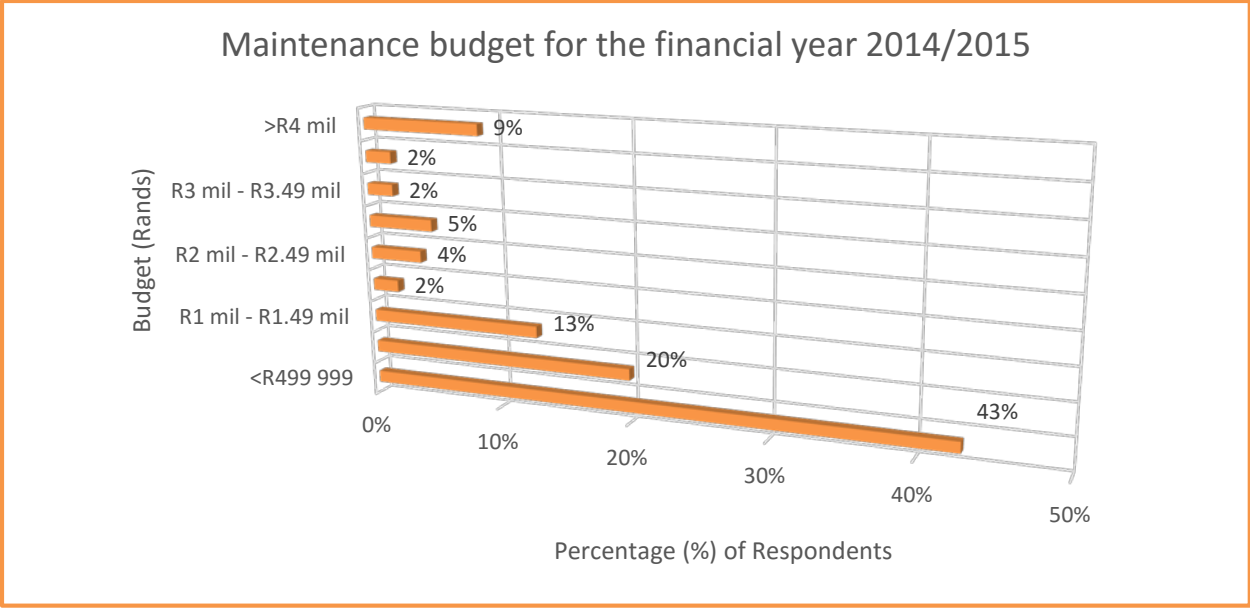


Figure 4-10: Maintenance budget for the financial year 2014/2015

Forty-three percent (43%) of maintenance managers have at their disposal a budget of less than R499 999, as per Figure 4.10. This is followed by hotels with a budget of R500 000 – R999 999 while 13% of hotels have a budget of between R1 million and R1.49 million. There were 9% of hotels who have access to a maintenance budget of more than R4 million whereas 5% have a budget of between R2.5 million and R2.99 million. This is followed by 4% with a budget of between R2 million and R2.49 million. Finally, 2% have a budget of between R1.5 million and R1.49 million, with another 2% having a budget of R3 million to R3.49 million, and a further 2% with a budget of R3.5 million to R3.99 million.

4.3.1.11 Independent hotel or part of a larger group

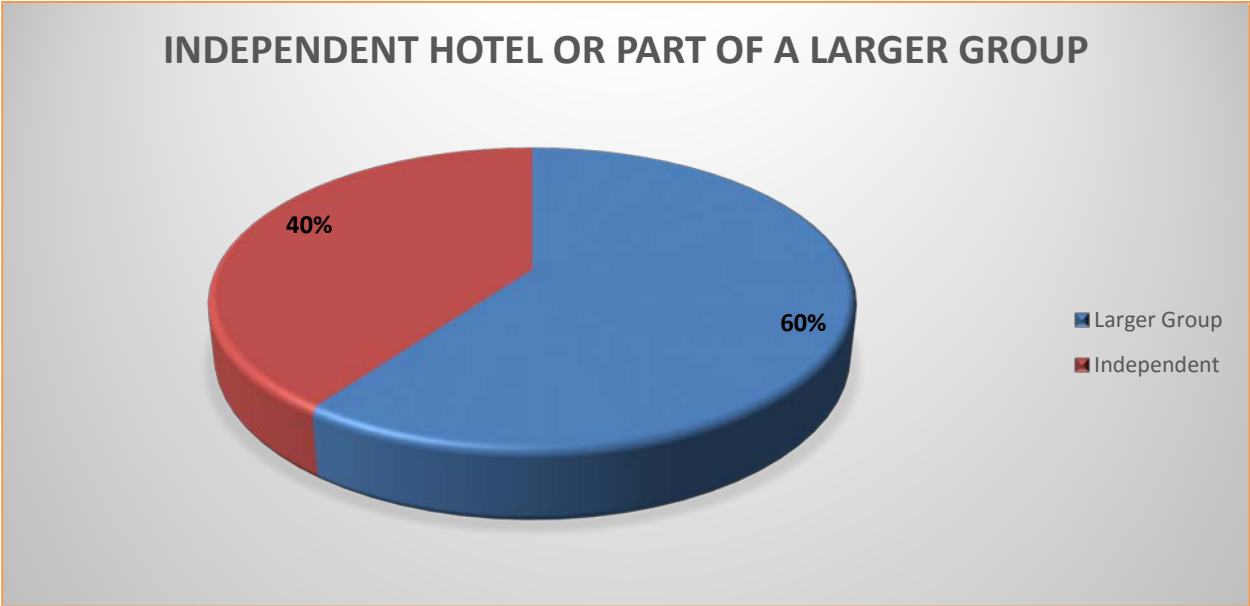


Figure 4-11: Independent hotel or part of a larger group

Constituting 60%, the majority of hotels are part of a larger group. The minority (40%) are independent hotels and not part of a larger group of hotels, as illustrated in Figure 4.11.

4.3.1.12 Services offered by the hotel

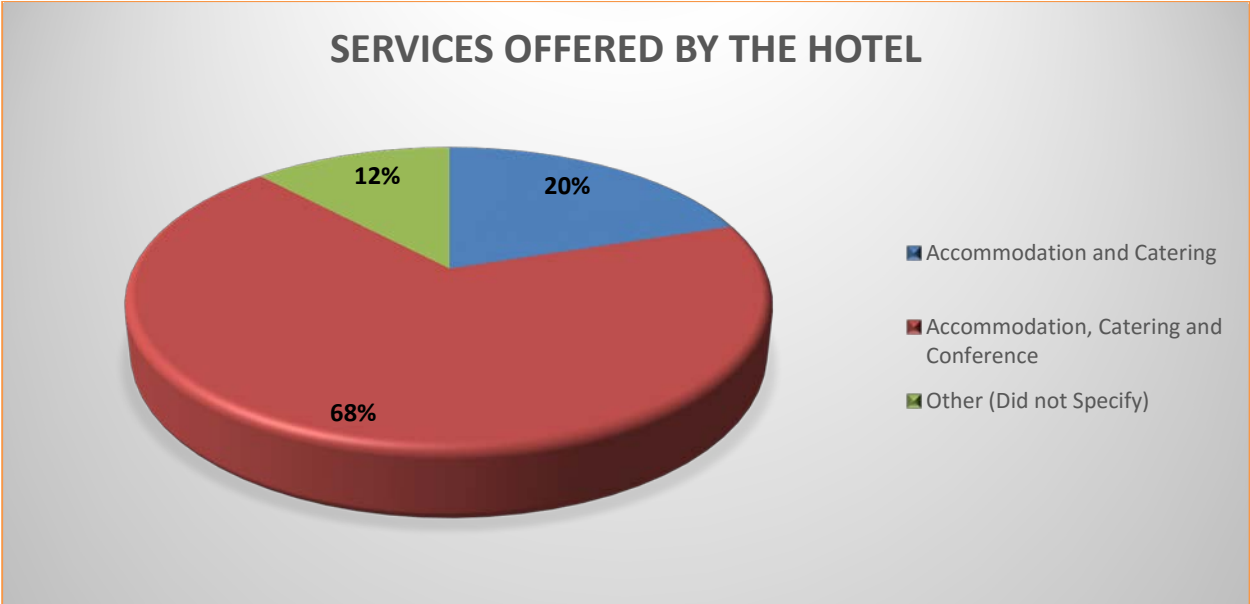


Figure 4-12: Services offered by the hotel

Hotels that offer accommodation, catering and conference facilities accounted for 68% of the study, by far the majority as can be seen in Figure 4.12. A mere 20% offered only accommodation and catering, with 12% who did not specify which services were offered.

4.3.1.13 Year(s) in current managerial position



Figure 4-13: Year(s) in current managerial position

Managers who participated have mostly been in their current managerial position between 2-4 years (28%) or 5-9 years (27%), when viewing the results in Figure 4.13. There are 16% who have been 10-14 years in their current position, followed very closely by 15% who were a mere one year or less in their position of management. Between 15-19 years were represented by 9% of the respondents, with the remaining managers being in their current (maintenance management position) between 20-24 years (3%) and more than 25 years (2%). On average, a respondent has been in their current managerial position for 7 years.

4.3.1.14 Year(s) of experience in the hotel sector

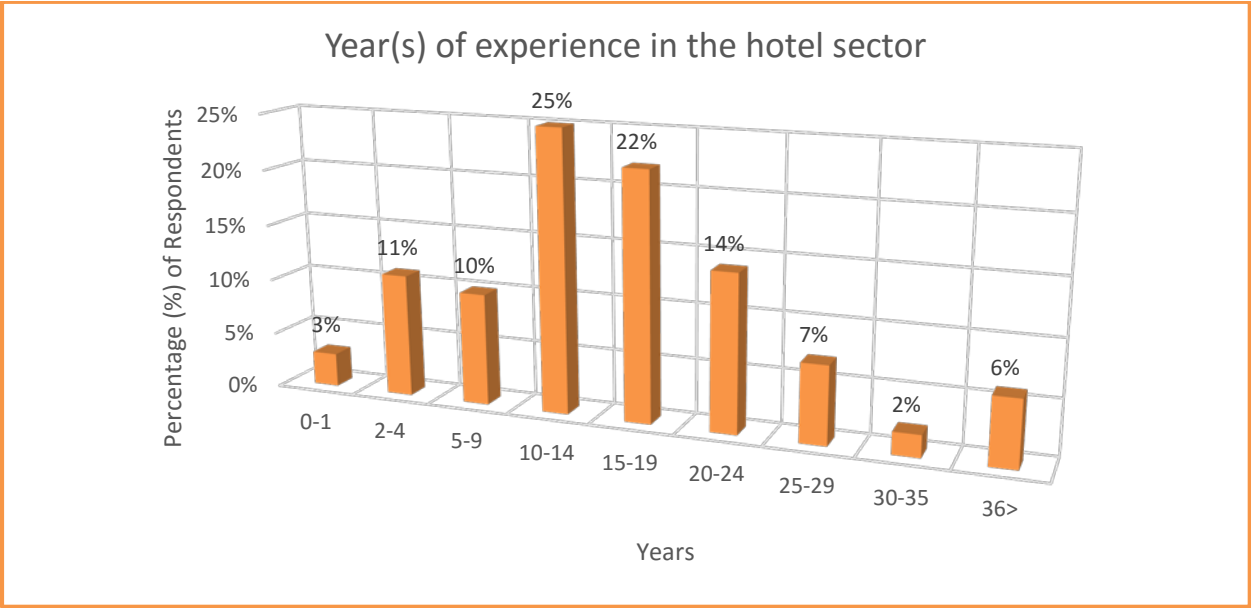


Figure 4-14: Year(s) of experience in the hotel sector

Figure 4.14 indicates that 25% have been employed in the hotel sector for between 10-14 years with a further 22% having been employed for between 15-19 years. Fourteen percent (14%) have been active in hotels for between 20-24 years. There were 11% who have been employed in the sector for between 2-4 years, with a further 10% between 5-9 years. Seven percent (7%) have approximately 25-29 years' worth of experience in the hotel industry, with 6% having been in the hotel industry for more than 36 years. Three percent (3%) have less than one year of experience, compared to 2% who have between 30-35 years. The respondents have had an average of 15-and-a half years of experience in the hotel sector.

4.3.1.15 Department in which the hotel career was started

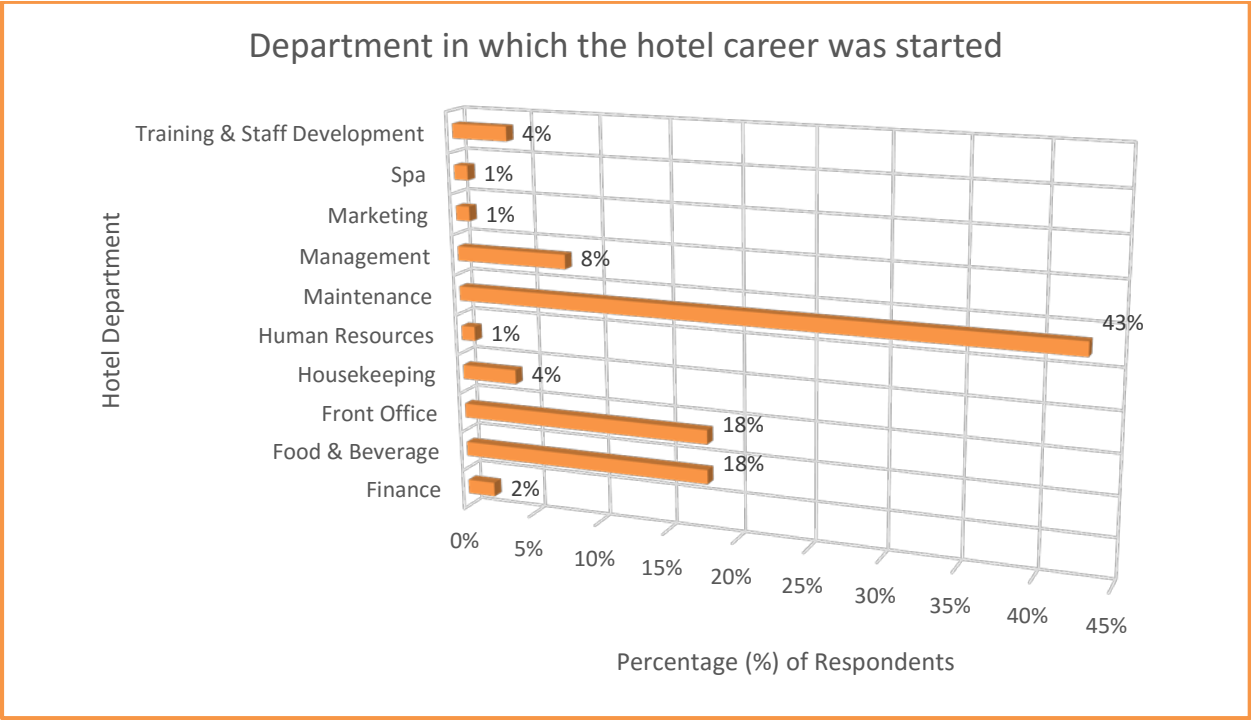


Figure 4-15: Department in which the hotel career was started

By far most maintenance managers started their careers in the maintenance department of a hotel (43%). The front office and food and beverage are tied at 18%. Eight percent (8%) of maintenance managers appear to have started their hotel career in the management department from the onset of their career in the hotel industry. Housekeeping, as well as training and staff development both, account for 4% each as the starting department for the responding managers. Interestingly, there were respondents who started their maintenance management career within the finance department (2%). Even more interesting, but with less representation, are the managers who started their careers in the spa at the hotel, at marketing and at human resources, each category making up 1% of the total respondents, as illustrated in Figure 4.15.

4.3.1.16 Characteristics or traits of hotel managers

Table 4.1 shows that maintenance managers at hotels consider the following managerial characteristics and traits as *very important* to *extremely important*.

- Ability to solve problems (96%)
- Trustworthiness (95%)

- Ability to stay calm in an emergency/crisis (94%)
- Honesty (93%)
- Ability to prioritise (93%)
- Ability to organise (92%)
- Ability to effectively implement plans (92%)
- Time management skills (92%)
- Leadership ability (91%)
- Common sense (90%)

The following traits were deemed to be less important:

- Sympathy (44%)
- Entrepreneurial characteristics (59%)
- Fairness and generosity (63%)
- Imagination and creative thinking (68%)

Table 4-1: Managerial traits

		1 Not at all important	2 Less important	3 Neutral	4 Very important	5 Extremely important
1	Ability to judge and to combine different ideas	-	2%	16%	49%	33%
2	Ability to organise	-	-	8%	25%	67%
3	Ability to effectively implement plans	-	1%	7%	29%	63%
4	Imagination and creative thinking	1%	2%	29%	36%	32%
5	Common sense	-	-	10%	21%	69%
6	Innovation	-	1%	22%	41%	36%
7	Inclination and capacity to assume risk	1%	6%	20%	38%	35%
8	Self-evaluation ability	-	5%	18%	52%	25%
9	Self-confidence	-	1%	14%	46%	39%
10	Leadership ability	-	-	9%	40%	51%
11	Applying modern business methods, specifically flexibility/adaptability	1%	7%	19%	41%	32%
12	Entrepreneurial characteristics	1%	13%	27%	41%	18%
13	Ability to solve problems	-	-	4%	27%	69%

14	Effective communication skills	-	-	11%	35%	54%
15	Fairness and generosity	1%	3%	33%	31%	32%
16	Trustworthiness	-	-	5%	21%	74%
17	Sympathy	2%	13%	41%	25%	19%
18	Honesty	-	-	7%	17%	76%
19	Ability to treat people equally	-	1%	16%	32%	51%
20	Ability to prioritise	-	-	7%	26%	67%
21	Ability to stay calm in an emergency/crisis	-	-	6%	20%	74%
22	Motivational skills	-	2%	19%	47%	32%
23	Financial/budgeting sensibility	-	-	23%	38%	39%
24	Skills of positive influence	-	2%	18%	50%	30%
25	Time management skills	-	-	8%	42%	50%

Source: Author's Own Compilation

4.3.1.17 Critical success factors for general management

Table 4.2 shows that maintenance managers at hotels consider the following critical success factors for general management as *very important* to *extremely important*:

- Providing high quality facilities (92%)
- High standards of maintenance of facilities (92%)
- Well-trained staff (91%)
- Meeting customer needs and preferences (88%)
- Provision of high levels of customer care (86%)
- Proper policies (85%)
- Clear strategies (85%)
- Maintaining efficient purchasing practices and effective liaison with suppliers (85%)
- Clear lines of communication (85%)
- Applying the principle of "the customer is king" (80%)
- Clear objectives and goals (80%)

The following critical success factor was deemed to be *not at all important* or *less important*:

- International work experience (59%)

Table 4-2: Critical success factors for general management

		1 Not at all important	2 Less important	3 Neutral	4 Very important	5 Extremely important
1	Provision of high levels of customer care	-	-	14%	33%	53%
2	Meeting customer needs and preferences	-	-	12%	28%	60%
3	Applying the principle of "the customer is king"	-	5%	16%	32%	48%
4	Proper policies	-	-	15%	42%	43%
5	Clear strategies	-	1%	14%	48%	37%
6	Well-trained staff	-	1%	8%	40%	51%
7	Maintaining efficient purchasing practices and effective liaison with suppliers	-	-	15%	43%	42%
8	Providing high quality facilities	-	1%	7%	30%	62%
9	High standard of maintenance of facilities	-	-	8%	25%	67%
10	Operations of effective recruitment of staff and selection procedures	-	1%	22%	44%	33%
11	Regular training of staff	-	1%	23%	37%	39%
12	Management experience	-	1%	21%	44%	34%
13	Experience working in tourism and hospitality fields	3%	15%	42%	21%	19%
14	Experience working in maintenance/ construction/similar fields	-	7%	31%	37%	25%
15	International work experience	23%	36%	25%	9%	7%
16	Cross-cultural knowledge	3%	18%	42%	28%	9%
17	Global vision (about your hotel, the economy, etc.)	6%	12%	35%	32%	15%
18	Experienced staff	-	1%	31%	38%	30%
19	Implementing effective recycling methods	2%	7%	29%	34%	28%
20	Implementing eco-friendly or "green" management principles	2%	7%	28%	33%	30%
21	Proper budgeting processes	-	-	28%	34%	38%
22	Clear objectives and goals	-	-	20%	48%	32%
23	Proper financial/budget management	-	2%	20%	41%	37%
24	Professional staff	1%	3%	22%	42%	32%
25	On the job training	-	2%	19%	40%	39%
26	Clear lines of communication	-	-	15%	42%	43%
27	Clear delegation of authority	-	-	11%	52%	37%
28	Effective system to get feedback from customers	-	5%	21%	39%	35%
29	Limited staff turnover	-	2%	21%	45%	32%
30	Limit expenditure	-	7%	25%	34%	34%

4.3.1.18 Critical success factors for maintenance management

Table 4.3 shows that maintenance managers at hotels considered the following critical success factors for maintenance management as *very important* to *extremely important*:

- Scheduled/general/upkeep maintenance (95%)
- The speedy resolution of problems (93%)
- Protection of hotel standards (93%)
- Maintaining and implementing electrical systems, appliances and devices (92%)
- Quality of work and workmanship (92%)
- Proper maintenance to improve and maintain safety and safety standards (92%)
- Emergency/breakdown maintenance (91%)
- Effective communication between management and staff (91%)
- Prioritising service and/or work to be completed (90%)
- Effective communication between staff members (90%)
- Effective communication between hotel departments (90%)
- Maintaining the physical building (structure and fittings) (90%)

The following aspects were deemed to be the less important:

- Implementation of a CMMS (Computerised Maintenance Management System) (45%)
- External auditing (54%)
- Maintaining and implementing IT/Computer systems (56%)
- Maintaining and implementing telecommunication systems (66%)
- Benchmarking maintenance operations to ensure superior performance (67%)
- Personnel training and/or certification (67%)
- Administering and outsourcing certain maintenance tasks/activities (67%)
- Maintenance auditing to ensure cost-effective operations (68%)
- Personnel qualifications and skills in areas of expertise (68%)

- Proper financial management/accounting (69%)
- Proper budgeting processes (69%)
- Provision of clear and concise maintenance manual for employees (69%)

Table 4-3: Critical success factors for maintenance management

		1 Not at all important	2 Less important	3 Neutral	4 Very important	5 Extremely important
1	Maintenance auditing to ensuring cost-effective operations	1%	4%	27%	41%	27%
2	Benchmarking maintenance operations to enable superior performance	1%	5%	27%	37%	30%
3	Implementation of a CMMS (Computerised Maintenance Management System)	6%	22%	27%	27%	18%
4	Proper Financial Management/Accounting	1%	7%	23%	44%	25%
5	Proper Budgeting Processes	-	6%	25%	41%	28%
6	Conserving energy in hotel operations	-	1%	12%	32%	55%
7	Managing and minimising risk	-	-	14%	37%	49%
8	Preventive Maintenance (especially Planned Preventative Maintenance Schedule, or PPMS)	-	2%	9%	27%	62%
9	Scheduled/general/ upkeep maintenance	-	-	5%	37%	58%
10	Emergency/Breakdown Maintenance	-	1%	8%	37%	54%
11	Corrective Maintenance	-	-	11%	43%	46%
12	Insurance against certain risks	-	-	19%	36%	45%
13	Maintaining and implementing electrical systems, appliances and devices	-	-	8%	33%	59%
14	Maintaining and implementing plumbing systems and fixtures	-	-	11%	36%	53%
15	Maintaining and implementing HVAC (Heating, Ventilation and Air-Conditioning)	1%	1%	19%	30%	49%
16	Heating	-	2%	23%	38%	37%
17	Ventilation	1%	1%	24%	35%	39%
18	Air-Conditioning	1%	2%	18%	38%	41%
19	Maintaining and implementing refrigeration systems	-	1%	16%	41%	42%
20	Maintaining and implementing effective lighting systems and adequate fixtures	-	-	18%	38%	44%
21	Maintaining elevators	12%	7%	9%	19%	53%
22	Personnel qualifications and skills in areas of expertise	-	3%	29%	37%	31%
23	Personnel productivity and efficiency	-	-	13%	51%	36%

24	Personnel training and/or certification	1%	3%	29%	43%	24%
25	Access to up-to-date equipment specifications and manuals	1%	7%	16%	40%	36%
26	Access to up-to-date structural-, mechanical, electrical- and electrical equipment control schematic plans	2%	7%	20%	35%	36%
27	Maintaining adequate emergency power systems	-	1%	12%	33%	54%
28	Administering and outsourcing certain maintenance tasks/activities	1%	5%	27%	40%	27%
29	Good inventory record-keeping and control of maintenance supplies	-	1%	19%	42%	38%
30	Good record- and information keeping systems of maintenance records	-	2%	18%	44%	36%
31	Provision of clear and concise maintenance manual for employees	1%	4%	26%	41%	28%
32	Good relationship between maintenance and housekeeping	-	-	14%	32%	54%
33	Custodial/routine/daily hotel maintenance	-	-	13%	45%	42%
34	Prioritising service and/or work to be completed	-	-	10%	47%	43%
35	Maintaining and implementing IT/Computer Systems	6%	13%	25%	28%	28%
36	The speedy resolution of problems	-	-	7%	38%	55%
37	An efficient reporting system and prompt recording of maintenance requests	-	1%	14%	44%	41%
38	Effective communication between staff members	-	-	10%	47%	43%
39	Effective communication between management and staff	-	-	9%	45%	46%
40	Effective communication between hotel departments	-	-	10%	40%	50%
41	Maintaining and acquiring mechanical-, power- and vehicular equipment	1%	3%	20%	44%	32%
42	Quality of work and workmanship	-	-	8%	39%	53%
43	Proper maintenance to improve and maintain safety and safety standards	-	-	8%	38%	54%
44	Maintaining the physical building (structure & fittings)	-	-	10%	36%	54%
45	Maintaining and implementing laundry systems	2%	3%	21%	42%	32%
46	Maintaining and implementing telecommunication systems	3%	9%	22%	34%	32%
47	Maintaining and structuring landscaping and grounds	3%	4%	21%	44%	28%
48	Maintaining and structuring roads, parking areas, walkways and other surfaces	2%	5%	21%	38%	34%

49	Maintaining surface coverings, such as wallpaper	1%	3%	19%	43%	34%
50	Maintaining, acquiring or fabrication of furniture	2%	3%	22%	40%	33%
51	Pest control and managing pests	-	3%	9%	31%	57%
52	Proper control, handling and storage of hazardous materials	-	1%	14%	32%	53%
53	Managing logistical aspects such as inventory acquisition	-	1%	29%	43%	28%
54	Setting clearly defined goals/objectives for all tasks	-	1%	21%	49%	29%
55	Scheduling maintenance in order to minimise disruption and losses	-	1%	12%	38%	49%
56	Clear, specific definitions of duties and responsibilities of staff	-	1%	12%	49%	38%
57	Knowledge and experience of the head of maintenance or chief engineer	-	1%	13%	43%	43%
58	Proper supervision of subordinates when necessary	-	-	13%	52%	35%
59	Ensuring that tools are upgraded and in good supply	-	-	12%	54%	34%
60	External auditing	5%	9%	32%	32%	22%
61	Staff and performance reviews	-	5%	20%	47%	28%
62	Protection of hotel standards, ensuring that customer expectations are met	-	-	7%	40%	53%

Source: Author's Own Compilation

4.3.1.19 Maintenance expertise

Table 4.4 shows that maintenance managers at hotels considered the following areas of expertise as *very important* to *extremely important*:

- Maintenance is an important function in any hotel (100%)
- Employees must know what management expects of them (94%)
- Housekeeping and engineering managers need to devote attention to improving the relationship between departments (87%)

The following areas of expertise were deemed to be less important:

- Engineering is still viewed as “basement” bottom and out of sight (55%)
- Upper management still fosters conventional views of maintenance as an interruption and an unavoidable cost burden (57%)

Table 4-4: Maintenance expertise

		1 Disagrees strongly	2 Disagrees somewhat	3 Neutral	4 Agrees somewhat	5 Agrees strongly
1	Engineering and maintenance activities are often given insufficient space	2%	6%	20%	55%	17%
2	Upper management (above GM) needs to have a basic understanding of engineering	1%	8%	19%	52%	20%
3	Many organisations have not recognised the significance of the contribution of facility maintenance and operations function makes to the ultimate success or failure of the business	-	11%	12%	57%	20%
4	Employees must know what management expects of them	-	-	6%	47%	47%
5	Upper management still fosters conventional views of maintenance as an interruption and an unavoidable cost burden	3%	25%	15%	43%	14%
6	Housekeeping and engineering managers need to devote attention to improving the relationship between the departments	-	1%	12%	57%	30%
7	A modern hotel manager (GM or below) needs a basic knowledge of engineering	2%	5%	21%	48%	24%
8	Engineering is still viewed as "basement" bottom and out of sight	3%	19%	23%	36%	19%
9	Maintenance personnel should take part in planning and budgeting processes	-	6%	20%	50%	24%
10	Maintenance is an important function in any hotel	-	-	-	25%	75%

Source: Author's Own Compilation

4.3.2 Results of the factor analyses

The pattern matrix of the principal axis factor analyses using Oblimin rotation with the Kaiser Normalisation identified five personality trait factors (Table 4.5), seven CSFs (Table 4.6), eight maintenance management CSFs (Table 4.7) and three maintenance management expertise factors (Table 4.8) that were labelled according to similar characteristics. The identified factors accounted for respectively 64%, 74%, 73% and 63% of the total variance. All factors had relatively high-reliability coefficients (Cronbach alphas) and the average inter-item correlation coefficients with values between also imply internal consistency for all factors. Moreover, all items loaded on a factor with a loading greater than 0.3 and relatively high factor loadings indicate a reasonably high correlation between the delineated factors and their individual items. The Kaiser-Meyer-Olkin measure of sampling adequacy of respectively 0.87, 0.91, 0.87 and 0.76 also indicated that patterns of correlation are relatively compact and yield distinct and reliable factors (Field,

2005:640). Barlett's Test of Sphericity also reached statistical significance ($p < 0.000$) in all four cases, supporting the factorability of the correlation matrix (Pallant, 2007:197).

The next section discusses the results of the four factor analyses separately.

4.3.2.1 Personal characteristics

Factor scores were calculated as the average of all items contributing to a particular factor so that they could be interpreted on the original 5-point Likert scale of measurement. As seen in Table 4.5, *Acquired Traits* (Factor 3) obtained the highest mean value (4.67) and was regarded as the most important personality trait that a hotel maintenance manager should possess. This was followed by *Leadership Traits* (4.38), *Entrepreneurial & Business Traits* (4.20) and *Internal Traits* (4.05). *Creative Traits* obtained the lowest mean value (4.03); however it is still important when interpreting the Likert-scale of measurement.

Although previous studies have found personal characteristics that are of note to hotel managers, the combination and grouping of various characteristics of factors identified in this research are distinct from those findings. The identified factors relating to acquired traits confirm statements made by Leiper (2004), Tesone (2010) and Nel (2007) through which managers and their decisions can directly enhance the productivity of the hotel if they possess the necessary skills and characteristics to do so. Page (2007) notes that in the tourism industry where change is a constant, managers must also be adaptable and capable of acquiring additional skills when and where it is needed and confirms the importance of acquired traits. Burgess' (as cited by Bresler, 2005) comments support leadership traits and entrepreneurial traits to be necessary for the efficient hotel manager, as does the roles identified by Mintzberg (as cited in Jones & Lockwood, 2004) and Quinn, Faerman, Thompson and McGrath (1990), who also advocate that one of the innovator roles of the manager is to think creatively.

The characteristic personal factors that were identified are therefore well supported by the literature, even if it is not labelled identically.

Table 4-5: Factor analysis results for personal characteristics

	Component				
	Internal Traits (Factor 1)	Acquired Traits (Factor 2)	Entrepreneurial & Business Traits (Factor 3)	Leadership Traits (factor 4)	Creative Traits (Factor 5)
Fairness and generosity	.745				
Sympathy	.721				
Skills to positively influence others	.641				
Motivational skills	.636				
Ability to treat people equally	.537				
Effective communication skills	.509				
Trustworthiness		.872			
Honesty		.775			
Ability to stay calm in an emergency/crisis		.749			
Ability to prioritise		.661			
Ability to organise			.734		
Ability to effectively implement plans			.733		
Financial/budgeting sensibility			.644		
Ability to judge and to combine different ideas			.585		
Applying modern business methods, specifically flexibility/adaptability			.541		
Entrepreneurial characteristics			.536		
Time management skills			.357		
Self-confidence				.742	
Leadership ability				.595	
Common sense				.569	
Self-evaluation ability				.557	
Ability to solve problems				.432	
Imagination and creative thinking					.744
Inclination and capacity to assume risk					.613
Innovation					.570
	Internal Traits (Factor 1)	Acquired Traits (Factor 2)	Entrepreneurial & Business Traits (Factor 3)	Leadership Traits (Factor 4)	Creative Traits (Factor 5)

Cronbach's Alpha	.874	.812	.831	.795	.779
Inter-item Correlation	.541	.525	.420	.443	.546
Mean Value	4.05	4.67	4.20	4.38	4.03

Source: Author's Own Compilation

4.3.2.2 Critical success factors for general hotel management

As seen in Table 4.6, *Facility Efficiency* was the most important CSF with a mean value of 4.31 followed closely by *Commitment to Customers* (4.29). This was followed by *Skilled Staff* (4.21), *Strategy & Policy* (4.19), *Organisational Effectiveness* (4.11) and *Eco-friendly Attitude* (3.81). *Knowledge & Experience* obtained the lowest mean value (3.30) and when interpreted on the Likert scale of measurement, respondents felt neutral towards this factor.

The importance of facilities as a CSF for general hotel management is supported by the research of Brotherton (2004) and their comparison with the research done by Brotherton and Shaw (1996), where aspects relating to the facilities were ranked as important in the conference and banqueting, food and beverage, leisure operations, back of house and guest accommodation aspects. Hua *et al.* (2009) also indicated that the physical product is an inherent dimension of the CSFs for hotel operations. In a South African context regarding CSFs, Van der Westhuizen (2003) indicated that the services and facilities that guests need at a guesthouse needs to be provided; Kruger (2006) found that a conference centre had to provide the right variety of facilities, as well as provide an attractive venue; Marais (2009) determined quality and good management, including adequate facilities for children, need to be provided at a wine festival; and Engelbrecht (2011) ascertained that facilities are critical at a national park.

Being committed to customers through service quality (Avcikurt *et al.*, 2010), providing high levels of customer care (Brotherton & Shaw, 1996) and high levels of service (Brotherton & Shaw, 1996; Brotherton, 2004) supports the identified factor commitment to customers. With regard to the CSF in South African research findings, guests must be welcomed at the guesthouse in a personal manner and courtesy should be shown to guests (Van der Westhuizen, 2003), and quality and customer satisfaction management is critical in a hotel (Appel *et al.*, 2013).

Skilled staff also came through strongly in the literature (Brotherton, 2004; Brotherton & Shaw, 1996; Hua *et al.*, 2009), as loyal and experienced staff contribute to higher occupancy levels (Jeffrey *et al.*, 2002). Only Van der Westhuizen's South African study relating to guesthouses (2003) found well-trained employees as a CSF.

The strategy and policy of the hotel that is followed will influence the standards of performance and, therefore, the hotel’s survival in the hospitality industry (Jeffrey, Barden, Buckley & Hubbard, 2002), and is also regarded as one of the strengths of CSFs (Boynton & Zmud, 1984). Brotherton and Shaw (1996) support the idea that CSFs are controllable by management, and can, therefore, determine the effectiveness of the management process, leading to an increase or decrease in organisational effectiveness. Van der Westhuizen’s guesthouse study (2003), De Witt’s special events – wedding tourism – study (2006), Kruger’s conference centre study (2006), Marais’ wine festival study (2009) and Appel *et al.*’s (2013) hotel management study, all identified critical success factors that could relate to the strategy and policy of the associated organisation within a South African context.

The identified factor, *Eco-friendly Attitude*, is distinct in that it has also been identified previously as being of importance as a CSF to the general management of a hotel in South Africa in the study by Appel *et al.* (2013), in the form of green management.

The knowledge and experience of the hotel manager is also distinct, as it was identified as being regarded as important in the the literature (c.f.2.3.2), which contradicts the finding in the present study that most respondents felt neutral towards the factor. There were also no South African studies that indicated that knowledge and experience of management was a critical success factor in any tourism product. This could indicate that within a South African context qualifications and skills for the (hotel) manager and/or maintenance manager is not viewed as important by either the industry or literature.

As tourism products differ, the type of tourism product can, therefore, be said to influence and determine the combination and importance of the relevant CSFs. There is no universally applicable set of CSFs for tourism products and this emphasises the importance of identifying these aspects.

Table 4-6: Factor analysis results for critical success factors of general hotel management

	Component						
	Strategy & Policy (Factor 1)	Knowledge & Experience (Factor 2)	Skilled Staff (Factor 3)	Commitment to Customers (Factor 4)	Organisational Effectiveness (Factor 5)	Eco-friendly Attitude (Factor 6)	Facility Efficiency (Factor 7)
Proper financial/budget management	.790						
Proper budgeting processes	.715						
Clear strategies	.589						

Proper policies	.529						
Clear objectives and goals	.522						
Maintaining efficient purchasing practices and effective liaison with suppliers	.312						
Experience working in tourism and hospitality fields		.819					
International work experience		.787					
Cross-cultural knowledge		.728					
Global vision (about your hotel, the economy, etc.)		.692					
Management experience		.333					
Experienced staff			.835				
Well-trained staff			.705				
Professional staff			.668				
On the job training			.588				
Clear lines of communication			.395				
Meeting customer needs and preferences				.792			
Applying the principle of "the customer is king"				.607			
Provision of high levels of customer care				.606			
Effective system to get feedback from customers				.528			
Limit expenditure					.846		
Limited staff turnover					.701		
Clear delegation of authority					.447		
Operations of effective recruitment of staff and selection procedures					-395		
Regular training of staff					.353		
Implementing eco-friendly or "green" management principles						.821	
Implementing effective recycling methods						.807	
Providing high-quality facilities							.740
High standard of maintenance of facilities							.724
Experience working in maintenance/construction/ similar fields							.513

	Strategy & Policy (Factor 1)	Knowledge & Experience (Factor 2)	Skilled Staff (Factor 3)	Commitment to Customers (Factor 4)	Organisational Effectiveness (Factor 5)	Eco-friendly Attitude (Factor 6)	Facility Efficiency (Factor 7)
Cronbach's Alpha	.903	.839	.849	.841	.835	.927	.725
Inter-item correlation	.608	.513	.585	.584	.513	.864	.507
Mean Value	4.19	3.30	4.21	4.29	4.11	3.81	4.31

Source: Author's Own Compilation

4.3.2.3 Critical success factors for hotel maintenance management

Table 4.7 illustrates that *Maintenance Types* (4.45) had the highest mean value and was perceived as the most important critical success factor for hotel maintenance management. This was followed closely by *Risk Management* (4.37), *Prime Directives* (4.35) and *Optimal Personnel Management* (4.30). *Supplementary Infrastructure Systems* obtained a mean value of (4.10) followed by *Indoor & Outdoor Surfaces* (4.08), *Control* (3.93) and *Documentation- /Recording Management* (3.90).

Although previous studies as discussed in the literature review identified aspects important for maintenance management within hotels, no studies performed a factor analysis to determine specific factors. These factors can, therefore, be regarded as distinct to this research.

Table 4-7: Factor analysis results for critical success factors of hotel maintenance management

	Component							
	Prime Directives (Factor 1)	Documentation- /Recording Management (Factor 2)	Supplementary Infrastructure Systems (Factor 3)	Indoor- & Outdoor Surfaces (Factor 4)	Maintenance Types (Factor 5)	Risk Management (Factor 6)	Control (Factor 7)	Optimal Personnel Management (Factor 8)
Maintaining the physical building (structure & fittings)	.724							
Proper maintenance to improve and maintain safety and safety standards	.662							
Good relationship between maintenance and housekeeping	.507							
The speedy resolution of problems	.480							

Quality of work and workmanship	.471							
Maintaining and implementing electrical systems, appliances and devices	.455							
An efficient reporting system and prompt recording of maintenance requests	.413							
Protection of hotel standards, ensuring that customer expectations are met	.405							
Custodial/routine/daily hotel maintenance	.400							
Maintaining and implementing plumbing systems and fixtures	.377							
Administering and outsourcing certain maintenance tasks/activities	.393							
Prioritising service and/or work to be completed	.324							
Maintaining adequate emergency power systems	.334							
Good inventory record-keeping and control of maintenance supplies	.303							
Access to up-to-date equipment specifications and manuals		.702						
Access to up-to-date structural-, mechanical-, and electrical equipment control schematic plans		.696						
Provision of clear and concise maintenance manual for employees		.674						
Implementation of a CMMS (Computerised Maintenance Management System)		.627						
Benchmarking maintenance operations to enable superior performance		.557						
Proper Budgeting Processes		.432						
Good record- and information keeping systems of maintenance records		.427						
Personnel qualifications and skills in areas of expertise		.355						
Managing logistical aspects such as inventory acquisition		.438						

Proper Financial Management/ Accounting		.356					
Maintaining and implementing air-condition specifically			.899				
Maintaining and implementing HVAC (Heating, Ventilation and Air-Conditioning) globally			.852				
Maintaining and implementing refrigeration systems			.765				
Maintaining and implementing ventilation specifically			.702				
Maintaining and implementing heating specifically			.630				
Maintaining and implementing effective lighting systems and adequate fixtures			.587				
Maintaining elevators			.576				
Maintaining and implementing laundry systems			.313				
Maintaining and implementing telecommunication systems			.384				
Maintaining and structuring roads, parking areas, walkways and other surfaces				.894			
Maintaining and structuring landscaping and grounds				.862			
Maintaining, acquiring or fabrication of furniture				.824			
Maintaining surface coverings, such as wallpaper				.753			
Ensuring that tools are upgraded and in good supply				.517			
Setting clearly defined goals/objectives for all tasks				.331			
Scheduling maintenance to minimise disruption and losses				.315			
Emergency/ Breakdown Maintenance					.633		
Corrective Maintenance					.593		
Scheduled/general/upkeep maintenance					.484		
Preventive Maintenance (especially Planned Preventative Maintenance Schedule, or PPMS)					.467		
Proper control, handling and storage of hazardous materials						.800	

Pest control and managing pests						.777		
Managing and minimising risk						.395		
Conserving energy in hotel operations						.297		
Insurance against certain risks						.492		
Personnel training and/or certification							.370	
External auditing							.534	
Maintaining and acquiring mechanical-, power- and vehicular equipment							.520	
Maintaining and implementing IT/Computer Systems							.331	
Maintenance auditing in ensuring cost-effective operations							.348	
Effective communication between hotel departments								.705
Effective communication between management and staff								.697
Effective communication between staff members								.633
Knowledge and experience of the head of maintenance or chief engineer								.451
Clear, specific definitions of duties and responsibilities for staff								.439
Proper supervision of subordinates when necessary								.430
Staff and performance reviews								.336
Personnel productivity and efficiency								.341
	Prime Directives (Factor 1)	Documentation- /Recording Management (Factor 2)	Supplementary Infrastructure Systems (Factor 3)	Indoor- & Outdoor Surfaces (Factor 4)	Maintenance Types (Factor 5)	Risk Management (Factor 6)	Control (Factor 7)	Optimal Personnel Management (Factor 8)
Cronbach's Alpha	.945	.921	.925	.924	.877	.844	.811	.919
Inter-item correlation	.566	.547	.633	.636	.653	.522	.470	.622
Mean Value	4.35	3.90	4.10	4.08	4.45	4.37	3.93	4.30

Source: Author's Own Compilation

4.3.2.4 Critical success factors for maintenance expertise

Employee Expertise has the highest mean value, being 4.44, and was perceived as the most important expertise factor, as can be seen in Table 4.8. This was followed by *Managerial Involvement* (3.88) and *Organisational Expertise* (3.64).

Although previous studies and literature insights as discussed in the literature review identified aspects important for maintenance management within hotels, none of these performed a factor analysis to identify specific factors. These factors can, therefore, be regarded as distinct to this research, as it could not be validated by literature.

Table 4-8: Factor analysis results for maintenance expertise

	Component		
	Organisational Expertise (Factor 1)	Employee Expertise (Factor 2)	Managerial Involvement (Factor 3)
Engineering and maintenance activities are often given insufficient space	.807		
Many organisations have not recognised the significance of the contribution of facility maintenance and operations function makes to the ultimate success or failure of the business	.796		
Engineering is still viewed as "basement" bottom and out of sight	.738		
Upper management still fosters conventional views of maintenance as an interruption and an unavoidable cost burden	.658		
Employees must know what management expects of them		.833	
Maintenance is an important function in any hotel		.781	
Housekeeping and engineering managers need to devote attention to improving the relationship between the departments		.542	
Maintenance personnel should take part in planning and budgeting processes			.806
A modern hotel manager (GM or below) needs a basic knowledge of engineering			.666
Upper management (above GM) needs to have a basic understanding of engineering			.335

	Organisational Expertise (Factor 1)	Employee Expertise (Factor 2)	Managerial Involvement (Factor 3)
Cronbach's Alpha	.631	.662	.771
Inter-item correlation	.358	.401	.458
Mean Value	3.64	4.44	3.88

Source: Author's Own Compilation

4.3.2.5 Comparisons of all factors used in the study

4.3.2.5.1 T-tests

T-tests were conducted to ascertain whether there were any statistically significant differences between the factors and gender, as well as between the factors and hotel independence. This will indicate whether different genders follow different managerial approaches, as well as approached followed by hotels that are operated independently and those which are part of a larger group. Only the significant results are discussed in the next section.

4.3.2.5.1.1 Comparison between factors and gender

Table 4-9: T-tests: Comparison between factors and gender

Factor domains	Male (n=86)		Female (n=20)		F-value	Sig (P-value)	Effect
	Mean	Std. Dev.	Mean	Std. Dev.			
<i>Personality traits</i>							
Internal Traits	4.07	.64	3.91	.68	.26	.34	.24**
Acquired Traits	4.71	.42	4.51	.63	4.66	.20	.31**
Entrepreneurial & Business Traits	4.25	.54	4.01	.58	.25	.12	.40**
Leadership Traits	4.45	.45	4.07	.61	2.65	.02*	.62***
Creative Traits	4.08	.74	3.83	.64	.31	.14	.34**
<i>Hotel management CSFs</i>							
Strategy & Policy	4.21	.62	4.06	.61	.93	.32	.25**
Knowledge & Expertise	3.26	.78	3.47	.81	.08	.31	.26**
Skilled Staff	4.22	.63	4.19	.62	.01	.84	.05

Commitment to Customers	4.25	.68	4.39	.57	1.12	.34	.21**
Organisational Effectiveness	4.12	.61	4.04	.65	.34	.63	.12
Eco-friendly Attitude	3.89	.95	3.55	.99	.41	.17	.34**
Facility Efficiency	4.35	.58	4.15	.69	.67	.23	.29**
<i>Maintenance management CSFs</i>							
Prime Directives	4.38	.52	4.25	.61	.46	.38	.22**
Documentation- /Recording Management	3.94	.69	3.71	.75	.22	.21	.31**
Supplementary Infrastructure Systems	4.19	.71	3.74	.81	1.81	.03*	.55***
Indoor- & Outdoor Surfaces	4.15	.68	3.81	.71	.00	.06	.48**
Maintenance Types	4.50	.53	4.26	.74	6.55	.18	.32**
Risk Management	4.38	.56	4.28	.73	2.70	.56	.14
Optimal Control	3.94	.66	3.86	.76	.65	.66	.11
Personnel Management	4.31	.55	4.22	.60	.12	.53	.15
<i>Maintenance management expertise</i>							
Organisational Expertise	3.75	.74	3.21	.72	.15	.01*	.72***
Employee Expertise	4.43	.46	4.48	.38	1.16	.57	.12
Managerial Expertise	3.93	.66	3.67	.65	.00	.11	.40**

*Statistical significant difference: $p \leq 0.05$ (Pallant, 2007:190)

Effect sizes are categorised as **small (0.2-0.4), ***medium (0.5-0.8) and ****large (>0.8)

Based on the effect sizes in Table 4.9, there are no statistically significant differences between males and females with regards to most of the factor domains, as the effect sizes were small. The only exceptions would be a personal characteristic factor, *Leadership Traits* ($p=0.02$), the maintenance management CSFs, *Supplementary Infrastructure Systems* ($p=0.03$) and the maintenance expertise factor, *Organisational Expertise* ($p=0.01$), which indicate a medium effect size difference and which were also statistically significant. Male respondents regard *Leadership Traits* as more important, when compared to female respondents (mean value of 4.45 and 4.07 respectively). The same is also true of *Supplementary Infrastructure Systems* (mean value of 4.19 for males compared to 3.74 for females) and *Organisational Expertise* (mean value of 3.75 for

males compared to 3.21 for females). There were no large effect sizes, indicating that both genders rated the factors very similarly. The most important personality traits factor for both males and females was *Acquired Traits*, with a mean value of 4.71 for males and 4.51 for females respectively. With the factor hotel management CSFs, *Commitment to Customers* was deemed to be the most important, with a mean value of 4.25 for males and 4.39 for females. *Maintenance Types* was seen as the most important maintenance management CSF, with a mean value of 4.50 for males and 4.26 for females respectively. Males and females ranked *Employee Expertise* as the most important maintenance management expertise factor, with a mean value of 4.43 and 4.48 for males and females respectively.

4.3.2.5.1.2 Comparison between factors and hotel independence

Table 4-10: T-tests: Comparison between factors and hotel independence

Factor domains	Large Corporation (n=64)		Operated Independently (n=43)		F-value	Sig (P-value)	Effect
	Mean	Std. Dev.	Mean	Std. Dev.			
<i>Personality traits</i>							
Internal Traits	4.08	.68	4.01	.59	2.00	.57	.11
Acquired Traits	4.74	.42	4.57	.52	2.50	.08	.32**
Entrepreneurial & Business Traits	4.28	.49	4.12	.59	1.05	.15	.27**
Leadership Traits	4.38	.50	4.40	.49	1.32	.89	.03
Creative Traits	4.05	.70	4.01	.77	.00	.79	.05
<i>Hotel management CSFs</i>							
Strategy & Policy	4.32	.56	3.99	.64	.23	.01*	.52***
Knowledge & Expertise	3.23	.77	3.41	.79	.12	.22	.24**
Skilled Staff	4.25	.62	4.13	.63	.05	.35	.18
Commitment to Customers	4.33	.66	4.21	.66	.030	.36	.18
Organsational Effectiveness	4.13	.62	4.08	.61	.59	.73	.07
Eco-friendly Attitude	3.95	.83	3.64	1.10	6.38	.13	.28**
Facility Efficiency	4.37	.59	4.22	.61	.23	.22	.24**
<i>Maintenance management CSFs</i>							
Prime Directives	4.45	.51	4.20	.54	.00	.02*	.45**

Documentation- /Recording Management	3.98	.63	3.78	.78	1.83	.15	.26**
Supplementary Infrastructure Systems	4.25	.71	3.90	.76	.27	.02*	.46**
Indoor- & Outdoor Surfaces	4.16	.69	3.97	.69	.78	.15	.28**
Maintenance Types	4.57	.51	4.27	.63	1.56	.01*	.47**
Risk Management	4.19	.59	4.28	.58	.97	.25	.23**
Optimal Control	4.01	.66	3.81	.68	.00	.13	.29**
Personnel Management	4.38	.54	4.17	.56	.10	.06	.37**
<i>Maintenance management expertise</i>							
Organisational Expertise	3.63	.81	3.67	.69	1.38	.78	.05
Employee Expertise	4.50	.40	4.36	.49	2.53	.13	.28**
Managerial Expertise	3.95	.62	3.76	.71	1.21	.15	.27**

*Statistical significant difference: $p \leq 0.05$ (Pallant, 2007:190)

Effect sizes are categorised as **small (0.2-0.4), ***medium (0.5-0.8) and ****large (>0.8)

Based on Table 4.10, there are statistically significant differences between respondents who are part of larger hotels and respondents who are employed at independent hotels. Hotel management CSF factors that showed these differences were *Strategy & Policy* ($p=0.01$). The significant maintenance management CSF factors were *Prime Directives* ($p=0.02$), *Supplementary Infrastructure Systems* ($p=0.02$), and *Maintenance Types* ($p=0.01$). Respondents who are part of a larger hotel group regard *Strategy & Policy* as more important, when compared to respondents who are part of independently operated hotels (mean value of 4.32 and 3.99 respectively). The same is also true of *Prime Directives* (mean value of 4.45 compared to 4.20 for independent hotels), *Supplementary Infrastructure Systems* (mean value of 4.25 compared to 3.90 for independent hotels), and *Maintenance Types* (mean value of 4.57 compared to 4.27 for independent hotels). *Acquired Traits* was once again ranked as the most important personality traits factor, with a mean value of 4.74 for hotels that are part of a larger group, and a mean value of 4.57 for hotels that are operated independently. The most important hotel management CSF was viewed as being *Facility Efficiency*, with a mean value of 4.37 for hotels that are part of larger groups, and a mean value of 4.22 for independent hotels. *Maintenance Types* was again ranked as the most important maintenance management CSF, with a mean value of 4.57 for chain hotels and 4.27 for independent hotels. *Employee Expertise* was also again ranked as the most

important maintenance management expertise factor, with a mean value of 4.50 for hotels that form part of a larger group, and a value of 4.36 for independent hotels.

4.3.2.5.2 ANOVA results

ANOVA tests were conducted to ascertain whether there were any statistically significant differences between three or more factor domains and the factors themselves. The first comparison was therefore done between the factors and the provinces *Western Cape*, *Gauteng* and *KwaZulu-Natal* (those being the provinces with the highest participation/respondents). The second comparison was done between the factors and services offered, those services being either *Accommodation and Catering Only*, *Accommodation*, *Catering and Conference*; or *Other*. In the following section, only the significant results are discussed.

4.3.2.5.2.1 ANOVA results of factors and province comparison

Table 4-11: ANOVA results of factors and province comparison

Factor domains	Western Cape (WC) (n=35)			Gauteng (GP) (n=29)			KwaZulu-Natal (KZN) (n=17)			F-value	P-value (Sig)	Effect Sizes		
	Mean	Std. Dev.	Tukey	Mean	Std. Dev.	Tukey	Mean	Std. Dev.	Tukey			WC with GP	WC with KZN	GP with KZN
<i>Personality traits</i>														
Internal Traits	4.12	.67	a	3.87	.69	a	4.25	.51	a	2.03	.14	.36**	.19	.54***
Acquired Traits	4.71	.44	a	4.67	.51	a	4.63	.43	a	.15	.86	.07	.17	.08
Entrepreneurial & Business Traits	4.25	.54	a	4.03	.57	a	4.37	.50	a	2.46	.09	.39**	.22**	.61***
Leadership Traits	4.43	.45	a	4.25	.57	a	4.35	.50	a	1.01	.37	.32**	.15	.18
Creative Traits	3.99	.71	a	4.04	.70	a	3.98	.64	a	.05	.96	.06	.01	.08
<i>Hotel management CSFs</i>														
Strategy & Policy	4.20	.59	a	4.10	.67	a	4.41	.60	a	1.33	.27	.14	.36**	.46**
Knowledge & Expertise	3.22	.78	a	3.46	.81	a	3.24	.86	a	.74	.48	.29**	.01	.25**
Skilled Staff	4.15	.65	a	4.10	.63	a	4.41	.68	a	1.37	1.26	.08	.39**	.47**

Commitment to Customers	4.30	.61	a	4.10	.75	a	4.52	.48	a	2.27	.11	.26 **	.35 **	.55 ***
Organisational Effectiveness	4.05	.65	a	4.06	.59	a	4.25	.59	a	.68	.51	.03	.31 **	.31 **
Eco-friendly Attitude	3.84	.91	a	3.78	.74	a	3.88	1.28	a	.08	.93	.07	.03	.08
Facility Efficiency	4.30	.61	a	4.25	.56	a	4.11	.77	a	.35	.71	.07	.15	.21 **
<i>Maintenance management CSFs</i>														
Prime Directives	4.33	.56	a	4.33	.58	a	4.47	.51	a	.42	.66	.00	.25 **	.24 **
Documentation- /Recording Management	3.92	.67	a	3.94	.64	a	4.08	.71	a	.36	.70	.02	.22 **	.20 **
Supplementary Infrastructure Systems	4.09	.90	a	4.13	.66	a	4.24	.70	a	.22	.80	.04	.17	.17
Indoor- & Outdoor Surfaces	4.12	.66	a	4.10	.68	a	4.01	.79	a	.15	.86	.03	.14	.11
Maintenance Types	4.44	.54	a	4.48	.60	a	4.46	.70	a	.05	.95	.08	.03	.04
Risk Management	4.31	.59	a	4.40	.63	a	4.48	.60	a	.47	.63	.14	.28 **	.13
Optimal Control	3.90	.67	a	4.00	.72	a	4.09	.65	a	.50	.61	.14	.29 **	.13
Personnel Management	4.29	.53	a	4.32	.58	a	4.35	.59	a	.06	.94	.05	.09	.04
<i>Maintenance management expertise</i>														
Organisational Expertise	3.54	.71	a	3.71	.77	a	3.84	.77	a	.98	.38	.21 **	.39 **	.17
Employee Expertise	4.36	.43	a	4.38	.46	a	4.69	.28	b	3.91	.02*	.04	.75 ***	.67 ***
Managerial Expertise	3.84	.65	a	3.93	.53	a	3.88	.87	a	.16	.86	.14	.05	.06

*Statistical significant difference: $p \leq 0.05$ (Pallant, 2007:190)

Effect sizes are categorised as **small (0.2-0.4), ***medium (0.5-0.8) and ****large (>0.8)

^a Group varies significantly from the variable (in row) where ^b is indicated

Only the provinces of Western Cape, Gauteng and KwaZulu-Natal, are used for the comparison, as it is the provinces that have the most respondents. Table 4.11 shows statistically significant differences between the respondents based on *Employee Expertise* ($p=0.02$). Regarding the factor *Employee Expertise*, respondents from Kwazulu-Natal rated the factor as more important (mean value of 4.69), compared to respondents from Gauteng and the Western Cape (mean values of 4.38 and 4.36 respectively). The three groups rated the remaining factors similarly. When taking only the mean values into account, *Acquired Traits* had the highest average mean

value (4.67) of the personality traits. The factor with the highest average mean value under hotel management CSFs was *Commitment to Customers* (average mean value of 4.31). *Maintenance Types* had the highest value of maintenance management CSFs (average mean value of 4.46), and *Employee Expertise* under maintenance management expertise (average mean value of 4.48).

4.3.2.5.2.2 ANOVA results of factors and services offered

Table 4-12: ANOVA results of factors and services offered

Factor domains	Accommodation and Catering Only (AC) (n=22)			Accommodation, Catering and Conference (ACC) (n=73)			Other (O) (n=13)			F-value	P-value (Sig)	Effect Sizes		
	Mean	Std. Dev.	Tukey	Mean	Std. Dev.	Tukey	Mean	Std. Dev.	Tukey			AC with ACC	AC with O	ACC with O
<i>Personality traits</i>														
Internal Traits	3.93	.62	a	4.04	.64	a	4.30	.69	a	1.32	.27	.17	.53 ***	.37 **
Acquired Traits	4.57	.59	a	4.71	.40	a	4.60	.60	a	.98	.38	.24 **	.05	.19
Entrepreneurial & Business Traits	3.92	.55	a	4.23	.52	a b	4.51	.53	b	5.55	.01 *	.58 ***	.07	.51 ***
Leadership Traits	4.15	.60	a	4.42	.44	a b	4.51	.56	b	3.18	.05 *	.46 **	.60 ***	.15
Creative Traits	3.77	.78	a	4.06	.71	ab	4.36	.57	b	2.89	.06	.36 **	.75 ***	.43 **
<i>Hotel management CSFs</i>														
Strategy & Policy	3.92	.69	a	4.22	.56	a b	4.45	.61	b	3.63	.03 *	.44 **	.77 ***	.38 **
Knowledge & Expertise	3.26	.71	a	3.22	.77	a	3.82	.79	b	3.41	.37	.04	.71 ***	.75 ***
Skilled Staff	4.06	.67	a	4.24	.60	a	4.29	.67	a	.85	.43	.27 **	.34 **	.07
Commitment to Customers	4.17	.75	a	4.28	.63	a	4.54	.61	a	1.32	.27	.14	.49 **	.41 **
Organisational Effectiveness	4.00	.59	a	4.11	.61	a	4.31	.64	a	1.05	.36	.18	.48 **	.31 **
Eco-friendly Attitude	3.41	1.14	a	3.88	.87	a	4.08	1.00	a	2.73	.07	.42 **	.59 ***	.19
Facility Efficiency	4.15	.68	a	4.33	.57	a	4.44	.58	a	1.12	.33	.27 **	.42 **	.18

<i>Maintenance management CSFs</i>														
Prime Directives	4.23	.60	a	4.37	.50	a	4.43	.60	a	.74	.48	.23 **	.33 **	.10
Documentation- /Recording Management	3.72	.75	a	3.91	.67	a	4.15	.75	a	1.59	.21	.25 **	.57 ***	.32 **
Supplementary Infrastructure Systems	3.97	.70	a	4.16	.72	a	4.05	.92	a	.60	.55	.27 **	.09	.11
Indoor- & Outdoor Surfaces	3.97	.52	a	4.09	.71	a	4.22	.84	a	.57	.57	.18	.30 **	.15
Maintenance Types	4.32	.63	a	4.49	.531	a	4.48	.739	a	.76	.47	.27 **	.22 **	.01
Risk Management	4.28	.64	a	4.37	.54	a	4.49	.76	a	.52	.59	.14	.28 **	.16
Optimal Control	3.74	.67	a	3.95	.64	a	4.14	.77	a	1.62	.20	.33 **	.52 ***	.24 **
Personnel Management	4.17	.59	a	4.33	.52	a	4.34	.66	a	.72	.49	.26 **	.26 **	.02
<i>Maintenance management expertise</i>														
Organisational Expertise	3.57	.83	a	3.67	.74	a	3.62	.79	a	.16	.85	.12	.06	.07
Employee Expertise	4.58	.44	a	4.40	.44	a	4.44	.42	a	1.32	.27	.39 **	.32 **	.08
Managerial Expertise	3.65	.76	a	3.96	.60	a	3.80	.73	a	2.00	.14	.40 **	.19	.23 **

*Statistical significant difference: $p \leq 0.05$ (Pallant, 2007:190)

Effect sizes are categorised as **small (0.2-0.4), ***medium (0.5-0.8) and ****large (>0.8)

^a Group varies significantly from the variable (in row) where ^b is indicated

Table 4.12 shows statistically significant differences between the respondents based on the personality traits *Entrepreneurial & Business Traits* ($p=0.01$) and *Leadership Traits* ($p=0.05$). There was also statistically significant differences in the hotel management CSF *Strategy & Policy* ($p=0.03$). Regarding the factor *Entrepreneurial & Business Traits*, respondents who offer other services rated the factor as more important (mean value of 4.51), compared to accommodation, catering and conference and accommodation and catering only (mean values of 4.23 and 3.92 respectively). With the factor *Leadership Traits*, respondents who offer other services rated the factor as more important (mean value of 4.51), compared to accommodation, catering and conference and accommodation and catering only (mean values of 4.42 and 4.15 respectively). *Strategy & Policy*, the last factor of statistical significance, had respondents who offer other services rate the factor as more important (mean value of 4.45), compared to accommodation, catering and conference and accommodation and catering only (mean values of 4.22 and 3.92

respectively). The three groups rated the remaining factors similarly. When taking only the mean values into account, the personality trait *Acquired Traits* had the highest average mean value (4.63). The factor with the highest average mean value under hotel management CSFs was *Commitment to Customers* (average mean value of 4.33). *Maintenance Types* had the highest value when evaluating maintenance management CSFs (average mean value of 4.43), and *Employee Expertise* under maintenance management expertise (average mean value of 4.47).

4.3.2.6 Spearman’s Rank Order Correlations results

The Spearman’s Rank Order Correlations are applied to test for a rank order relationship between two quantitative variables. This is done when there is concern that one or both variables are ordinal (rather than interval) and/or not normally distributed or when the sample size is small. Thus, it is used in the same data situation as a Pearson's correlation, except that it is used when the data are either importantly non-normally distributed, the measurement scale of the dependent variable is ordinal (not interval or ratio), or from a too-small sample. In the case of the present research study, Spearman's Rank Order Correlations were used. Since correlation is an effect size, Cohen (1988:79-81) indicated that there are three levels of interpreting the values in the correlation matrix with all values between 0 and 1 classified as $r = 0.10 - 0.29 =$ small; $0.30 - 0.49 =$ medium; $0.50 - 1.0 =$ large. The next section discusses only the significant results.

4.3.2.6.1 Correlations between personal characteristics and company profile aspects with personality traits

Table 4-13: Correlations between personal characteristics and company profile aspects with personality traits

Personal characteristics and company profile aspects	Personality Traits									
	Internal Traits		Acquired Traits		Entrepreneurial Traits		Leadership Traits		Creative Traits	
	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)
Highest level of education (n=98)	-.06	.56	-.05	.62	.00	1.00	-.10	.33	-.11	.28
Star grading (n=107)	.09	.36	-.01	.94	.25*	.01*	.28*	.00*	.13	.18
Size of hotel (n=105)	-.04	.67	.14	.17	.02	.83	-.09	.36	-.01	.96
Years in current managerial position (n=108)	.05	.58	.11	.26	-.14	.14	.06	.57	-.00	.99

Years of hotel sector experience (n=107)	.04	.69	.15	.12	-.09	.34	.03	.78	.03	.76
Age (n=106)	.08	.42	.02	.82	-.00	.97	.11	.27	-.04	.70
Approximate annual maintenance expenditure (n=90)	-.09	.42	.19	.07	.12	.25	-.05	.68	.02	.87
Maintenance budget for current term (n=76)	-.22	.06	.07	.53	.00	.98	-.29*	.01*	-.16	.17

*Statistical significant difference: $p \leq 0.05$ (Pallant, 2007:190)

Cohen (1988:79-81; 1969:77) indicated that there are three levels of interpreting the values in the correlation matrix with all values between 0 and 1 classified as $r = 0.10 - 0.29 = \text{small}^*$; $0.30 - 0.49 = \text{medium}^{**}$; $0.50 - 1.0 = \text{large}^{***}$

As can be seen, in Table 4.13 the following correlations were drawn between personal characteristics and company profile aspects with the personal trait factors:

- Entrepreneurial Traits

The question *Star grading* ($CC=0.25$, $p=0.01$) had a small, positive correlation when compared to *Entrepreneurial Traits*. This indicates that the higher the star grading of the hotel, the more important *Entrepreneurial Traits* becomes.

- Leadership Traits

Star grading ($CC=0.28$, $p=0.00$) had a small positive correlation, indicating that the higher the star grading or, the more luxurious the hotel, the more important *Leadership Traits* becomes. There was also a small negative correlation between *Maintenance Budget for the current term* ($CC=-0.29$, $p=0.01$), indicating that the larger the hotel maintenance budget is, the less important *Leadership Traits* for the maintenance manager becomes.

4.3.2.6.2 Correlation between personal characteristics and company profile aspects and critical success factors for general hotel management

Table 4-14: Correlation between personal characteristics and company profile aspects and critical success factors for general hotel management

Personal characteristics and company profile aspects	Maintenance Management CSFs													
	Strategy & Policy		Knowledge & Expertise		Skilled Staff		Commitment to Customers		Organisational Effectiveness		Eco-Friendly Attitude		Facility Efficiency	
	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)
Highest level of education (n=98)	-.03	.76	-.01	.94	-.10	.32	.09	.37	.03	.76	.05	.60	-.08	.45
Star grading (n=107)	.09	.34	-.01	.96	.00	1.0	.01	.93	-.08	.41	.11	.25	.16	.10
Size of hotel (n=105)	.10	.33	-.20*	.04*	-.15	.13	-.10	.32	-.02	.85	.15	.13	.02	.83
Years in current managerial position (n=108)	-.13	.19	.08	.43	.08	.43	.08	.43	.04	.66	-.03	.79	-.04	.71
Years of hotel sector experience (n=107)	-.09	.38	-.03	.79	.13	.18	.08	.44	.05	.62	.03	.74	-.01	.95
Age (n=106)	.00	.99	-.13	.19	.05	.61	.05	.61	-.01	.95	.04	.67	.11	.23
Approximate annual maintenance expenditure (n=90)	.08	.45	-.06	.61	-.06	.61	.04	.70	-.03	.82	.11	.29	.07	.51
Maintenance budget for current term (n=76)	-.01	.96	-.07	.57	-.18	.13	-.01	.95	-.15	.19	.07	.57	.00	1.0

*Statistical significant difference: $p \leq 0.05$ (Pallant, 2007:190)

Cohen (1988:79-81; 1969:77) indicated that there are three levels of interpreting the values in the correlation matrix with all values between 0 and 1 classified as $r = 0.10 - 0.29 = \text{small}^*$; $0.30 - 0.49 = \text{medium}^{**}$; $0.50 - 1.0 = \text{large}^{***}$

As can be seen, in Table 4.14 the only aspect that indicated a significant difference was based on the size of the hotel. A small, negative correlation (CC=-0.20, $p=0.04$) was found and the factor *Knowledge & Expertise*. As such, the larger the hotel becomes, the less importance is placed on *Knowledge & Expertise*.

4.3.2.6.3 Correlation between personal characteristics and company profile aspects and critical success factors for hotel maintenance management

Table 4-15: Correlation between personal characteristics and company profile aspects and critical success factors for hotel maintenance management

Personal characteristics and company profile aspects	Maintenance Aspects															
	Prime Directives		Documentation- /Recording Management		Supplementary Infrastructure Systems		Indoor- & Outdoor Surfaces		Maintenance Types		Risk Management		Optimal Control		Personnel Management	
	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)
Highest level of education (n=98)	-.06	.56	-.04	.68	-.04	.68	.02	.88	-.16	.13	-.10	.34	-.01	.94	-.07	.52
Star grading (n=107)	.09	.35	.19*	.05*	.30**	.00*	.19	.06	.15	.14	.02	.80	.13	.19	.08	.42
Size of hotel (n=105)	.07	.48	.12	.22	.24*	.01*	.10	.33	.15	.13	.08	.41	.14	.17	-.00	.97
Years in current managerial position (n=108)	.01	.95	-.04	.67	-.06	.53	-.18	.44	-.05	.62	-.13	.19	-.01	.94	-.04	.67
Years of hotel sector experience (n=107)	.04	.67	-.08	.42	-.07	.51	.06	.57	.04	.65	-.02	.81	-.08	.40	.06	.54
Age (n=106)	.02	.86	-.05	.62	.00	.97	.00	.10	-.02	.84	-.06	.55	-.14	.17	-.03	.80
Approximate annual maintenance expenditure (n=90)	.07	.49	.23*	.03*	.21*	.05*	.02	.86	.18	.09	.10	.34	.16	.14	.01	.95

Maintenance budget for current term (n=76)	.01	.95	.13	.28	.15	.20	-.02	.89	.04	.75	.03	.82	.07	.57	-.09	.47
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*Statistical significant difference: $p \leq 0.05$ (Pallant, 2007:190)

Cohen (1988:79-81; 1969:77) indicated that there are three levels of interpreting the values in the correlation matrix with all values between 0 and 1 classified as $r = 0.10 - 0.29 = \text{small}^*$; $0.30 - 0.49 = \text{medium}^{**}$; $0.50 - 1.0 = \text{large}^{***}$

As can be seen, in Table 4.15 the following correlations were drawn between CSFs for hotel maintenance management and the personal characteristics and company profile aspects:

- Documentation- /Recording Management

A small positive correlation exists between the questions *Star grading* ($CC=0.19$, $p=0.05$) and *Approximate annual maintenance expenditure* ($CC=0.23$, $p=0.03$) and the factor, indicating that the higher the star grading and the higher the annual maintenance expenditure of the associated hotel, the more reliance is also placed on proper *Documentation- /Recording Management* to keep track of these records and information.

- Supplementary Infrastructure Systems

Star grading ($CC=0.30$, $p=0.00$) has a positive, medium correlation when compared to the factor *Supplementary Infrastructure Systems*, indicating that hotels with a higher star grading place more emphasis on the *Supplementary Infrastructure Systems*. The *Size of the hotel* has a small positive correlation ($CC=0.24$, $p=0.01$), as well as the *Approximate annual maintenance expenditure* ($CC=0.21$, $p=0.05$). Therefore, the larger the hotel, and the more maintenance expenditures it has during an annual cycle, the more important the *Supplementary Infrastructure Systems* of the hotel also become.

4.3.2.6.4 Correlation between personal characteristics and company profile aspects and expertise

Table 4-16: Correlation between personal characteristics and company profile aspects and expertise

Personal characteristics and company profile aspects	Expertise					
	Organisational Expertise		Employee Expertise		Managerial Expertise	
	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)
Highest level of education (n=98)	-.07	.53	.13	.20	-.00	.99
Star grading (n=107)	.24*	.01*	-.09	.34	.14	.15

Size of hotel (n=105)	.03	.80	-.10	.31	.18	.07
Years in current managerial position (n=108)	.10	.29	.01	.95	.12	.21
Years of hotel sector experience (n=107)	.16	.09	-.04	.71	-.02	.88
Age (n=106)	.08	.41	-.05	.64	.17	.09
Approximate annual maintenance expenditure (n=90)	-.00	.98	-.05	.62	.20	.06
Maintenance budget for current term (n=76)	-.06	.59	-.07	.54	.22	.06

*Statistical significant difference: $p \leq 0.05$ (Pallant, 2007:190)

Cohen (1988:79-81; 1969:77) indicated that there are three levels of interpreting the values in the correlation matrix with all values between 0 and 1 classified as $r = 0.10 - 0.29 = \text{small}^*$; $0.30 - 0.49 = \text{medium}^{**}$; $0.50 - 1.0 = \text{large}^{***}$

As shown in Table 4.16, there was a small, positive correlation between the factor *Organisational Expertise* and *Star grading* ($CC=0.24$, $p=0.01$). This indicates that the higher the star grading, the more important *Organisational Expertise* becomes.

4.3.2.7 Spearman's Rank Order Correlation results between factors

4.3.2.7.1 Correlation between factors and personal trait factors

Table 4-17: Correlation between factors and personal trait factors

	Personality traits									
	Internal Traits		Acquired Traits		Entrepreneurial Traits		Leadership Traits		Creative Traits	
	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)
<i>Personality traits</i>										
Internal Traits (n=108)	1.00	-	.57***	.00*	.62***	.00*	.64***	.00*	.50***	.00*
Acquired Traits (n=108)	.57***	.00*	1.00	-	.45**	.00*	.42**	.00*	.32**	.00*
Entrepreneurial Traits (n=108)	.62***	.00*	.45**	.00*	1.00	-	.61***	.00*	.62***	.00*

Leadership Traits (n=108)	.64 ***	.00 *	.42 **	.00 *	.61 ***	.00 *	1.00	-	.57 ***	.00 *
Creative Traits (n=108)	.50 ***	.00 *	.32 **	.00 *	.62 ***	.00 *	.57 ***	.00 *	1.00	-
<i>Hotel management CSFs</i>										
Strategy & Policy (n=108)	.67 ***	.00 *	.49 **	.00 *	.74 ***	.00 *	.51 ***	.00 *	.42 **	.00 *
Knowledge & Expertise (n=108)	.50 ***	.00 *	.30 **	.00 *	.49 **	.00 *	.37 **	.00 *	.45 **	.00 *
Skilled Staff (n=108)	.64 ***	.00 *	.52 ***	.00 *	.53 ***	.00 *	.61 ***	.00 *	.38 **	.00 *
Commitment to Customers (n=108)	.67 ***	.00 *	.48 **	.00 *	.64 ***	.00 *	.49 **	.00 *	.44 **	.00 *
Organisational Effectiveness (n=108)	.62 ***	.00 *	.53 ***	.00 *	.54 ***	.00 *	.54 ***	.00 *	.36 **	.00 *
Eco-friendly Attitude (n=108)	.37 **	.00 *	.41 **	.00 *	.55 ***	.00 *	.33 **	.00 *	.34 **	.00 *
Facility Efficiency (n=108)	.61 ***	.00 *	.53 ***	.00 *	.58 ***	.00 *	.59 ***	.00 *	.40 **	.00 *
<i>Maintenance management CSFs</i>										
Prime Directives (n=108)	.56 ***	.00 *	.47 **	.00 *	.62 ***	.00 *	.58 ***	.00 *	.46 **	.00 *
Documentation-/Recording Management (n=108)	.61 ***	.00 *	.42 **	.00 *	.69 ***	.00 *	.50 ***	.00 *	.49 **	.00 *
Supplementary Infrastructure Systems (n=108)	.47 **	.00 *	.37 **	.00 *	.52 ***	.00 *	.49 **	.00 *	.39 **	.00 *
Indoor- & Outdoor Surfaces (n=108)	.46 **	.00 *	.36 **	.00 *	.51 ***	.00 *	.53 ***	.00 *	.41 **	.00 *
Maintenance Types (n=108)	.42 **	.00 *	.46 **	.00 *	.44 **	.00 *	.46 **	.00 *	.41 **	.00 *
Risk Management (n=108)	.53 ***	.00 *	.44 **	.00 *	.50 ***	.00 *	.40 **	.00 *	.41 **	.00 *
Optimal Control (n=108)	.57 ***	.00 *	.31 **	.00 *	.58 ***	.00 *	.52 ***	.00 *	.45 **	.00 *
Personnel Management (n=108)	.58 ***	.00 *	.45 **	.00 *	.58 ***	.00 *	.61 ***	.00 *	.42 **	.00 *
<i>Maintenance management expertise</i>										
Organisational Expertise (n=108)	.15	.12	.09	.34	.14	.16	.30 **	.00 *	.20 *	.04 *
Employee Expertise (n=108)	.42 **	.00 *	.25 *	.01 *	.26 *	.01 *	.34**	.00 *	.18	.06

Managerial Expertise (n=108)	.16	.10	.24 *	.01 *	.32 **	.00 *	.18	.07	.28 *	.00 *
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*Statistical significant difference: $p \leq 0.05$ (Pallant, 2007:190)

Cohen (1988:79-81; 1969:77) indicated that there are three levels of interpreting the values in the correlation matrix with all values between 0 and 1 classified as $r = 0.10 - 0.29 = \text{small}^*$; $0.30 - 0.49 = \text{medium}^{**}$; $0.50 - 1.0 = \text{large}^{***}$

Table 4.17 indicates that all five personal trait factors, all seven hotel management CSFs and all eight maintenance management factors indicated a significant relationship between the personal trait factors. All factors had small, medium to large, positive correlations indicating that the most important respondents value the factors, the more important the personal trait factors also become. This could indicate an intrinsic drive that becomes stronger as a maintenance manager places more value on the different factors. Regarding the maintenance management expertise factors, *Organisational expertise* has positive correlations with *Leadership Traits* ($CC=0.30$, $p=0.00$) and *Creative Traits* ($CC=0.20$, $p=0.04$) while *Employee Expertise* had positive correlations with *Internal Traits* ($CC=0.42$, $p=0.00$), *Acquired Traits* ($CC=0.25$, $p=0.01$), *Entrepreneurial Traits* ($CC=0.26$, $p=0.01$) and *Leadership Traits* ($CC=0.34$, $p=0.00$). *Managerial Expertise* indicated positive correlations with *Acquired Traits* ($CC=0.24$, $p=0.01$), *Entrepreneurial Traits* ($CC=0.32$, $p=0.00$) and *Creative Traits* ($CC=0.28$, $p=0.00$).

4.3.2.7.2 Correlation between factors and critical success factors for general hotel management factors

Table 4-18: Correlation between factors and critical success factors for general hotel management factors

	Hotel management CSFs													
	Strategy & Policy		Knowledge & Expertise		Skilled Staff		Commitment to Customers		Organisational Effectiveness		Eco-friendly Attitude		Facility Efficiency	
	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)
<i>Personality traits</i>														
Internal Traits (n=108)	.67 ***	.00 *	.50 ***	.00 *	.64 ***	.00 *	.67 ***	.00 *	.62 ***	.00 *	.37 **	.00 *	.61 ***	.00 *
Acquired Traits (n=108)	.49 **	.00 *	.30 **	.00 *	.52 ***	.00 *	.48 **	.00 *	.53 ***	.00 *	.41 **	.00 *	.53 ***	.00 *

Entrepreneurial & Business Traits (n=108)	.74 ***	.00 *	.49 **	.00 *	.53 ***	.00 *	.64 ***	.00 *	.54 ***	.00 *	.55 ***	.00 *	.58 ***	.00 *
Leadership Traits (n=108)	.51 ***	.00 *	.37 **	.00 *	.61 ***	.00 *	.49 **	.00 *	.54 ***	.00 *	.33 **	.00 *	.59 ***	.00 *
Creative Traits (n=108)	.42 **	.00 *	.45 **	.00 *	.38 **	.00 *	.44 **	.00 *	.36 **	.00 *	.34 **	.00 *	.40 **	.00 *
<i>Hotel management CSFs</i>														
Strategy & Policy (n=108)	1.0	-	.48 **	.00 *	.63 ***	.00 *	.66 ***	.00 *	.69 ***	.00 *	.64 ***	.00 *	.60 ***	.00 *
Knowledge & Expertise (n=108)	.48 **	.00 *	1.0	-	.46 **	.00 *	.54 ***	.00 *	.51 ***	.00 *	.43 **	.00 *	.40 **	.00 *
Skilled Staff (n=108)	.63 ***	.00 *	.46 **	.00 *	1.0	-	.64 ***	.00 *	.72 ***	.00 *	.53 ***	.00 *	.66 ***	.00 *
Commitment to Customers (n=108)	.66 ***	.00 *	.54 ***	.00 *	.64 ***	.00 *	1.0	-	.64 ***	.00 *	.48 **	.00 *	.54 ***	.00 *
Organisational Effectiveness (n=108)	.69 ***	.00 *	.51 ***	.00 *	.72 ***	.00 *	.64 ***	.00 *	1.0	-	.53 ***	.00 *	.58 ***	.00 *
Eco-friendly Attitude (n=108)	.64 ***	.00 *	.43 **	.00 *	.53 ***	.00 *	.48 **	.00 *	.53 ***	.00 *	1.0	-	.44 **	.00 *
Facility Efficiency (n=108)	.60 ***	.00 *	.40 **	.00 *	.66 ***	.00 *	.54 ***	.00 *	.58 ***	.00 *	.44 **	.00 *	1.0	-
<i>Maintenance management CSFs</i>														
Prime Directives (n=108)	.74 ***	.00 *	.49 **	.00 *	.73 ***	.00 *	.61 ***	.00 *	.63 ***	.00 *	.68 ***	.00 *	.69 ***	.00 *
Documentation-/Recording Management (n=108)	.79 ***	.00 *	.64 ***	.00 *	.61 ***	.00 *	.58 ***	.00 *	.65 ***	.00 *	.64 ***	.00 *	.67 ***	.00 *
Supplementary Infrastructure Systems (n=108)	.64 ***	.00 *	.40 **	.00 *	.54 ***	.00 *	.46 **	.00 *	.51 ***	.00 *	.59 ***	.00 *	.61 ***	.00 *
Indoor- & Outdoor Surfaces (n=108)	.60 ***	.00 *	.44 **	.00 *	.57 ***	.00 *	.48 **	.00 *	.55 ***	.00 *	.60 ***	.00 *	.59 ***	.00 *
Maintenance Types (n=108)	.52 ***	.00 *	.34 **	.00 *	.60 ***	.00 *	.41 **	.00 *	.55 ***	.00 *	.50 ***	.00 *	.63 ***	.00 *
Risk Management (n=108)	.69 ***	.00 *	.56 ***	.00 *	.62 ***	.00 *	.59 ***	.00 *	.63 ***	.00 *	.62 ***	.00 *	.56 ***	.00 *
Optimal Control (n=108)	.71 ***	.00 *	.68 ***	.00 *	.61 ***	.00 *	.60 ***	.00 *	.67 ***	.00 *	.54 ***	.00 *	.60 ***	.00 *

Personnel Management (n=108)	.69 ***	.00 *	.49 **	.00 *	.75 ***	.00 *	.54 ***	.00 *	.68 ***	.00 *	.57 ***	.00 *	.69 ***	.00 *
<i>Maintenance management expertise</i>														
Organisational Expertise (n=108)	.22 *	.02 *	.15	.13	.12	.22	.04	.67	.15	.12	.23 *	.02 *	.21 *	.03 *
Employee Expertise (n=108)	.49 **	.00 *	.30 **	.00 *	.51 ***	.00 *	.46 **	.00 *	.47 **	.00 *	.36 **	.00 *	.38 **	.00 *
Managerial Expertise (n=108)	.42 **	.00 *	.32 **	.00 *	.18	.07	.23 *	.02 *	.21 *	.03 *	.48 **	.00 *	.25 **	.01 *

*Statistical significant difference: $p \leq 0.05$ (Pallant, 2007:190)

Cohen (1988:79-81; 1969:77) indicated that there are three levels of interpreting the values in the correlation matrix with all values between 0 and 1 classified as $r = 0.10 - 0.29 = \text{small}^*$; $0.30 - 0.49 = \text{medium}^{**}$; $0.50 - 1.0 = \text{large}^{***}$

Similar to the results obtained in Table 4.17, Table 4.18 indicates that all five personal trait factors, all seven hotel management CSFs and all eight maintenance management factors indicated a significant relationship with the hotel management CSFs. All factors had small, medium to large, positive correlations indicating that the more important respondents value the factors, the more important the general management CSFs also become. Regarding the maintenance management expertise factors, *Organisational Expertise* has positive correlations with *Strategy & Policy* ($CC=0.22$, $p=0.00$), *Eco-friendly Attitude* ($CC=0.23$, $p=0.02$) and *Facility Efficiency* ($CC=0.21$, $p=0.03$). *Employee Expertise* and *Managerial Expertise* all had small and medium positive correlations, and as such the more relevant respondents value the factors, the more important the hotel general management CSFs also become.

4.3.2.7.3 Correlation between factors and critical success factors for hotel maintenance management factors

Table 4-19: Correlation between factors and critical success factors for hotel maintenance management factors

	Maintenance Management CSFs															
	Prime Directives		Documentation - /Recording Management		Supplementary Infrastructure Systems		Indoor- & Outdoor Surfaces		Maintenance Types		Risk Management		Optimal Control		Personnel Management	
	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)	CC	Sig (2-tailed)
<i>Personality traits</i>																
Internal Traits (n=108)	.56***	.00*	.61***	.00*	.47**	.00*	.46**	.00*	.42**	.00*	.53***	.00*	.57***	.00*	.58***	.00*
Acquired Traits (n=108)	.47**	.00*	.42**	.00*	.37**	.00*	.36**	.00*	.46**	.00*	.44**	.00*	.31**	.01*	.45**	.00*
Entrepreneurial & Business Traits (n=108)	.62***	.00*	.69***	.00*	.52***	.00*	.51***	.00*	.44**	.00*	.50***	.00*	.58***	.00*	.58***	.00*
Leadership Traits (n=108)	.58***	.00*	.50***	.00*	.49**	.00*	.53***	.00*	.46**	.00*	.40**	.00*	.52***	.00*	.61***	.00*
Creative Traits (n=108)	.46**	.00*	.49**	.00*	.39**	.00*	.41**	.00*	.41**	.00*	.41**	.00*	.45**	.00*	.42**	.00*
<i>Hotel management CSFs</i>																
Strategy & Policy (n=108)	.74***	.00*	.79***	.00*	.64***	.00*	.60***	.00*	.52***	.00*	.69***	.00*	.71***	.00*	.69***	.00*
Knowledge & Expertise (n=108)	.49**	.00*	.64***	.00*	.40**	.00*	.44**	.00*	.34**	.00*	.56***	.00*	.68***	.00*	.49**	.00*
Skilled Staff (n=108)	.73***	.00*	.61***	.00*	.54***	.00*	.57***	.00*	.60***	.00*	.62***	.00*	.61***	.00*	.75***	.00*
Commitment to Customers (n=108)	.61***	.00*	.58***	.00*	.46**	.00*	.48**	.00*	.41**	.00*	.59***	.00*	.60***	.00*	.54***	.00*
Organisational Effectiveness (n=108)	.63***	.00*	.65***	.00*	.51***	.00*	.55***	.00*	.55***	.00*	.63***	.00*	.67***	.00*	.68***	.00*
Eco-friendly Attitude (n=108)	.68***	.00*	.64***	.00*	.59***	.00*	.60***	.00*	.50***	.00*	.62***	.00*	.54***	.00*	.57***	.00*

Facility Efficiency (n=108)	.69 ***	.00 *	.65 ***	.00 *	.61 ***	.00 *	.59 ***	.00 *	.63 ***	.00 *	.56 ***	.00 *	.60 ***	.00 *	.69 ***	.00 *
<i>Maintenance management CSFs</i>																
Prime Directives (n=108)	1.0 0	-	.76 ***	.00 *	.78 ***	.00 *	.80 ***	.00 *	.75 ***	.00 *	.75 ***	.00 *	.75 ***	.00 *	.83 ***	.00 *
Documentation- /Recording Management (n=108)	.76 ***	.00 *	1.0	-	.75 ***	.00 *	.66 ***	.00 *	.60 ***	.00 *	.68 ***	.00 *	.82 ***	.00 *	.72 ***	.00 *
Supplementary Infrastructure Systems (n=108)	.78 ***	.00 *	.75 ***	.00 *	1.0	-	.79 ***	.00 *	.65 ***	.00 *	.69 ***	.00 *	.72 ***	.00 *	.67 ***	.00 *
Indoor- & Outdoor Surfaces (n=108)	.80 ***	.00 *	.66 ***	.00 *	.79 ***	.00 *	1.0	-	.64 ***	.00 *	.67 ***	.00 *	.66 ***	.00 *	.73 ***	.00 *
Maintenance Types (n=108)	.75 ***	.00 *	.60 ***	.00 *	.65 ***	.00 *	.64 ***	.00 *	1.0	-	.58 ***	.00 *	.57 ***	.00 *	.69 ***	.00 *
Risk Management (n=108)	.75 ***	.00 *	.68 ***	.00 *	.69 ***	.00 *	.67 ***	.00 *	.58 ***	.00 *	1.0	-	.70 ***	.00 *	.70 ***	.00 *
Optimal Control (n=108)	.75 ***	.00 *	.82 ***	.00 *	.72 ***	.00 *	.66 ***	.00 *	.57 ***	.00 *	.70 ***	.00 *	1.0	-	.73 ***	.00 *
Personnel Management (n=108)	.83 ***	.00 *	.72 ***	.00 *	.67 ***	.00 *	.73 ***	.00 *	0.6 9** *	.00 *	.70 ***	.00 *	.73 ***	.00 *	1.0	-
<i>Maintenance management expertise</i>																
Organisational Expertise (n=108)	.19 *	.05 *	.30 **	.00 *	.27 *	.01 *	.25 *	.01 *	.18	.07	.17	.09	.20 *	.04 *	.21 *	.03 *
Employee Expertise (n=108)	.57 ***	.00 *	.44 **	.00 *	.34 **	.00 *	.39 **	.00 *	.31 **	.00 *	.47 **	.00 *	.45 **	.00 *	.52 ***	.00 *
Managerial Expertise (n=108)	.41 **	.00 *	.48 **	.00 *	.40 **	.00 *	.35 **	.00 *	.26 *	.01 *	.33 **	.00 *	.38 **	.00 *	.29 **	.00 *

*Statistical significant difference: $p \leq 0.05$ (Pallant, 2007:190)

Cohen (1988:79-81; 1969:77) indicated that there are three levels of interpreting the values in the correlation matrix with all values between 0 and 1 classified as $r = 0.10 - 0.29 = \text{small}^*$; $0.30 - 0.49 = \text{medium}^{**}$; $0.50 - 1.0 = \text{large}^{***}$

As hotel maintenance is the main focus of this study, this section as well as the following section will be discussed in more detail.

- Prime Directives

There were large, positive correlations when *Prime Directives* were compared to the factors of *Internal Traits* (CC=0.56, $p=0.00$), *Entrepreneurial & Business Traits* (CC=0.62, $p=0.00$), *Leadership Traits* (CC=0.58, $p=0.00$), *Strategy & Policy* (CC=0.74, $p=0.00$), *Skilled Staff* (CC=0.73, $p=0.00$), *Commitment to Customers* (CC=0.61, $p=0.00$), *Organisational Effectiveness* (CC=0.63, $p=0.00$), *Eco-friendly Attitude* (CC=0.68, $p=0.00$), *Facility Efficiency* (CC=0.69, $p=0.00$), *Documentation- /Recording Management* (CC=0.76, $p=0.00$), *Supplementary Infrastructure Systems* (CC=0.78, $p=0.00$), *Indoor- & Outdoor Surfaces* (CC=0.80, $p=0.00$), *Maintenance Types* (CC=0.75, $p=0.00$), *Risk Management* (CC=0.75, $p=0.00$), *Optimal Control* (CC=0.75, $p=0.00$), *Personnel Management* (CC=0.83, $p=0.00$) and *Employee Expertise* (CC=0.57, $p=0.00$). These large correlations indicate that the more important these factors become, the more important the *Prime Directives* of the hotel also become.

There were positive, medium correlations between *Prime Directives* and *Acquired Traits* (CC=0.47, $p=0.00$), *Creative Traits* (CC=0.46, $p=0.00$), *Knowledge & Expertise* (CC=0.49, $p=0.00$) and *Managerial Expertise* (CC=0.41, $p=0.00$). A small correlation was present when comparing the factor to *Organisational Expertise* (CC=0.19, $p=0.05$). As such, *Prime Directives* is also relevant, but to a lesser extent, the more emphasis is placed on expertise and traits.

- Documentation- /Recording Management

Positive, large correlations were obtained by comparing *Documentation- /Recording Management* to *Internal Traits* (CC=0.61, $p=0.00$), *Entrepreneurial & Business Traits* (CC=0.69, $p=0.00$), *Leadership Traits* (CC=0.50, $p=0.00$), *Strategy & Policy* (CC=0.79, $p=0.00$), *Knowledge & Expertise* (CC=0.64, $p=0.00$), *Skilled Staff* (CC=0.61, $p=0.00$), *Commitment to Customers* (CC=0.58, $p=0.00$), *Organisational Effectiveness* (CC=0.65, $p=0.00$), *Eco-friendly Attitude* (CC=0.64, $p=0.00$), *Facility Efficiency* (CC=0.65, $p=0.00$), *Prime Directives* (CC=0.76, $p=0.00$), *Supplementary Infrastructure Systems* (CC=0.75, $p=0.00$), *Indoor- & Outdoor Surfaces* (CC=0.66, $p=0.00$), *Maintenance Types* (CC=0.60, $p=0.00$), *Risk Management* (CC=0.68, $p=0.00$), *Optimal Control* (CC=0.82, $p=0.00$) and *Personnel Management* (CC=0.72, $p=0.00$).

When *Documentation- /Recording Management* was compared to *Acquired Traits* (CC=0.42, $p=0.00$), *Creative Traits* (CC=0.49, $p=0.00$), *Organisational Expertise* (CC=0.30, $p=0.00$), *Employee Expertise* (CC=0.44, $p=0.00$) and *Managerial Expertise* (CC=0.48, $p=0.00$), small positive correlations were found. As such good record keeping also becomes more important as these factors increase in importance, but not as important as with the previously mentioned large correlation factors.

- Supplementary Infrastructure Systems

Large, positive correlations were found when *Supplementary Infrastructure Systems* was compared to *Entrepreneurial & Business Traits* (CC=0.52, $p=0.00$), *Strategy & Policy* (CC=0.64, $p=0.00$), *Skilled Staff* (CC=0.54, $p=0.00$), *Organisational Effectiveness* (CC=0.51, $p=0.00$), *Eco-friendly Attitude* (CC=0.59, $p=0.00$), *Facility Efficiency* (CC=0.61, $p=0.00$), *Prime Directives* (CC=0.78, $p=0.00$), *Documentation- /Recording Management* (CC=0.75, $p=0.00$), *Indoor- & Outdoor Surfaces* (CC=0.79, $p=0.00$), *Maintenance Types* (CC=0.65, $p=0.00$), *Risk Management* (CC=0.69, $p=0.00$), *Optimal Control* (CC=0.72, $p=0.00$) and *Personnel Management* (CC=0.67, $p=0.00$).

Positive, medium correlations were found between *Supplementary Infrastructure Systems* and *Internal Traits* (CC=0.47, $p=0.00$), *Acquired Traits* (CC=0.37, $p=0.00$), *Leadership Traits* (CC=0.49, $p=0.00$), *Creative Traits* (CC=0.39, $p=0.00$), *Knowledge & Expertise* (CC=0.40, $p=0.00$), *Commitment to Customers* (CC=0.46, $p=0.00$), *Employee Expertise* (CC=0.34, $p=0.00$) and *Managerial Expertise* (CC=0.40, $p=0.00$).

The only small, positive correlation was with the factor *Organisational Expertise* (CC=0.27, $p=0.01$).

- Indoor- & Outdoor Surfaces

Upon comparing *Indoor- & Outdoor Surfaces* to the various factors, several large, positive correlations were found with the following factors: *Entrepreneurial & Business Traits* (CC=0.51, $p=0.00$), *Leadership Traits* (CC=0.53, $p=0.00$), *Strategy & Policy* (CC=0.60, $p=0.00$), *Skilled Staff* (CC=0.57, $p=0.00$), *Organisational Effectiveness* (CC=0.55, $p=0.00$), *Eco-friendly Attitude* (CC=0.60, $p=0.00$), *Facility Efficiency* (CC=0.59, $p=0.00$), *Prime Directives* (CC=0.80, $p=0.00$), *Documentation- /Recording Management* (CC=0.66, $p=0.00$), *Supplementary Infrastructure Systems* (CC=0.79, $p=0.00$), *Maintenance Types* (CC=0.64, $p=0.00$), *Risk Management* (CC=0.67, $p=0.00$), *Optimal Control* (CC=0.66, $p=0.00$) and *Personnel Management* (CC=0.73, $p=0.00$).

Medium, positive correlations were found between *Indoor- & Outdoor Surfaces* as well as *Internal Traits* (CC=0.46, $p=0.00$), *Acquired Traits* (CC=0.36, $p=0.00$), *Creative Traits* (CC=0.41, $p=0.00$), *Knowledge & Expertise* (CC=0.44, $p=0.00$), *Commitment to Customers* (CC=0.48, $p=0.00$), *Employee Expertise* (CC=0.39, $p=0.00$) and *Managerial Expertise* (CC=0.35, $p=0.00$). *Organisational Expertise* (CC=0.25, $p=0.01$) was found to have a small, positive correlation.

- Maintenance Types

Upon comparing the factors to *Maintenance Types*, several large, positive correlations emerged, being *Strategy & Policy* (CC=0.52, $p=0.00$), *Skilled Staff* (CC=0.60, $p=0.00$), *Organisational Effectiveness* (CC=0.55, $p=0.00$), *Eco-friendly Attitude* (CC=0.50, $p=0.00$), *Facility Efficiency* (CC=0.63, $p=0.00$), *Prime Directives* (CC=0.75, $p=0.00$), *Documentation- /Recording Management* (C=0.60, $p=0.00$), *Supplementary Infrastructure Systems* (CC=0.65, $p=0.00$), *Indoor- & Outdoor Surfaces* (CC=0.64, $p=0.00$), *Risk Management* (CC=0.67, $p=0.00$), *Optimal Control* (CC=0.57, $p=0.00$) and *Personnel Management* (CC=0.69, $p=0.00$).

Medium, positive correlations were found to be *Internal Traits* (CC=0.42, $p=0.00$), *Acquired Traits* (CC=0.46, $p=0.00$), *Entrepreneurial & Business Traits* (CC=0.44, $p=0.00$), *Leadership Traits* (CC=0.46, $p=0.00$), *Creative Traits* (CC=0.41, $p=0.00$), *Knowledge & Expertise* (CC=0.34, $p=0.00$), *Commitment to Customers* (CC=0.41, $p=0.00$) and *Employee Expertise* (CC=0.31, $p=0.00$). A small positive correlation was found by comparing *Maintenance Types* to *Managerial Expertise* (CC=0.26, $p=0.01$).

- Risk Management

When comparing *Risk Management* to the different factors, large, positive correlations were identified in *Internal Traits* (CC=0.53, $p=0.00$), *Entrepreneurial & Business Traits* (CC=0.50, $p=0.00$), *Strategy & Policy* (CC=0.69, $p=0.00$), *Knowledge & Expertise* (CC=0.56, $p=0.00$), *Skilled Staff* (CC=0.62, $p=0.00$), *Commitment to Customers* (CC=0.59, $p=0.00$), *Organisational Effectiveness* (CC=0.63, $p=0.00$), *Eco-friendly Attitude* (CC=0.62, $p=0.00$), *Facility Efficiency* (CC=0.56, $p=0.00$), *Prime Directives* (CC=0.75, $p=0.00$), *Documentation- /Recording Management* (CC=0.68, $p=0.00$), *Supplementary Infrastructure Systems* (CC=0.69, $p=0.00$), *Indoor- & Outdoor Surfaces* (CC=0.67, $p=0.00$), *Maintenance Types* (CC=0.58, $p=0.00$), *Optimal Control* (CC=0.70, $p=0.00$) and *Personnel Management* (CC=0.70, $p=0.00$).

Medium, positive correlations were found between *Risk Management* and *Acquired Traits* (CC=0.44, $p=0.00$), *Leadership traits* (CC=0.40, $p=0.00$), *Creative Traits* (CC=0.41, $p=0.00$), *Employee Expertise* (CC=0.47, $p=0.00$) and *Managerial Expertise* (CC=0.33, $p=0.00$).

- Optimal Control

When comparing *Optimal Control* to the other factors, there were large, positive correlations that emerged from factors *Internal Traits* (CC=0.57, $p=0.00$), *Entrepreneurial & Business Traits* (CC=0.58, $p=0.00$), *Leadership Traits* (CC=0.52, $p=0.00$), *Strategy & Policy* (CC=0.71, $p=0.00$), *Knowledge & Expertise* (CC=0.68, $p=0.00$), *Skilled Staff* (CC=0.61, $p=0.00$), *Commitment to*

Customers (CC=0.60, $p=0.00$), *Organisational Effectiveness* (CC=0.67, $p=0.00$), *Eco-friendly attitude* (CC=0.54, $p=0.00$), *Facility Efficiency* (CC=0.60, $p=0.00$), *Prime Directives* (CC=0.75, $p=0.00$), *Documentation- /Recording Management* (CC=0.82, $p=0.00$), *Supplementary Infrastructure Systems* (CC=0.72, $p=0.00$), *Indoor- & Outdoor Surfaces* (CC=0.66, $p=0.00$), *Maintenance Types* (CC=0.57, $p=0.00$), *Risk Management* (CC=0.70, $p=0.00$) and *Personnel Management* (CC=0.73, $p=0.00$).

Medium correlations were found when comparing *Optimal Control* to *Acquired Traits* (CC=0.31, $p=0.01$), *Creative Traits* (CC=0.45, $p=0.00$), *Employee Expertise* (CC=0.45, $p=0.00$) and *Managerial Expertise* (CC=0.38, $p=0.00$). A small, positive correlation was found when compared to *Organisational Expertise* (CC=0.20, $p=0.04$).

- Personnel Management

Large, positive correlations were found when comparing *Personnel Management* to *Internal Traits* (CC=0.58, $p=0.00$), *Entrepreneurial & Business Traits* (CC=0.58, $p=0.00$), *Leadership Traits* (CC=0.61, $p=0.00$), *Strategy & Policy* (CC=0.69, $p=0.00$), *Skilled Staff* (CC=0.75, $p=0.00$), *Commitment to customers* (CC=0.54, $p=0.00$), *Organisational Effectiveness* (CC=0.68, $p=0.00$), *Eco-friendly Attitude* (CC=0.57, $p=0.00$), *Facility Efficiency* (CC=0.69, $p=0.00$), *Prime Directives* (CC=0.83, $p=0.00$), *Documentation- /Recording Management* (CC=0.72, $p=0.00$), *Supplementary Infrastructure Systems* (CC=0.67, $p=0.00$), *Indoor- & Outdoor Surfaces* (CC=0.73, $p=0.00$), *Maintenance Types* (CC=0.69, $p=0.00$), *Risk Management* (CC=0.70, $p=0.00$), *Optimal Control* (CC=0.73, $p=0.00$) and *Employee Expertise* (CC=0.52, $p=0.00$).

Medium, positive correlations were found with the factors *Acquired Traits* (CC=0.45, $p=0.00$), *Creative Traits* (CC=0.42, $p=0.00$) and *Knowledge & Expertise* (CC=0.49, $p=0.00$). Small, positive correlations were found when *Personnel Management* was compared to *Organisational Expertise* (CC=0.21, $p=0.03$) and *Managerial Expertise* (CC=0.29, $p=0.00$).

4.3.2.7.4 Correlation between factors and expertise factors

Table 4-20: Correlation between factors and expertise factors

	Expertise					
	Organisational Expertise		Employee Expertise		Managerial Expertise	
	CC	Sig(2-tailed)	CC	Sig(2-tailed)	CC	Sig(2-tailed)
<i>Personality traits</i>						
Internal Traits (n=108)	.15	.12	.42**	.00*	.16	.10
Acquired Traits (n=108)	.09	.34	.25*	.01*	.24*	.01*
Entrepreneurial & Business Traits (n=108)	.14	.16	.26*	.01*	.32**	.00*
Leadership Traits (n=108)	.30**	.00*	.34**	.00*	.18	.07
Creative Traits (n=108)	.20*	.01*	.18	.06	.28*	.00*
<i>Hotel management CSFs</i>						
Strategy & Policy (n=108)	.22*	.02*	.49**	.00*	.42**	.00*
Knowledge & Expertise (n=108)	.15	.13	.30**	.00*	.32**	.00*
Skilled Staff (n=108)	.12	.22	.51***	.00*	.18	.07
Commitment to Customers (n=108)	.04	.67	.46**	.00*	.23*	.02*
Organisational Effectiveness (n=108)	.15	.12	.47**	.00*	.21*	.03*
Eco-friendly Attitude (n=108)	.23*	.02*	.36**	.00*	.48**	.00*
Facility Efficiency (n=108)	.21*	.03*	.38**	.00*	.25*	.01*
<i>Maintenance management CSFs</i>						
Prime Directives (n=108)	.19*	.05*	.57***	.00*	.41**	.00*
Documentation- /Recording Management (n=108)	.30**	.00*	.44**	.00*	.48**	.00*
Supplementary Infrastructure Systems (n=108)	.27*	.01*	.34**	.00*	.34**	.00*
Indoor- & Outdoor Surfaces (n=108)	.25*	.01*	.39**	.00*	.35**	.00*
Maintenance Types (n=108)	.18	.07	.31**	.00*	.26*	.01*

Risk Management (n=108)	.17	.09	.47**	.00*	.33**	.00*
Optimal Control (n=108)	.12*	.04*	.45**	.00*	.38**	.00*
Personnel Management (n=108)	.21*	.03*	.52***	.00*	.29*	.00*
<i>Maintenance management expertise</i>						
Organisational Expertise (n=108)	1.00	-	.30**	.00*	.51***	.00*
Employee Expertise (n=108)	.30**	.00*	1.00	-	.41**	.00*
Managerial Expertise (n=108)	.51***	.00*	.41**	.00*	1.00	-

*Statistical significant difference: $p \leq 0.05$ (Pallant, 2007:190)

Cohen (1988:79-81; 1969:77) indicated that there are three levels of interpreting the values in the correlation matrix with all values between 0 and 1 classified as $r = 0.10 - 0.29 = \text{small}^*$; $0.30 - 0.49 = \text{medium}^{**}$; $0.50 - 1.0 = \text{large}^{***}$

- Organisational Expertise

There were large, positive correlations between *Organisational Expertise* and *Managerial Expertise* ($CC=0.51$, $p=0.00$). Therefore, *Organisational Expertise* is more important to respondents who value *Managerial Expertise*. There were medium, positive correlations with *Leadership Traits* ($CC=0.30$, $p=0.00$), *Documentation- /Recording Management* ($CC=0.30$, $p=0.00$), *Employee Expertise* ($CC=0.30$, $p=0.00$) and small, positive correlations with *Creative Traits* ($CC=0.20$, $p=0.01$), *Strategy & Policy* ($CC=0.22$, $p=0.02$), *Eco-friendly Attitude* ($CC=0.23$, $p=0.02$), *Facility Efficiency* ($CC=0.21$, $p=0.03$), *Prime Directives* ($CC=0.19$, $p=0.05$), *Supplementary Infrastructure Systems* ($CC=0.27$, $p=0.01$), *Indoor- & Outdoor Surfaces* ($CC=0.25$, $p=0.01$), *Optimal Control* ($CC=0.12$, $p=0.04$) and *Personnel Management* ($CC=0.21$, $p=0.03$), indicating that the more important respondents regarded those factors, the more important *Organisational Expertise* also became to them.

- Employee Expertise

A large correlation was found between the factor *Employee Expertise* and *Skilled Staff* ($CC=0.51$, $p=0.00$) as well as with the factor *Prime Directives* ($CC=0.57$, $p=0.00$) and *Personnel Management* ($CC=0.52$, $p=0.00$). The more importance respondents placed on these factors, the more important *Employee Expertise* also became. Positive, medium correlations was found between *Employee Expertise* and *Internal Traits* ($CC=0.42$, $p=0.00$), *Leadership Traits* ($CC=0.34$, $p=0.00$), *Strategy & Policy* ($CC=0.49$, $p=0.00$), *Knowledge & Expertise* ($CC=0.30$, $p=0.00$), *Commitment to Customers* ($CC=0.46$, $p=0.00$), *Organisational Effectiveness* ($CC=0.47$, $p=0.00$),

Eco-friendly Attitude (CC=0.36, $p=0.00$), *Facility Efficiency* (CC=0.38, $p=0.00$), *Documentation-Recording Management* (CC=0.44, $p=0.00$), *Supplementary Infrastructure Systems* (CC=0.34, $p=0.00$), *Indoor- & Outdoor Surfaces* (CC=0.39, $p=0.00$), *Maintenance Types* (CC=0.31, $p=0.00$), *Risk Management* (CC=0.47, $p=0.00$), *Optimal Control* (CC=0.45, $p=0.00$), *Organisational Expertise* (CC=0.30, $p=0.00$) and *Managerial Expertise* (CC=0.41, $p=0.00$). *Employment Expertise* was thus also more important as more emphasis was placed on these factors. There were also small, positive correlations between *Employee Expertise* and *Acquired Traits* (CC=0.25, $p=0.01$) and *Entrepreneurial & Business Traits* (CC=0.26, $p=0.01$), indicating that *Employee Expertise* was regarded as marginally more important when more importance was placed upon *Acquired Traits* and *Entrepreneurial & Business Traits*.

- **Managerial Expertise**

Managerial Expertise had a large, positive correlation when compared to *Organisational Expertise* (CC=0.51, $p=0.00$), and, therefore, the more importance was placed upon *Organisational Expertise*, the more noticeably important *Managerial Expertise* also became. There were also medium, positive correlations with the factors *Entrepreneurial & Business Traits* (CC=0.32, $p=0.00$), *Strategy & Policy* (CC=0.42, $p=0.00$), *Knowledge & Expertise* (CC=0.32, $p=0.00$), *Eco-friendly Attitude* (CC=0.48, $p=0.00$), *Prime Directives* (CC=0.41, $p=0.00$), *Documentation-Recording Management* (CC=0.48, $p=0.00$), *Supplementary Infrastructure Systems* (CC=0.34, $p=0.00$), *Indoor- & Outdoor Surfaces* (CC=0.35, $p=0.00$), *Risk Management* (CC=0.33, $p=0.00$), *Optimal Control* (CC=0.38, $p=0.00$) and *Employee Expertise* (CC=0.41, $p=0.00$). Small, positive correlations were found by comparing *Managerial Expertise* to the factors *Acquired Traits* (CC=0.24, $p=0.01$), *Creative Traits* (CC=0.28, $p=0.00$), *Commitment to Customers* (CC=0.23, $p=0.02$), *Organisational Effectiveness* (CC=0.21, $p=0.03$), *Facility Efficiency* (CC=0.25, $p=0.01$), *Maintenance Types* (CC=0.26, $p=0.01$) and *Personnel Management* (CC=0.29, $p=0.00$). Therefore, although *Managerial Expertise* was considered to be more important as these factors increased in importance, it was less so with these factors than with other factors.

4.4 Conclusion

The aim of this chapter was to discuss the method of research followed in this study as well as the results of the corresponding survey. This was done by assessing the factors relating to the effective maintenance management of hotels in South Africa. Various data analysis methods were used in this process, including descriptive analysis, factor analysis, ANOVAs, *T*-tests and Spearman's Rank Order Correlations.

The descriptive analysis was used to construct a profile of the hotel maintenance manager within South Africa. The ANOVAs and *T*-tests indicated various factors that influenced maintenance managers in their decision making process. The following factors were identified for *Personality Traits*: *Internal Traits*, *Acquired Traits*, *Entrepreneurial Traits*, *Leadership Traits* and *Creative Traits*. *Hotel Management CSFs* had the following factors that were identified: *Strategy & Policy*, *Knowledge & Experience*, *Skilled Staff*, *Commitment to Customers*, *Organisational Effectiveness*, *Eco-friendly Attitude* and *Facility Efficiency*. The following *Maintenance Management CSFs* were identified: *Prime Directives*, *Documentation- /Recording Management*, *Supplementary Infrastructure Systems*, *Indoor- & Outdoor Surfaces*, *Maintenance Types*, *Risk Management*, *Optimal Control* and *Personnel Management*. Three *Expertise* factors were also identified, being *Organisational Expertise*, *Employee Expertise* and *Managerial Expertise*.

The factors that were identified as being the most important for hotel maintenance managers that participated in the survey were *Leadership Traits*, *Supplementary Infrastructure Systems* and *Organisational Expertise*. This implies that by focusing more on these factors, maintenance managers can increase their personal effectiveness, as well as that of the maintenance division within the hotel. Statistical significant differences were also found in the *T*-tests, ANOVAs and Spearman's Rank Order Correlations. This indicates that the personal characteristics of maintenance managers within hotels, combined with the hotel's organisational structure/company profile, influences how important the different factors that were identified are. These differences should therefore be taken into account when looking at the maintenance aspects within hotels in South Africa.

The following chapter will outline the conclusions and recommendations made based on results and findings of this study.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

Hotels are defined as being accommodation establishments that have a reception, additional facilities, offers meals in most cases and provides additional services (International Organisation for Standardisation, 2003:2). Several researchers have acknowledged the importance of hotels (Solnet, Paulson & Cooper, 2010:139; Cooper, Gilbert, Fletcher, Wanhill & Shepard, 1998:315; Medlik & Ingram, 2000:4; Shoval & Cohen-Hattab, 2001:910). This is not necessarily the case with the maintenance function of the hotel, for although Liu (2013:107) states that hotels have become so essential to the economic development of a region that they can be considered irreplaceable, Lepkova and Zukaite-Jefimoviene (2012:2) remark that (facility) maintenance is unfortunately often seen as an annoyance or a necessary evil. This is unfortunate, as guests perceptions of the hotel are directly influenced by the maintenance of the hotel (Mattilla & O'Neil, 2003:339). This can unfortunately not be verified within a South African context, as no information could be found to this extent.

The main aim of this study was to determine the critical success factors of the maintenance function in the South African hotel sector. To achieve this aim the following objectives were set in Chapter 1 and achieved in the respective chapters.

- The first objective was to do an analysis of the hospitality industry and hotels by means of a literature review. This was achieved in Chapter 2 of the study. The chapter outlined the importance of effective hotel management, and also investigated the significance of hotel manager's' personal characteristics. The critical success factors in managing hotels were also discussed. Modern hotel managers are essential to the continued effective functioning of a hotel, as they fulfil extremely diverse and complex functions. Yet no matter how good the managers are, if the customer experience is not satisfactory, the hotel will fail.
- The second objective was to do an analysis of hotel maintenance by means of a literature review. This was achieved in Chapter 3 of the study. The complexity and importance of the maintenance function in a hotel often goes unnoticed, but it is crucial to the guests' experience as well as to the continued optimal functioning of the hotel. Maintenance actions should preferably be planned, but unplanned maintenance is never completely unavoidable. Having appropriate staff or contractors to attend to issues is of paramount importance.

- The third objective was to determine the critical success factors and personal characteristics needed for managing maintenance within hotels in South Africa by means of an empirical survey. This was achieved in Chapter 4 of the study, by utilising descriptive analysis, factor analyses, *T*-tests, ANOVAs and Spearman's Rank Order Correlations. Five personality trait factors, seven CSFs for hotel management, eight maintenance management CSFs and three maintenance management expertise factors were identified. The other analyses also found statistically significant differences that should also be kept in mind.
- The final objective was to draw conclusions and to make recommendations concerning the critical success factors and personality traits and expertise required for efficient maintenance management in South African hotels. This chapter will conclude the findings of the research and use the results to make recommendations concerning aspects of maintenance within hotels in South Africa to maintenance managers, as well as academics, and to highlight the importance of the maintenance function and the need for further research.

The aim of this chapter, therefore, is to draw conclusions and make recommendations with regards to the critical success factors needed for managing the maintenance function within hotels in South Africa, as well as to identify aspects for future research.

5.2 Conclusions

The conclusions will be discussed concerning the literature reviews and the survey, as reported in respectively Chapters 2, 3 and 4.

5.2.1 Conclusions regarding the literature study

Conclusion will be made regarding both literature chapters in the next section.

5.2.1.1 Conclusions with regard to Chapter 2: Conceptualising hotel management by means of a literature overview

This first literature review objective was accomplished by discussing the following aspects:

- Hotel management (c.f. 2.2)
 - A hotel is an establishment that provides accommodation, meals and other services.
 - Different sizes of hotels have different characteristics, from small hotels with few rooms to mega hotels with an excess of 1000 rooms.

- Hotels can be classified according to aspects such as the size, location, services and amenities offered, price tier and guest profile of the establishment.
 - On a basic classification, the hotel is either economy, mid-range or luxury hotels.
 - In South Africa, the official grading authority is the Tourism Grading Council of South Africa, in which a hotel can be graded between one and five stars, in increasing quality. The Automobile Association Limited (AA) also offers grading in the form of one to five stars, but it is not officially recognised.
 - The hotel must be managed for the goals to be achieved through the optimal utilisation of the available resources.
 - Due to a wider span of control and the benefits of better communication, the modern hotel's organisational structure is quite flat when compared the a period such as the 1980's.
- The importance and characteristics of effective hotel managers (c.f. 2.3)
 - Managing a hotel is highly complex, and a manager is, therefore, a critical component of this process, as they give organisations a better chance of surviving in the competitive business environment.
 - On a base level, managers need to manage four components: human resources, the external environment (economic environment), the information management system and the technical infrastructure. Each task requires different skills and approaches.
 - Some of the general goals that the manager must attain for the hotel is profitability, efficiency and effectiveness. Other goals will also exist that are not mentioned here.
 - The resources available to accomplish this is usually labour, money, products, machinery, time, methodology and energy.
 - A hotel manager usually performs the role of the decision maker or interpersonal or informational roles. Coordination is viewed as being one of the key roles that need to be fulfilled.
 - The managerial or leadership roles are a bit more varied and include the role of director, producer, coordinator, monitoring, mentor, facilitator, innovator and broker.
 - The manager, therefore, has to gather and analyse information on the goals that the hotel or organisation wishes to attain, and ensure that the correct actions are taken in achieving these goals.
 - For a manager to be successful, he or she also needs to possess certain personal characteristics to do so. These qualities vary from individual to individual but are usually intrinsic to a manager.
 - One of the most important qualities that a hotel manager must possess is the ability to adapt to change.

- Managers need to have a holistic approach, who attune themselves to the needs of the hotel and the staff (including themselves) while utilising resources in as efficient a manner as possible and retaining control of operations. Throughout all this, they will always conduct themselves in a professional yet compassionate and team-orientated manner.
- Some of the most important requirements for being a successful general manager are the qualifications, skills and knowledge that an individual has, particularly regarding technical areas, human resources, finance and marketing.
- In today's hospitality industry, education and knowledge are rated as quite important for a hotel general manager.
- In the late 1990's there were essential competencies that were lacking in hotel managers, which included communication skills, people management skills, utilising staff and their skills correctly, and encouraging training. This appears to now be competencies that the modern hotel manager must possess.
- Managers are so integral to the existence of the hotel, that they can be considered to be a critical success factor.
- The critical success factors (CSFs) in managing hotels (c.f. 2.4)
 - It is crucial for establishments within the hospitality industry to be aware of the critical success factors that determine the success or failure of their undertakings.
 - Critical success factors were identified as being important as far back as the 1960's, although it has only started getting the needed attention in the last decade or so.
 - Utilising the critical success factor approach, one can largely overcome the weaknesses of the approach through the careful and knowledgeable application of the CSF method while reaping the benefits that the approach offers. Critical success factors for hotels in the UK indicated CSFs for the front office, conference and banqueting, human resource management, food and beverage (service), leisure operations, sales and marketing, food and beverage (production), back of house operations, accounting and control, and guest accommodation.
 - Critical success factors can also be grouped as seen from the viewpoint of different interested parties that are not part of the hotel management, such as industrial professionals, government authorities, hotel investors and hotel guests. The CSFs then include different dimensions related to the physical product, the quality of service, the price, promotional aspects and location.
 - For hotels to shift their thinking towards a management approach, the focus should be on organisational design, management development, culture and climate, performance measurement, and management information systems.
 - Probably the most mentioned critical success factor is service quality, which makes sense as the customer and the meeting or surpassing their expectations are key to the continued existence and growth of a hotel.
- The previous research concerning critical success factors in South Africa (c.f. 2.5)

- In the last decade, various studies have been undertaken on different aspects within the tourism industry, to determine the critical success factors needed for managing those areas.
- These studies focused on the management of guesthouses, special events, conference centres, the Wacky Wine Festival, the visitor experience at the Kruger National Park, the visitor experience at the Klein Karoo National Arts Festival, the visitor experience at a major musical festival, and of hotels in South Africa.
- Regarding the only study on hotels in South Africa to date, the following were found to be the most important CSFs: organisational management, quality and customer satisfaction management, human resource management, purchasing management, risk and policy management and green management.
- As tourism products differ, the type of tourism product will influence and determine the combination and importance of the relevant CSFs.

5.2.1.2 Conclusions with regard to Chapter 3: A literature overview of hotel maintenance

The second literature review objective was accomplished by discussing the following aspects:

- Hotel maintenance management (c.f. 3.2)
 - The engineering/maintenance systems of a hotel are very complex, however maintaining them is critical as it directly influences the quality of various services and amenities in the hotel, and, therefore, the guest's experience.
 - As far back as 1977, the importance of maintenance in hotels was already academically recognised, although there exists little literature on the subject to this day.
 - Maintenance can be seen as a function of the engineering department, but for simplicity, the term maintenance was used throughout the study.
 - Maintenance is the process of keeping something in good condition.
 - Engineering focuses on the design, building and use of machines and structures.
 - Management is the process through which resources are used to obtain a goal.
 - Therefore hotel maintenance management is the department within a hotel tasked with keeping all surfaces, systems, structures, equipment, grounds and any other relevant fixtures and assets in good working condition, by keeping it from degrading with time and use, and with repairing or replacing any such aspects should it be deemed necessary to ensure the continued optimal functioning of the hotel.
- The importance of maintenance for hotels (c.f. 3.3)
 - Hotels can be considered irreplaceable to the economic development of a country or region, and their (hotel's) success and survival can be said to hinge on the

efficiency and effectiveness of the maintenance system (department) to a large extent.

- Maintenance has a direct and significant effect on a guest's impressions of a hotel, and poor maintenance or upkeep can cloud their perceptions negatively.
 - Any breakdowns in the main areas of the hotel's operations and maintenance seriously inconvenience guests.
 - More focus on maintenance is also being investigated as a method to improve customer satisfaction.
 - Hotels place more and more emphasis on developing suitable maintenance strategies.
 - The higher quality product the hotel offers, the higher the associated maintenance requirements will be (which includes costs).
 - For the guest's demand for quality services to be met, the constant updating and maintenance of the hotel's facilities is of paramount importance.
 - Maintenance has a very large role in determining the energy efficiency (and, therefore, energy and cost savings) of the hotel.
 - Maintenance can be seen as an investment, for spending the resources today to reduce costs or expenses will be more beneficial than when the resources are not spent.
 - Maintenance, therefore, plays an imperative role in the hotel, and as such also in the organisational structure.
- Maintenance within the organisational structure of the hotel (c.f. 3.4)
 - It is said that working closely with staff grants managers the opportunity to more easily make informed decisions and to ensure that staff have access to the resources they need to provide a high quality of service.
 - The maintenance department is only as effective as its internal effectiveness and external effectiveness combined.
 - In a smaller hotel, the maintenance department may consist of a single "handyman", compared to larger hotels where the head of maintenance may be an engineer with several foremen and their teams to be managed.
 - The organisational structure of the maintenance department will, therefore, vary from hotel to hotel, influenced by factors such as hotel size and company policy.
 - A good maintenance strategy is important, as it directs the process of maintenance management.
 - The maintenance programme is a comprehensive schedule of the maintenance works to be carried out, and their associated timeframes.

- Using historical work order to improve future maintenance effectiveness is a strategy that hotels often overlook, but which can prove very useful.
 - Maintenance can be grouped into five strategic bases, to ease management of the functions.
 - Computerised maintenance management systems (CMMS) are being used by more and more hotels to enable online and real-time tracking of maintenance work.
 - A CMMS may also assist to obtain the goals of what a maintenance management system must attain. The goals are to handle effectively the maintenance needs of the property, record essential information relating to the systems and equipment, establish standards for measuring the performance of the maintenance staff, and to provide feedback that management can use to assess the performance of the maintenance department.
 - There are various factors that influence the costs that are associated with maintenance, such as service quality (the grade of the building and the hotel's standard) and the scale of work to be done (the quality of the installation and the capacity of the installation).
 - Maintenance costs can be substantial, especially with larger hotels that offer higher quality, or with major projects such as renovation or refurbishment.
 - The maintenance department faces various challenges, especially as there still often exists negative perceptions regarding the department.
 - Research, however, indicates that there appears to be a shift towards a more favourable view to that where maintenance is an integral part of the business process.
 - Another challenge is that upper management does not always necessarily comprehend the scope of the work that the maintenance department has. Should upper management have more knowledge (even if just very basic) of maintenance, it will undoubtedly assist the department in reaching its goals.
 - Outsourcing is often used where the maintenance department wishes rather to focus on core competencies, or where it is more cost-effective to do so. Outsourcing should however always be monitored and controlled.
- The classification and types of maintenance management within hotels (c.f. 3.5)
 - Refurbishment can be categorised into several subsections: soft refurbishment, soft and hard refurbishment, full refurbishment, repositioning, repositioning and extension, building uses conversion, and new builds.
 - Guest rooms can either be refreshed (what most people would refer to when they say refurbishment) or re-branded (modifying the rooms physically to move the rooms (hotel) into a higher service market, such as a higher star grading).
 - The physical aspects of the hotel were (for this study) categorised as follows: heating, ventilation and air-conditioning (HVAC); electrical systems; plumbing

systems; refrigeration systems; general repairs/maintenance; grounds, roads and recreational areas; equipment and vehicles; and construction.

- Maintenance can be either planned or unplanned.
 - Planned maintenance refers to routine maintenance, preventative maintenance, condition-based maintenance, scheduled maintenance, or the exploratory approach of crowd-sourcing.
 - Unplanned maintenance refers to corrective maintenance or breakdown/emergency maintenance.
 - The maintenance department can also make use of auditing to ensure that the department is operated as efficiently as possible, as well as that aspects relating to maintenance within the hotel (such as energy efficiency) is managed as efficiently and cost-effectively as possible.
- Previous research on maintenance management within hotels (c.f. 3.6)
 - Very little literature could be found on the subject, even more so when focusing on the critical success factors (none could be found).
 - The researcher as such attempted to identify possible critical success factors, by utilising literature that relates to hotels, in general, and even to facility management.
 - Several sources were repeatedly used, as the challenges faced in obtaining literature simply made it impossible not to do so.
 - A massive void exists in South African literature regarding maintenance management within hotels.

5.2.2 Conclusions from the survey

Conclusion will be made regarding the survey in the next section, as per research objective 3.

5.2.2.1 Conclusions regarding descriptive data

Based on Table 5.1 (c.f.4.3.1.1-4.3.1.15), maintenance managers of hotels who participated in the study as respondents were predominantly male and aged 45 years. Their highest level of education is a college certificate or diploma. They are employed in at three-star graded hotels in the Western Cape, with between 76-100 guest rooms, where their department answers to the general manager of the hotel. The maintenance department spends R499 999 per year or less on maintenance, also having a budget of R499 999. This budget is utilised mostly for building maintenance and/or upkeep. The hotel where they are employed is part of a larger group of hotels and offers accommodation, catering and conferencing services. The maintenance managers have been employed in the hotel sector between 10 and 14 years, of which 2-4 years have been

spent in their current managerial position. They also started their hotel careers within the maintenance department of a hotel.

Table 5-1: Profile of respondent maintenance managers and their hotels

Category	Profile
Gender	Male (81%)
Age	Average age: 45 years
Highest level of education	College certificate/ diploma (54%)
Hotel by province	Western Cape (32%)
Hotel star grading	3-star (36%)
Hotel size	76-100 rooms (19%)
Division to which maintenance answered to	General manager (52%)
Approximate annual expenditure on maintenance	R499 999 or less (55%)
Budget utilisation per maintenance aspects	Building maintenance/upkeep (22%)
Maintenance budget for the financial year 2014/2015	R499 999 or less (43%)
Independent hotel or part of a larger group	Larger group (60%)
Services offered by Hotel	Accommodation, catering and conference (68%)
Years in current managerial position	2-4 years (28%)
Years of experience in the hotel sector	10-14 years (25%)
Department in which the hotel career was started	Maintenance (43%)

Source: Author's compilation

5.2.2.2 Conclusions regarding the factor analyses

- Five personality trait factors were identified by the factor analysis. These factors are *Internal Traits*, *Acquired Traits*, *Entrepreneurial Traits*, *Leadership Traits* and *Creative Traits*. *Acquired Traits* obtained the highest mean value (4.67) and was regarded as the most important personality trait that a maintenance manager could possess. This was followed by *Leadership Traits* (mean value of 4.38), *Entrepreneurial & Business Traits* (mean value of 4.20) and *Internal Traits* (mean value of 4.05). *Creative Traits* had the lowest mean value (4.03) (although still considered important) (c.f.4.3.2.1).
- The factor analysis identified seven CSFs for general hotel management. *Strategy & Policy*, *Knowledge & Expertise*, *Skilled Staff*, *Commitment to Customers*, *Organisational Effectiveness*, *Eco-friendly Attitude* and *Facility Efficiency* were all identified as factors. *Facility Efficiency* was regarded as being the most important CSF (mean value of 4.31), followed by *Commitment to Customers* with a mean value of 4.29. *Skilled Staff* obtained a mean value of 4.21, followed by *Strategy & Policy* (mean value of 4.19), *Organisational Effectiveness* (mean value of 4.11) and *Eco-friendly Attitude* with a mean value of 3.81. *Knowledge & Experience* was ranked lowest, with a mean value of 3.30 (c.f.4.3.2.2).

- Eight maintenance management CSFs were identified by the factor analysis, those factors being *Prime Directives*, *Documentation- /Recording Management*, *Supplementary Infrastructure Systems*, *Indoor- & Outdoor Surfaces*, *Maintenance Types*, *Risk Management*, *Optimal Control* and *Personnel Management*. *Maintenance Types* obtained the highest mean value (4.45). This was followed by *Risk Management* (mean value of 4.37), *Prime Directives* (mean value of 4.35) and *Optimal Personnel Management* with a mean value of 4.30. *Supplementary Infrastructure Systems* obtained a mean value of 4.10, *Indoor- & Outdoor Surfaces* a mean value of 4.08, and *Control* a mean value of 3.93. *Documentation- /Recording Management* obtained the lowest mean value (3.90) (c.f.4.3.2.3).
- Lastly, three maintenance management expertise factors were identified. These factors are *Organisational Expertise*, *Employee Expertise* and *Managerial Expertise*. *Employee Expertise* had the highest mean value (4.44), followed by *Managerial Involvement* (mean value of 3.88) and *Organisational Expertise* (mean value of 3.64) (c.f.4.3.2.4).

5.2.2.3 Conclusions regarding T-tests

- T-tests comparisons between factors and gender indicate that there was only a statistically significant difference based on the personal characteristics factor, *Leadership Traits*; the maintenance management CSF, *Supplementary Infrastructure Systems*; and the maintenance expertise factor, *Organisational Expertise*. Both males and females rated *Acquired Traits* (a personal characteristic), *Commitment to Customers* (a hotel management CSF), *Maintenance Types* (a maintenance management CSF) and *Employee Expertise* (a maintenance management expertise factor) as the most important factors in each category (c.f.4.3.2.5.1.1).
- The T-test comparison between factors and hotel independence indicated statistically significant differences between respondents who are part of larger hotels and respondents who are employed at independent hotels. The hotel management factor that showed this difference was *Strategy & Policy*. Statistically significant maintenance management CSFs were *Prime Directives*, *Supplementary Infrastructure Systems* and *Maintenance Types*. All these factors were regarded as being more important by maintenance managers of hotels that are part of larger groups, compared to maintenance managers of independent hotels. *Acquired Traits* was once again ranked as the most important personality traits factor, being more important for hotels that form part of a larger group. *Facility Efficiency* (the highest ranked hotel management CSF) was seen as more important by managers of hotels that are not independent. *Maintenance Types* (again the most important maintenance management CSF) and *Employee Expertise* (a maintenance management expertise factor) were regarded as the most important in both categories by managers of group hotels (c.f.4.3.2.5.1.2).

5.2.2.4 Conclusions regarding the ANOVAs

- ANOVA results for the factors and province comparison was done by comparing only the provinces of Western Cape, Gauteng and KwaZulu-Natal, as these provinces had the most respondents. There were statistically significant differences between the respondents of the different provinces based on *Employee Expertise*, as KwaZulu-Natal rated the factor as more important (mean value of 4.69) compared to Gauteng (4.38) and Western Cape (4.36) (c.f.4.3.2.5.2.1).
- ANOVA results for the factors and services offered comparison indicated statistically significant differences between the respondents based on the personality traits *Entrepreneurial & Business Traits* (respondents at hotels who offer other services rated this

as the most important), as well as *Leadership Traits* (also rated as the most important by respondents of hotels offering other services). The hotel management CSF *Strategy & Policy* also indicated significance (being viewed as most important by respondents of hotels offering other services). The three groups rated the remaining factors similarly (c.f.4.3.2.5.2.2).

5.2.2.5 Conclusions regarding Spearman's Rank Order Correlations

Rank order correlations indicated the following statistically significant differences:

- Correlation between personal characteristics and company profile aspects with personality traits (c.f.4.3.2.6.1).
 - Positive correlations concerning the factor *Entrepreneurial & Business Traits* and the question *Star grading*.
 - Positive correlation concerning the factor *Leadership Traits* and the question *Star grading*. There was a negative correlation with the question *Maintenance budget for the current term*.
- Correlation between personal characteristics and company profile aspects and critical success factors for general hotel management (c.f.4.3.2.6.2).
 - A negative correlation was found with the factor *Knowledge & Expertise*.
- Correlation between personal characteristics and company profile aspects and critical success factors for hotel maintenance management (c.f.4.3.2.6.3)
 - Positive correlations were found concerning the questions *Star grading* and *Approximate annual maintenance expenditure* when compared to the factor *Documentation -/Recording Management*.
 - Positive correlations were found with the questions *Star grading*, *Size of the hotel* and *Approximate annual maintenance expenditure* when compared to the factor *Supplementary Infrastructure Systems*.
- Correlation between personal characteristics and company profile aspects and expertise (c.f.4.3.2.6.4).
 - A positive correlation was found between the factor *Organisational Expertise* and the question *Star grading*.
- Correlation between factors and personal traits factors (c.f.4.3.2.7.1).
 - All five personal traits factors, all seven general hotel management CSFs and all eight maintenance management factors indicated a significant relationship between the personal trait factors, as all had positive correlations. *Organisational Expertise* had positive correlations with *Leadership Traits* and *Creative Traits*. *Employee Expertise* had positive correlations with *Internal Traits*, *Acquired Traits*, *Entrepreneurial Traits* and *Leadership Traits*. *Managerial Expertise* had positive correlations with *Acquired Traits*, *Entrepreneurial Traits* and *Creative Traits*.

- Correlation between factors and critical success factors for general hotel management factors (c.f.4.3.2.7.2).
 - All five personal traits factors, all seven general hotel management CSFs and all eight maintenance management factors indicated a significant relationship with the hotel management CSFs, as all had positive correlations. As a maintenance management expertise factor, *Organisational Expertise* has positive correlations with *Strategy & Policy*, *Eco-friendly Attitude* and *Facility Efficiency*. *Employee Expertise* and *Managerial Expertise* both also had positive correlations.

- Correlation between factors and critical success factors for hotel maintenance management factors (c.f.4.3.2.7.3).
 - Positive correlations in relation to *Prime Directives* was evident with *Internal Traits*, *Entrepreneurial & Business Traits*, *Leadership Traits*, *Strategy & Policy*, *Skilled Staff*, *Commitment to Customers*, *Organisational Effectiveness*, *Eco-friendly Attitude*, *Facility Efficiency*, *Documentation- /Recording Management*, *Supplementary Infrastructure Systems*, *Indoor- & Outdoor Surfaces*, *Maintenance Types*, *Risk Management* and *Employee Expertise*, as well as to a lesser extent with *Acquired Traits*, *Creative Traits*, *Knowledge & Expertise*, *Managerial Expertise*, and lastly, *Organisational Expertise*.
 - Positive correlations were obtained when *Documentation- /Recording Management* was compared to *Internal Traits*, *Entrepreneurial & Business Traits*, *Leadership Traits*, *Strategy & Policy*, *Knowledge & Expertise*, *Skilled Staff*, *Commitment to Customers*, *Organisational Effectiveness*, *Eco-friendly Attitude*, *Facility Efficiency*, *Prime Directives*, *Supplementary Infrastructure Systems*, *Indoor- & Outdoor Surfaces*, *Maintenance Types*, *Risk Management*, *Optimal Control* and *Personnel Management*. *Acquired Traits*, *Creative Traits*, *Organisational Expertise*, *Employee Expertise* and *Managerial Expertise*, correlated positively as well, but to a lesser extent.
 - Positive correlations about *Supplementary Infrastructure Systems* was obtained with *Entrepreneurial & Business Traits*, *Strategy & Policy*, *Skilled Staff*, *Organisational Effectiveness*, *Eco-friendly Attitude*, *Facility Efficiency*, *Prime Directives*, *Documentation- /Recording Management*, *Indoor- & Outdoor Surfaces*, *Maintenance Types*, *Risk Management*, *Optimal Control* and *Personnel Management*. Positive but medium correlations were found between *Supplementary Infrastructure Systems* and *Internal Traits*, *Acquired Traits*, *Leadership Traits*, *Creative Traits*, *Knowledge & Expertise*, *Commitment to Customers*, *Employee Expertise* and *Managerial Expertise*. *Organisational Expertise* had a small, positive correlation.
 - Positive correlations were obtained when comparing *Indoor- & Outdoor Surfaces* to *Entrepreneurial & Business Traits*, *Leadership Traits*, *Strategy & Policy*, *Skilled Staff*, *Organisational Expertise*, *Eco-friendly Attitude*, *Facility Efficiency*, *Prime Directives*, *Documentation- /Recording Management*, *Supplementary Infrastructure Systems*, *Maintenance Types*, *Risk Management*, *Optimal Control* and *Personnel Management*. There were also positive correlations to a lesser extent with *Internal Traits*, *Acquired Traits*, *Creative Traits*, *Knowledge & Expertise*, *Commitment to Customers*, *Employee Expertise* and *Managerial Expertise*. *Organisational Expertise* had a small but positive correlation.

- *Maintenance Types* had positive correlations when compared to *Strategy & Policy*, *Skilled Staff*, *Organisational Expertise*, *Eco-friendly Attitude*, *Facility Efficiency*, *Prime Directives*, *Documentation- /Recording Management*, *Supplementary Infrastructure Systems*, *Indoor- & Outdoor Surfaces*, *Risk Management*, *Optimal Control* and *Personnel Management*. *Internal Traits*, *Acquired Traits*, *Entrepreneurial & Business Traits*, *Leadership Traits*, *Creative Traits*, *Knowledge & Expertise*, *Commitment to Customers*, and *Employee Expertise* also had positive correlations, as well as *Managerial Expertise*.
- A comparison of *Risk Management* revealed positive correlations with *Internal Traits*, *Entrepreneurial & Business Traits*, *Strategy & Policy*, *Knowledge & Expertise*, *Skilled Staff*, *Commitment to Customers*, *Organisational Effectiveness*, *Eco-friendly Attitude*, *Facility Efficiency*, *Prime Directives*, *Documentation- /Recording Management*, *Supplementary Infrastructure Systems*, *Indoor- & Outdoor Surfaces*, *Maintenance Types*, *Optimal Control* and *Personnel Management*. *Acquired Traits*, *Leadership Traits*, *Creative Traits*, *Employee Expertise* and *Managerial Expertise* had lesser positive correlations.
- Positive correlations with *Optimal Control* was found with *Internal Traits*, *Entrepreneurial & Business Trist*, *Leadership Traits*, *Strategy & Policy*, *Knowledge & Expertise*, *Skilled Staff*, *Commitment to Customers*, *Organisational Effectiveness*, *Eco-friendly Attitude*, *Facility Efficiency*, *Prime Directives*, *Documentation- /Recording Management*, *Supplementary Infrastructure Systems*, *Indoor- & Outdoor Surfaces*, *Maintenance Types*, *Risk Management* and *Personnel Management*. Less positive correlations were found with *Acquired Traits*, *Creative Traits*, *Employee Expertise* and *Managerial Expertise*. *Organisational Expertise* also had a positive correlation.
- *Personnel Management* had positive correlations when compared to the factors *Internal Traits*, *Entrepreneurial & Business Traits*, *Leadership Traits*, *Strategy & Policy*, *Skilled Staff*, *Commitment to Customers*, *Organisational Effectiveness*, *Eco-friendly Attitude*, *Facility Efficiency*, *Prime Directives*, *Documentation- /Recording Management*, *Supplementary Infrastructure Systems*, *Indoor- & Outdoor Surfaces*, *Maintenance Types*, *Risk Management*, *Optimal Control* and *Employee Expertise*. There were also positive correlations with *Acquired Traits*, *Creative Traits*, *Knowledge & Expertise*, as well as with *Organisational Expertise* and *Managerial Expertise*.
- Correlation between factors and expertise factors (c.f.4.3.2.7.4).
 - Positive correlations were found between *Organisational Expertise* and *Managerial Expertise*, as well as with *Leadership Traits*, *Documentation - /Recording Management* and *Employee Expertise*. *Creative Traits*, *Strategy & Policy*, *Eco-friendly Attitude*, *Facility Efficiency*, *Prime Directives*, *Supplementary Infrastructure Systems*, *Indoor- & Outdoor Surfaces*, *Optimal Control* and *Personnel Management* also had positive correlations.
 - *Employee Expertise* had positive correlations with the factors *Skilled Staff*, *Prime Directives* and *Personnel Management*. *Internal Traits*, *Leadership Traits*, *Strategy & Policy*, *Knowledge & Expertise*, *Commitment to Customers*, *Organisational Effectiveness*, *Eco-friendly Attitude*, *Facility Efficiency*, *Documentation- /Recording Management*, *Supplementary Infrastructure Systems*, *Indoor- & Outdoor Surfaces*, *Maintenance Types*, *Risk Management*, *Optimal Control*,

Organisational Expertise, Managerial Expertise, as well as with Acquired Traits and Entrepreneurial & Business Traits.

- *Managerial Expertise* had positive correlations with *Organisational Expertise*, as well as with *Entrepreneurial & Business Traits, Strategy & Policy, Knowledge & Expertise, Eco-friendly Attitude, Prime Directives, Documentation- /Recording Management, Supplementary Infrastructure Systems, Indoor- & Outdoor Surfaces, Risk Management, Optimal Control* and *Employee Expertise*. There were also positive correlations with *Acquired Traits, Creative Traits, Commitment to Customers, Organisational Effectiveness, Facility Efficiency, Maintenance Types* and *Personnel Management*.

5.3 Recommendations

Following the conclusions that were made concerning the study, certain recommendations can thus be formed. These recommendations will be for hotel maintenance managers, as well as for academics who may want to expand this research in future.

5.3.1 Recommendations for South African hotel industry regarding effective maintenance management

Based on the conclusions discussed above and the research results, the following recommendations can be made.

- Recommendations to hotel maintenance managers
 - Hotel managers need to continue to be trustworthy and honest, as *Acquired Traits* was identified by the factor analysis as the most important personality trait. This factor key to a good relationship with staff, guests and other managers alike. Teamwork is based on trust, and the maintenance team will function better through a holistic approach where the entire team equals more than the sum of the individuals. Although it may in certain situations be difficult for managers to be honest with their staff, it is paramount to the trust relationship. Actively seeking better methods of communication with staff, and utilising opportunities where trust can be earned will assist the manager in honing these traits. This means that the manager must take the time to speak to the staff in their department, both formally (through aspects such as meetings and feedback requests) and informally (through simple things like greeting staff and asking them how they are, and being genuine about it).
 - The factor analysis revealed *Facility Efficiency* as the most important CSF for general hotel management. The quality of the facilities and the guest experience tie in very closely with one another. Facilities should, therefore, be of a consistently high quality throughout the hotel as the guest experience can become clouded if even just one facility out of all the available facilities offered by the hotel is not up to par. If there are facilities that need some attention, the necessary refurbishments or re-branding should be done so that the required level of quality is reached. Should the facilities already match the required standards, or recently been adjusted to meet those standards, they must be kept in that way. The only method

of doing this is to ensure that there is a high standard of maintenance of these facilities, and where possible that priority should also be given to facility management as hotel facilities can quickly impact the guest experience of several guests at a single time.

- *Maintenance Types* was deemed to be the most important maintenance management CSF, as per the factor analysis. Maintenance operations should as far as possible make use of planned maintenance activities. This will not only reduce or eliminate guest discomfort or dissatisfaction to being disturbed or unable to enjoy their experience, but is also a more efficient approach to maintenance management than waiting for problems to arise first before attending to them. It can be difficult to plan these activities, however historical data and records can assist greatly in developing a schedule that will be suited to the tasks that need to be completed, take guests into account, and result in more cost effective and efficient maintenance management by not being overly aggressive. A balance needs to be found for optimal levels of planned maintenance. Otherwise, it can quickly result in over-the-top preventative maintenance that consumes unnecessary valuable hotel resources. The historical data, if it exists, is used to determine the frequency of breakdowns and the time needed to repair it for specific assets, for example, the heating element in a bain-marie. If it does not exist, it must be calculated or approximated as accurately as possible. The result will then be used to establish a maintenance schedule, for example once every three months the bain-marie needs to be checked for faults and be taken out of commission for one hour to do so, as it normally breaks down the fourth month and then takes two hours to repair.
- The factor analysis showed *Employee Expertise* as being the most important maintenance management expertise factor. The importance of employee expertise cannot be overestimated, as the hotel is only as efficient as its staff. Management must make it clear to the staff of what is expected from them. This eliminates any (costly) misunderstandings to a large extent and increases efficiency. Once again the key to this is clear communication. Maintenance managers are already aware of the fact that their department is paramount to the continued existence of the hotel, but they should keep in mind that other departments are also in their right equally important. Working on methods to strengthen the relationship between maintenance and housekeeping can be especially beneficial. Maintenance can make use of the additional eyes and ears to more quickly detect any potential deterioration or existing maintenance issues, and housekeeping will benefit from the better condition of rooms and facilities and, therefore, have lower turnaround times on servicing these areas. A symbiotic relationship would be most beneficial to both departments and by implication the hotel as a whole. Better communication would aid the hotel with improved maintenance turnaround in other aspects as well. For example if a guest reports a problem to front office/reception, and that problem is quickly and clearly conveyed to maintenance, that same problem can be attended to speedily and efficiently, resulting in an improved guest experience.
- The correlation analysis confirmed that the identified personality trait, general management CSFs, maintenance management CSFs and maintenance management expertise factors had a positive influence on each other. Implementing the recommendations made above will thus have a positive spill over effect on all the factors which can ensure the efficient management of the hotel sector. This will furthermore increase guest satisfaction and revenue while reducing employee turnover.

- While both male and female managers have the same outlook on the importance of factors, mostly they have different approaches to leadership and the importance of the various infrastructure systems. There also appears to be a difference in opinion as to how outsiders perceive their maintenance department. This creates an opportunity to explore these differences across genders, and quite possibly by combining the different outlooks deficiency in approaches can be addressed and only the most efficient approaches can remain. In essence, the different approach followed by each gender regarding a particular problem, and the outcome thereof, need to be weighed against one another, so that the best approach can be found.
- Managers at hotels that are part of larger groups clearly place more value on CSFs that are influenced by company policy, compared to managers at independent hotels. As corporate structures have the resources to develop more efficient and cost-effective strategies, smaller hotels can benefit from this by determining which approaches followed by hotels that form part of larger groups will also apply to their hotels, or which strategies can be adapted for their purposes. This can be of great benefit as independent hotels do not always have access to the resources or the expertise to determine what these efficient approaches are. Organisations such as FEDHASA (Federated Hospitality Association of Southern Africa) and even TGCSA (Tourism Grading Council of South Africa) may be of assistance in providing these types of information to accommodation establishments.
- The ANOVA results revealed that maintenance managers in Gauteng and the Western Cape placed less value on the factor *Employee Expertise*. Managers at hotels in Gauteng and the Western Cape should, therefore, ensure that their employees know what management expects from them, as it appears that this may become lost in the potentially more corporate driven environments of these provinces. Further research is however required to confirm the differences in the CSFs required to effectively manage the maintenance function in hotels located in the different provinces in the country.
- Managers at hotels with higher star grading should give attention to the manner in which aspects are organised and how they implement plans, through ensuring that it is in line with the policies and strategies of the hotel. This is based on the correlation analysis results that showed *Leadership Traits* and *Star grading* to affect one another in a positive way. It is recommended that a lower graded hotel operation should place more value on the importance of proper plans and strategies as the hotel can be seen as having to prove itself more than when compared to a higher rated hotel, and it may assist in streamlining the policies and strategies of the hotel (especially if the hotel wishes to upgrade its grading to a higher level).
- The higher the star grading of the hotel, the more a manager must possess certain leadership qualities. These qualities can be further enhanced and expanded through the use of appropriate skills and seminar courses, as managers, must ensure that they stay at the top of their game.
- As higher star grading requires maintenance expenditures to be documented and recorded more precisely, it can be of note to hotels with a lower grading to also start documenting these expenses. A historical overview of expenses incurred can be of great benefit in determining future maintenance budget, projects and expenditures.

- As the supplementary infrastructure systems and their maintenance expenditures tie directly in with the grading and size of the hotel, it is recommended that managers take this into account when the hotel plans to upgrade its star grading or increase the number of rooms in the hotel. The bigger and better the hotel, the higher the expenses for maintenance will be as the more infrastructure systems need maintaining. Associated budget requests should, therefore, be increased well in advance, and not only once the upgrading and expansion projects have commenced or been finalised.
- The larger and higher graded the hotel; the more space will be needed by the maintenance department. Managers should make it a priority to get authorisation to increase the department's available floor space, as it will severely undermine the effectiveness of the maintenance department should there not be enough space to store tools and spares or for the different workshops to perform their duties.
- Recommendations for staff skill development
 - The factor analysis identified *Acquired Traits* as the most important personal characteristic for both males and females. Although honesty and trust can be said to be inherent traits, through the right development framework, these traits can be strengthened and enhanced. Developing communication skills in all organisational levels of the hotel can only be beneficial, as can team building exercises be within departments and between department heads. The ability to stay calm in a crisis, as well as the ability to prioritise, are abilities that can be further developed if already present, or can also be taught, through making use of appropriate courses or seminars/workshops.
 - To ensure high standards of facility maintenance, staff need to possess the necessary skills and expertise to do so. Focusing on skills development can be a costly and time-consuming undertaking, but if suitable individuals are identified and resources are spent on bettering their skills and expertise, it will only be to the future benefit of the hotel. Quicker turnaround times, higher quality of workmanship and more efficient utilisation of resources will ultimately lead to a more cost effective hotel, as well as higher guest satisfaction, as problems are attended to before guests become aware of them, or attended to in such a manner that guests cannot be anything but satisfied with the level of service received.
 - The correlation analysis identified a positive correlation between *Entrepreneurial & Business Traits* and the star grading of the hotel and these traits become more important the higher the star grading of the hotel. As such, one can say that time management is a skill that is very useful not only for managers but operational staff as well. Various courses and literature are available on the subject, and it is something that can be taught with relative ease. Taking into consideration that one of the key responsibilities of management is to plan and organise, this can assist greatly with tasks such as when drawing up a plan of action for planned maintenance. Operational staff who can manage their time better will become greater assets to the hotel as time is one of the most precious of resources as it influences the expenditure and costs of most other things (such as labour). With higher graded hotels where the expenses are higher and more services are offered to the guest, the manager must oversee more details, and the ability to do so efficiently in the available time while also cutting costs can be of great assistance. Even though it is less important to lower graded hotels, the above still apply, but

in a smaller sense, should the hotel wish to enhance its effectiveness and productivity.

- Developing an understanding of maintenance staff for the importance of housekeeping, and vice versa will greatly benefit both departments. It is entirely possible that operational staff do not always understand or appreciate the challenges that their colleagues are faced with in sister-departments. Bridging this divide should create more integrated staff members across departments.
 - Where possible there should be attempts to increase and enhance the skills of self-confidence, leadership, common sense, self-evaluation ability and problem-solving ability. This can be done through the use of workshops and seminars.
 - Incorporate a strategy if possible where employees are not only taught the importance of why good recordkeeping and documentation is important but where they can see the importance of this task. It can be accomplished by integrating recordkeeping practises into their routines, even something as simple as for the gardener to log the days and the hours spent in mowing a particular lawn, so that he can use the historical data as support for a request such as to requisition new parts for the lawnmower.
 - The effective use of space within the areas allocated to the maintenance department can be crucial, especially as the department often receives insufficient space. Managers and staff need to be taught how to make the best use of the available space so that they may modify the layout of the available space in such a manner as to increase storage- and workspace. Should this not be possible or deemed unnecessary, it is recommended that outside specialisation is obtained to design and install work- and storage spaces that allow for greater efficiency and that make the best use of the available space.
 - A short workshop can be developed in which the importance and the main responsibilities and the associated work that needs to be done can be conveyed to the heads of other departments and the general manager. Ideally, the directors should also be part of the workshop, but considering their positions it will suffice if only the staff at the hotel as suggested above partakes.
- Recommendations to academic and training institutions
 - This research, coupled with the factors that were identified and the importance of those factors as they relate to different size and grading hotels, can be used to expand the content of current curriculum and textbooks regarding hotel management. This is the first time that information is available on the function and importance of maintenance within hotels in South Africa, and it should be utilised to improve hotel management courses and –curriculums, as the object of those same courses and curriculums is to produce and train good, well-rounded hotel managers who have knowledge and understanding of the different departments and aspects of their hotels.
 - Practical experience for graduates, especially at universities, is often less than what the industry would have liked. To incorporate practical aspects into the course material is highly recommended. Something as simple as liaising with hotels to arrange for a “day-in-the-life-of” experience, where students can shadow a particular department’s manager for a day until all the departments at a hotel have

been experienced, can provide insight into the workings of a hotel that would not otherwise be obtained through mere studies. It can also be arranged so that it takes place with operational staff in each department to give a “low-down-and-dirty” insight into what it is like being on the lowest link in the organisational chain, and what challenges those staff member encounter during the process of performing their duties. This would be even better, therefore combining lowest level and top level hotel department insights to help the aspiring hotel manager better understand that the complexity of a hotel increases the more one looks at it and that each department (such as maintenance) has its challenges and is important to the hotel on its way.

5.3.2 Recommendations for future research

Based on this research, the following aspects need to be further researched:

- Continuous research on maintenance management within hotels is recommended to increase the awareness and understanding of this (academically neglected) department within hotels.
- Spearman's' Rank Order Correlations indicated a strong relationship between the identified factors. It is thus recommended that this relationship be explored further using a Structural Equation Model (SEM) as this analysis will help identify the most significant factors for hotel managers to consider when managing the maintenance function.
- It is recommended that this study also be undertaken as a qualitative study, which will allow for greater involvement by the hotel maintenance managers in the design and outcome of the study. This approach will also facilitate future quantitative surveys, as the statements from such a qualitative survey can be used in conjunction with the current (very limited) literature towards an industry approach.
- The study should also be approached from a supply and demand side perspective. This means that the study can target the hotel guest to determine what the guest feels is important regarding the maintenance of the hotel. When compared to what maintenance managers feel is important, a potential gap can then be identified between the expectations of the guests and the perceptions of the maintenance manager. Addressing this gap will then result in increased guest satisfaction.
- This study should be applied to a specific group of hotels, to determine whether the results (except for those about part of a larger group or individual hotel) are similar. This will enable one to determine whether the identified CSFs and other factors are inherently the same in hotels irrespective of size, or whether it is influenced by company policy.
- This study should be applied as per above recommendation, on a group of hotels, but varied by having two or more groups of hotels partake in the study. This will provide a clear indication as to any possible differences between hotel maintenance approaches in hotels that are part of larger groups.
- An all-inclusive approach can also be undertaken, in that the employees of the maintenance department within a particular hotel or hotel group all partake in the study. This would provide a comparison between what managers believe to be important in the management of the division, and what operational staff believe management should be focusing on. This can potentially support hotel operations through identifying aspects that can receive more attention or higher priority from management, and can result in a more efficient workforce as

the resources at their disposal are streamlined, and their skills honed, for the specific duties that they need to perform.

- This study can also be applied to guesthouses. This will indicate the similarities and differences between the management styles and the importance of the various CSFs and other maintenance factors of hotels versus guesthouses. Guesthouses are recommended as it is the form of accommodation that is the most widely used after hotels. However, if this is applied to other forms of accommodation establishments as well, a comprehensive guide regarding maintenance management in South African accommodation establishments can be compiled. This will be of immeasurable assistance to the lodging sector within the hospitality industry, especially their maintenance functions.
- In some of the analyses it was found that certain provinces place more importance on certain factors, when compared to other provinces. This shows that clearly the management approaches differ not only between different hotels, but also between different geographic areas. This creates an opportunity for research to further investigate these differences in management approaches, as differing from region to region.

From this study, it is evident that the effective management of the maintenance function in an accommodation establishment such as a hotel is dependent on certain critical success factors and other relevant factors. The results provided by this innovative study are therefore invaluable for the future maintenance management of hotels, especially in South Africa.

5.4 Limitations of the study

The following limitations were discovered while undertaking this study:

- No complete database exists that lists hotels in South Africa. The databases that were frequently used suffered from old and inaccurate information. This led to many hotels being potentially excluded from participating in the survey, as either their updated particulars could not be obtained, or there was simply no way to determine that they existed. In the case of graded establishments where a yearly reassessment needs to be done to remain graded, a requirement can be added to the grading body that details need to be re-confirmed before the certification is issued.
- As the requests for participation were e-mailed to the appropriate contact particulars that could be obtained at the hotel, the possibility exists that it could have simply been deleted and never forwarded to the relevant person as was requested.
- There were no open-ended questions in the survey apart from the section where hotel maintenance managers could make suggestions or recommendations for the effective management of the maintenance function within a hotel. Even then, few respondents made use of this, with most of the responses being a plea for larger budgets or better understanding of the department and its challenges.

5.5 Contribution of the research

This study contributes to the research field of maintenance within hotels. These contributions can be listed as follow:

- It was the first study of its kind done in South Africa determining the critical maintenance management aspects critical to the successful operation of hotels within South Africa. The importance of the maintenance function within hotels is an aspect that appears to be neglected internationally and has not been researched yet in a developing country such as South Africa. This study is the first of its kind focusing on a developing country that identified the importance of the maintenance function within a hotel.
- The study contributed to the literature on maintenance within hotels, and to that of hotels, in general, specifically with the focus on the importance of maintenance to the effective operations and continued existence of hotels. No research has been found that has a focus on this effect, even though the research was found that focuses on certain aspects relating to the maintenance department. This is, therefore, the first study that attempts to provide a holistic, if somewhat simplified, an overview of the hotel's operations, focusing then specifically on maintenance within the hotel. A definition of the term "*hotel maintenance management*" was also developed, as none existed that could be found in the current literature. **Hotel maintenance management can therefore be defined as that department within a hotel that is tasked with keeping all surfaces, systems, structures, equipment, grounds and any other relevant fixtures and assets in optimal working condition, with keeping it from degrading with time and use, and with repairing or replacing any such aspects should it be deemed necessary to ensure the continued optimal functioning of the hotel.**
- This study provides insight into what maintenance managers of hotels view as being critical for the efficient management of the maintenance function within their hotel. The study identifies aspects that are perceived to be more important than others; that can assist maintenance managers in the hospitality industry in managing their maintenance department more efficiently. For smaller hotels it may even provide some insight into the maintenance function for especially owners, who may not always have the necessary background to understand some of the complexity and diversity surrounding this aspect. In a simplified form, it can assist educators in giving a basic understanding of the hotel maintenance function to students, to better prepare them for a career in the hospitality industry. Researchers can make use of the recommendations for further research to expand academic knowledge on the subject, and also to realise that this, to date, academically neglected, field of study has much potential for further research endeavours that can assist the efficient management of the hotel (and accommodation) industry at large.

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ANNEXURES

Annexure A: Questionnaire



MANAGING MAINTENANCE IN THE SOUTH AFRICAN HOTEL SECTOR

Good day

The goal of my Masters dissertation is to identify the Critical Success Factors (CSF) important for effective maintenance management in hotels. This research is invaluable since maintenance is a crucial but often neglected aspect within hotel management. Your insights in this regard is therefore much appreciated.

The results of this study will contribute to the knowledge base regarding maintenance management in hotels and will provide guidelines for the effective management of maintenance in the sector.

Thank you in advance for your participation.

For any queries please contact us at:

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SECTION A: DEMOGRAPHIC DETAILS

1. Gender ?

Male

Female

2. Year of birth?

3. Highest level of education?

4. In which province is your hotel situated?

5. In which city/town/area is your hotel situated?

6. Please indicate the star grading of the hotel that you are employed at:

7. Indicate the size of your hotel:

8. To which division, if any, do you answer to?

9. Approximately how much does your hotel spend on maintenance each year?

10. Which area / aspect of maintenance utilises the highest part of the budget?

11. What is the maintenance budget for this year (2014)?

12. Is your hotel part of a larger group, or operated independently?

Larger group

Operated independently

Other

13. What does your hotel offer?

- Accommodation and catering only
- Accommodation, catering and conference facilities
- Other (please specify):

14. How long have you been working in your current managerial position (months/years)?

15. How long have you had experience in the hotel sector (months/years)?

16. In which department did you start your hotel career?

SECTION B: MANAGERIAL TRAITS

17. Please indicate how important you consider each of the following characteristics or traits of an effective maintenance manager of a hotel. Please rate all statements.

		1 Not at all important	2 Less important	3 Neutral	4 Very important	5 Extremely important
1	Ability to judge and to combine different ideas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	Ability to organise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	Ability to effectively implement plans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	Imagination and creative thinking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	Common sense	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	Innovation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	Inclination and capacity to assume risk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	Self-evaluation ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	Self-confidence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	Leadership ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11	Applying modern business methods, specifically flexibility/adaptability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12	Entrepreneurial characteristics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13	Ability to solve problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14	Effective communication skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15	Fairness and generosity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16	Trustworthiness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17	Sympathy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18	Honesty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19	Ability to treat people equally	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20	Ability to prioritise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21	Ability to stay calm in an emergency/crisis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22	Motivational skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23	Financial/budgeting sensibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24	Skills of positive influence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25	Time management skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

SECTION C: CRITICAL SUCCESS FACTORS - GENERAL MANAGEMENT

18. Please indicate how important you consider each of the following critical success factors in the effective management of hotel maintenance. Please rate all statements.

		1 Not at all important	2 Less important	3 Neutral	4 Very important	5 Extremely important
1	Provision of high levels of customer care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	Meeting customer needs and preferences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	Applying the principle of "the customer is king"	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	Proper policies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	Clear strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	Well-trained staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	Maintaining efficient purchasing practices and effective liaison with suppliers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	Providing high quality facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9	High standard of maintenance of facilities	○	○	○	○	○
10	Operations of effective recruitment of staff and selection procedures	○	○	○	○	○
11	Regular training of staff	○	○	○	○	○
12	Management experience	○	○	○	○	○
13	Experience working in tourism and hospitality fields	○	○	○	○	○
14	Experience working in maintenance/ construction/similar fields	○	○	○	○	○
15	International work experience	○	○	○	○	○
16	Cross cultural knowledge	○	○	○	○	○
17	Global vision (about your hotel, the economy, etc.)	○	○	○	○	○
18	Experienced staff	○	○	○	○	○
19	Implementing effective recycling methods	○	○	○	○	○
20	Implementing eco-friendly or "green" management principles	○	○	○	○	○
21	Proper budgeting processes	○	○	○	○	○
22	Clear objectives and goals	○	○	○	○	○
23	Proper financial/budget management	○	○	○	○	○
24	Professional staff	○	○	○	○	○
25	On the job training	○	○	○	○	○
26	Clear lines of communication	○	○	○	○	○
27	Clear delegation of authority	○	○	○	○	○
28	Effective system to get feedback from customers	○	○	○	○	○
29	Limited staff turnover	○	○	○	○	○
30	Limit expenditure	○	○	○	○	○

SECTION D: CRITICAL SUCCESS FACTORS - MAINTANANCE MANAGEMENT

19. Please indicate how important you consider each of the following critical success factors in the effective management of hotel maintenance. Please rate all statements.

		1 Not at all important	2 Less important	3 Neutral	4 Very important	5 Extremely important
1	Maintenance auditing in ensuring cost-effective operations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	Benchmarking maintenance operations to enable superior performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	Implementation of a CMMS (Computerised Maintenance Management System)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	Proper Financial Management/Accounting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	Proper Budgeting Processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	Conserving energy in hotel operations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	Managing and minimising risk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	Preventive Maintenance (especially Planned Preventative Maintenance Schedule, or PPMS)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	Scheduled/general/upkeep maintenance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	Emergency/Breakdown Maintenance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11	Corrective Maintenance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12	Insurance against certain risks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13	Maintaining and implementing electrical systems, appliances and devices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14	Maintaining and implementing plumbing systems and fixtures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15	Maintaining and implementing HVAC (Heating, Ventilation and Air-Conditioning)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16	Heating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17	Ventilation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18	Air-Conditioning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19	Maintaining and implementing refrigeration systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20	Maintaining and implementing effective lighting systems and adequate fixtures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21	Maintaining elevators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22	Personnel qualifications and skills in areas of expertise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23	Personnel productivity and efficiency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24	Personnel training and/or certification	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25	Access to up-to-date equipment specifications and manuals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26	Access to up-to-date structural-, mechanical, electrical- and electrical equipment control schematic plans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27	Maintaining adequate emergency power systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28	Administering and outsourcing certain maintenance tasks/activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29	Good inventory record-keeping and control of maintenance supplies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30	Good record- and information keeping systems of maintenance records	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

31	Provision of clear and concise maintenance manual for employees	○	○	○	○	○
32	Good relationship between maintenance and housekeeping	○	○	○	○	○
33	Custodial/routine/daily hotel maintenance	○	○	○	○	○
34	Prioritising service and/or work to be completed	○	○	○	○	○
35	Maintaining and implementing IT/Computer Systems	○	○	○	○	○
36	The speedy resolution of problems	○	○	○	○	○
37	An efficient reporting system and prompt recording of maintenance requests	○	○	○	○	○
38	Effective communication between staff members	○	○	○	○	○
39	Effective communication between management and staff	○	○	○	○	○
40	Effective communication between hotel departments	○	○	○	○	○
41	Maintaining and acquiring mechanical-, power- and vehicular equipment	○	○	○	○	○
42	Quality of work and workmanship	○	○	○	○	○
43	Proper maintenance to improve and maintain safety and safety standards	○	○	○	○	○
44	Maintaining the physical building (structure & fittings)	○	○	○	○	○
45	Maintaining and implementing laundry systems	○	○	○	○	○
46	Maintaining and implementing telecommunication systems	○	○	○	○	○
47	Maintaining and structuring landscaping and grounds	○	○	○	○	○
48	Maintaining and structuring roads, parking areas,	○	○	○	○	○

	walkways and other surfaces					
49	Maintaining surface coverings, such as wallpaper	○	○	○	○	○
50	Maintaining, acquiring or fabrication of furniture	○	○	○	○	○
51	Pest control and managing pests	○	○	○	○	○
52	Proper control, handling and storage of hazardous materials	○	○	○	○	○
53	Managing logistical aspects such as inventory acquisition	○	○	○	○	○
54	Setting clearly defined goals/objectives for all tasks	○	○	○	○	○
55	Scheduling maintenance in order to minimise disruption and losses	○	○	○	○	○
56	Clear, specific definitions of duties and responsibilities for staff	○	○	○	○	○
57	Knowledge and experience of the head of maintenance or chief engineer	○	○	○	○	○
58	Proper supervision of subordinates when necessary	○	○	○	○	○
59	Ensuring that tools are upgraded and in good supply	○	○	○	○	○
60	External auditing	○	○	○	○	○
61	Staff and performance reviews	○	○	○	○	○
62	Protection of hotel standards, ensuring that customer expectations are met	○	○	○	○	○

SECTION E: EXPERTISE

20. Please indicate to which extent you agree with the following statements. Please rate all statements.

		1 Disagrees strongly	2 Disagrees somewhat	3 Neutral	4 Agrees somewhat	5 Agrees completely
1	Engineering and maintenance activities are often given insufficient space	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	Upper management (above GM) needs to have a basic understanding of engineering	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	Many organisations have not recognised the significance of the contribution of facility maintenance and operations function makes to the ultimate success or failure of the business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	Employees must know what management expects of them	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	Upper management still fosters conventional views of maintenance as an interruption and an unavoidable cost burden	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	Housekeeping and engineering managers need to devote attention to improving the relationship between the departments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	A modern hotel manager (GM or below) needs a basic knowledge of engineering	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	Engineering is still viewed as "basement" bottom and out of sight	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9	Maintenance personnel should take part in planning and budgeting processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	Maintenance is an important function in any hotel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

21. What specific management actions and recommendations can you suggest to ensure the proper and successful management of a hotel?



Thank you for your participation!

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Annexure B: Author's database of hotels invited to partake in study

1	10 2nd Avenue Houghton Estate	306	Morula Casino & Hotel
2	131 on Herbert Baker	307	Mount Currie Inn
3	2 Ten Hotel	308	Mount Nelson Hotel
4	Adderley Hotel	309	Mpekweni Beach Resort
5	African Pride Melrose Arch Hotel	310	Mypond Hotel
6	African Rock Hotels	311	Brookes Hills Suites Hotel
7	African Sky Reef Hotel	312	Ndalo Hotel
8	Africanos Inn	313	New Kings Hotel
9	Afrique Boutique Hotel	314	Ngwenya Hotel
10	Airport Grand Hotel	315	NH Hotel Plettenberg Bay
11	Akua-Yaa Boutique Hotel	316	NH The Lord Charles
12	Albany Hotel	317	NMN Grand Hotel
13	Albertinia Hotel	318	O On Kloof Boutique Hotel
14	All Suite on 14th Hotel	319	Oakhurst Hotel
15	Alpha Conference Centre	320	Oasis Lodge
16	Ambassador Hotel	321	Oasis Signature Hotel
17	Apollo Hotel	322	Ocean Reef Hotel
18	Arcadia Hotel	323	Okiep Hotel
19	Arminel Hotel	324	Old Mill Hotel
20	Arniston Hotel	325	Olwandle Suite Hotel
21	Asara Wine Estate & Hotel	326	One & Only Cape Town
22	Atlantic Affair Boutique Hotel	327	Onverwacht Boutique Hotel
23	Atlantic Beach Hotel	328	Oranje Rivier Hotel
24	Avalon Springs Hotel	329	Oribi Gorge Hotel
25	Aviator Hotel	330	Orient Boutique Hotel
26	Balmoral Hotel	331	Orion Hotel Promenade
27	Bantry Bay Luxury Suites	332	Orion Magoebaskloof Hotel
28	Barrydale Karoo Hotel	333	Orion Safari Lodge
29	Bayview Hotel	334	Orion Wartburg Hotel
30	Beach hotel	335	Oude Werf Hotel
31	Belaire Suites	336	Oyster Box
32	Bellvista Lodge	337	Palm Park Hotel
33	Belvidere Manor	338	Parade Hotel
34	Best Western Cape Suites	339	Park Inn by Radisson, CPT
35	Beverly Hills Hotel	340	Parliament Hotel
36	Birchwood Hotel	341	Peech Hotel
37	Birkenhead House	342	Peermont Doreale Grande Hotel
38	Bloem Hotel Conference & Spa	343	Peermont Graceland Hotel
39	Blue Bay Lodge	344	Peermont Metcourt
40	Blue Lagoon Hotel & Conf Centre	345	Peermont Metcourt Suites
41	Blue Waters Hotel	346	Peermont Mmabatho Palms
42	Bluewaters Hotel	347	Peermont Mondior Hotel

43	Breederiver Lodge	348	Peninsula All Suite Hotel
44	Cabanas Sun City	349	Pepper Club Luxury Hotel
45	Caledon Casino Hotel	350	Perry's Bridge Hotel
46	Calvinia Hotel	351	Piekenierskloof Mountain Lodge
47	Cape Grace	352	Pietersburg Club
48	Cape Milner Hotel	353	Pine Lake Inn
49	Cape Royale Luxury Residence	354	Plettenberg Park Hotel
50	Cape Town Lodge Hotel	355	Point Hotel
51	Cape Town Ritz Hotel	356	Point Village Hotel
52	Capetonian Hotel	357	Pongola Country Lodge
53	Casa Da Sol	358	Pontac Manor Hotel
54	Casterbridge Hollow Boutique Hotel	359	Porche Villa Hotel
55	Cavern resort & Spa	360	Port Captain's Lodge
56	Cedar Park Hotel	361	Portswood Hotel
57	Cellars Hohenort	362	Prana Lodge
58	Centurion Lake Hotel	363	Premier Hotel - Cape Manor
59	Champagne Castle Hotel	364	Premier Hotel - Edwardian
60	Circa On The Square Hotel	365	Premier Hotel - Regent
61	Citrusdal Country Lodge	366	Premier Hotel EL ICC
62	City Lodge Airport Barbara Road	367	Premier Hotel Knysna Moorings
63	City Lodge Bloemfontein	368	Premier Hotel OR Tambo
64	City Lodge Bryanston	369	Premier Hotel Pretoria
65	City Lodge Catherine Street	370	President Hotel
66	City Lodge Durban	371	Protea Hazyview
67	City Lodge Fourways	372	Protea Hotel Upington
68	City Lodge Hatfield	373	Protea Hotel Balalaika
69	City Lodge Lynnwood	374	Protea Hotel Bloem Central
70	City Lodge ORTIA	375	Protea Hotel Bloemfontein
71	City Lodge Pinelands	376	Protea Hotel Capital
72	City Lodge Umhlanga	377	Protea Hotel Centurion
73	City Lodge V&A Waterfront	378	Protea Hotel Clarens
74	City Royal Hotel	379	Protea Hotel Cumberland
75	Clanwilliam Lodge	380	Protea Hotel Durbanville
76	Clico Boutique Hotel	381	Protea Hotel Empangeni
77	Coastlands On The Ridge	382	Protea Hotel Fire & Ice CPT
78	Coastlands Umhlanga Hotel	383	Protea Hotel Fire & Ice Melrose Arch
79	Coco De Mer	384	Protea Hotel Franschoek
80	Colosseum Executive Suite hotel	385	Protea Hotel Hatfield
81	Commodore Hotel	386	Protea Hotel Highveld
82	Corporate Boutique hotel	387	Protea Hotel Hilton
83	Court Classique Suite Hotel	388	Protea Hotel Hluhluwe
84	Courtyard Arcadia	389	Protea Hotel Imperial
85	Courtyard Port Elizabeth	390	Protea Hotel Island Club
86	Courtyard Rosebank	391	Protea hotel Karridene

87	Courtyard Sandton	392	Protea Hotel Kimberley
88	Crescent Hotel	393	Protea Hotel king George
89	Crocodilian Equisite Hotel	394	Protea Hotel Klerksdorp
90	Davinci Hotel	395	Protea Hotel Knysna Quays
91	Desert Palace Hotel	396	Protea Hotel Kruger gate
92	Diaz Beach Hotel	397	Protea Hotel Landmark
93	Die Herberg Hotel	398	Protea Hotel Mafikeng
94	Dock House Boutique Hotel	399	Protea Hotel Manor
95	Docklands Hotel	400	Protea Hotel Marine
96	Dolphin Beach Hotel	401	Protea Hotel Midrand
97	Drakensberg Gardens	402	Protea Hotel Mossel Bay
98	Dunes Hotel	403	Protea Hotel Neslpruit
99	Durban Manor Hotel	404	Protea Hotel North Wharf
100	Dutch Manor Antique Hotel	405	Protea Hotel Oasis
101	Ebandla Hotel	406	Protea Hotel OR Tambo
102	Edcon Retail Academy	407	Protea Hotel Outeniqua
103	Eden Country Inn	408	Protea Hotel Parktonian
104	Eendracht Hotel	409	Protea Hotel President
105	Elephant Lake Hotel	410	Protea Hotel Ranch resort
106	Elgro Hotel	411	Protea Hotel Richards Bay
107	Elgro Inn Hotel	412	Protea Hotel Riempie Estate
108	Ellerman House	413	Protea Hotel Roodepoort
109	Emakhosini Boutique Hotel	414	Protea Hotel Saldanha Bay
110	Emakhosini on East	415	Protea Hotel Samrand
111	Emerlad Resort & Casino	416	Protea Hotel Sea Point
112	Erinvale Estate Hotel	417	Protea Hotel Stellenbosch
113	Eskulaap Hotel	418	Protea Hotel The Park
114	Estuary Country Hotel	419	Protea Hotel The Richards
115	Euphoria Golf Estate	420	Protea Hotel The Winkler
116	Europrime Hotel	421	Protea Hotel Tygervalley
117	Evander Villas	422	Protea Hotel Umfolozi River
118	Fabz Garden Hotel	423	Protea Hotel Umhlanga Ridge
119	Faircity Fallstaff Hotel	424	Protea Hotel Umhlanga Ridge
120	Faircity Mapungubwe Hotel	425	Protea Hotel Wanderers
121	Faircity Quatermain Hotel	426	Protea Hotel Waterfront Richards Bay
122	Faircity Roodevallei	427	Protea Hotel Willow Lake
123	Fairlawns Boutique Hotel	428	Protea Hotel Witbank
124	Fairview Hotel	429	Pumula Beach Hotel
125	Fairy Knowe Hotel	430	Quarters Hotel Avondale Road
126	Fancourt Hotel	431	Quarters Hotel Florida Road
127	Farm Inn	432	Queen Victoria Hotel
128	Fern Hill Hotel	433	Queens casino & Hotel
129	Fish River Sun Hotel	434	Queens Hotel
130	Floreat Riverside Lodge	435	Radisson blu Hotel, Sandton

131	Florida Park Hotel	436	Radisson blu Hotel, Waterfront CPT
132	Fordoun Leisure	437	Railwaymann's Inn
133	Forest Suites At Zimbali	438	Randburg Towers Hotel
134	Forever Hotel At White River	439	Rex Hotel
135	Forever Hotel Badplaas	440	Riebeeck Valley Hotel
136	Forever Hotel Centurion	441	Rio Hotel Casino
137	Forever Resorts Mount Sheba Hotel	442	River City Inn
138	Fountains Hotel	443	Riverside Hotel
139	Fouriesburg Country Inn	444	Riviera Hotel
140	Frontier Inn & Casino	445	Road Lodge Airport
141	Furrow Lane Hotel	446	Road Lodge Bloemfontein
142	Fusion Boutique Hotel	447	Road Lodge Centurion
143	Garden Court Blackrock Newcastle	448	Road Lodge CTIA
144	Garden Court De Waal	449	Road Lodge Durban
145	Garden Court Eastgate	450	Road Lodge East London
146	Garden Court Marine Parade	451	Road Lodge Germiston
147	Garden Court Milpark	452	Road Lodge Isando
148	Garden Court Nelson Mandela Boulevard	453	Road Lodge Kimberley
149	Garden Court OR Tambo	454	Road Lodge N1 City
150	Garden Court Sandton City	455	Road Lodge Nelspruit
151	Garden Court South Beach	456	Road Lodge Potchefstroom
152	Garden Court Umhlanga	457	Road Lodge Randburg
153	Gateway Hotel	458	Road Lodge Richards Bay
154	Georgiou Hotel	459	Road Lodge Rivonia
155	Ghost Mountain Inn	460	Road Lodge Rustenburg
156	Glen Boutique Hotel	461	Road Lodge Southgate
157	Glenburn Lodge	462	Road Lodge Umhlanga
158	Gold Reef City Hotel	463	Robertson Small Hotel
159	Golden Gate Hotel	464	Rorke's drift Hotel
160	Goldreef City Casino	465	Royal Hotel
161	Gonubie Hotel	466	Royal Hotel
162	GPS Hotel	467	Royal Malewane
163	Graham Hotel	468	Royal Marang Hotel
164	Grand Café	469	Royal Palm Hotel
165	Grand Daddy Hotel	470	Royal Sibaya Hotel
166	Grande Roche Hotel	471	Royal Ushaka Hotel
167	Graskop Hotel	472	Ruby Stone Boutique Hotel
168	Graywood Hotel	473	Russel Hotel
169	Greenway Woods Resort	474	SAB World Of Learning hotel
170	Greenways Hotel	475	Saint George Hotel
171	Haga Haga Hotel	476	Salt Rock Hotel
172	Halfway House Hotel	477	Sammish Investments CC
173	Halyards Hotel	478	Sandford Park Country Hotel
174	Hanover Lodge Hotel	479	Sanrock Resort

175	Hans Merensky Hotel	480	Saxon Boutique Hotel
176	Harbour Bridge Hotel	481	Scotia Inn Hotel
177	Harrismith Inn	482	Shakespeare Inn
178	High Performance Centre Hotel	483	Shelley Point Hotel
179	Hilton Double Tree CPT	484	Sheraton PTA Hotel
180	Hilton Durban	485	Sibaya Lodge
181	Hippo Hollow Country Estate	486	Simola Hotel
182	Hoedjiesbaai Hotel	487	Simon's Town Quayside Hotel
183	Holiday Inn Express CPT City Centre	488	Soli Deo Gloria
184	Holiday Inn Express PTA Sunnypark	489	Somerset Hotel
185	Holiday Inn Express Woodmead	490	Southern Sun Cape Sun
186	Holiday Inn Sandton	491	Southern Sun Elangeni
187	Horseshoe Inn	492	Southern Sun Hyde Park Sandton
188	Hospitality and Tourism Academy	493	Southern Sun Katherine Street
189	Hotel 224	494	Southern Sun North Beach
190	Hotel F1 Alberton	495	Southern Sun OR Tambo
191	Hotel F1 Beaufort West	496	Southern Sun Silverstar
192	Hotel F1 Benoni	497	Southern Sun The Cullinan
193	Hotel F1 Berea	498	Southern Sun Waterfront CPT
194	Hotel F1 Bloemfontein	499	Soweto Hotel
195	Hotel F1 Durban	500	Sparkling Waters Hotel & Spa
196	Hotel F1 Edenvale	501	Spier Hotel
197	Hotel F1 Foreshore, CPT	502	Springbok Hotel
198	Hotel F1 Kimberley	503	Stanville Hotel
199	Hotel F1 Midrand	504	Stanville Inn
200	Hotel F1 Milnerton	505	Stayeasy Eastgate
201	Hotel F1 Nelspruit	506	Stayeasy Pietermaritzburg
202	Hotel F1 OR Tambo	507	Steenberg Hotel
203	Hotel F1 Parow	508	Stellenbosch Hotel
204	Hotel F1 PE	509	Stellenbosch Lodge
205	Hotel F1 Pta	510	Strand Tower Hotel
206	Hotel F1 Richards Bay	511	Sugar Hotel
207	Hotel F1 Southgate	512	Summerstrand Hotel
208	Hotel F1 Vereeniging	513	Sun City Cascades Hotel
209	Hotel F1 Witbank	514	Sun City Main Hotel
210	Hotel F1 Wynberg	515	Suncoast Towers
211	Hotel Graeme	516	Sundown Ranch
212	Hotel Izulu	517	Sundowner Lodge
213	Hotel Numbi	518	Swartberg Hotel
214	Hotel on St Georges	519	Syrene Boutique Hotel
215	Hotel Osner	520	Table Bay Hotel
216	Hotel Partoa Diaz	521	Taj Cape Town
217	Hotel Savoy	522	Taung Hotel Convention Resort
218	Hotel Verde	523	Thaba Ya Batswana

219	Hotel Victoria Mews	524	The Bay Hotel
220	Hout Bay Manor	525	The Bayshore Hotel
221	Houw Hoek Inn	526	The Beach Hotel
222	Howick Falls Hotel	527	The Blades
223	Hoyohoyo Chartwell Lodge	528	The Farmhouse Hotel
224	Humewood Hotel	529	The Grand Hotel
225	Hunters Rest Hotel	530	The Hyde Hotel
226	Hyatt Regency Oubaai Golf Resort & Spa	531	The Kelway Hotel
227	Idayimani Hotel	532	The Lakes Hotel
228	IFA Fair Zim Hotel	533	The Marly
229	Ilawu inn	534	The Maslow Hotel
230	Illyria House	535	The Nest Drakensberg Mountain Resort
231	Indaba Hotel	536	The One 8 Hotel
232	Indaba Hotel, Spa & Conf Centre	537	The Palace of the Lost City
233	Ingwenyama Conf & Sport Resort	538	The Palazzo Montecasino
234	Inkwazi Country Hotel	539	The Paxton Hotel
235	Innjoy Boutique Hotel	540	The Place on the Bay Hotel
236	Intercontinental JHB OR Tambo	541	The Residence Boutique Hotel
237	Intercontinental Sandton Towers	542	The Rosebank Crowne Plaza JHB
238	Isango Gate	543	The Royal Country Inn
239	Isiphiwo Boutique Hotel	544	The Square Boutique Hotel
240	Jock Sabie Lodge	545	The View Boutique Hotel
241	Jozini Tiger Lodge	546	The Villas Luxury Suite Hotel
242	Kapenta Bay	547	The Westin CPT
243	Karoo 1 hotel Village	548	The Wineglass Hotel
244	Karoo Country Inn	549	Thorn Tree Lodge
245	Katberg Hotel	550	Three Cities Imvubu Lodge
246	Kelway Hotel	551	Three Cities Le Franschoek Hotel
247	Kennaway Hotel	552	Three Oaks And An Aloe
248	Khoroni Hotel Casino	553	Tintswalo At Waterfall
249	Kievits Kroon Country Estate	554	Towers Lodge
250	Kinberley Club Boutique Hotel	555	Town Lodge Airport
251	Klainkaap Boutique Hotel	556	Town Lodge Bellville
252	Klawer Hotel	557	Town Lodge George
253	Kloppenheim Country Estate Hotel	558	Town Lodge Gryanston
254	Kokerboom Motel	559	Town Lodge Menlo Park
255	Kurland Hotel	560	Town Lodge Midrand
256	La Mercy Beach Hotel	561	Town Lodge Nelspruit
257	La Residence Hotel & Villas	562	Town Lodge PE
258	La Splendida Hotel	563	Town Lodge Polokwane
259	Laiplek Hotel	564	Town Lodge Roodepoort
260	Lady Hamilton	565	Townhouse Hotel
261	Lagoon Beach Hotel	566	Tradewinds Country Inn
262	Lakeview Airport Lodge	567	Tramonto

263	Lamberts Bay Hotel	568	Travel Inn
264	Landros Boutique Hotel	569	Tropicana Hotel
265	Lanzerac Hotel & Spa	570	Tsar Hotels
266	Le Chef Boutique Hotel	571	Tsitsikamma Lodge
267	Le Franschoek Valley	572	Tsitsikamma Village Inn
268	Le Grand Chateau Hotel	573	Tudor Hotel
269	Le Quartier Francais	574	Turbine Boutique Hotel
270	Leisure Bay luxury Suites	575	Turnberry Boutique Hotel
271	L'ermitage Franschoek	576	Twelve Apostles Hotel
272	Lido Hotel	577	Tzaneen Country Lodge
273	Little Tuscany Boutique Hotel	578	UCT Breakwater Lodge
274	Loa Hotel	579	Umfolozzi Hotel Casino
275	Lodge At Princes Grants	580	Umthunzi Boutique Hotel
276	Lombardy Boutique Hotel	581	Urban Chic Boutique Hotel
277	Lonely Oak Hotel	582	Urban Hotel Bloemfontein
278	Lord Milner Hotel	583	Urban Hotel Kathu
279	Lord's Signature Hotel	584	Urban Park Hotel & Spa
280	Lutzville Hotel	585	Vaalnest Boutique Hotel
281	Magalies Manor	586	Valverde Country Hotel
282	Magaliesburg Country Hotel	587	Venture Inn Hotel
283	Majestic Hotel	588	Victoria Hotel
284	Maluti Mountain Lodge	589	Views Boutique Hotel
285	Mandela Rhodes Place	590	Villa Amor
286	Manderson Hotel	591	Villa Bali Boutique Hotel
287	Margate Hotel	592	Villa Belmont
288	Marine hotel	593	Villa Exner Boutique Hotel
289	Marion On Nicol	594	Villa Paradiso
290	Maropeng Boutique Hotel	595	Villa Toscania
291	Masonic Hotel	596	Village At Fairview
292	Mercure Hotel Bedfordview	597	Wayside Budget Hotel
293	Mercure Hotel Midrand	598	Welkom Inn
294	Mercure Hotel Nelspruit	599	Wentworth Hotel
295	Mercure Hotel Randburg	600	Whalesong Hotel & Hydro
296	Mesami Hotel	601	Wild Coast Sun
297	Miami Lodges	602	Willows Garden Hotel Potch
298	Michelangelo Hotel	603	Winchester Mansions
299	Misty Hills Country Hotel	604	Windmill Lodge
300	Misty Waves Hotel	605	Windmills Boutique Hotel
301	Monarch Hotel	606	Windsor Cabanas
302	Mondazur Hotel	607	Windsor Hotel Hermanus
303	Mont d'Or Hotel	608	Winston Hotel
304	Montagu Country Hotel	609	Woodridge Country Hotel & Spa
305	Morgan Bay Hotel		



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DECLARATION OF LANGUAGE EDITING

I, Christina Maria Etrechia Terblanche, hereby declare that I edited the
research study titled:

**CRITICAL SUCCESS FACTORS OF THE MAINTENANCE FUNCTION IN
THE SOUTH AFRICAN HOTEL SECTOR**

for CL Neethling for the purpose of submission as a postgraduate
dissertation. Changes were suggested and implementation was left to the
discretion of the author.

Regards,

CME Terblanche

Cum Laude Language Practitioners (CC)

SATI accr nr: 1001066

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